DENSO ROBOT

ERROR CODE TABLES

(Ver. 2.2)

■**-D/-E series (Ver.1.** to 1.99)

Vertical articulated V*-D/-E SERIES

Horizontal articulated H*-D/-E SERIES

Cartesian coordinate XYC-4D SERIES

■**-F series (Ver.2.0* to 2.2*)

Vertical articulated V*-F SERIES

Horizontal articulated HS-F SERIES

■Options

Vision device μVision-21 SERIES

WINCAPSⅡ

Preface

Thank you for purchasing the DENSO robot. This book lists error codes to be displayed on the teach pendant, mini-pendant, operating panel, or PC screen if an error occurs in the robot series or WINCAPSII given below. Those error codes are followed by detailed explanation and recovery action to be taken.

If an error occurs, use this book together with the related instruction manuals.

Robot series and PC teaching system covered by this book

-/D/-E series robot with RC5 controller (Version 1. to 1.99)	- Vertical articulated, V*-D/-E SERIES - Horizontal articulated, H*-D/-E SERIES - Cartesian coordinate XYC-4D SERIES
**-F series robot with RC7 controller (Version 2.0* to 2.2*)	- Vertical articulated, V*-F SERIES - Horizontal articulated, HS-F SERIES
Options	- Vision device, μVision-21 SERIES - WINCAPSII

CONTENTS

1 Guide to Using This Book

This book covers two types of error codes--Controller error codes and WINCAPSII error codes. The former would appear on the teach pendant (TP), mini-pendant (MP), or operating panel (OP) if an error occurs in the robot controller when the robot is in operation. The latter would appear on the PC screen if an error occurs in WINCAPSII.
Those error codes will be followed by error messages.

1.1 How to use the controller error code table

Errors that could occur in the robot controller may be classified into five levels. Depending upon the error level, the controller's reaction to errors will differ as listed below. If Level 4 error occurs, for example, the controller will output "Robot failure" signal, stop the program in emergency, switch the motion mode from external to internal, and turn the motor power off. Note: Level 0 is displayed only for 600C (emergency stop ON).

Error Level List

Error level		The robot controller			
		Outputs this error signal:	**Makes the program come to:**	**Switches the motion mode:**	**Turns the motor power:**
Level 1	*[3]	-	-	-	-
Level 2	Errors when using TP/MP/OP*[1]*[3]	-	-	-	-
	Other errors	*Robot Warning (RC5)* *Robot Failure (RC7)*	Halt	-	-
Level 3	Errors when using TP/MP/OP*[1]*[3]	-	-	-	-
	Other errors	*Robot Failure*	Halt	External → Internal	Off*[2]
Level 4		*Robot Failure*	Emergency stop	External → Internal	Off
Level 5		*Robot Failure*	Emergency stop	External → Internal	Off (Restart disabled)

*[1] If caused during operation with the teach pendant, mini-pendant or operating panel, errors 6000s and run-time errors will be treated in the same way as for "Other errors" listed on the next line.

*[2] If any of errors 6071 to 607B and 6671 to 667B (software motion limit over, out of motion space, or singular point), 607F (figure mismatch), 6081 to 6088 (Jx command speed limit over), and 6AF3 (Interference area detected by J1, 2, 3) occurs when the robot is in operation in Manual mode, then the robot controller will not cut off the motor power.

*[3] External operation is accepted even when a level 1 error or a level 2 or 3 error in TP/MP/OP operation is displayed.

Definition of Terms Used in the Error Level List

Error level	Errors when using TP/MP/OP	Errors caused by misoperation of the teach pendant (TP), mini-pendant (MP) or operating panel (OP).
	Other errors	Errors caused during program execution, dedicated I/O input operation, or servo operation.
Outputs this error signal:	*Robot Warning*	The robot controller will output the *Robot Warning* signal to the external equipment (e.g., PLC) to tell the occurrence of an insignificant error (Level 2 error).
	Robot Failure	The robot controller will output the *Robot Failure* signal to the external equipment (e.g., PLC) to tell the occurrence of a fatal error (Level 3 error or higher one).
Makes the program come to:	Halt	The robot stops if Level 2 or 3 error occurs. When decelerating the motor speeds for this stop, the robot traces the same motion path as in the normal motion.
	Emergency stop	The robot stops in emergency if Level 4 or 5 error occurs. Each axis motor decelerates at the maximum rate for this stop, so the motion path may be different from that in the normal motion, particularly in CP motion.
Switches the motion mode:	External → Internal	If an error occurs in the external automatic mode, then the mode switches to the internal automatic mode.
Turns the motor power:	Off	If the motor power is ON when an error occurs, the controller will turn the motor power OFF.
	Off (Restart disabled)	If the motor power is ON when an error occurs, the controller will turn the motor power OFF. To restart, you need to turn the controller power OFF and ON. Without it, if you attempt to turn the motor power ON, then error 27A6 "Not executable due to fatal error" will result.

1.2 How to use the WINCAPSII error code table

The WINCAPSII error code table is divided into several parts according to Manager (System Manager, PAC Manager, DIO Manager, and others). If an error occurs, refer to the part associated with the Manager in which the error has occurred.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
1201	Prepare for communication (unconnected)	4	The DeviceNet module is operating normally, but I/O connection is not yet established, although the explicit connection with the master device is established.	Establish a connection from the master device. If the network connection can be established even after this error that occurred during a power-on sequence, then increase the wait time for network error detection.
1202	Prepare for communication (unconnected)	4	DeviceNet module operation is normal and connection with the master device is explicitly established, however, the I/O connection is not established.	Establish connection from the master device.
1203	Prepare for communication (idle status)	4	The DeviceNet module is operating normally, but only empty data has been received from the master device within the specified time period.	Check the contents of the I/O data sent from the master device. If the network connection can be established even after this error that occurred during a power-on sequence, then increase the wait time for network error detection.
1204	Prepare for communication (I/O timeout)	4	The DeviceNet module is operating normally, but no data has been received from the master device within the specified time period.	Check and ensure that (a) there is no broken wire in the network cable, (b) the connectors are properly inserted, (c) the cable length is within the limit, and (d) the termination resistor is properly installed at the right position. If the network connection can be established even after this error that occurred during a power-on sequence, then increase the wait time for network error detection.
1205	Robot access failure in DPRAM	4	The robot cannot access the DPRAM on the DeviceNet or CC-Link board.	Power the controller off and on for restart.
120A	Slave exclusive flag failure	4	Any exclusive flag of the DeviceNet slave station or the communications processor in the CC-Link remote device is not set normally.	Check that the DeviceNet slave board or CC-Link remote device board is correctly installed. If the error persists, the board may be damaged.
120B	DeviceNet master exclusive flag failure	4	The exclusive flag of DeviceNet master communication processor is not working normally.	Check the connection of the DeviceNet master board. If the error persists, the board may be defective.
120C	The network error cleared	3	An network error on the DeviceNet, PROFIBUS or CC-Link has been removed.	Carry out the error removal process with the teach pendant, operating panel, or external equipment.

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Code	Message	Level	Description	Remedy
1210	DeviceNet internal communications error	4	Communications data is abnormal due to noises.	Turn the robot controller power off and then on. Retry the operation.
1213	Disconnected/bus-off state	4	Network cable is disconnected or bus is OFF (network not connected).	Verify that the cable connector is securely plugged in at the robot side. If this error occurs after you change the DIP switch settings, verify that the network communication speed matches DIP switch settings.
1215	Prep. to communicate (initial set error)	4	DeviceNet communication process part did not receive initial setting from the controller.	Verify that the network communication speed matches the DIP switch settings.
1216	Transfer data length abnormal	4	The number of input/output slots for DeviceNet exceeds the specified range.	Change the input slot number for DeviceNet to one of 8~32, and that of output slot to one of 7~32, turn the control power OFF and then ON again.
1217	Same node No. specified duplication	4	Controller node number is overlapped with another node in the online status.	Change the node number so that the node number of the controller does not overlap other nodes.
1218	FlashRom BCC error	4	A BCC error has occurred in the flash ROM on the DeviceNet board.	Power the controller off and on for restart.
1219	Parameter information area error	4	A data error has occurred in the parameter information area on the DeviceNet board.	Power the controller off and on for restart.
121A	Robot control area error	4	A data error has occurred in the Robot Controller's control area on the DeviceNet board.	Power the controller off and on for restart..
121D	Scan list data table error	4	A data error has occurred in the scan list data table on the DeviceNet board.	Power the controller off and on for restart.
121E	Scan list mapping information area error	4	A data error has occurred in the scan list mapping information area on the DeviceNet board.	Power the controller off and on for restart.
1220	I/O option board connection error	4	More than one I/O option board is installed. Concurrent access to those boards is impossible.	Turn the controller power off and remove I/O option boards except one board.
1221	Busy time of Master exceeded setup value	4	DeviceNet master initialization did not end normally.	Turn off the power switch of the controller and then restart operation.
1222	Master failed in the scanlist formation	4	Scan list creation processing of the DeviceNet master failed.	Perform scan list creation processing again.
1223	Serial number is un-decision	4	No serial number is decided for the DeviceNet master.	Enter a serial number from the teach pendant.

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Code	Message	Level	Description	Remedy
1224	The setup of master board is unusual	4	Abnormal setting information is defined in the DeviceNet master.	Turn OFF the power switch of the controller once and restart operation.
1225	Serial number change failure	4	Serial number rewriting failed due to any factor in the DeviceNet master.	Perform serial number rewrite processing again.
1226	EPR change failure	4	EPR rewriting failed due to any factor.	Perform EPR rewrite processing again.
1227	ISD change failure	4	ISD rewriting failed due to any factor in the DeviceNet master.	Perform ISD rewrite processing again.
1228	Scanlist change failure	4	Scan list rewriting failed due to any factor in the DeviceNet master.	Perform scan list rewrite processing again.
1229	Master Flash ROM failure (serial No)	4	A serial number could not be written normally in Flash ROM of the DeviceNet master.	Turn OFF the power switch of the controller, confirm whether the board is securely inserted, and perform the same processing again.
122A	Master Flash ROM failure (EPR)	4	EPR could not be written normally in Flash ROM of the DeviceNet master.	Turn OFF the power switch of the controller, confirm whether the board is securely inserted, and perform the same processing again.
122B	Master Flash ROM failure (ISD)	4	ISD could not be written normally in Flash ROM of the DeviceNet master.	Turn OFF the power switch of the controller, confirm whether the board is securely inserted, and perform the same processing again.
122C	Master Flash ROM failure (scanlist)	4	A scan list could not be written normally in Flash ROM of the DeviceNet master.	Turn OFF the power switch of the controller, confirm whether the board is securely inserted, and perform the same processing again.
122D	DeviceNet Master board doesn't exist	2	An attempt was made to change DeviceNet master board data to a controller without DdeviceNet master board.	Install the DeviceNet master board to the controller and perform the same operation.
1230	Robot access failure in DPRAM (slave)	4	The robot controller cannot access the DPRAM in the DeviceNet slave module or on the CC-Link remote device board.	Restart the robot controller and then try the operation again.
1232	Reset command receiving state	4	A reset command was received from the master device.	Restart the robot controller and then try the operation again.

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Code	Message	Level	Description	Remedy
1234	DeviceNet internal RAM failure	4	A RAM error was detected in the self-check of the communications unit.	Restart the robot controller and then try the operation again.
1236	DeviceNet internal DPRAM failure	4	A DPRAM error was detected in the self-check of the communications unit.	Restart the robot controller and then try the operation again.
1237	DeviceNet internal EEPROM failure	4	An EEPROM error was detected in the self-check of the communications unit.	Restart the robot controller and then try the operation again.
1238	Slave board access failure in DPRAM	4	The communication software in the DeviceNet slave station or CC-Link remote device cannot access the DPRAM.	Restart the robot controller and then try the operation again.
1239	Out of set output range	2	Output address is out of the specified range, therefore, output is not available.	Check output address.
123A	Out of set input range	3	Input address is out of the specified range, therefore, input is not available.	Check input address.
1240	Slave I/O area overlaps	4	An invalid node address is specified for the slave.	Specify a node address again so that the slave I/O area is not overlapped.
1241	I/O area range over	4	The slave I/O area exceeds the valid range.	Correct the node address so that the I/O area does not exceed the valid range.
1242	Non-registrable slave detection	4	The I/O size of one slave exceeds 64 bytes.	Specify the I/O size with 64 bytes or fewer again.
1243	Registered slave doesn't exist	4	No slave is registered in the scan list.	Register slave information into the scan list by teach pendant operation.
1244	Inconsistent IO slave size	4	The I/O size of the slave unmaches one registered in the scan list.	Rescan from pendant or return the I/O size of the lave to the registered one.
1245	No response from slave	4	No response was returned from the slave.	Normally operate the abnormal slave.

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Code	Message	Level	Description	Remedy
1246	MACID overlaps	4	The node address of this node is used by another node.	Change the node address of either node.
1247	BusOff condition is detected	4	Network entered communication disabled state.	Turn OFF the power switch of the controller and restart operation.
1248	No network power supply	4	No DeviceNet network power is supplied.	Confirm the network power supply line.
1249	CAN transmission timeout	4	Transmission to the CAN chip failed on the DeviceNet master.	Locate and solve the problem occurring on the network. This error can happen when there is no other node in the network and the network is powered on.
124A	DeviceNet RAM failure	4	The DeviceNet's communications software detected a hardware error of RAM.	Power the controller off and on for restart.
124B	DeviceNet master ROM failure	4	DeviceNet master communication part software detected a ROM hardware error.	Turn OFF the power of the controller and restart operation.
124C	DeviceNet master DPRAM failure	4	DeviceNet master communication part software detected a DPRAM hardware error.	Turn OFF the power of the controller and restart operation.
124D	DeviceNet board access failure in DPRAM	4	The DeviceNet's communications software cannot access DPRAM.	Power the controller off and on for restart.
124E	Robot side setup bit failure	4	The robot set an invalid bit in the DeviceNet master.	Turn OFF the power of the controller and restart operation.
124F	Master communication start is unusual	4	An error occurred in network communication processing at initialization of the DeviceNet master.	Turn OFF the power of the controller and restart operation.
126A	CIF board access error	5	Failed to access the CIF board.	Restart the controller.
126B	CIF board DPRAM access error	5	Failed to access the DPRAM on the CIF board.	Restart the controller. If the error persists, the CIF board may be defective.
126C	CIF board initialization error	5	Failed to initialize the CIF board.	Restart the controller. If the error persists, the CIF board may be defective.
126D	CIF board watchdog error	5	An error has occurred in the watchdog timer on the CIF board.	Restart the controller. If the error persists, the CIF board may be defective.
126E	Failed CIF board resetting	5	Failed to reset the CIF board.	Restart the controller. If the error persists, the CIF board may be defective.

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Code	Message	Level	Description	Remedy
126F	Network is not established	4	On the CIF board, no network (e.g., PROFIBUS) has been established.	(1) Check the connection of the line. (2) Check the network settings (e.g., node address). (3) Check lines for breaks.
127A	CIF board failure	5	A CIF board error has occurred.	Restart the controller. If the error persists, the CIF board may be defective.
127B	CIF board message send time out	5	During message transmission from the CIF board, a timeout has occurred.	Restart the controller. If the error persists, the CIF board may be defective.
127C	CIF board message received time out	5	During message reception on the CIF board, a timeout has occurred.	Restart the controller. If the error persists, the CIF board may be defective.
127D	Communication watchdog is invalid	4	The communications watchdog timer is set to "Disable."	Set the watchdog timer to "Enable"; otherwise, the system cannot check whether the network is established.
127E	Network configuration mismatch	4	The configuration data sent from the master unit mismatches that preset in the slave unit.	Check the network settings (e.g., module type).
127F	CIF board Initializing	4	You attempted to perform any operation that is not allowed during initialization of the CIF board.	Wait for approx. 20 seconds and then retry the operation.
128A	CC-Link board error at power on	4	When turned on, the robot controller has detected a hardware error on the CC-Link remote device board.	Restart the robot controller and then try the operation again.
128B	CC-Link <- controller handshake error	4	An error has occurred in the process of exchanging the status information between the controller and CC-Link remote device board.	Restart the robot controller and then try the operation again.
128C	CC-Link DPRAM data error	4	A data error has occurred in the DPRAM. on the CC-Link remote device board.	Restart the robot controller and then try the operation again.
128D	CC-Link communication error	4	CC-Link does not operate.	1. Check that the CC-Link settings made in the controller are not discrepant from those in the master station. 2. Check that the CC-Link cable is not broken or the connector is plugged in. 3. Check that there is no welding machines or machinery emitting electric noise near the robot unit or its controller. In addition to the above check points, check the status of the LEDs on the front of the CC-Link remote device board.

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Code	Message	Level	Description	Remedy
128E	CC-Link station number error	2	"Remote station address + (Number of local stations - 1)" is out of the range from 1 to 63.	Set it within the specified range.
128F	CC-Link communication speed error	2	The transmission rate switch is set to any position other than 0 to 4.	Set the transmission rate switch to any of the 0 to 4 positions.
129A	CC-Link occupied stations error	4	The number of local (occupied) stations is out of the range from 2 to 4.	Set it within the specified range.
129D	CC-Link check sum error	5	A check-sum error has occurred in the flash ROM on the CC-Link Remote Device board.	Power the controller off and on for restart.
129E	CC-Link board access failure in DPRAM	4	The robot cannot access the DPRAM on the CC-Link Remote Device board.	Power the controller off and on for restart.
15A0	Received data error	3	Received data includes an error.	1. Check the communication settings. 2. Check the number of communication data. 3. Turn power OFF and then back ON.
15A1	Receiving timeout	3	Receiving timeout occurred.	1. Change the receiving timeout time. 2. Check the communication cable. 3. Turn OFF the power and turn it ON.
15A2	Sending timeout	3	Sending timeout occurred.	1. Change the receiving timeout time. 2. Check the communication cable. 3. Turn power OFF and then back ON.
15A3	Receiving buffer overflow	3	The number of receiving data exceeded available input number.	1. Check the communication setting. 2. Check the number of communication data. 3. Turn power OFF and then back ON.
15A4	Received delimiter error	3	Received separate code (delimiter) is not correct.	1. Check the delimiter. 2. Check the number of communication data. 3. Turn power OFF and then back ON.
15A5	Serial port communication error	5	Communication error occurred due to excess retry number.	1. Change the number of communication retries. 2. Check the communication cable. 3. Turn the power OFF and then back ON.
15A6	Ethernet communication error	5	Communication error occurred due to excess retry number.	1. Change the number of communication retries 2. Check the communication cable. 3. Turn power OFF and then back ON.

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Code	Message	Level	Description	Remedy
15A8	Packet failure	1	Communication packet failed.	1. Check the communication setting. 2. Check the number of communication data. 3. Turn power OFF and then back ON.
15A9	Communication data error	1	Communication error occurred due to excess NAK retry number.	1. Change the number of NAK communication retries. 2. Check the communication cable. 3. Turn power OFF and then back ON.
15AA	Same IP address specified twice	2	IP address is overlapped.	Set IP address so that it does not overlap.
2003	Value out of range	3	A numeric value given as process parameter was out of range.	Designate a value in the designated range before executing the process again.
2004	CAL not executed	2	Attempt was made to execute a process executable after completion of CAL.	Execute CAL before executing the process again.
2005	Manual mode not selected	3	The specified command can be executed only in the manual mode.	Select the manual mode and retry.
2006	Turn ON the motor power	2	Attempt was made to execute a process executable with the motor power ON.	Turn ON the motor power before executing the process again.
2008	Robot stop is activated	2	Attempt was made to execute a process that is not available in the robot stop ON status.	Turn OFF the robot stop status before executing the process again.
200A	Turn OFF the motor power	2	Attempt was made to execute a process that is not available in the motor power OFF status.	Turn OFF the motor power before executing the process again.
200B	Robot is running	2	You attempted to perform any operation that is not allowed when the robot is in operation.	Wait for the robot to stop and then start the desired operation.
201E	Machine lock ON	2	You attempted to switch the motion mode in machine lock state by using the operating panel.	Use the teach pendant to release the machine lock.

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Code	Message	Level	Description	Remedy
2031	Program not found	3	Object program for process execution was not found.	1. Check if the wrong program number is designated. 2. Check if a program was loaded after it was transmitted or compiled. 3. Check if a transmit error occurs when the execution form file is sent from WINCAPSII to the controller. 4. Check if an error has occurred during compiling by the controller. 5. Create the execution form file again by using WINCAPSII or the controller. Disable the DATE INSPECTION option in WINCAPSII at this time. 6. Check if the status of the command area and the data area are settled when the strobe signal rises in the standard mode. 7. Check if the program select signal status is settled when the program start signal rises in the compatible mode.
2032	Data area 1 remains undefined	2	The content of data area 1 is undefined by the program motion command in the standard I/O mode.	1. Execute again after correcting the status of data area 1. 2. Check if the status of data area 1 is settled when the strobe signal rises.
2033	I/O parity error occurred	3	The parity bit status of system-I/O input only is not an odd parity.	Set the parity bit status so that the number of bits which are ON in the system input only I/O and the parity bits of the I/O parity calculation object are odd. 2. Set the parity parameter of I/O hardware setting to invalid if no parity bit is detected. 3. Check if the status of the command area and data area are settled when the strobe signal rises in the standard mode. 4. Check if the program select signal status is settled when the program start signal rises in the compatible mode.
2034	Internal I/O out of range	2	Attempt was made to read or write in an area other than the internal I/O using the standard I/O read and write commands.	Correct so that I/O read and write objects are in the internal I/O range.
2035	Data area remains undefined	2	The data area is not yet defined by I/O commands.	1. Define the data area properly and then try again. 2. Make sure that the data area is properly defined before the strobe signal is turned on.
203C	CPU overheated	4	The internal temperature inside the CPU has exceeded the predetermined value.	Wait for the internal temperature to decrease.
207B	Cannot move to this position	2	The point read is a singular point.	Set the reading point to a point other than a singular point.
20F1	Semaphore creation error	5	An error has occurred when the controller attempted to create the semaphore.	Turn the controller power off and then on. Retry the operation.

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Code	Message	Level	Description	Remedy
20F2	Semaphore taking error	5	An error has occurred when the controller attempted to get semaphore.	Turn the controller power off and then on. Retry the operation.
2103	Time to change controller backup battery	1	It is time to replace the backup battery in the controller.	Replace the controller backup battery and set the date for the next inspection of the battery.
2106	Backup battery low voltage	4	The voltage level of the backup battery for the memory containing manager files has dropped below the specified level. Therefore, those manager files may be defective. It is impossible to turn the motor on or start programs until any recovery process is followed.	Contact your local Denso Wave representative.
2107	Backup memory failure	4	An error has occurred in the backup memory containing manager files. Therefore, those manager files may be defective. It is impossible to turn the motor on or start programs until any recovery process is followed.	Contact your local Denso Wave representative.
2187	Communication error with TP, MP or OP	4	Communications error between the robot controller and the teach pendant, mini-pendant or operating panel.	Connect the teach pendant, mini-pendant or operating panel to the robot controller correctly. If the error persists, the teach pendant cable is broken or the teach pendant, mini-pendant or operating panel is defective.
21B9	Local variable editing	2	You attempted to carry out any operation not allowed during editing of local variables.	After completion of local variable editing, retry the operation.
21BA	Interference check execution error	4	An error was detected during the execution of an interference check.	Check the interference check setting. Ensure also that the IO port number of the destination is set to general output or internal IO.
21BB	Loading	2	This operation is not available during loading.	Execute this operation after loading is finished.
21BC	Compiling	2	This operation is not available during compiling.	Execute this operation after compiling is finished.
21BD	Program editing	2	This operation is not available during program editing.	Execute this operation after program editing is finished.
21BE	Parameter editing	2	This operation is not available during parameter editing.	Execute this operation after parameter editing is finished.

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Code	Message	Level	Description	Remedy
21BF	Not executable while robot is suspended	2	Variable cannot be moved during robot suspension.	Release the robot suspension status.
21C0	Subtraction error	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C1	Debug exception	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C2	NMI interruption	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C3	Break point	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C4	INTO command overflow	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C5	Boundary check fault	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C6	Illegal operation code	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C7	Device not usable	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C8	Double fault	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21C9	Coprocessor segment over	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21CA	Illegal TSS	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21CB	Illegal segment	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21CC	Stack segment fault	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21CD	General protection exception	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21CE	Page exception	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21CF	(Intel reservation)	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.

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Code	Message	Level	Description	Remedy
21D0	Coprocessor error (overflow)	5	1. Digit overflow occurred in the program. 2. Controller internal error.	1. Reboot the controller and correct the digit overflow. 2. Turn OFF the controller power switch and restart the operation.
21D1	Adjustment check	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21D2	Only signal handler was called	5	Controller internal error.	Turn OFF the controller power switch and restart the operation.
21D3	Error occurred	1	Attempt was made to execute a process that is not allowed when another error occurs.	Clear the current error before executing the process again.
21D4	Cannot operate from TP	1	Attempt was made to execute a process not executable from the teach pendant, mini-pendant or operating panel.	Execute from a usable device (I/O device or personal computer).
21D5	Cannot operate from PC	1	Attempt was made to execute a process not executable from a personal computer.	Execute from a device (I/O device, teach pendant, mini-pendant or operating panel).
21D6	Cannot operate from external I/O	1	Attempt was made to execute a process not executable from the external I/O.	Execute from a usable device (personal computer, teach pendant, mini-pendant or operating panel).
21D7	Select dummy I/O mode	1	Attempt was made to execute a process executable only in the dummy I/O mode.	Select the dummy I/O mode before executing the process again.
21D8	Release dummy I/O mode	1	Attempt was made to execute a process not executable in the dummy I/O mode.	Release the dummy I/O mode before executing the process again.
21D9	Hand cable disconnected	3	The hand cable between the robot controller and robot is disconnected.	Check for hand cable disconnection, contact failure of the connector and cable disconnection.
21DB	Failure to allocate memory	3	An attempt to allocate process memory was made to stop a batch of programs, but the attempt failed.	Turn OFF the controller power switch and restart the operation.
21DC	Internal task stopped	5	The internal process task failed and the stop status activated, therefore, processing was aborted.	Turn OFF the controller power switch and restart the operation.
21DD	Undefined I/O device	2	Attempt was made to operate a device not defined as an I/O device.	Turn OFF the controller power switch and restart the operation.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
21DE	Release machine lock	2	Attempt was made to execute a process not executable in machine lock status.	Release machine lock before executing the process again.
21DF	Activate machine lock	2	Attempt was made to execute a process executable only in machine lock status.	Select machine lock before executing the process again.
21E0	Program is running	2	Attempt was made to execute a process not executable during program running.	Terminate all the programs before executing the process.
21E1	All programs stopped	2	Attempt was made to execute a process executable only during program running.	Run the program before executing the process again after.
21E2	Cannot execute in manual mode	2	Attempt was made to execute a process not executable in the manual mode.	Select a mode other than the manual mode before executing the process again.
21E3	Select manual mode	2	Attempt was made to execute a process executable only in the manual mode.	Select the manual mode before executing the process again.
21E4	Cannot execute in teach check mode	2	Attempt was made to execute a process not executable in the teach check mode.	Select a mode other than the teach check mode before executing the process again.
21E5	Select teach check mode	2	Attempt was made to execute a process executable only in the teach check mode.	Execute again after selecting the teach check mode.
21E6	Cannot execute in automatic mode	2	Attempt was made to execute a process not executable in the automatic mode.	Select a mode other than the automatic mode before executing the process again.
21E7	Select automatic mode	2	Attempt was made to execute a process executable only in the automatic mode.	Select the automatic mode before executing the process again.
21E8	Cannot execute in external mode	2	Attempt was made to execute a process not executable in the external mode.	Select a mode other than the external mode before executing the process again.
21E9	Select external mode	2	Attempt was made to execute a process executable only in the external mode.	Select the external mode before executing the process again.

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Code	Message	Level	Description	Remedy
21EA	CAL has been executed	2	Attempt was made to execute a process executable only before CAL processing.	Turn OFF the power switch and back ON and execute the process before executing CAL.
21EB	Release the deadman switch	2	Attempt was made to execute a process not executable with the deadman switch ON.	Release the deadman switch before executing the process again.
21EC	Press the deadman switch	2	Attempt was made to execute a process executable only with the deadman switch ON.	Press the deadman switch before executing the process again.
21ED	Robot stop OFF	2	Attempt was made to execute a process not executable with the robot stop status OFF.	Turn ON the robot stop status before executing the process again.
21EE	Halt ON	2	Attempt was made to execute a process not executable with the halt I/O input ON.	Turn OFF the halt I/O input before executing the process again.
21EF	Halt OFF	2	Attempt was made to execute a process not executable with the halt I/O input OFF.	Turn ON the halt I/O input before executing the process again.
21F0	Step stop ON	2	Attempt was made to execute a process not executable with the step stop I/O input ON.	Turn OFF the step stop I/O input before executing the process again.
21F1	Step stop OFF	2	Attempt was made to execute a process executable with the step stop I/O input OFF.	Turn ON the step stop I/O input before executing the process again.
21F2	Enable Auto ON	2	Attempt was made to execute a process executable with the automatic enable I/O input ON.	Turn OFF the automatic enable I/O input before executing the process again.
21F3	Enable Auto OFF	2	Attempt was made to execute a process not executable with the automatic enable I/O input OFF.	Turn ON the automatic enable I/O input before executing the process again.
21F4	Undefined I/O command	2	The status of the command area was not defined using the standard mode I/O.	1. Check if the status was defined as an I/O command. 2. When the strobe signal is input, Check if the I/O command area status is secured.
21F5	Same program is running	2	During program execution, Attempt was made to execute the same program again.	Reconsider the process so that the same program does not start during program execution.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
21F6	Can't change speed while program running	2	During program execution, a speed change command was received from the external device. However, it failed.	Change after the motion is finished, because changing the speed from the external device is prohibited during program execution.
21F7	Cannot take arm semaphore	4	1. A task having no arm semaphore tried to execute robot motion-related commands. 2. Attempt was made to take arm semaphore but another task already had the arm semaphore.	1. Take the arm semaphore with the TAKEARM statement, and execute the robot motion related commands. 2. Change the programs so that multiple programs do not attempt to take the arm semaphore at the same time.
21F8	Cannot release arm semaphore	4	Attempt was made to release the arm semaphore although another task has already taken the arm semaphore.	Edit the program so that the task that took the arm semaphore with the TAKEARM statement also releases the arm semaphore.
21F9	Cannot take vision semaphore	4	1. A task having no vision semaphore tried to execute vision related commands. 2. Attempt was made to take the vision semaphore although another task already took the vision semaphore.	1. Execute vision-related commands after taking semaphore using the TAKEVIS statement. 2. Change so that multiple programs do not attempt to take the vision semaphore at the same time.
21FA	Cannot release vision semaphore	4	Attempt was made to release the vision semaphore although another task has already taken the vision semaphore.	Edit the program so that the task that took the vision semaphore with the TAKEVIS statement also releases the vision semaphore.
21FB	Reserved output area writing error	3	An attempt was made to access a write-inhibited system area.	Check the output address.
21FC	Enable Auto signal OFF	2	In the internal and external mode, the external automatic enable signal turned OFF.	Match the select SW and the external automatic enable signal status and then determine the mode.
21FD	Enable Auto signal ON	2	In the manual and teach check mode, the external automatic enable signal turned ON.	Match the select SW and the external automatic enable signal status and then determine the mode.
21FE	Power OFF during compiling	4	The controller power supply turned OFF during compiling.	Compile again or transfer an execution file from WINCAPSII.
220F	I/O device changed	5	The status or configuration of I/O devices has been changed since the last operation. (Example: A new DeviceNet Slave board has been mounted.)	Update the I/O status and configuration settings and then restart the controller.

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Code	Message	Level	Description	Remedy
222E	Communication to restart failed (master)	2	Communication of the DeviceNet master restarted after parameter change, but it failed.	Confirm whether the cable connected to the DeviceNet master board is loosened, and restart communication by rescanning.
2257	Reading failure due to CRC error	5	Reading failed due to abnormal check sum in CRC of the read data.	1 Check to see that the FG (frame ground) terminals of the robot body and controller are grounded. 2 Check to see that there is no noise-generating equipment (welder, etc.) near the robot body and controller. 3 Operate the robot again after turning the controller power off once. 4 If the same error occurs again, the data is destroyed. Manually input the setting data again.
225B	DeviceNet master data is not found	2	The controller power was turned OFF during compilation.	Recompile or transfer an execution file from WINCAPS II.
2280	Maximum connection of USB was exceeded	1	Connecting a USB device to the robot controller has exceeded the maximum number of USB device connection times allowed with the controller power turned on.	To access the USB device, reboot the robot controller and then connect the USB device again.
2281	USB cannot be recognized	1	The robot controller cannot find the USB device since the USB device has been removed without being released.	To access the USB device, reboot the robot controller and then connect the USB device again.
2282	USB cannot be connected at the same time	1	You attempted to connect such a USB device that cannot share the controller with one previously connected.	Do not connect more than one data storage USB device such as a USB FDD to the controller.
2283	USB was detached without release	1	The USB device has been disconnected without being released. The controller cannot access any USB device until you reboot the controller. (You should release the USB device first and then disconnect it.)	To access the USB device, reboot the robot controller and then connect the USB device again.
235A	Power off while receiving data	2	When high-speed transfer setting was valid, the power was turned OFF without saving data during transfer from WINCAPS II to the controller or after transfer ended.	When this error occurred, the execution-format file gets undefined, and deleted. After transfer ended, save the file or edit it with the teach pendant for compilation.
235B	Power OFF during files saving	5	The power was turned OFF during file saving. The program file may be destroyed.	Restart the system and then confirm the contents of the program file. Perform transfer, editing, and compilation as required.
235C	Files saving	2	This operation is invalid because file saving is in progress.	Perform this operation after file saving ends.

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Code	Message	Level	Description	Remedy
23E9	Semaphore error	5	Access to I/O failed.	Turn OFF the controller power switch and restart the operation.
2481	Arm-end position out of allowable range	3	In Continue-start operation the distance between the auto-adjustment position and the present position is out of allowable range.	Increase parameters of arm allowable range of auto position adjustment.
2490	Forbidden area 0 invasion	4	Tool-end invaded forbidden area	Cancel area 0 during motor off and move out of area 0, then make area 0 effective. Release machine-lock when machine-lock occurs.
2491	Forbidden area 1 invasion	4	Tool-end invaded forbidden area	Cancel area 1 during motor off and move out of area 1 ,then make area 1 effective. Release machine-lock when machine-lock occurs.
2492	Forbidden area 2 invasion	4	Tool-end invaded forbidden area	Cancel area 2 during motor off and move out of area 2, then make area 2 effective. Release machine-lock when machine-lock occurs.
2493	Forbidden area 3 invasion	4	Tool-end invaded forbidden area	Cancel area 3 during motor off and move out of area 3, then make area 3 effective. Release machine-lock when machine-lock occurs.
2494	Forbidden area 4 invasion	4	Tool-end invaded forbidden area	Cancel area 4 during motor off and move out of area 4, then make area 4 effective. Release machine-lock when machine-lock occurs.
2495	Forbidden area 5 invasion	4	Tool-end invaded forbidden area	Cancel area 5 during motor off and move out of area 5, then make area 5 effective. Release machine-lock when machine-lock occurs.
2496	Forbidden area 6 invasion	4	Tool-end invaded forbidden area	Cancel area 6 during motor off and move out of area 6, then make area 6 effective. Release machine-lock when machine-lock occurs.
2497	Forbidden area 7 invasion	4	Tool-end invaded forbidden area	Cancel area 7 during motor off and move out of area 7, then make area 7 effective. Release machine-lock when machine-lock occurs.
2498	The arm end enters inhibit area 0 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 0.
2499	The arm end enters inhibit area 1 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 1.
249A	The arm end enters inhibit area 2 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 2.

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Code	Message	Level	Description	Remedy
249B	The arm end enters inhibit area 3 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 3.
249C	The arm end enters inhibit area 4 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 4.
249D	The arm end enters inhibit area 5 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 5.
249E	The arm end enters inhibit area 6 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 6.
249F	The arm end enters inhibit area 7 (DIRECT)	2	In direct teaching mode, the tool end enters the prohibited area.	Move the tool end outside prohibited area 7.
24A0	Time to change robot backup battery	1	It is time to replace the encoder backup battery (robot).	Replace the encoder backup battery (robot).
279C	Can't set when DETECT is valid.	2	Hand I/O interrupt and DETECT are not enabled simultaneously.	Disable the DETECT.
279D	Can't set. (Hand I/O interrupt is valid.)	2	DETECT and Hand I/O interrupt are not enabled simultaneously.	Disable the hand I/O interrupt.
279E	Inconsistent robot stop input	3	No input at one of two robot stop input lines.	Check the wiring of the robot stop circuit.
27A0	Initialized	5	The RAM drive was cleared due to a RAM drive initialization error.	Restart the controller and set each item again.
27A1	Deletion of program/variables completed	5	The ROM drive (programs and variables) was cleared by ROM drive initialization error.	Restart the controller and load programs and variables in the controller again.
27A2	Forbidden operation in FD processing	2	Forbidden operation was executed during FD (floppy disk) processing.	Execute the operation again after FD (floppy disk) process is finished.
27A3	Write-enable setting overlapped	2	Two or more ports are selected from COM2, COM3, COM4 and Ethernet as the read/write port in communication permission setting.	Select only one port from COM2, COM3, COM4, and Ethernet in communication permission setting.

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Code	Message	Level	Description	Remedy
27A4	Illegal character used in file name	2	File name has unusable characters.	Change the file name.
27A5	FD processing failed (internal error)	3	Internal error occurred during FD (floppy disk) processing.	To retry FD processing, turn OFF the controller power switch and restart the operation.
27A6	Not executable due to fatal error	2	Forbidden operation was executed when a serious error (level 5 or higher) occurred.	Turn OFF the controller power switch and restart the operation.
27A7	Initial communication error in TP/OP	4	A communications error occurred in the teach pendant (TP), mini-pendant (MP), or operating panel (OP) when the controller was started.	Turn OFF the power switch of the controller and restart the operation. If the error persists, replace the teach pendant, mini-pendant or operating panel.
27A8	Continue-start error.	3	Continue-start was executed when it was not permitted.	Execute Continue-start only when Continue-start permission signal is ON.
27A9	Continue-start failed.	4	Executed operation was not permitted during Continue-start.	Do not execute such operations during Continue-start.
27AA	Program reset signal ON.	2	Program reset signal is ON.	Turn off the program reset signal and then start again. A program reset signal being on during Continue Start triggers this error. Before Continue Start, turn off the program reset signal.
27AB	Failed in auto position adjustment.	4	Failed in auto position adjustment at Continue-start.	Robot moved to the position unrecoverable by auto position adjustment.
27AC	Sending system data	2	The SYSTEM data is being sent.	Wait until the transmission of the SYSTEM data is completed.
27AD	System Update completed.	5	System Update is completed.	Reboot the controller.
27AE	System Update failed.	5	Failed in System Update.	Retry System Update.(The controller does not restart if power is shut down before System Update completion.)
27AF	System Update not permitted.	2	System Update was executed from WINCAPSII when not permitted by the controller.	Permit System Update from WINCAPSII with the controller.
27B0	Robot type undefined.	2	Robot type is undefined.	Robot type is not defined. Set the Robot type with the teach pendant or transfer the saved data. Robot type is set on the data transfer. Then reboot the controller.
27B1	Robot type inconsistent	2	Robot type is not consistent.	Robot type saved in FD and the Robot type of the controller is inconsistent. Set the Robot type with the teach pendant and then reboot the controller.
27B2	Flash area allocation error.	2	Could not allocate Flash area to save control logs.	Cannot allocate Flash area to save control logs. Collect control log data with WINCAPSII before power shut down.

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Code	Message	Level	Description	Remedy
27B9	Error storage pointer out of range	3	The loading pointer of the error loading function is out of the specified range. This occurs when the I type variable at the head of the error loading function buffer is rewritten.	Do not rewrite the I type variable of the error loading function buffer. (When an error is loaded after occurrence of this error, however, the pointer is automatically set to the beginning of the buffer.)
27BA	Error storage function parameter error	3	The I type variable buffer for storing errors is wrongly set or the pointer value has been rewritten.	Check the buffer settings. If the settings are correct, check if the pointer value has been rewritten or not.
27BB	Error storage function is not effective	3	The attempted operation needs to enable the function for storing errors in the I type variable buffer.	Enable the function or stop the operation.
27BC	Not setting argument	2	You attempted to run a program involving arguments when the argument setting window could not be opened.	Restart the controller, check that the argument setting window can be opened, and then retry the operation.
27BD	Controller initialization is unusual	5	In the powering-on sequence of the controller, initialization has failed.	Restart the controller.
27BE	Can't start motion from here.	2	In easy teaching, you attempted to run a command not allowed in the current robot status.	Before starting robot motion under arc interpolation control and executing DEPART command, move the robot arm to the destination position defined in the immediately preceding motion command.
27BF	Updating system	2	Updating the system.	Wait until updating is completed. Do not turn the controller power off during updating.
27C0	Starting from the step upon power interruption by [Conti-start] upon power recovery	1	The program is normally restored to the state upon power interruption.	Operation restarts from the state upon power interruption by [Conti-start].
27C1	Power recovery abnormality, abnormal program count	3	More than 32 program steps were running upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27C2	Power recovery abnormality, data error (memory over)	3	Failure in backup of the program information upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27C3	Power recovery abnormality, data error (process information)	3	Failure in backup of the program information upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27C4	Power recovery abnormality, data error (status information)	3	Failure in backup of the program information upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.

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Code	Message	Level	Description	Remedy
27C5	Power recovery abnormality, data error (continue information)	3	Failure in backup of the program information upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27C6	Power recovery abnormality, data error (servo information)	3	Failure in backup of the program information upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27C7	Power recovery abnormality, program starting failure	3	Failed in restoration to the state upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27C8	Power recovery abnormality, visual instruction executed upon power interruption	3	Power interruption occurred during execution of a visual instruction.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27C9	power recovery abnormality, INPUT or LINE INPUT executed upon power interruption	3	Power interruption occurred during data receiving.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27CA	Power recovery abnormality, semaphore in use upon power interruption	3	Power interruption occurred during execution of a program using semaphore.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27CB	Power recovery abnormality, robot stop instructed	2	Robot stop instruction is ON upon returning to the automatic mode after power recovery.	Reset the robot stop instruction. Power recovery processing starts after resetting.
27CC	Power recovery abnormality, failed in data saving upon power interruption	3	Failed in backup of the program information upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27CD	Power recovery completed, restored to the state upon power interruption	1	The program is restored normally to the state upon power interruption.	Operation starts by [Conti-start] from the state upon power interruption.
27CF	power recovery abnormality, memory reading error	3	Failed in restoration of the program state upon power interruption.	Power recovery failed. Since the program is executed from the start, restart operation after fully checking no influence on the equipment.
27D0	Semaphore release error	5	An error has occurred when the controller attempted to release the semaphore.	Turn the controller power off and then on. Retry the operation.
27D3	Cannot take J1 semaphore	4	(1) A task, that had gotten no arm group containing J1, attempted to execute the J1 motion related command. (2) A task attempted to get an arm group containing J1, but any other task had already gotten it.	(1) Get an arm group containing J1 with the TAKEARM statement, and then execute J1 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J1 at the same time.

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Code	Message	Level	Description	Remedy
27D4	Cannot take J2 semaphore	4	(1) A task, that had gotten no arm group containing J2, attempted to execute the J2 motion related command. (2) A task attempted to get an arm group containing J2, but any other task had already gotten it.	(1) Get an arm group containing J2 with the TAKEARM statement, and then execute J2 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J2 at the same time.
27D5	Cannot take J3 semaphore	4	(1) A task, that had gotten no arm group containing J3, attempted to execute the J3 motion related command. (2) A task attempted to get an arm group containing J3, but any other task had already gotten it.	(1) Get an arm group containing J3 with the TAKEARM statement, and then execute J3 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J3 at the same time.
27D6	Cannot take J4 semaphore	4	(1) A task, that had gotten no arm group containing J4, attempted to execute the J4 motion related command. (2) A task attempted to get an arm group containing J4, but any other task had already gotten it.	(1) Get an arm group containing J4 with the TAKEARM statement, and then execute J4 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J4 at the same time.
27D7	Cannot take J5 semaphore	4	(1) A task, that had gotten no arm group containing J5, attempted to execute the J5 motion related command. (2) A task attempted to get an arm group containing J5, but any other task had already gotten it.	(1) Get an arm group containing J5 with the TAKEARM statement, and then execute J5 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J5 at the same time.
27D8	Cannot take J6 semaphore	4	(1) A task, that had gotten no arm group containing J6, attempted to execute the J6 motion related command. (2) A task attempted to get an arm group containing J6, but any other task had already gotten it.	(1) Get an arm group containing J6 with the TAKEARM statement, and then execute J6 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J6 at the same time.
27D9	Cannot take J7 semaphore	4	(1) A task, that had gotten no arm group containing J7, attempted to execute the J7 motion related command. (2) A task attempted to get an arm group containing J7, but any other task had already gotten it.	(1) Get an arm group containing J7 with the TAKEARM statement, and then execute J7 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J7 at the same time.

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Code	Message	Level	Description	Remedy
27DA	Cannot take J8 semaphore	4	(1) A task, that had gotten no arm group containing J8, attempted to execute the J8 motion related command. (2) A task attempted to get an arm group containing J8, but any other task had already gotten it.	(1) Get an arm group containing J8 with the TAKEARM statement, and then execute J8 motion related command. (2) Correct the program so that more than one program will not attempt to get an arm group containing J8 at the same time.
27E3	Not executable while joint is suspended	2	If suspended, the joint cannot be moved by variables.	Release the suspension of the joint.
27F3	The number of variables outside range	3	The number of variables for getting the current position has exceeded the declared ones at the execution time of DETECT command.	Increase the number of global variables concerned or specify smaller variable number in the DETECT command.
27F4	Largest acquisition quantity excess	3	Exceeded the maximum number that can be gotten at the execution time of DETECT command.	(1) Increase the maximum number to be specified in DETECT command. (2) Check that the FG wires of the robot unit and controller are grounded. (3) Check that there is no noise source (e.g., welding machine) near the robot unit or controller.
27F5	Vision operating	2	You attempted to perform any operation that is not allowed when the vision board is in operation.	Do not perform such operation when the vision board is in operation.
2AF1	Encoder reference position error	3	1. Robot type is not consistent with the robot controller. 2. The encoder is normal, but the robot arm (2nd axis or 3rd axis) has been moved after the controller was turned off. 3. The motor was replaced. 4. Encoder reference error occurred in the 2nd axis or 3rd axis.	To clear the error caused by the reason of 1 or 2, send the arm data (including CALSET value) for the corresponding robot to the controller using WINCAPS II arm manager. To clear the error caused by the reason of 3, perform CALSET for the problem axis. Check the positional error in the 2nd axis or 3rd axis, and then perform CALSET for the related axis. Note: Though this error can be cleared by transmitting the arm data contained CALSET value to the controller, the positional error may be occurred. Therefore, check the positional error in the 2nd axis or 3rd axis, and then perform CALSET for the related axis.
2AF2	During a software limit check release	2	When the software motion limits are temporarily invalid, you attempted to move joints using variables or get the current arm position into variables.	Make the software motion limits valid and then retry the operation.
2AF4	Cooling fan error	2	The controller detects the built-in cooling fan being out of order.	First remove the error factor, move the robot arm to a safe area, and then replace the cooling fan.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
330B	Project directory not found	5	A failure occurred in saved memory area of the program.	After turning OFF the controller power, turn it ON again and send the data (WINCAPSII or FD) again.
330C	Cannot create project file	3	Memory capacity required for compiling was not sufficient or a failure occurred in memory area for storing programs.	Delete files not required and reduce the number of programs. If the error persists carry out the same remedy as 330B.
330D	Cannot open program file	3	A failure occurred in saved memory area of the program.	After turning OFF the controller power, turn it ON again and send data (WINCAPSII or FD) again.
330E	Cannot open compile condition set file	3	A failure occurred in saved memory area of the program.	After turning OFF the controller power, turn it ON again and send data (WINCAPSII or FD) again.
330F	Cannot create compile log file	3	Memory capacity required for compiling was not sufficient or a failure occurred in memory area for storing programs.	Delete unnecessary files and reduce the number of programs. If the error persists carry out the same remedy as 330B.
331A	Project file is broken	3	Memory capacity required for compiling was not sufficient or a failure occurred in memory area for storing programs.	After turning OFF the controller power, turn it ON again and send data (WINCAPSII or FD) again.
331B	Compile error	3	An error occurred in compiling.	Check the compile log and correct the position at which the error occurred.
331C	Disk capacity isn't enough for compiling	3	Memory capacity required for compiling was not sufficient.	Delete unnecessary files and recompile. If the error persists, delete files and compile with WINCAPSII. Then transmit it.
331D	Link error	3	An error occurred in linking.	Check the compile log and correct the position at which the error occurred.
331E	Cannot find PAC file to be compiled	2	Compiling was executed without PAC file of compiling object.	Create a PAC file or transmit the PAC file from WINCAPSII. Then change the setting SW to Use and execute compiling.
331F	More than 256 PAC files to be compiled	2	Attempt was made to compile more than 256 PAC files.	Reduce the number of compiling object PAC files to 256 or less.
3A00	*** Aborts compile: error No. exceeds 100 ***	3	Compiling is discontinued because the number of errors exceeded 100.	Recompile after correcting the error.
3A01	Cannot find related files.	3	Could not find files for the date-check.	Check if program source files and include- files are not deleted.
3A02	Unknown file	3	Unknown file name was designated.	Compile information file of PAC manager output may be destroyed. Check the file system error condition.
3A03	File cannot open.	3	Impossible to open the file because of several reasons.	Check if the file is present or is in accessible condition.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
3B00	Not SELECT statement	3	The block command that corresponds to the END SELECT statement is not SELECT CASE.	Describe the corresponding SELECT CASE statement.
3B01	Not IF or ELSEIF	3	The block command corresponding to the END IF statement is not the IF statement or the ELSEIF statement.	Describe the corresponding IF statement or ELSEIF statement.
3B02	Repeat/conditional statement not closed	3	Block is not closed because the beginning and end of the repeat statement or the conditional statement do not correspond.	Check the correspondence of the repeat statement or the conditional statement.
3B03	Mismatch between IF and END IF	3	IF statement corresponding to END IF statement was not found.	Describe the corresponding IF statement or ELSEIF statement.
3B04	Mismatch between SELECT and ENDSELECT	3	SELECT CASE corresponding to END SELECT was not found.	Describe the corresponding SELECT CASE statement.
3B05	CASE statement not found	3	Although there is no CASE, CASE ELSE is described.	Be sure to describe at least one CASE statement if a CASE ELSE statement is used.
3B06	Previous statement not including SELECT	3	The statement before the first CASE is not a SELECT statement.	Before the first CASE statement, be sure to make the SELECT CASE statement.
3B07	Mismatch between SELECT and ENDSELECT	3	The SELECT CASE statement corresponding to the END SELECT was not found.	Describe the corresponding SELECT CASE statement.
3B08	Wrong loop variable	3	A variable other than a numeric value was designated as the loop variable (FOR statement).	Set the loop variable designated with the FOR statement to a numeric variable.
3B09	Mismatch between FOR and NEXT	3	The FOR statement corresponding to the NEXT statement was not found.	Describe the corresponding FOR statement.
3B0A	Wrong loop variable	3	A local variable other than a numeric value was designated as the loop variable (NEXT statement).	Set the loop variable designated with the NEXT statement to a numeric variable.
3B0B	Wrong loop variable	3	A global variable other than a numeric value was designated as the loop variable (NEXT statement).	Set the loop variable designated with the NEXT statement as a numeric variable.

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Code	Message	Level	Description	Remedy
3B0C	Mismatch between DO and LOOP	3	The DO statement corresponding to the LOOP statement was not found.	Describe the corresponding DO statement.
3B0D	Mismatch between REPEAT and UNTIL	3	The REPEAT statement corresponding to the UNTIL statement was not found.	Describe the corresponding REPEAT statement.
3B0E	Mismatch between WHILE and WEND	3	The WHILE statement corresponding to the WEND statement was not found.	Describe the corresponding WHILE statement.
3B0F	Not positional data	3	Expected data was not pose type (types P, J and T).	Specify the pose type data.
3B10	EXIT DO is not between DO and LOOP	3	EXIT DO was described out of DO ~ LOOP.	Check the description position of the EXIT DO statement.
3B11	EXIT FOR is not between FOR and NEXT	3	EXIT FOR was described out of FOR ~ NEXT.	Check the description position of the EXIT FOR statement.
3B12	Type not usable for SELECT CASE	3	Type not usable for condition of SELECT CASE was found.	Check the designated type.
3B13	Type J data	3	Although the joint type was expected another data type was designated.	Describe joint type data.
3B16	Not type J data	3	Although the joint type was expected, another data type was designated.	Describe joint type data.
3B17	Not type V data	3	Although the vector type was expected, another data type was designated.	Describe Vector type data.
3B18	Not type P data	3	Although the position type was expected, another data type was designated.	Describe position type data.
3B19	Not type T data	3	Although the homogeneous transformation type was expected, another data type was designated.	Describe homogeneous transformation type data.
3B1A	Type V data	3	Although the vector type was expected, another data type was designated.	Describe vector type data.
3B1B	Not type I data	3	Although the integer type was expected, another data type was designated.	Describe integer type data.

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Code	Message	Level	Description	Remedy
3B1C	Not type F data	3	Although the single precision real type was expected, another data type was designated.	Describe data of single precision real type.
3B1E	Type T data	3	Although the homogeneous transformation type was expected, another data type was designated.	Describe homogeneous transformation type data.
3B21	Wrong name	3	Improper name designated as program name.	Correct the name.
3B22	Wrong interpolation method	3	Interpolation method was ignored or the designation was wrong.	Designate correct interpolation method.
3B23	Not type D data	3	Although the double precision real type was expected, another data type was designated.	Describe data of the double precision real type.
3B25	Not type S data	3	Although the character string type was expected, another data type was designated.	Describe data of the character string.
3B38	Wrong operator	3	An unexpected operator appeared.	Check the operators.
3B39	Type not usable for condition statement	3	Data type not usable for comparison with a conditional statement was used.	Check the described data type.
3B3A	Wrong relational operator	3	An unexpected relational operator appeared.	Check the relational operator.
3B3B	Not an I/O variable	3	Undefined name used as an I/O variable.	Check the type of the variable.
3B3C	Wrong subscript No. in array variable	3	Array subscript number was different from the dimension number when it was defined.	Check the designated number of dimensions.
3B3D	Subscript value out of permissible range	3	Subscript of <Error in execution> array exceeded the defined range.	Check the value of the variable used as a subscript.
3B3E	Value out of permissible range	3	A value designated as an <Error in execution> argument exceeded the permissible range.	Check the value of the variable used as an argument.
3B42	Wrong sign	3	The sign is wrong.	Remove the sign.

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Code	Message	Level	Description	Remedy
3B43	Wrong number of type P variable elements	3	Position type variable was designated. However, the number of elements exceeded that of the position type variable.	Check the number of elements.
3B44	Wrong number of type J variable elements	3	Joint type variable was designated. However, the number of elements exceeded that of the joint type variable.	Check the number of elements.
3B47	Wrong reference	3	A variable not defined as an array was referred.	Check the definition of variables.
3B48	Wrong number of type V variable elements	3	Vector type variable was designated. However, the number of elements exceeded that of the vector type variable.	Check the number of elements.
3B49	Wrong number of type T variable elements	3	Homogeneous transformation type variable was designated. However, the number of elements exceeded that of the homogeneous transformation type variable.	Check the number of elements.
3B4E	Wrong command format	3	Described command and expression did not conform to the format.	Check the described contents.
3BF9	Too many arguments for macro function	3	The number of macro function arguments exceeded 32.	Check the number of arguments for macro declaration.
3BFA	Too many uses of #define	3	#define exceeded 2048 (the maximum number allowable for definition).	The #define cannot define more than this. Delete unnecessary definitions with #undef if required.
3BFB	Identifier not found	3	Macro name not defined.	Describe the macro name after #define.
3BFC	Definition contents not found	3	Macro extension contents not defined.	Describe the contents after the macro name in macro name definition.
3BFD	Wrong macro function	3	Macro function defined wrongly.	Check the error and correct it.
3BFE	Use of kana or kanji	3	2-byte characters and half size katakana character were found in other than comment or character string.	Check if 2-byte code (kanji) and half size katakana are present.
3BFF	Error	3	Successive message was a character string defined with #error.	Delete if required.

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Code	Message	Level	Description	Remedy
3C00	Wrong usage of <> or “”.	3	Double quotations or parenthesis at the head and the tail of the file name in the #include statement did not correctly correspond.	Check if the correspondence is correct.
3C01	Wrong argument No.	3	Macro argument was different from the defined number.	Check the number of defined arguments.
3C02	File cannot open	3	A file designated with the #include statement could not be opened.	Check if the designated file is present.
3C03	Unusable statement	3	This statement is currently a reserved word.	Delete the statement or set it to a comment.
3C04	Not positional data	3	Designated type was not the pose type.	Describe data of the pose type.
3C05	Used in wrong position	3	Although the description position was limited in the program, it was not correctly described.	Check the described position and correct it.
3C09	Type P data	3	Although the position type was expected, another data type was designated.	Describe data of the position type.
3C19	Pass start displacement at relay	3	Path start displacement cannot be described at a relay point of the arc interpolation.	Remove the path start displacement at the relay point.
3C1A	TIME or SPEED option	3	TIME and SPEED options were designated together.	Delete one of the two.
3C1C	Same option defined twice	3	Attempt was made to use multiple options with the same meaning.	Use only one.
3C1D	Cannot specify negative value	3	A negative value cannot be described for precision designation.	Describe the precision designation with a positive value.
3C1E	No precision specified	3	Precision designation followed by @ was not present or not correct.	Describe the precision designation.
3C1F	Improper positioning accuracy	3	Designation of positioning accuracy was wrong.	Check the error and correct it.
3C21	Wrong designation of rotation plane	3	Designation of a rotation plane was wrong.	Check the designation of the rotation plane and correct it.

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Code	Message	Level	Description	Remedy
3C24	Wrong option	3	Designated option has an error.	Check the option and correct it.
3C2A	Undefined name	3	Attempt was made to refer to an undefined name.	Check the name and define it.
3C2C	Program not found	3	Valid program line was not present.	Describe the program.
3C2D	Double definition	3	Attempt was made to define the same name.	Check the name and correct it so that it does not overlap.
3C2E	Wrong subscript	3	In the PROGRAM statement, a subscript was not described for a program array argument.	Describe the number of subscripts for when arrays are to be handled.
3C2F	Wrong subscript in No. of array variable	3	In the PROGRAM statement, the described argument of the program array exceeded the dimension number range.	Define the number of array dimension from 1 to 3.
3C34	Too many arguments in a program	3	The number of program arguments exceeded 32.	Check the number of arguments and correct so that it does not exceed the upper limit.
3C35	No type name after AS	3	Type name followed by AS was not present.	Describe the type name.
3C36	Improper program name	3	The name was not accepted as a program name.	Check the program name.
3C37	Improper file name	3	The file name was not accepted as a program name.	Change the file name or use the PROGRAM statement to define the program name.
3C38	Program name is too long	3	The number of program characters exceeded 64.	Define the program name so that it does not exceed 64 characters.
3C39	Program PROn includes argument	3	An argument was described in a program that did not have an argument.	Arguments cannot be added to a program PRO<Numeral>.
3C3A	Plural program names are defined	3	Attempt was made to define multiple program names.	Check the name and correct it so that it does not overlap.
3C3B	Double definition	3	Attempt was made to define the same name.	Check the name and correct it so that it does not overlap.
3C3D	Wrong argument	3	In CALL statement, an argument was described in a program that did not have an argument.	Arguments cannot be added to a program PRO<Numeral>.
3C48	Plural cycle options are defined	3	Multiple cycle options were designated in the RUN statement.	Check the option and correct it.

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Code	Message	Level	Description	Remedy
3C49	Plural priority options are defined	3	Multiple priority options were designated in the RUN statement.	Check the option and correct it.
3C4A	Wrong option	3	An option in the RUN statement has an error.	Check the option and correct it.
3C4B	Wrong argument	3	In the RUN statement, an argument was described in a program that did not have an argument.	Arguments cannot be added to a program PRO<Numeral>.
3C51	Unsupported command	3	The command is currently not supported.	Delete this or set it to a comment.
3C53	Wrong use of command or function	3	There is an error in description of DEFEND.	Check the usage of the DEFEND statement and correct it.
3C54	Label name not defined	3	Attempt was made to refer to an undefined label.	Check the label name and correct it.
3C55	No quotation mark at the string end	3	The defined character string did not end in double quotations.	Add the double quotation at the end of the character string.
3C56	Value exceeds permissible range	3	The value exceeds the range that the PAC can handle.	Check the available value range and correct the value.
3C5A	Type V data	3	Although the vector type was expected, another data type was designated.	Describe data of the vector type.
3C5B	Type T data	3	Although the homogeneous transformation type was expected, another data type was designated.	Describe data of the homogeneous transformation type.
3C5C	Function	3	Function was specified where such command is not allowed.	Functions cannot be used.
3C5F	Circuit No.	3	Circuit number was ignored.	Check the circuit number and describe it.
3C63	Unusable function	3	The function is currently not usable.	Delete this or set this to a comment.
3C64	Function w/o argument has parentheses	3	An argument was described for a function without arguments.	Check the function specification and delete the arguments.
3C65	Argument is omitted	3	The specified function does not include an argument that cannot be omitted.	Describe the function without omitting the arguments.

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Code	Message	Level	Description	Remedy
3C66	Argument is omitted	3	The specified function does not include an argument that cannot be omitted.	Describe the function without omitting the arguments.
3C68	Wrong number of arguments	3	The designated function did not meet the number of required arguments.	Check the number of arguments and correct it.
3C69	Function without any argument	3	An argument was not described in the function with an argument.	Check the function specification and describe the argument.
3C6A	User function not defined	3	Designated user function was not defined.	Check the function definition.
3C6B	Option for automatic line numbering	3	Although the “automatic line number” option was valid, the line number was described.	Check the program specification and correct the program.
3C6D	Wrong label name	3	A name not available for use (such as reserved word) was referred to as a label.	Check the label name.
3C6E	Wrong subscript No. of array variables	3	A position where the position type or vector type should have been designated had a description of variables with numbers of another type.	Describe data of the position type or vector type.
3C6F	Wrong subscript No. of array variables	3	The value described as an array subscript was not an integer.	Describe the array subscript with an integer.
3C70	Wrong subscript No. of array variables	3	Designated array dimension number and the subscript number were different.	Describe the array dimension number from 1 to 3.
3C71	Subscript of array out of range	3	Shown out of the range available to describe as a subscript of the array, when the array variable subscript was designated with constants.	Check the upper limit value for the subscript and correct it.
3C7D	Wrong postposition found	3	Different type postposition was described.	Check if there is a contradiction in the type and correct it.
3CA2	Wrong label definition	3	A name not available for use (such as reserved words) was defined as a label.	Check if a reserved word is not used.
3CA3	Too long character string	3	Character string is described exceeding 247 characters.	Correct the character string within 247 characters.

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Code	Message	Level	Description	Remedy
3CA4	More than 255 characters in a line	3	The number of characters exceeded 255, the number of characters available in a line of PAC language.	Correct so that the number of digits in a line is 255 or less.
3CA5	Table underflow	3	Attempt was made to read data of a number higher than registered from the corresponding process table.	Checks if the head and end of the block is a conditional branch pair such as an IF...THEN...ENDIF statement or a repeat command such as a FOR...NEXT statement.
3CA6	Table size over	3	Data registered in the corresponding process table exceeded the total number.	Change the table size by selecting “Compile” tab in “Set”.
3CA7	Error line No.	3	Multiple line numbers were present.	Check if the line numbers overlap.
3CA8	Line No. not defined	3	Designated line number was not defined.	Check if the designated line number is correct and if there is no line to designate then create it.
3CA9	Related file not found	3	Object file could not be found for date inspection.	Check if the program source file or include file is not deleted.
3CAA	loadModule	3	Reading of <For HOST> child process failed.	OS memory may be lacking. Check the OS status.
3CAB	symFindByName	3	The name for <For HOST> was not found.	There is a possibility that an execution file of the application was deleted or the status of the OS has changed.
3CAC	Unknown file	3	Unknown file name was designated.	The compile information file (output by PAC manager) may be broken. Check if the file system has an error.
3CAD	File cannot open	3	File cannot be opened.	Check if the file is present, or whether the status does not allow access to files.
3CAE	Wrong option	3	Wrong option when program was started.	The compile information file (output by PAC manager) may be broken. Check if the file system has an error.
3CB1	Undefined name	3	Designated name not yet defined.	Check the name and correct it.
3CB2	Type mismatch	3	Designated variable or constant type is wrong.	Check the designated data type and correct it.
3CB4	Too long name	3	An identifier or name was described using more than 64 characters.	Correct so that it is within 64 characters.
3CB5	Source file cannot open	3	Source input file could not be opened.	Check if the file is present, or whether the status does not allow access to files.
3CB6	Output object file cannot open	3	Object output file could not be opened.	Check if the disk capacity is full and whether file access is available.

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Code	Message	Level	Description	Remedy
3CB7	Variable and/or constant types not match	3	Specified variable or constant types are incorrect.	Check the specified data type and correct it.
3CB8	Improper use of command or function	3	The use of an instruction or a function is incorrect.	Check the format in the PROGRAMMER'S MANUAL and correct it.
3CB9	Same program name is present	3	More than one program having the same name is defined.	Correct the program name so that the name is not used more than once.
3CBA	Double definition	3	More than one definition with the same name is defined.	Correct the definition name so that the name is not used more than once.
3CBB	Wrong command format	3	Syntax error.	Check the syntax and correct it.
3CBC	Program too large to be compiled	3	Compiling aborted because the buffer to output codes is full.	Reduce the size of one program by dividing the program into multiple programs.
3CBD	Too many nests	3	Nesting of included files exceeds 8 nests.	Correct the number of nests to 8 nests or less.
3CBF	Improper function name	3	Improper name of a function is specified.	Correct the user function so that characters followed by FN are always alphabet letters.
3CC0	Invalid statement	2	The compiler setting caused the statement to become meaningless.	To make the statement valid, change the compiler setting with PROJECT SETTING.
3CC2	Error occurred during error processing	3	While processing errors <Error in execution> another error occurred.	Check the cause of the error and correct the program.
3CC3	Improper extension in #include statement	3	The extension of the specified include file is one that is not permitted.	Include files are limited to files with the extensions *.PAC or *.H, check the corresponding file extensions are correct.
3CC4	RESUME is in error processing routine	3	RESUME statement was executed with a normal process of <Error in execution>.	The RESUME statement is not present except for the error process or the control errors in processing due to branch commands other than the ON ERROR GOTO statement.
3D80	IC_DUMP is aborted	3	Processing aborted because an error occurred while creating the list file.	Check that there is sufficient free space on the disk and that the file is accessible.
3D81	Option error	3	Incorrect option at the start-up.	Compile information file of PAC manager output may be destroyed. Check the file system error condition.
3D82	Source file cannot open	3	Impossible to open the source input file because of several reasons.	Check if the file is present and available to access.

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Code	Message	Level	Description	Remedy
3D83	Output object file cannot open	3	Impossible to open the output object file because of several reasons.	Check if the disk capacity is not full and the file is available to access.
3E00	Option error	3	Incorrect option at the start-up.	Compile information file of PAC manager output may be destroyed. Check the file system error condition.
3F01	File cannot open	3	Impossible to open the file because the file is not found or an error occurred.	Check if the file is present and that the file is available to access.
3F02	File writing error	3	An error occurred in writing files.	Check that there is sufficient free space on the disk and that the file is accessible.
3F04	Memory cannot be allocated	3	Working memory for the linker was not allocated normally.	Increase the available memory by changing the OS setting.
3F05	Table overflow	3	The table size exceeded the one used in the link.	Change the size of the corresponding table in the tab menu by clicking SETTING and then MAKE.
3F06	Too many libraries	3	Too many link libraries in the program.	Reduce the number of link libraries.
3F07	Too many objects	3	Too many link objects in the program.	Reduce the number of link libraries.
3F08	Option error	3	Incorrect option at the start-up.	Compile information file of PAC manager output may be destroyed. Check the file system error condition.
3F09	Same program name is present	3	More than one program having the same name is defined.	Correct the program name avoiding duplication.
3F0A	Undefined name	3	Designated name is not defined.	Check the name and correct properly.
3F0B	Type mismatch	3	Designated variable or constant type is wrong.	Check the designated data type and correct properly.
42A1	Vision board not mounted	2	1. The vision board is not mounted. 2. Cannot recognize vision board.	1. Mount the vision board. 2. Delete the vision only instructions from the program. 3. If the vision board is mounted, initialize the vision board from the teaching board. 4. Turn OFF the power switch ON the controller and restart the operation.
42A2	Vision parameter 1 out of range	3	Parameter 1 of the vision command is out of range.	Correct the corresponding parameters.
42A3	Vision parameter 2 out of range	3	Parameter 2 of the vision command is out of range.	Correct the corresponding parameters.

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Code	Message	Level	Description	Remedy
42A4	Vision parameter 3 out of range	3	Parameter 3 of the vision command is out of range.	Correct the corresponding parameters.
42A5	Vision parameter 4 out of range	3	Parameter 4 of the vision command is out of range.	Correct the corresponding parameters.
42A6	Vision parameter 5 out of range	3	Parameter 5 of the vision command is out of range.	Correct the corresponding parameters.
42A7	Vision parameter 6 out of range	3	Parameter 6 of the vision command is out of range.	Correct the corresponding parameters.
42A8	Vision parameter 7 out of range	3	Parameter 7 of the vision command is out of range.	Correct the corresponding parameters.
42A9	Vision parameter 8 out of range	3	Parameter 8 of the vision command is out of range.	Correct the corresponding parameters.
42AA	Vision parameter 9 out of range	3	Parameter 9 of the vision command is out of range.	Correct the corresponding parameters.
42AB	Vision parameter 10 out of range	3	Parameter 10 of the vision command is out of range.	Correct the corresponding parameters.
42AC	Vision parameter 11 out of range	3	Parameter 11 of the vision command is out of range.	Correct the corresponding parameters.
42AD	Vision parameter 12 out of range	3	Parameter 12 of the vision command is out of range.	Correct the corresponding parameters.
42AE	Vision parameter 13 out of range	3	Parameter 13 of the vision command is out of range.	Correct the corresponding parameters.
42AF	Vision parameter 14 out of range	3	Parameter 14 of the vision command is out of range.	Correct the corresponding parameters.
42B0	Transmission command failure	3	A failure occurred in the communication protocol with the vision board (sending).	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42B1	Reception command failure	3	A failure occurred in the communication protocol with the vision board (receiving).	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42B2	Camera input error	3	1. The camera is not connected. 2. A failure was detected with the camera or the camera cable.	1. Connect the camera. 2. Initialize the vision board from the teaching board. 3. Reboot the camera and the controller power.

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Code	Message	Level	Description	Remedy
42B3	Vision undefined command	3	1. Undefined instruction for the vision board 2. Communication error occurred.	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42B4	No response from vision board	3	A vision board communication error.	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42B5	Vision board failure	3	A vision board communication error.	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42B6	Window shape error	3	The window setting is out of range.	Correct the corresponding window settings.
42B7	Vision board undefined	3	An error occurred on the vision board.	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42B8	Vision receiving timeout	3	Communication timeout occurred (receiving).	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42B9	Vision sending timeout	3	Communication timeout occurred (sending).	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42BA	Vision communication protocol error	3	1. An error occurred in communication. 2. This occurs when vision the instructions are executed after a communication timeout occurs.	1. Initialize the vision board from the teaching board. 2. Turn OFF the power switch ON the controller and restart the operation.
42BB	Error in vision command execution	3	The vision commands are not executable with the set parameters.	Correct the corresponding vision command (parameter) settings.
52D0	Main memory failure	5	The controller detected a failure by R/W check on the CPU built-in memory in the teach pendant.	Replace the teach pendant.
52D1	Buzzer failure	2	The controller detected a failure by R/W check on the buzzer I/O in the teach pendant.	Replace the teach pendant or its cable.
52D2	Backlight failure	3	The controller detected a failure by R/W check on the backlight I/O in the teach pendant.	If the backlight does not properly illuminate, replace the teach pendant.

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Code	Message	Level	Description	Remedy
52D3	Motor LED failure	2	The controller detected a failure by R/W check on the motor LED I/O in the teach pendant.	If the motor LED does not properly illuminate, replace the teach pendant.
52D4	Machine lock LED failure	2	The controller detected a failure by R/W check on the machine lock LED I/O in the teach pendant.	If the machine lock LED does not properly illuminate, replace the teach pendant.
52D5	GIVF failure	3	The controller checks if GVIF LOS in the teach pendant is set at Low (0). (L: digital transmission signal being sent, H: digital transmission signal stopped)	If the image is improperly displayed, replace the teach pendant or the cable.
52D6	Touch panel failure 1	2	The controller outputs 00 to the scan signal line (bit 2-4 of port E) of the analog touch panel and checks the reading through the same port.	Replace the teach pendant.
52D7	Touch panel failure 2	2	The controller outputs 01 to the scan signal line (bit 2-4 of port E) of the analog touch panel and checks the reading through the same port.	Replace the teach pendant.
52D8	Touch panel failure 3	2	The controller outputs 010 to the scan signal line (bit 2-4 of port E) of the analog touch panel and checks the reading through the same port.	Replace the teach pendant.
52D9	Touch panel failure 4	2	The controller outputs 100 to the scan signal line (bit 2-4 of port E) of the analog touch panel and checks the reading through the same port.	Replace the teach pendant.
52DA	Dedicated key failure 1	3	The controller outputs 0001 to the SW matrix scan signal line (bit 6-9 of port E) and checks the reading through the same port. It does not check the return line.	Replace the teach pendant.
52DB	Dedicated key failure 2	3	The controller outputs 0010 to the SW matrix scan signal line (bit 6-9 of port E) and checks the reading through the same port. It does not check the return line.	Replace the teach pendant.
52DC	Dedicated key failure 3	3	The controller outputs 0100 to the SW matrix scan signal line (bit 6-9 of port E) and checks the reading through the same port. It does not check the return line.	Replace the teach pendant.

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Code	Message	Level	Description	Remedy
52DD	Dedicated key failure 4	3	The controller outputs 1000 to the SW matrix scan signal line (bit 6-9 of port E) and checks the reading through the same port. It does not check the return line.	Replace the teach pendant.
52DE	Dedicated key failure 5	3	The controller outputs 0000 to the SW matrix scan signal line (bit 6-9 of port E) and checks the reading through the port. It does not check the return line.	Replace the teach pendant.
52DF	RTS failure	5	The controller detected a failure in the RTS signal line of the teach pendant or the cable.	Replace the teach pendant or the cable.
531C	Memory capacity isn't enough for compiling	5	Memory necessary for compilation is not enough.	1. Close all windows and recompile. 2. If this error recurs, reduce the number of programs for compilation. Otherwise, compile with WINCAPS2 and send data to the controller.
53E3	Insufficient memory	5	The amount of memory is insufficient to display the screen you requested.	Turn the controller power off and then on. Retry the operation. If this error occurs during program editing, removing a part of that program may fix this problem.
5790	Speed over in direct mode	4	Excessive speed in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
5791	J1 speed over in Direct Teaching	4	Excessive speed (axis 1) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
5792	J2 speed over in Direct Teaching	4	Excessive speed (axis 2) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
5793	J3 speed over in Direct Teaching	4	Excessive speed (axis 3) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
5794	J4 speed over in Direct Teaching	4	Excessive speed (axis 4) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
5795	J5 speed over in Direct Teaching	4	Excessive speed (axis 5) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
5796	J6 speed over in Direct Teaching	4	Excessive speed (axis 6) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.

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Code	Message	Level	Description	Remedy
5797	J7 speed over in Direct Teaching	4	Excessive speed (axis 7) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
5798	J8 speed over in Direct Teaching	4	Excessive speed (axis 8) in manual operation occurred during teaching in direct mode.	Carefully prevent excessive force application when operating the robot.
6001	Not executable	3	The specified operation is not executable.	1. Enter again in executable status. 2. Enter a proper command.
6002	Wrong operation mode	2	The specified operation does not match the selected operation mode.	Select the mode suitable for the operation.
6003	Excess in effective value range	3	The specified value of various commands exceeds the permissible range. Examples 1. Set value of speed and acceleration is not 1 ~ 100. 2. The using condition parameter is not within designation available range. 3. Number of robot figures exceeds 31.	Enter the correct value again.
6004	Calibration not executed	2	1. The program was executed before calibration. 2. Manual XY and TOOL motion were executed.	Execute calibration and operate again.
6005	Manual mode not selected	2	The manual XY mode, tool mode or the individual axis mode is not selected.	Select a mode to manually operate.
6006	Motor power is off	2	The motor power is not ON.	Turn ON the motor power.

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Code	Message	Level	Description	Remedy
6008	Robot stop is on	2	1. The motor power attempted to turn ON, although the robot stop input was not ON (short). 2. The motor power attempted to turn ON with the robot stop button pressed on the operating panel or on the teach pendant.	1. Set the robot stop signal of system input to ON (short). 2. Check if the robot stop button remains ON. If it is, release it.
6009	Turning off controller and restart	5	After an error, which required a restart, occurred the motor power attempted to turn ON without turning OFF the controller power.	Turn OFF the power switch ON the controller and restart the operation.
600A	Motor power is ON	3	An unavailable operation was executed while the motor power was ON.	Operate after turning off the motor power.
600B	Robot is running	3	The robot performed inoperable running.	After the robot stops, restart operation.
600C	Emergency stop ON	0	The robot stop input was turned OFF(open) to stop the robot emergently. The robot stop button was pressed. If the robot is in the external automatic mode at this time, it is changed to the internal automatic mode.	Set the robot stop input to ON (short).Release the robot stop button.
600D	Deadman switch off	2	The deadman switch is turned OFF.	Operate with the deadman switch pressed.
600E	Robot type setting error	5	Robot type setting is incomplete or wrong.	Set the correct Robot type or transfer necessary parameters to the controller. Then turn OFF the power switch and restart the operation.
600F	Do CAL after initializing encoder data	2	The encoder preset data was initialized because data was not received by the encoder occurred.	Execute calibration and operate again.
6014	Calibration aborted	2	Calibration execution aborted.	If this error occurs in automatic booting with the operation preparation start, check that the step stop and the halt of the system input are not OFF. If OFF, set them to ON (short).
6017	Vector calculation error	3	Posture vectors (normal, orient, and approach) were not correctly set.	Properly set the specified vector and the type T variable.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6018	Arc interpolation calculation error	4	Arc interpolation through a specified passing position to a destination position is not available or a path shift due to deceleration stop occurred.	Set the passing or the destination position correctly. If this error occurs when restarting the robot after it is stopped with the motor OFF, curing motion, use the halt as the means to stop the robot.
6019	Path plane setting error	4	The path plane cannot be calculated with the MKPL and the ROTATE command.	A plane can not be formed with a vector specified as the argument. Correctly set it again.
601A	Tool change not allowed	3	The tool attempted to change in status but the tool change was not available.	Changing the tool is not allowed while the robot is in motion. After the motion stops, operate again.
601B	Parameter change not allowed	3	Attempted to change the parameter status but the parameter change was not allowed.	When the motor power is ON, you cannot change parameters. Turn OFF the motor power and operate again.
601C	Change the posture	1	The motion destination figure position does not meet the motion finish.	There are times when the figure at the motion destination position does not match with that of the motion finish. Execute teaching again, at the motion finish position. The occurrence of this error does not affect the motion.
601D	Motion restart command not executed	3	Controller internal error.	Set the robot stop input to ON and then to OFF before restarting the robot.
601E	Machine lock on	2	Operations not available such as 1. Motor on 2. Brake releasing 3. Calibration or CALSET was executed while the machine was locked.	Release the machine lock and operate again.
601F	Decrease the path start displacement	1	The set path start displacement distance exceeds the permissible value.	Set the path start displacement distance again. The path start displacement distance should be less than half of the moving distance.
6038	Improper arm parameter	3	Arm parameter failure	Transmit the arm manager file corresponding to the robot and reboot the robot.
6039	Watchdog error	5	A delay has occurred in an interrupt processing.	Reboot the robot controller and perform the operation again.
603A	Servo CPU error	5	Controller internal failure (Servo CPU stops.)	Turn OFF the power switch of the controller and restart the operation.

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Code	Message	Level	Description	Remedy
6071	Cur. Position J1 soft motion limit over	3	Current position exceeded the software motion limit of the 1st axis in motion. The 1st axis exceeded the software motion limit during CP motion for deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.
6072	Cur. Position J2 soft motion limit over	3	Current position exceeded the software motion limit of the 2nd axis in motion. The 2nd axis exceeded the software motion limit during CP motion for deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.
6073	Cur. Position J3 soft motion limit over	3	Current position exceeded the software motion limit of the 3rd axis in motion. The 3rd axis exceeded the software motion limit during CP motion for deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.
6074	Cur. Position J4 soft motion limit over	3	Current position exceeded the software motion limit of the 4th axis in motion The 4th axis exceeded the software motion limit during CP motion for deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.

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Code	Message	Level	Description	Remedy
6075	Cur. Position J5 soft motion limit over	3	Current position exceeded the software motion limit of the 5th axis in motion The 5th axis exceeded the software motion limit during CP motion for deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.
6076	Cur. Position J6 soft motion limit over	3	Current position exceeded the software motion limit of the 6th axis in motion The 6th axis exceeded the software motion limit during CP motion for deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.
6077	Cur. Position J7 soft motion limit over	3	(1) Current position exceeded the software motion limit of the 7th axis in motion (2) The 7th axis exceeded the software motion limit during CP motion for deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.
6078	Cur. Position J8 soft motion limit over	3	(1) The current position exceeded the software motion limit of the 8th axis in motion. (2) The 8th axis exceeded the software motion limit during CP motion at the deceleration stop.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if the robot does not pass the vicinity of the singular point in the CP motion, and correct the program so that it avoids the singular point. However, if you return the robot to the motion space, move the axes in manual mode. Axis movement may be impossible in XY or TOOL mode. 4. If this error occurs with increase In CP motion speed, decrease the speed.

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Code	Message	Level	Description	Remedy
6079	Current pos. out of operation range 1	3	Current position reached out of motion space.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if target position of PTP motion and P/T variables in P2J and T2J commands specify a position and a figure where robot movement is physically possible.
607A	Current pos. out operation range 2	3	Current position reached out of operation range.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check if you followed correct procedures to change the data. 3. Check if target position of PTP motion and P/T variables in P2J and T2J commands specify a position and a figure where robot movement is physically possible.
607B	Current pos. is in singular point	3	Current position is at a singular point, which disables execution of reverse coordinate transformation command.	Set the contents of the position variable to a non- singular point value.
607D	Not movable near singular point	4	The robot cannot move because it passes near a singular point in the CP motion.	Select PTP mode if no interference occurs during robot movement. Correct the program to avoids a singular point in the CP motion. 3. If this error occurs with increase in CP motion speed, decrease the speed.
607E	Inoperable in this shape	3	Cannot move to the specified position in this shape.	Change the shape and re-execute.
607F	Robot posture mismatch	3	1. Having specified a figure different from the current figure at the destination point in the CP motion, the specified motion is not possible. 2. When you restart the motion from the halt during the path motion from the PTP motion to the CP, the figure at the halt does not meet the one at the destination position of the CP motion.	1. The robot does not move if the wrist, elbow and arm figures do not match the current figures at the destination positions, excluding a few exceptions. If this error occurs, teach the robot so that the wrist, the elbow and the arm figures match with those of the current figures. 2. This error may be possibly occurred when restarting the robot after it is stopped with the halt during path motion from the PTP motion to the CP motion. Do not designate the path motion if you need to restart the robot after the robot stops during path motion from the PTP motion to the CP motion.
6081	J1 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 1st axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.
6082	J2 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 2nd axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.

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Code	Message	Level	Description	Remedy
6083	J3 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 3rd axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.
6084	J4 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 4th axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.
6085	J5 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 5th axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.
6086	J6 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 6th axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.
6087	J7 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 7th axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.
6088	J8 command speed limit over	3	The CP motion cannot execute with the specified speed because the speed command value of the 8th axis exceeds the limit value.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. 3. Set the control set of motion optimization to 2 or 3.
6089	J1 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 1st axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.
608A	J2 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 2nd axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.

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Code	Message	Level	Description	Remedy
608B	J3 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 3rd axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.
608C	J4 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 4th axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.
608D	J5 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 5th axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.
608E	J6 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 6th axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.
608F	J7 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 7th axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.
6090	J8 command speed limit over (servo)	4	The CP motion cannot execute with the specified speed because the speed command value of the 8th axis exceeds the limit value.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed.
6091	J1 power module failure	5	Power module failure on the 1st axis.	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.
6092	J2 power module failure	5	Power module failure on the 2nd axis	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.

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Code	Message	Level	Description	Remedy
6093	J3 power module failure	5	Power module failure on the 3rd axis	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.
6094	J4 power module failure	5	A power module failure occurred on 4th axis.	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.
6095	J5 power module failure	5	A power module failure occurred on 5th axis.	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.
6096	J6 power module failure	5	A power module failure occurred on 6th axis.	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.
6097	J7 power module failure	5	A power module failure occurred on 7th axis.	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.
6098	J8 power module failure	5	A power module failure occurred on 8th axis.	As the controller may be possibly damaged, take the following remedy. 1. Check if the controller is properly installed, referring to the INSTALLATION & MAINTENANCE GUIDE. 2. Check the working ambient temperature. 3. Clean the fan filter.
609F	Power module failure	5	An error for an unknown axis occurs in the power module.	This error may cause a serious damage in the controller. Be sure to follow the steps below. 1)Check that the controller is installed correctly as specified in the INSTALLATION & MAINTENANCE GUIDE. 2)Check that all power modules are inserted correctly into the specified slots. 3)Check the current ambient temperature. 4)Clean up the fan filters.

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Code	Message	Level	Description	Remedy
60B1	J1 current offset failure	5	Offset of the 1st axis detection current exceeds the reference value.	Inspect or repair the 1st axis power module.
60B2	J2 current offset failure	5	Offset of the 2nd axis detection current exceeds the reference value.	Inspect or repair the 2nd axis power module.
60B3	J3 current offset failure	5	Offset of the 3rd axis detection current exceeds the reference value.	Inspect or repair the 3rd axis power module.
60B4	J4 current offset failure	5	Offset of the 4th axis detection current exceeds the reference value.	Inspect or repair the 4th axis power module.
60B5	J5 current offset failure	5	Offset of the 5th axis detection current exceeds the reference value.	Inspect or repair the 5th axis power module
60B6	J6 current offset failure	5	Offset of the 6th axis detection current exceeds the reference value.	Inspect or repair the 6th axis power module.
60B7	J7 current offset failure	5	Offset of the 7th axis detection current exceeds the reference value.	Inspect or repair the 7th-axis power module.
60B8	J8 current offset failure	5	Offset of the 8th axis detection current exceeds the reference value.	Inspect or repair the 8th-axis power module.
60BE	Multi operation buffer overflow	5	Controller internal error (software)	Turn OFF the power switch on the controller and restart the operation.
60BF	Multi operation buffer release failure	5	Controller internal error (software)	Turn OFF the power switch on the controller and restart the operation.
60C0	Robot 1 motion control buffer failure	5	Controller internal error (software)	Turn OFF the power switch on the controller and restart the operation.
60C1	Robot 2 motion control buffer failure	5	Controller internal error (software)	Turn OFF the power switch on the controller and restart the operation.
60C2	Path creation stack failure	5	Controller internal error (software)	Turn OFF the power switch on the controller and restart the operation.
60C3	Path creation buffer failure	5	Controller internal error (software)	Turn OFF the power switch on the controller and restart the operation.

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Code	Message	Level	Description	Remedy
60C4	Path creation file failure	5	Path creation parameter error.	Transmit the arm manager file corresponding to the robot and reboot.
60C5	Servo file failure	5	Servo parameter error.	Transmit the arm manager file corresponding to the robot and reboot.
60C6	Deceleration stop command failure	4	Controller internal error (Command value for deceleration stop cannot be created.)	Turn OFF the power switch on the controller and restart the operation.
60C7	Command transfer buffer write error	5	Controller internal error (Command value storage buffer is not present.)	Turn OFF the power switch on the controller and restart the operation.
60C8	Command transfer buffer read error	5	Controller internal error (Command value is not created.)	Turn OFF the power switch on the controller and restart the operation.
60C9	Path creation aborted	5	Controller internal error (Path creation process stopped.)	Turn OFF the power switch on the controller and restart the operation.
60CA	Halt processing aborted	5	Controller internal error (Halt process failed.)	Turn OFF the power switch on the controller and restart the operation.
60CB	Deceleration stop aborted	5	Controller internal error (Deceleration stop process failed.)	Turn OFF the power switch on the controller and restart the operation.
60CC	Halt time over	5	Controller internal error (Halt process unfinished.)	Turn OFF the power switch on the controller and restart the operation.
60CD	Deceleration stop time over	5	Controller internal error (Deceleration stop process unfinished.)	Turn OFF the power switch on the controller and restart the operation.
60CE	Internal cycle processing aborted	5	Controller internal error (Host internal cycle process stop failure)	Turn OFF the power switch on the controller and restart the operation.
60CF	Motion command processing aborted	5	Controller internal error (Motion command process stop failure)	Turn OFF the power switch on the controller and restart the operation.
60D0	Motion optimization function unexecutable	4	Command speed could not be changed when the control set of motion optimization was 2 or 3.	1. Reduce the speed or set the motion of the PTP, if there is no problem, such as interference, on the motion path. 2. Check the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point.
60D1	Motion optimization parameter error	4	Acceleration cannot be calculated due to load condition parameter failure when the control set of motion optimization mode was 2 or 3.	Enter the proper load condition value according to the practical load.

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Code	Message	Level	Description	Remedy
60D2	Mass of payload out of setting range	3	End load setting value is outside the robot specifications.	Enter the proper end load setting value.
60DA	Can't operate to the Z-axis position	1	With the current settings of arch start and end positions, the robot arm cannot reach the commanded Z-coordinate.	Correct the current arch settings.
60DB	Decreased TCP speed	1	The specified rotation is so much that the robot cannot run at the specified TCP speed. The TCP speed has been decreased.	Set the smaller rotation angle. If it is impossible, decrease the whole robot speed.
60DC	Executing pass restart process	1	Since stop processing was performed during path operation, save processing was performed at restart.	After save processing ended, return to normal operation.
60DD	Execute CAL	2	Fetch of the correct position data failed. CAL execution is necessary.	Turn ON the motor and execute CAL.
60DE	Rotary motion other than specified	4	While the arc interpolation command is executing, after a path motion, with the other motion command, you attempted to hold the robot and restart.	If the robot is held during execution of the arc interpolation command, after the path motion with the other motion command, and you restart the operation, the radius of the rotation and the motion position may change. Do not execute such operation.
60DF	Automatic slowdown in progress	1	The command speed was changed when the control set of motion optimization was 2 or 3.	To avoid changing the command speed, set the control set of motion optimization to 0 or 1, and reduce the speed so that the command speed failure will not occur.
60E0	Log data retrieving error	5	Controller internal error. (A control log obtaining failure.)	Turn OFF the power switch of the controller and restart the operation.
60E1	Log data recording error	5	Controller internal error. (A control log recording failure.)	Turn OFF the power switch of the controller and restart the operation.
60E2	Obtain log	2	Attempt was made to refer to the load estimation value without obtaining control log.	Obtain the control log and operate again.
60E3	Control log area allocation error	4	Control log is not available because of insufficient data area for the control log function.	Reset to the default value if the control log recording mode was altered. If the error occurs with default settings, the memory capacity is insufficient and the memory capacity shall be increased to use the control log function.
60EF	Reset compliance mode	2	The motor was turned OFF during conference control and compliance control was ended forcibly.	When the motor was turned OFF during compliance control, continue start is disabled. Reset the program and restart operation.
60F0	Task creation error	5	Controller internal error occurred. (An OS error.)	Turn OFF the power switch on the controller and restart the operation.

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Code	Message	Level	Description	Remedy
60F1	Semaphore creation error	5	Controller internal error occurred. (An OS error.)	Turn OFF the power switch on the controller and restart the operation.
60F2	Semaphore taking error	5	Controller internal error occurred. (An OS error.)	Turn OFF the power switch on the controller and restart the operation.
60F3	Gravity compensation task halt	5	Controller internal error occurred (OS error).	Turn OFF the power switch on the controller and restart the operation.
60F4	Compliance processing delay	4	Compliance processing delayed.	This error may occur when the controller keyboard is operated or the communication frequency by the RS232C or Ethernet is high where the compliance is valid. Lower the communication frequency.
60F5	Compliance control is not executable	4	When the compliance is valid, the current is limited or gravity compensation is invalid.	Make the current limit invalid and the gravity compensation invalid, then restart operation.
60F6	Improper compliance parameter	5	The specified compliance parameter exceeded the allowable range.	Specify the compliance parameter in the allowable range.
60F7	Compliance state is unchangeable	4	Compliance function switching error.	Turn OFF the power switch of the controller once and restart operation.
60F8	Compliance deviation excess error	4	The compliance position deviation exceeded the allowable value.	Change the allowable value of the compliance position deviation.
60F9	Improper compliance set/reset operation	4	Program reset or step-back operation was performed during compliance set/reset operation. The program was reset due to an error.	When performing program reset or step-back operation at instantaneous stop during compliance invalid operation, turn OFF the motor once and make the compliance invalid.
60FA	Not Executable in compliance control	4	The gravity compensation was made invalid, the current limit was made valid, or the compliance parameter was changed during compliance processing.	Make the compliance invalid to invalidate the gravity compensation, validate the current limit, or change the compliance parameter.
60FB	Improper compliance reference	4	An improper compliance reference value was specified during compliance control.	Confirm whether the extreme power is applied due to the interference of the robot. Also check whether the robot is moved in the compliance control direction.
60FC	Speed limit over in compliance mode	3	The specified speed is limited within 50% during compliance control. This error occurs when 50% is exceeded for operation.	Specify the internal speed so that the specified speed is within 50%.
60FD	PTP motion is not executable	3	PTP operation cannot be performed during compliance control. This error occurs when PTP operation is executed.	Change to CP operation

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
60FE	Servo CPU version unmatched	2	The servo CPU is too old; so, its functions are unusable.	Upgrade the version of the servo CPU.
60FF	Exception error occurred	5	The servo CPU is too old; so, its functions are unusable.	Turn OFF the power switch of the controller once and restart operation.
6101	Watchdog error	5	An interrupt processing has abnormally stopped.	Reboot the robot controller and perform the operation again. If the error persists, you need to investigate or repair the controller.
6102	Power failure	5	The AC power supply is faulty. If this error message appears when you turn the controller off, it means no problem.	1. Check that the voltage level of the AC power supply is within the specified range. 2. Check that each lead of the AC power cable is securely connected. Do not connect or disconnect the cable with the controller power on. Be sure to turn off the controller power switch. 3. If the error persists after rebooting the controller, you need to investigate or repair the controller.
6103	Warning: Backup battery low voltage	1	The memory backup battery voltage is low.	Save each manager file with WINCAPSII and replace the backup battery.
6104	Power failure	5	1. The +24V output source is short-circuited. 2. The power voltage in the controller has been dropped. 3. The counterelectromotive force of the servomotor is abnormal. 4. The power supply board is faulty. If this error message appears when you turn the controller off, it means no problem.	1. At the wiring end of the controller I/O cable, check for a short between the +24V and 0V leads or between the +24V lead and output terminal. 2. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 3. If the error persists after rebooting the controller, you need to investigate or repair the controller.
6105	Power failure	5	1. The DB relay has been melted. 2. The power supply board is faulty.	If the error persists after rebooting the controller, you need to investigate or repair the controller.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6111	J1 excess error	4	An excess deviation error on the 1st axis. Servo deviation exceeded permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.
6112	J2 excess error	4	An excess deviation error on the 2nd axis. The servo deviation exceeded the permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.
6113	J3 excess error	4	An excess deviation error on the 3rd axis. The servo deviation exceeded the permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6114	J4 excess error	4	An excess deviation error on the 4th axis. The servo deviation exceeded the permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.
6115	J5 excess error	4	An excess deviation error on the 5th axis. The servo deviation exceeded the permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.
6116	J6 excess error	4	An excess deviation error on the 6th axis. The servo deviation exceeded the permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6117	J7 excess error	4	Excessive deviation error on the 7th axis. The servo deviation exceeded the permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.
6118	J8 excess error	4	Excessive deviation error on the 8th axis. The servo deviation exceeded the permissible value.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check if the servo motor connector for each axis is firmly plugged. 6. Check if the 200 VAC voltage power has dropped. 7. Decrease the speed and acceleration.
6119	J1 overcurrent	4	An overcurrent error has occurred in the V-phase of the J1 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
611A	J2 overcurrent	4	An overcurrent error has occurred in the V-phase of the J2 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
611B	J3 overcurrent	4	An overcurrent error has occurred in the V-phase of the J3 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
611C	J4 overcurrent	4	An overcurrent error has occurred in the V-phase of the J4 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
611D	J5 overcurrent	4	An overcurrent error has occurred in the V-phase of the J5 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
611E	J6 overcurrent	4	An overcurrent error has occurred in the V-phase of the J6 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
611F	J7 overcurrent	4	An overcurrent error has occurred in the V-phase of the J7 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.

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Code	Message	Level	Description	Remedy
6120	J8 overcurrent	4	An overcurrent error has occurred in the V-phase of the J8 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
6121	J1 overcurrent	4	An overcurrent error has occurred in the U-phase of the J1 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
6122	J2 overcurrent	4	An overcurrent error has occurred in the U-phase of the J2 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6123	J3 overcurrent	4	An overcurrent error has occurred in the U-phase of the J3 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
6124	J4 overcurrent	4	An overcurrent error has occurred in the U-phase of the J4 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
6125	J5 overcurrent	4	An overcurrent error has occurred in the U-phase of the J5 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.

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Code	Message	Level	Description	Remedy
6126	J6 overcurrent	4	An overcurrent error has occurred in the U-phase of the J6 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
6127	J7 overcurrent	4	An overcurrent error has occurred in the U-phase of the J7 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.
6128	J8 overcurrent	4	An overcurrent error has occurred in the U-phase of the J8 motor.	1. Check each joint (including hand and workpieces) for no interference with surrounding devices, piping or wiring. 2. If the joint interferes with any mechanical end so as to cause this error, change the software limit or check that the CALSET operation has been correctly performed. 3. Check that the hand specifications (including workpieces) do not exceed the robot capacity. 4. Check that the robot controller cable is securely connected to the robot unit and controller. 5. Check that the FG terminals of the robot unit and controller are grounded. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6129	J1 overcurrent (software)	4	An overcurrent error on the 1st axis. The current to the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.
612A	J2 overcurrent (software)	4	An overcurrent error on the 2nd axis. The current to the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.
612B	J3 overcurrent (software)	4	An overcurrent error on the 3rd axis. The current to the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
612C	J4 overcurrent (software)	4	An overcurrent error on the 4th axis. The current to the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.
612D	J5 overcurrent (software)	4	An overcurrent error on the 5th axis. The current to the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.
612E	J6 overcurrent (software)	4	An overcurrent error on the 6th axis. The current to the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. heck that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
612F	J7 overcurrent (software)	4	Overcurrent error on the 7th axis. The current flown through the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.
6130	J8 overcurrent (software)	4	Overcurrent error on the 8th axis. The current flown through the motor exceeded the permissible value set in the software.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged. 5. Check that the FG terminals on the robot and the controller are grounded. 6. Decrease the speed and acceleration.
6131	J1 encoder cable disconnected	4	1st axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6132	J2 encoder cable disconnected	4	2nd axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6133	J3 encoder cable disconnected	4	3rd axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6134	J4 encoder cable disconnected	4	4th axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6135	J5 encoder cable disconnected	4	5th axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6136	J6 encoder cable disconnected	4	6th axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6137	J7 encoder cable disconnected	4	The 7th-axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6138	J8 encoder cable disconnected	4	The 8th-axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6139	Power module overheated	4	The temperature inside the robot controller has arisen abnormally.	1. Check the ambient temperature 2. Check that there is no obstruction to ventilation maintained by the fans inside the controller. Once this error occurs, the motor will not be able to be turned on until the inside temperature drops below the specified level. Wait for at least one minute.
613A	Power module overheated	4	The temperature inside the robot controller has risen abnormally.	1. Check the ambient temperature 2. Check that there is no obstruction to ventilation maintained by the fans inside the controller. Once this error occurs, the motor will not be able to be turned on until the inside temperature drops below the specified level. Wait for at least one minute.
6140	Motor brake fuse blown	4	A motor brake power supply fuse was blown.	1. Check the cable between the robot and the controller. 2. Inspect the motor.

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Code	Message	Level	Description	Remedy
6141	J1 power module failure	4	A fuse on the 1st axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6142	J2 power module failure	4	A fuse on the 2nd axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6143	J3 power module failure	4	A fuse on the 3rd axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6144	J4 power module failure	4	A fuse on the 4th axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6145	J5 power module failure	4	A fuse on the 5th axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6146	J6 power module failure	4	A fuse on the 6th axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6147	J7 power module failure	4	A fuse on the 7th-axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6148	J8 power module failure	4	A fuse on the 8th-axis power module was blown.	Inspection or repair of the power module is required. Do not replace the fuse on the power module. If excess deviation, overcurrent, motor overload or controller overload occurred prior to this error, follow the remedy steps corresponding to each error.
6149	J1 power module capacity failure	4	The J1 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.
614A	J2 power module capacity failure	4	The J2 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.

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Code	Message	Level	Description	Remedy
614B	J3 power module capacity failure	4	The J3 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.
614C	J4 power module capacity failure	4	The J4 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.
614D	J5 power module capacity failure	4	The J5 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.
614E	J6 power module capacity failure	4	The J6 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.
614F	J7 power module capacity failure	4	The J7 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.
6150	J8 power module capacity failure	4	The J8 power module does not match the motor parameter values.	1. Check the matching between the power module capacity and the connected motor's output. 2. Check the matching between the arm file being used and the robot model. 3. When the joint is used as an extended-joint, check that the extended-joint path parameters for the motor are correctly set.
6170	Regenerative resister overload	4	An overload occurred on the regenerative resister, inside the controller.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6171	J1 motor overload	4	An overload error occurred on the 1st axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.
6172	J2 motor overload	4	An overload error occurred on the 2nd axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.
6173	J3 motor overload	4	An overload error occurred on the 3rd axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.
6174	J4 motor overload	4	An overload error occurred on the 4th axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.
6175	J5 motor overload	4	An overload error occurred on the 5th axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.
6176	J6 motor overload	4	An overload error occurred on the 6th axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.
6177	J7 motor overload	4	An overload error occurred on the 7th axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.

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Code	Message	Level	Description	Remedy
6178	J8 motor overload	4	An overload error occurred on the 8th axis motor.	1. Check if the hand, including the work-piece, specification is beyond the robot standard specifications. 2. Check if the cable between the robot and the controller is firmly plugged. 3. Insert a timer between the motion commands, and reduce the speed and acceleration. Wait one minute before attempting to operate again.
6180	Servo communication data error	5	A controller internal error has occurred. (Servo-received data is out of the range.)	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6181	Servo calculation time over	5	Controller internal error (Servo process time over.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine.
6182	Servo communication interruption delay (host)	5	Controller internal error (Interruption from servo exceeded the preset time.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine.
6183	Servo data check sum error	5	A check sum failure occurred in communicating data between the host and the servo.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine.
6185	Host data check sum error	5	A check sum failure occurred in communicating data between the host and the servo.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine.
6186	Servo answer command receive error (host)	5	Controller internal error (An unregistered command was received from servo.)	Turn OFF the power switch of the controller and restart the operation.
6189	Servo transmission command undefined	5	Controller internal error (An unregistered command was received from upper module.)	Turn OFF the power switch of the controller and restart the operation.
618A	Host send command receive error (servo)	5	Controller internal error (An unregistered command was received from host.)	Turn OFF the power switch of the controller and restart the operation.
618B	Servo command mode unknown	5	Controller internal error (The sub data quantity of command to send servo is not defined.)	Turn OFF the power switch of the controller and restart the operation.
618C	Servo command delete error	5	Controller internal error (The corresponding command to the one answered from servo is not present.)	Turn OFF the power switch of the controller and restart the operation.

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Code	Message	Level	Description	Remedy
618D	Servo transmit command buffer overflow	5	Controller internal error (The number of commands to send from servo is over.)	Turn OFF the power switch of the controller and restart the operation.
618E	Servo ans. command buffer overflow	5	Controller internal error (The number of commands waiting for answer from servo is over.)	Turn OFF the power switch of the controller and restart the operation.
618F	Servo answer command mismatch	5	Controller internal error (There is no command that corresponds to the command returned from the servo.)	Turn OFF the power switch of the controller and restart the operation.
6199	J1 motor lock overload2	4	Overload occurred because the motor for axis 1 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.
619A	J2 motor lock overload2	4	Overload occurred because the motor for axis 2 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.
619B	J3 motor lock overload2	4	Overload occurred because the motor for axis 3 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.
619C	J4 motor lock overload2	4	Overload occurred because the motor for axis 4 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.
619D	J5 motor lock overload2	4	Overload occurred because the motor for axis 5 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.
619E	J6 motor lock overload2	4	Overload occurred because the motor for axis 6 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.

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Code	Message	Level	Description	Remedy
619F	J7 motor lock overload2	4	Overload occurred because the motor for axis 7 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.
61A0	J8 motor lock overload2	4	Overload occurred because the motor for axis 8 was locked.	1. Check if any axis (including a hand and work) is in contact with an obstacle (peripheral unit, piping or wiring). 2. If the error has occurred because of the contact of the axis with the mechanical end, check if there is any error in software limit change or CALSET procedure.
61A1	J1 torque limit time over	4	The 1st axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.
61A2	J2 torque limit time over	4	The of 2nd axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.
61A3	J3 torque limit time over	4	The 3rd axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
61A4	J4 torque limit time over	4	The 4th axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.
61A5	J5 torque limit time over	4	The 5th axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.
61A6	J6 torque limit time over	4	The 6th axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.
61A7	J7 torque limit time over	4	The 7th axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
61A8	J8 torque limit time over	4	The 8th axis torque command reached its limit and the time exceeded its limit while maintaining that status.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET. 3. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 4. Check if the cable between the robot and the controller is firmly plugged.
61A9	J1 motor lock overload	4	An overload occurred because the 1st axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.
61AA	J2 motor lock overload	4	An overload occurred because the 2nd axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.
61AB	J3 motor lock overload	4	An overload occurred because the 3rd axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.
61AC	J4 motor lock overload	4	An overload occurred because the 4th axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.
61AD	J5 motor lock overload	4	An overload occurred because the 5th axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.
61AE	J6 motor lock overload	4	An overload occurred because the 6th axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.
61AF	J7 motor lock overload	4	An overload occurred because the 7th axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.

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Code	Message	Level	Description	Remedy
61B0	J8 motor lock overload	4	An overload occurred because the 8th axis motor locked.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software motion limit or check if you have executed the wrong procedures for CALSET.
61B1	J1 power module overload	4	An overload error occurred in the 1st axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.
61B2	J2 power module overload	4	An overload error occurred in the 2nd axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.
61B3	J3 power module overload	4	An overload error occurred in the 3rd axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.
61B4	J4 power module overload	4	An overload error occurred in the 4th axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.
61B5	J5 power module overload	4	An overload error occurred in the 5th axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.
61B6	J6 power module overload	4	An overload error occurred in the 6th axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.

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Code	Message	Level	Description	Remedy
61B7	J7 power module overload	4	An overload error occurred in the 7th axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.
61B8	J8 power module overload	4	An overload error occurred in the 8th axis power module of the controller.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. If this error occurs because the corresponding axis bumps into the mechanical stopper, change the software limit or check if you have executed the wrong procedures for CALSET. 3. Decrease the speed and acceleration.
61EC	Press the deadman switch	3	The deadman switch was turned off during auto gain tuning.	Hold down the deadman switch during auto gain tuning.
61FF	Overcurrent error (mode undetected)	4	An overcurrent error was accidentally detected.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Decrease the speed and acceleration.
6308	Brake releasing	2	The motor power was attempted to turn ON during motor brake releasing.	Lock the motor brake and turn ON the motor power.
6401	J1 encoder acceleration error	5	1st axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6402	J2 encoder acceleration error	5	2nd axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6403	J3 encoder acceleration error	5	3rd axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.

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Code	Message	Level	Description	Remedy
6404	J4 encoder acceleration error	5	4th axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6405	J5 encoder acceleration error	5	5th axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6406	J6 encoder acceleration error	5	6th axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6407	J7 encoder acceleration error	5	The 7th-axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6408	J8 encoder acceleration error	5	The 8th-axis encoder exceeded the acceleration limit value.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6411	J1 encoder system down failure	5	The 1st-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.
6412	J2 encoder system down failure	5	The 2nd-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.
6413	J3 encoder system down failure	5	The 3rd-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.
6414	J4 encoder system down failure	5	The 4th-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.

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Code	Message	Level	Description	Remedy
6415	J5 encoder system down failure	5	The 5th-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.
6416	J6 encoder system down failure	5	The 6th-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.
6417	J7 encoder system down failure	5	The 7th-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.
6418	J8 encoder system down failure	5	The 8th-axis encoder system has gone down.	1. Check that the encoder backup battery connector is firmly plugged. 2. If the battery connector has been disconnected for more than 3 minutes, this error will occur. For recovery, reset the encoder and execute CALSET.
6421	J1 encoder data not received	4	Communication error occurred on the 1st axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.
6422	J2 encoder data not received	4	A communication error occurred on the 2nd axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6423	J3 encoder data not received	4	A communication error occurred on the 3rd axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.
6424	J4 encoder data not received	4	A communication error occurred on the 4th axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.
6425	J5 encoder data not received	4	A communication error occurred on the 5th axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.
6426	J6 encoder data not received	4	A communication error occurred on the 6th axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.

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Code	Message	Level	Description	Remedy
6427	J7 encoder data not received	4	A communication error has occurred on the 7th-axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.
6428	J8 encoder data not received	4	A communication error has occurred on the 8th-axis encoder.	1. Check that the encoder backup battery connector is firmly plugged. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If this error occurs after you change the motor, check if the encoder ID number of the motor is correctly set. Using the error log, check that encoder-data-no-reception error occurs on the other axes. If this error occurs on six axes starting from the specific axis, check if the first axis encoder connector for normal connection. If this error occurs on all axes, follow the above step 3.
6431	J1 encoder counter overflow	5	The 1st axis multiple rotation data encoder overflowed.	Reset the 1st axis encoder and execute CALSET.
6432	J2 encoder counter overflow	5	The 2nd axis multiple rotation data encoder overflowed.	Reset the 2nd axis encoder and execute CALSET.
6433	J3 encoder counter overflow	5	The 3rd axis multiple rotation data encoder overflowed.	Reset the 3rd axis encoder and execute CALSET.
6434	J4 encoder counter overflow	5	The 4th axis multiple rotation data encoder overflowed.	Reset the 4th axis encoder and execute CALSET.
6435	J5 encoder counter overflow	5	The 5th axis multiple rotation data encoder overflowed.	Reset the 5th axis encoder and execute CALSET.
6436	J6 encoder counter overflow	5	The 6th axis multiple rotation data encoder overflowed.	Reset the 6th axis encoder and execute CALSET.
6437	J7 encoder counter overflow	5	The multi-rotation data of the 7th-axis encoder has overflowed.	Reset the 7th-axis encoder and execute CALSET.
6438	J8 encoder counter overflow	5	The multi-rotation data of the 8th-axis encoder has overflowed.	Reset the 8th-axis encoder and execute CALSET.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6441	J1 encoder counter error	5	Counter error occurred on 1st axis encoder.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6442	J2 encoder counter error	5	Counter error on the 2nd axis encoder	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6443	J3 encoder counter error	5	Counter error on the 3rd axis encoder	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6444	J4 encoder counter error	5	Counter error on the 4th axis encoder	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6445	J5 encoder counter error	5	Counter error on the 5th axis encoder	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6446	J6 encoder counter error	5	Counter error on the 6th axis encoder	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6447	J7 encoder counter error	5	A 7th-axis encoder counter error has occurred.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6448	J8 encoder counter error	5	A 8th-axis encoder counter error has occurred.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6449	J1 encoder counter error 2	5	J1 encoder counter error (Coarse data)	Restart the controller and CALSET J1.
644A	J2 encoder counter error 2	5	J2 encoder counter error (Coarse data)	Restart the controller and CALSET J2.
644B	J3 encoder counter error 2	5	J3 encoder counter error (Coarse data)	Restart the controller and CALSET J3.
644C	J4 encoder counter error 2	5	J4 encoder counter error (Coarse data)	Restart the controller and CALSET J4.
644D	J5 encoder counter error 2	5	J5 encoder counter error (Coarse data)	Restart the controller and CALSET J5.
644E	J6 encoder counter error 2	5	J6 encoder counter error (Coarse data)	Restart the controller and CALSET J6.
644F	J7 encoder counter error 2	5	J7 encoder counter error (Coarse data)	Restart the controller and CALSET J7.
6450	J8 encoder counter error 2	5	J8 encoder counter error (Coarse data)	Restart the controller and CALSET J8.
6451	J1 encoder G/A count error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
6452	J2 encoder G/A count error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
6453	J3 encoder G/A count error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.

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Code	Message	Level	Description	Remedy
6454	J4 encoder G/A count error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
6455	J5 encoder G/A count error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
6456	J6 encoder G/A count error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
6457	J7 encoder G/A counter error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
6458	J8 encoder G/A counter error	5	Controller internal error (G/A count error) occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
6461	J1 encoder phase Rx signal interrupted	4	1st axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6462	J2 encoder phase Rx signal interrupted	4	2nd axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.

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Code	Message	Level	Description	Remedy
6463	J3 encoder phase Rx signal interrupted	4	3rd axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6464	J4 encoder phase Rx signal interrupted	4	4th axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6465	J5 encoder phase Rx signal interrupted	4	5th axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6466	J6 encoder phase Rx signal interrupted	4	6th axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6467	J7 encoder phase Rx signal interrupted	4	The 7th-axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6468	J8 encoder phase Rx signal interrupted	4	The 8th-axis cable is not connected or broken.	1. Check if the cable between the robot and the controller is firmly plugged. 2. Check that the FG terminals on the robot and the controller are grounded. 3. Check if the cable of the axis is not broken.
6470	CALSET execution failed	3	CALSET execution error on all axes	Check if the motor can be turned ON. If possible, execute again. If not, reboot the system.
6471	J1 CALSET execution failed	2	CALSET execution error on the 1st axis	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.
6472	J2 CALSET execution failed	2	CALSET execution error on the 2nd axis	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.
6473	J3 CALSET execution failed	2	CALSET execution error on the 3rd axis	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.
6474	J4 CALSET execution failed	2	CALSET execution error on the 4th axis	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.

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Code	Message	Level	Description	Remedy
6475	J5 CALSET execution failed	2	CALSET execution error on the 5th axis	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.
6476	J6 CALSET execution failed	2	CALSET execution error on the 6th axis	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.
6477	J7 CALSET execution failed	2	CALSET execution error on the 7th axis.	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.
6478	J8 CALSET execution failed	2	CALSET execution error on the 8th axis.	Move the corresponding axis a little bit with hand before executing CALSET and return the axis again to the CALSET position.
6486	Position error at restart (ARRIVE command)	2	At restart the deviation from the stop position exceeded the permissible value.	Cannot continue the operation. Restart from the top of the program.
6488	Stop command in positioning accuracy check	1	Halt was executed while the controller was checking the positioning accuracy (@E) by accuracy check command.	Check of static accuracy was interrupted by the halt, and so the accuracy check has not been finished. Check the static accuracy when restarting the robot.
6489	Execution condition failed. (ARRIVE command)	2	Cannot continue the operation because the condition designated by ARRIVE command was not fulfilled.	Cannot continue the operation. Restart from the top of the program.
648A	Objective axis setting error (ARRIVE command)	2	ARRIVE command was executed to the inoperable axis.	Cannot continue the operation. Restart from the top of the program.
648B	Impossible to calculate arc parameters	2	Cannot calculate parameters needed for arc operation.	Cannot continue the operation. Restart from the top of the program.
648C	Operation command not executed (ARRIVE command)	2	Operation command was not executed.	Cannot continue the operation. Restart from the top of the program.
64A1	J1 encoder low battery	2	The 1st axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.
64A2	J2 encoder low battery	2	The 2nd axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.
64A3	J3 encoder low battery	2	The 3rd axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.
64A4	J4 encoder low battery	2	The 4th axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.
64A5	J5 encoder low battery	2	The 5th axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.
64A6	J6 encoder low battery	2	The 6th axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.

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Code	Message	Level	Description	Remedy
64A7	J7 encoder low battery	2	The 7th axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.
64A8	J8 encoder low battery	2	The 8th axis encoder back-up battery voltage dropped.	Replace the encoder back-up battery.
64A9	J1 encoder preset status error	4	The robot controller could not recognize the current position of the 1st-axis encoder.	Restart the robot controller. If Error 6421 also occurs, take its recovery. If not, replace the motor.
64AA	J2 encoder preset status error	4	The robot controller could not recognize the current position of the 2nd-axis encoder.	Restart the robot controller. If Error 6422 also occurs, take its recovery. If not, replace the motor.
64AB	J3 encoder preset status error	4	The robot controller could not recognize the current position of the 3rd-axis encoder.	Restart the robot controller. If Error 6423 also occurs, take its recovery. If not, replace the motor.
64AC	J4 encoder preset status error	4	The robot controller could not recognize the current position of the 4th-axis encoder.	Restart the robot controller. If Error 6424 also occurs, take its recovery. If not, replace the motor.
64AD	J5 encoder preset status error	4	The robot controller could not recognize the current position of the 5th-axis encoder.	Restart the robot controller. If Error 6425 also occurs, take its recovery. If not, replace the motor.
64AE	J6 encoder preset status error	4	The robot controller could not recognize the current position of the 6th-axis encoder.	Restart the robot controller. If Error 6426 also occurs, take its recovery. If not, replace the motor.
64AF	J7 encoder preset status error	4	The robot controller could not recognize the current position of the 7th-axis encoder.	Restart the robot controller. If Error 6427 also occurs, take its recovery. If not, replace the motor.
64B0	J8 encoder preset status error	4	The robot controller could not recognize the current position of the 8th-axis encoder.	Restart the robot controller. If Error 6428 also occurs, take its recovery. If not, replace the motor.
64B1	J1 encoder CRC check error	4	CRC check failure occurred on the 1st axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64B2	J2 encoder CRC check error	4	CRC check failure occurred on the 2nd axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.

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Code	Message	Level	Description	Remedy
64B3	J3 encoder CRC check error	4	CRC check failure occurred on the 3rd axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64B4	J4 encoder CRC check error	4	CRC check failure occurred on the 4th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64B5	J5 encoder CRC check error	4	CRC check failure occurred on the 5th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64B6	J6 encoder CRC check error	4	CRC check failure occurred on the 6th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64B7	J7 encoder CRC check error	4	CRC check failure occurred on the 7th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64B8	J8 encoder CRC check error	4	CRC check failure occurred on the 8th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64B9	J1 encoder overheated	3	The internal temperature of the 1st encoder has exceeded the set value.	Wait until the encoder’s internal temperature drops to a value in the permissible range.
64BA	J2 encoder overheated	3	The internal temperature of the 2nd encoder has exceeded the set value.	Wait until the encoder’s internal temperature drops to a value in the permissible range.

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Code	Message	Level	Description	Remedy
64BB	J3 encoder overheated	3	The internal temperature of the 3rd encoder has exceeded the set value.	Wait until the encoder's internal temperature drops to a value in the permissible range.
64BC	J4 encoder overheated	3	The internal temperature of the 4th encoder has exceeded the set value.	Wait until the encoder's internal temperature drops to a value in the permissible range.
64BD	J5 encoder overheated	3	The internal temperature of the 5th encoder has exceeded the set value.	Wait until the encoder's internal temperature drops to a value in the permissible range.
64BE	J6 encoder overheated	3	The internal temperature of the 6th encoder has exceeded the set value.	Wait until the encoder's internal temperature drops to a value in the permissible range.
64BF	J7 encoder overheated	3	The internal temperature of the 7th encoder has exceeded the set value.	Wait until the encoder's internal temperature drops to a value in the permissible range.
64C0	J8 encoder overheated	3	The internal temperature of the 8th encoder has exceeded the set value.	Wait until the encoder's internal temperature drops to a value in the permissible range.
64C1	J1 encoder framing error	4	Frame configuration error in the 1st axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64C2	J2 encoder framing error	4	Frame configuration error in the 2nd axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64C3	J3 encoder framing error	4	Frame configuration error in the 3rd axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64C4	J4 encoder framing error	4	Frame configuration error in the 4th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
64C5	J5 encoder framing error	4	Frame configuration error in the 5th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64C6	J6 encoder framing error	4	Frame configuration error in the 6th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64C7	J7 encoder framing error	4	Frame configuration error in the 7th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64C8	J8 encoder framing error	4	Frame configuration error in the 8th axis encoder data.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64D1	J1 encoder data (software) abnormal	4	Encoder data error (data skip) on the 1st axis.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64D2	J2 encoder data (software) abnormal	4	Encoder data error (data skip) on 2nd axis	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64D3	J3 encoder data (software) abnormal	4	Encoder data error (data skip) on 3rd axis	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.

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Code	Message	Level	Description	Remedy
64D4	J4 encoder data (software) abnormal	4	Encoder data error (data skip) on 4th axis	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64D5	J5 encoder data (software) abnormal	4	Encoder data error (data skip) on 5th axis.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64D6	J6 encoder data (software) abnormal	4	Encoder data error (data skip) on 6th axis.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64D7	J7 encoder data (software) abnormal	4	Encoder data error (data skip) on 7th axis.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64D8	J8 encoder data (software) abnormal	4	Encoder data error (data skip) on 8th axis.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
64E1	J1 encoder phase Rx not received (CABS)	4	1st axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
64E2	J2 encoder phase Rx not received (CABS)	4	2nd axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.
64E3	J3 encoder phase Rx not received (CABS)	4	3rd axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.
64E4	J4 encoder phase Rx not received (CABS)	4	4th axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.

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Code	Message	Level	Description	Remedy
64E5	J5 encoder phase Rx not received (CABS)	4	5th axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.
64E6	J6 encoder phase Rx not received (CABS)	4	6th axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.
64E7	J7 encoder phase Rx not received (CABS)	4	7th axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
64E8	J8 encoder phase Rx not received (CABS)	4	8th axis encoder communication error occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged. 4. If the error occurred after motor change, check that the encoder ID number of the changed motor is correctly set. Check the error log if communication error on the other axes occurred. If error occurred on the specific axis through the 6 th axis, then check the specific axis encoder connector is securely plugged. If error occurred on all axes, perform remedy 3.
64F1	J1 encoder CRC check error (CABS)	4	CRC error on 1st axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
64F2	J2 encoder CRC check error (CABS)	4	CRC error on 2nd axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
64F3	J3 encoder CRC check error (CABS)	4	CRC error on 3rd axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
64F4	J4 encoder CRC check error (CABS)	4	CRC error on 4th axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
64F5	J5 encoder CRC check error (CABS)	4	CRC error on 5th axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
64F6	J6 encoder CRC check error (CABS)	4	CRC error on 6th axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
64F7	J7 encoder CRC check error (CABS)	4	CRC error on 7th axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
64F8	J8 encoder CRC check error (CABS)	4	CRC error on 8th axis encoder data occurred.	1. Check that the FG (Frame Ground) terminals on the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check if the cable between the robot and the controller is firmly plugged.
64F9	More than one motor is connected.	2	Since more than one motor is connected, ID setting is impossible.	Connect only one motor and retry ID setting.
64FA	Cutting of a belt was detected	3	The controller detects the U-joint drive belt being broken.	Remove the robot cover and check or replace the belt.
64FF	Encoder error (mode undetected)	4	Though the encoder GA detected an encoder error; however, the encoder does not detect any error.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6600	Host-servo communicate IC error (servo)	5	Controller internal error (A communication IC failure was detected in the servo initialization. A communication error occurred in servo communication.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6601	Host-servo com. IC error (1:host-1)	5	Controller internal error (A send error was detected just before the host data was sent or when the periodical check was done.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6602	Host-servo com. IC error (2:host-2)	5	Controller internal error (A receiving error was detected just before host data was sent or when periodical check was done.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6603	Host com. interrupt delay (servo)	4	Controller internal error (Interruption from host stops exceeds the fixed time.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6604	Servo command answer timeout	4	Controller internal error (The command finish answer from servo was not returned.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6605	Host-servo com. IC error (host receiving)	5	Controller internal error (A communication failure was detected just after the host data was received.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
6607	Servo parameter error	5	An error has occurred in the servo parameter.	Reboot the robot controller and perform the operation again.
6608	Host parameter error	5	An error has occurred in operation parameters.	Reboot the robot controller and perform the operation again.
6609	System timer delay	5	A delay has occurred in the internal clock.	Reboot the robot controller and perform the operation again.
6631	J1 speed limit over	4	Motion exceeded the 1st axis speed limit.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6632	J2 speed limit over	4	Motion exceeded the 2nd axis speed limit.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.
6633	J3 speed limit over	4	Motion exceeded the 3rd axis speed limit.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.
6634	J4 speed limit over	4	Motion exceeded the 4th axis speed limit.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.
6635	J5 speed limit over	4	Motion exceeded the 5th axis speed limit.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.

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Code	Message	Level	Description	Remedy
6636	J6 speed limit over	4	Motion exceeded the 6th axis speed limit.	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.
6637	J7 speed limit over	4	Motion exceeded the 7th axis speed limit	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.
6638	J8 speed limit over	4	Motion exceeded the 8th axis speed limit	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged. 4. Transmit the arm manager file corresponding to the robot and reboot the controller. 5. Decrease the speed.
6641	J1 acceleration limit over	4	Motion exceeded the 1st axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6642	J2 acceleration limit over	4	Motion exceeded the 2nd axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.
6643	J3 acceleration limit over	4	Motion exceeded the 3rd axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.
6644	J4 acceleration limit over	4	Motion exceeded the 4th axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6645	J5 acceleration limit over	4	Motion exceeded the 5th axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.
6646	J6 acceleration limit over	4	Motion exceeded the 6th axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.
6647	J7 acceleration limit over	4	Motion exceeded the 7th axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6648	J8 acceleration limit over	4	Motion exceeded the 8th axis acceleration limit.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check that the FG terminals on the robot and the controller are grounded. 4. Check that the robot and the controller are away from noise source such as a welding machine. 5. Check if the robot and the controller are firmly connected with the cables. 6. Decrease the speed and acceleration.
6651	Check command time over	3	The current position does not reach stop accuracy within the specified time when stop accuracy (@E) is specified.	1. Check if any axis, including the hand and the work-piece, interferes with an obstacle (peripheral devices, pipes or wires). 2. Check if the hand, including a work-piece, specification is outside the robot standard specifications. 3. Check if the parameters of the permissible pulse width and the motion finish timeout, in the using condition parameters, are too small for their initial values. 4. Execute ResetPulseWidth ( ) and ResetTimeOut ( ) with the program and check the motion.
665A	Cannot set current limit	3	Attempted to execute current limit setting while the gravity compensation is ineffective.	Execute current limit setting after enabling the gravity compensation.
665B	Cannot disable the gravity compensation	3	Attempted to disable the gravity compensation while the current limit is effective.	Disable gravity compensation after releasing current limit.
6671	Dest. pos. out of J1 soft motion limit	3	1. The motion destination position of the 1st axis is out of the software motion limit. 2. The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6672	Dest. pos. out of J2 soft motion limit	3	1. The motion destination position of the 2nd axis is out of the software motion limit. 2. The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.
6673	Dest. pos. out of J3 soft motion limit	3	1. The motion destination position of the 3rd axis is out of the software motion limit. 2. The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.
6674	Dest. pos. out of J4 soft motion limit	3	1. The motion destination position of the 4th axis is out of the software motion limit. 2. The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.
6675	Dest. pos. out of J5 soft motion limit	3	1. The motion destination position of the 5th axis is out of the software motion limit. 2. The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6676	Dest. pos. out of J6 soft motion limit	3	1. The motion destination position of the 6th axis is out of the software motion limit. 2. The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.
6677	Dest. pos. out of J7 soft motion limit	3	(1) The motion destination position of the 7th axis is out of the software motion limit. (2) The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.
6678	Dest. pos. out of J8 soft motion limit	3	(1) The motion destination position of the 8th axis is out of the software motion limit. (2) The robot cannot physically perform linear movements in the CP motion for the coordinate entered.	1. Change the motion destination position to within the motion space. 2. If this error occurs after you change the robot specifications (CALSET), check that you have not executed wrong procedures to change the specification. 3. Check that the robot does not pass the singular point vicinity in the CP motion and correct the program so that it avoids the singular point. However, if you return the robot to within the motion space, use the manual mode for each axis. It is not possible to move an axis with either the XY mode or the TOOL mode.
6679	Destination position out of motion space 1	3	The motion destination position is out of the motion space.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check that you followed correct procedures to change the data. 3. Specify a position and a figure where robot movements are physically possible as the target position of the PTP motion and P/T variables of P2J and T2J commands.
667A	Destination position out of motion space 2	3	The motion destination position is out of the motion space.	1. Re-specify the target position within the motion space. 2. If this error occurs after you change the robot data (by CALSET), check that you followed correct procedures to change the data. 3. Specify a position and a figure where robot movements are physically possible as the target position of the PTP motion and P/T variables of P2J and T2J commands.
667B	Destination position in singular point	3	A singular point has been specified as the contents of the variable. Therefore, reverse coordinate transformation command cannot execute.	Set the contents of the position variable to a non-singular point value.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
66D1	J1 software limit over (Compliance)	3	The 1 axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
66D2	J2 software limit over (Compliance)	3	The 2 axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
66D3	J3 software limit over (Compliance)	3	The 3 axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
66D4	J4 software limit over (Compliance)	3	The 4 axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
66D5	J5 software limit over (Compliance)	3	The 5 axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
66D6	J6 software limit over (Compliance)	3	The 6 axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
66D7	J7 software limit over (Compliance)	3	The 7th-axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
66D8	J8 software limit over (Compliance)	3	The 8th-axis software limit was exceeded during compliance control.	Correct the operation position so that the robot is operable in the software limit.
6710	Servo communication initialization error	5	Controller internal error. (The host and the servo communication process initialization failed.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.
671A	Command value calculation delay	4	Time-over error occurred in calculation of command value.	This error may occur if communication is frequently executed with the RS232C and the Ethernet or if you operate the controller keyboard during the robot motion. Operate again after the robot stops.
671B	Servo command processing delay	4	Controller internal error. (A command interruption delay from the servo.)	1. Check that the FG (frame ground) terminals of the robot and the controller are grounded. 2. Check that the robot and the controller are away from noise source such as a welding machine. 3. Check that the cable between the robot and the controller is firmly plugged.

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Code	Message	Level	Description	Remedy
6750	CALSET not executed	2	CALSET has not been executed on all axes.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6751	Execute J1 CALSET	2	CALSET has not been executed on the 1st axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6752	Execute J2 CALSET	2	CALSET has not been executed on the 2nd axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6753	Execute J3 CALSET	2	CALSET has not been executed on the 3rd axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6754	Execute J4 CALSET	2	CALSET has not been executed on the 4th axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6755	Execute J5 CALSET	2	CALSET has not been executed on the 5th axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6756	Execute J6 CALSET	2	CALSET has not been executed on the 6th axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6757	Execute J7 CALSET	2	CALSET has not been executed on the 7th axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6758	Execute J8 CALSET	2	CALSET has not been executed on the 8th axis.	1. If you did not execute CALSET after resetting the encoder, then execute CALSET. 2. If you did not transmit the arm parameters after clearing the memory, transmit the parameters.
6761	J1 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 1st axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6762	J2 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 2nd axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
6763	J3 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 3rd axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
6764	J4 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 4th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
6765	J5 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 5th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
6766	J6 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 6th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
6767	J7 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 7th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
6768	J8 command accel limit over (servo)	4	The CP motion is not available with the specified speed because the acceleration command value exceeds the limit on the 8th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6769	J1 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 1st axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
676A	J2 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 2nd axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
676B	J3 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 3rd axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
676C	J4 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 4th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
676D	J5 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 5th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
676E	J6 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 6th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
676F	J7 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 7th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.

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Code	Message	Level	Description	Remedy
6770	J8 command accel limit over (host)	4	The CP motion is not available with the specified speed because acceleration command value exceeds the limit on the 8th axis.	1. Reduce the speed and the acceleration. If there are no problems, such as interference in the motion path, set the PTP motion. 2. Check that the robot does not pass the singular point vicinity in the CP motion, and correct the program so that it avoids the singular point. 3. If an error occurs when the control set of motion optimization is set to 2 or 3, decrease the speed and deceleration.
6771	J1 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 1st axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6772	J2 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 2nd axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6773	J3 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 3rd axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6774	J4 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 4th axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6775	J5 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 5th axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6776	J6 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 6th axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6777	J7 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 7th axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6778	J8 encoder speed over	5	When the controller power was OFF, an encoder speed error occurred on the 8th axis.	When the controller power is OFF, if excess force is applied on the robot, this error occurs. Reset the encoder and execute CALSET.
6781	J1 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 1st axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.
6782	J2 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 2nd axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.
6783	J3 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 3rd axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.

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Code	Message	Level	Description	Remedy
6784	J4 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 4th axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.
6785	J5 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 5th axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.
6786	J6 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 6th axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.
6787	J7 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 7th axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.
6788	J8 speed over at brake releasing	2	When the brake is OFF, an encoder speed error occurred on the 8th axis.	When you move the robot by releasing the brake, do not apply excess force on the robot.
67B3	Failure in operation command data storage	3	The power was turned off before storage of the operation command.	Restarting in succession to the state before power off is impossible. Since all programs and I-O units are initialized, operate the robot after moving the robot to a safe position to prevent it from coming into contact with any adjacent equipment.
67B4	Abnormal backup data of ARRIVE command	3	The power was turned off before storage of the ARRIVE command data.	Restarting in succession to the state before power off is impossible. Since all programs and I-O units are initialized, operate the robot after moving the robot to a safe position to prevent it from coming into contact with any adjacent equipment.
67B5	Power recovery impossible for operation command during manual operation or teach check	3	No operation command executed in the automatic mode.	Restarting in succession to the state before power off is impossible. Since all programs and I-O units are initialized, operate the robot after moving the robot to a safe position to prevent it from coming into contact with any adjacent equipment.
67B6	Power recovery impossible during Machine lock status.	3	The power switch turned off in machine lock status.	Restarting in succession to the state before power off is impossible. Since all programs and I-O units are initialized, operate the robot after moving the robot to a safe position to prevent it from coming into contact with any adjacent equipment.
67E7	Boundless rotatory joint isn't available	3	This command or operation cannot execute to a boundless rotatory joint.	Release the joint from the boundless rotation or do not execute this command or operation to the boundless rotatory joint.
67E8	Not set boundless rotatory joint	3	This command or operation cannot execute to a limited rotatory joint.	Set the joint for boundless rotation or do not execute this command or operation to the limited rotatory joint.
67FE	Error in initialization process	5	Controller internal error. (The host initialization process failed.)	Turn OFF the power switch of the controller and restart the operation.

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Code	Message	Level	Description	Remedy
67FF	Abnormal configuration	5	Controller internal error (software failure).	Turn OFF the power switch of the controller and restart the operation.
6809	Auto gain tuning is interrupted	3	The auto gain tuning process has been interrupted.	Execute auto gain tuning again.
680A	Inertia identification error	3	The inertia identification process is not possible during auto gain tuning	Auto gain tuning is not possible. Implement manual gain tuning.
680B	Auto gain tuning warning 1	1	Overshoot was found at the end of motion during fine adjustment of gain.	To reduce the overshoot, implement manual gain tuning.
680C	Auto gain tuning warning 2	1	Slow settlement was found at the end of motion during fine adjustment of gain.	To reduce the settlement time, implement manual gain tuning.
680D	Auto gain tuning warning 3	1	Low-level oscillation was found during fine adjustment of gain.	To reduce the oscillation, implement manual gain tuning.
680E	Servo data monitor error	4	Failed to monitor servo single-joint.	Clear the error and start monitoring the servo single-joint again.
680F	Auto gain tuning is not executable	3	The auto gain tuning start requirements are not satisfied.	Check the auto gain tuning start requirements and implement auto gain tuning again.
6819	Unexpected command (Host 1)	5	A controller internal error (software error) has occurred.	Restart the controller.
681A	Unexpected command (Host 2)	5	A controller internal error (software error) has occurred.	Restart the controller.
681B	Unexpected command (Host 3)	5	A controller internal error (software error) has occurred.	Restart the controller.
681C	Unexpected command (Servo 1)	5	A controller internal error (software error) has occurred.	Restart the controller.
681D	Unexpected command (Servo 2)	5	A controller internal error (software error) has occurred.	Restart the controller.
681E	Unexpected command (Servo 3)	5	A controller internal error (software error) has occurred.	Restart the controller.
6829	Precise control processing delay	4	The precision trajectory processing has not finished in time.	When the precision trajectory processing is in progress, this error may occur if the transmission is frequent via the RS-232C or Ethernet or if the controller is accessed by the keyboard. Decrease the frequency of transmission.

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Code	Message	Level	Description	Remedy
682B	Improper precise control operation	4	During setting for enabling or disabling the precision trajectory processing, Program Reset or Step Back operation has been performed. The occurrence of this error has reset the program(s) currently running.	If you want to execute Program Reset or Step Back when the robot is on halt for disabling/enabling the precision trajectory processing, then be sure to turn the motors off once.
6839	Track processing delay	4	Conveyor tracking delayed and was not completed within the specified time.	This error may occur when communication frequency by Ether net is high or when hand I/O interrupt occurs frequently. Decrease the communication or hand I/O interrupt frequency.
683A	Track semaphore error	4	A controller internal abnormality (OS abnormality) occurred.	Turn the controller power switch once and restart operation.
683B	Track Enc.1 Speed error	3	Conveyor 1 (encoder 1) exceeded the limit speed.	Check the conveyor tracking parameter for the encoder speed upper limit. Check if encoder 1 cable connection is normal.
683C	Track Enc.2 Speed error	3	Conveyor 2 (encoder 2) exceeded the limit speed.	Check the conveyor tracking parameter for the encoder speed upper limit. Check if encoder 2 cable connection is normal.
683D	Internal track mode error	4	Internal abnormality of conveyor tracking process.	Turn the controller power switch once and restart operation.
683E	Track state is unchangable	3	Switching to tracking operation fails.	Disable the current limit, OFFSRVLOCK instruction and OFFPWM instruction when executing tracking operation.
683F	Not set track reference data	3	Internal abnormality of conveyor tracking process.	Turn the controller power switch once and restart operation.
6840	Out of track Area	3	The target tracking position is outside the tracking range.	Set the upper and lower limits of the tracking range in conveyor tracking parameters correctly.
6841	Interrupted track motion	3	Tracking operation was interrupted because of stop input during tracking.	Restart the program.
6842	Track data buffer input error	3	Abnormal argument of the TrackDataSet instruction.	Execute the TrackDataSet instruction as many time as the number of works recognized by the TrackDataSet instruction.
6843	Track data buffer overflow	3	The number of data saved in the tracking buffer was exceeded 100.	The number of data saved in the tracking buffer increases and decreases with TrackDataGet instructions. Edit the program so that only TrackDataSet instructions are not executed continuously.
6844	Robot posture mismatch (track)	3	The robot form was changed during tracking operation.	The robot form cannot be changed during tracking operation. Change the tracking operation position.
6845	Track Enc.1 under speed	3	The speed of conveyor 1 (encoder 1) dropped below the set level.	Check the lower limit of the encoder speed in conveyor tracking parameters. Check if the encoder 1 cable is connected normally.

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Code	Message	Level	Description	Remedy
6846	Track Enc.2 under speed	3	The speed of conveyor 2 (encoder 2) dropped below the set level.	Check the lower limit of the encoder speed in conveyor tracking parameters. Check if the encoder 2 cable is connected normally.
6847	Time out of waiting tracking motion	3	The work position did not come into the rage allowing tracking operation within the specified time.	Either change the timeout setting or change the tracking start range.
6848	Track parameter error	3	The tracking operation setting is invalidated.	Set the parameter correctly.
6849	Not Executable in tracking mode	3	An unexecutable processing was tried during tracking operation.	Do not execute current limitation, OFFSRVLOCK instruction or OFFPWM instruction during tracking operation.
684A	Interrupt buffer overflow	3	Hand I/O interrupts occurred more than 100 times, but TrackDataSet was not executed.	Execute the TrackDataInitialize instruction, and clear the buffer. Up to 100 work position data detected upon hand I/O interrupts can be stored. The work position data moves to the conveyor tracking data buffer upon execution of TrackDataSet. Always execute the TrackDataSet instruction.
684B	Out of track start area	3	The object work is downstream the tracking start range (+ side) upon execution of the WaitTrackMove instruction, resulting in tracking failure.	Correctly set the tracking start range in conveyor tracking parameters.
684C	Track Enc. 1 Accel error	3	Conveyer 1 (Encoder 1) accelerates abnormally.	Check the encoder 1 cable for connection.
684D	Track Enc. 2 Accel error	3	Conveyer 2 (Encoder 2) accelerates abnormally.	Check the encoder 2 cable for connection.
6A91	J1 encoder communication error (bit)	4	The J1 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6A92	J2 encoder communication error (bit)	4	The J2 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6A93	J3 encoder communication error (bit)	4	The J3 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6A94	J4 encoder communication error (bit)	4	The J4 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.

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Code	Message	Level	Description	Remedy
6A95	J5 encoder communication error (bit)	4	The J5 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6A96	J6 encoder communication error (bit)	4	The J6 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6A97	J7 encoder communication error (bit)	4	The J7 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6A98	J8 encoder communication error (bit)	4	The J8 encoder data received is abnormal.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AA1	J1 encoder backup error	5	The J1 backup battery does not work so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AA2	J2 encoder backup error	5	The J2 backup has run out so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AA3	J3 encoder backup error	5	The J3 backup battery has run out so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AA4	J4 encoder backup error	5	The J4 backup battery has run out so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AA5	J5 encoder backup error	5	The J5 backup battery has run out so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AA6	J6 encoder backup error	5	The J6 backup battery has run out so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.

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Code	Message	Level	Description	Remedy
6AA7	J7 encoder backup error	5	The J7 backup battery has run out so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AA8	J8 encoder backup error	5	The J8 backup battery has run out so that the internal data has been lost.	(1) Check that the encoder backup battery connector is firmly plugged in. (2) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AA9	J1 encoder initialize error	4	An error has occurred during initialization of the J1 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AAA	J2 encoder initialize error	4	An error has occurred during initialization of the J2 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AAB	J3 encoder initialize error	4	An error has occurred during initialization of the J3 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AAC	J4 encoder initialize error	4	An error has occurred during initialization of the J4 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AAD	J5 encoder initialize error	4	An error has occurred during initialization of the J5 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AAE	J6 encoder initialize error	4	An error has occurred during initialization of the J6 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AAF	J7 encoder initialize error	4	An error has occurred during initialization of the J7 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB0	J8 encoder initialize error	4	An error has occurred during initialization of the J8 encoder.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.

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Code	Message	Level	Description	Remedy
6AB1	J1 encoder absolute data error	5	The J1 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB2	J2 encoder absolute data error	5	The J2 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB3	J3 encoder absolute data error	5	The J3 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB4	J4 encoder absolute data error	5	The J4 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB5	J5 encoder absolute data error	5	The J5 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB6	J6 encoder absolute data error	5	The J6 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB7	J7 encoder absolute data error	5	The J7 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB8	J8 encoder absolute data error	5	The J8 position data may be wrong.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AB9	J1 encoder error	5	A J1 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.

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Code	Message	Level	Description	Remedy
6ABA	J2 encoder error	5	A J2 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.
6ABB	J3 encoder error	5	A J3 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.
6ABC	J4 encoder error	5	A J4 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.
6ABD	J5 encoder error	5	A J5 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.
6ABE	J6 encoder error	5	A J6 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.
6ABF	J7 encoder error	5	A J7 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.
6AC0	J8 encoder error	5	A J8 encoder error has occurred.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) To recover from this error state, you need to reset the related encoder and perform CALSET.

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Code	Message	Level	Description	Remedy
6AC1	J1 encoder over speed error	5	The J1 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC2	J2 encoder over speed error	5	The J2 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC3	J3 encoder over speed error	5	The J3 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC4	J4 encoder over speed error	5	The J4 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC5	J5 encoder over speed error	5	The J5 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC6	J6 encoder over speed error	5	The J6 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC7	J7 encoder over speed error	5	The J7 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC8	J8 encoder over speed error	5	The J8 speed was too high when the power was turned on.	When the robot is on halt, restart the controller.
6AC9	J1 encoder communication error	4	The J1 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6ACA	J2 encoder communication error	4	The J2 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6ACB	J3 encoder communication error	4	The J3 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6ACC	J4 encoder communication error	4	The J4 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6ACD	J5 encoder communication error	4	The J5 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6ACE	J6 encoder communication error	4	The J6 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6ACF	J7 encoder communication error	4	The J7 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AD0	J8 encoder communication error	4	The J8 encoder data has not been updated correctly.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller.
6AD1	J1 encoder data not received	4	Cannot receive J1 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.
6AD2	J2 encoder data not received	4	Cannot receive J2 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.
6AD3	J3 encoder data not received	4	Cannot receive J3 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.
6AD4	J4 encoder data not received	4	Cannot receive J4 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.
6AD5	J5 encoder data not received	4	Cannot receive J5 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.

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Code	Message	Level	Description	Remedy
6AD6	J6 encoder data not received	4	Cannot receive J6 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.
6AD7	J7 encoder data not received	4	Cannot receive J7 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.
6AD8	J8 encoder data not received	4	Cannot receive J8 encoder data.	(1) Check that the FG wires of the robot unit and controller are grounded properly. (2) Check that no noise sources (e.g., welding machines) are in the vicinity of the robot unit or controller. (3) Check the cables between the robot unit and controller for connection.
6AD9	J1 encoder over heat error	4	The internal temperature of the J1 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)
6ADA	J2 encoder over heat error	4	The internal temperature of the J2 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)
6ADB	J3 encoder over heat error	4	The internal temperature of the J3 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)

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Code	Message	Level	Description	Remedy
6ADC	J4 encoder over heat error	4	The internal temperature of the J4 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)
6ADD	J5 encoder over heat error	4	The internal temperature of the J5 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)
6ADE	J6 encoder over heat error	4	The internal temperature of the J6 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)
6ADF	J7 encoder over heat error	4	The internal temperature of the J7 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)
6AE0	J8 encoder over heat error	4	The internal temperature of the J8 encoder is too high.	This high temperature state may break the encoder, so follow the steps below. (1) Check the temperature of the operating environment. (2) Check that the specifications of the hand (inc. workpiece) do not exceed the acceptable capacity of the robot. (3) Set timers between motion commands or decrease the speed and/or acceleration. (Before performing the operation again, wait for at least one minute.)
6AE1	J1 encoder battery low voltage	2	The battery voltage level of the J1 encoder has dropped.	Replace the encoder backup battery of the related joint.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
6AE2	J2 encoder battery low voltage	2	The battery voltage level of the J2 encoder has dropped.	Replace the encoder backup battery of the related joint.
6AE3	J3 encoder battery low voltage	2	The battery voltage level of the J3 encoder has dropped.	Replace the encoder backup battery of the related joint.
6AE4	J4 encoder battery low voltage	2	The battery voltage level of the J4 encoder has dropped.	Replace the encoder backup battery of the related joint.
6AE5	J5 encoder battery low voltage	2	The battery voltage level of the J5 encoder has dropped.	Replace the encoder backup battery of the related joint.
6AE6	J6 encoder battery low voltage	2	The battery voltage level of the J6 encoder has dropped.	Replace the encoder backup battery of the related joint.
6AE7	J7 encoder battery low voltage	2	The battery voltage level of the J7 encoder has dropped.	Replace the encoder backup battery of the related joint.
6AE8	J8 encoder battery low voltage	2	The battery voltage level of the J8 encoder has dropped.	Replace the encoder backup battery of the related joint.
6AE9	J1 encoder overflow warning	4	If the motor keeps running in the current direction, the J1 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.
6AEA	J2 encoder overflow warning	4	If the motor keeps running in the current direction, the J2 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.
6AEB	J3 encoder overflow warning	4	If the motor keeps running in the current direction, the J3 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.
6AEC	J4 encoder overflow warning	4	If the motor keeps running in the current direction, the J4 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.
6AED	J5 encoder overflow warning	4	If the motor keeps running in the current direction, the J5 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.
6AEE	J6 encoder overflow warning	4	If the motor keeps running in the current direction, the J6 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.
6AEF	J7 encoder overflow warning	4	If the motor keeps running in the current direction, the J7 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.

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Code	Message	Level	Description	Remedy
6AF0	J8 encoder overflow warning	4	If the motor keeps running in the current direction, the J8 position encoder counter will be overflown.	If you need to rotate the motor in the same direction further, reset the encoder of the related joint and perform CALSET.
6AF3	Interference area detected by J1,2,3	3	The end-effector has came in the defined interference check area.	Run the robot to make the end-effector go out of the interference check area and then try the operation again.
700B	Robot is running	3	The specified command cannot be executed during robot operation.	Stop the robot and retry.
7047	Subroutine return stack overflow	4	Number of calling subroutines exceeded their set value.	1. Check that the program, which had the error, does not call itself as a subroutine. 2. Check that the program calls the other program as a subroutine and that the subroutine calls the main program (calling) again as a subroutine. 3. Change the program configuration so that the subroutine is not called exceeding the set times of calling.
7048	Undefined process command	4	An undefined processing command in the current software attempted to execute.	1. Check that the controller software version agrees with that of WINCAPSII. 2. Re-create the execution form file using WINCAPSII or the controller. At this time, disable the DATE INSPECTION option in WINCAPSII. 3. Check that no error occurs when the program is transferred from WINCAPSII to the controller and when the program is loading.
7062	Mode change failure	3	Failed in changing the operation mode.	1. Check the error log for the error that occurred immediately before, and avoid it. 2. Change the operation mode to internal or external automatic mode.
71E0	Program busy	2	Attempted to perform an operation not executable while the program is in execution.	Restart the operation confirming that the program is not in execution.
736A	Stop operation error	4	Operation did not stop within a specified time after HALT and Robot stop.	Clear error and restart the operation.
736B	Automatic load not permitted	1	When the Program List window or the Select Variable Type window was opened, you attempted to carry out automatic load.	Try automatic load again with the teach pendant.
736C	Started program is in Teach-Check condition.	2	A program in Teach-Check condition was attempted to start by RUN command from other program.	If the operation is confirmed to be safe, start the program. If not, restart the program after ‘HALT’ of the Teach-Check program.

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Code	Message	Level	Description	Remedy
736D	TC time detected. All program halted.	1	This condition occurs when TC time (non-operation time) exceeds the set time in SS function stop mode setting.	Cannot start next operation by the unknown causes. Solve the causes.
736E	Executed program version does not coincide with the controller version.	4	Cannot load the program because the program version does not coincide with the controller version.	Recompile the program with the controller or make the WINCAPSII version coincide with the controller version.
736F	Can't start program with array arguments	2	In stand alone mode, the current system does not support starting of programs containing array argument(s).	Only the CALL statement can call such a program that contains array argument(s).
737A	Cannot store operation history	1	Failed in recording robot operation command data used in step-back function.	Execute step start or cycle start in case of executing the step-back of the program. The limitation of step back in this condition is up to the first robot operation command when step start or cycle start was executed after the error occurrence.
737B	Failed in initializing operation history	1	Failed in initializing the robot operation command data used in step back function.	In case of using step back function, switch off the controller power switch and restart the operation.
737C	Restart operation execution error	3	Failed in the execution of step back function. Or failed in step start or cycle start to the starting point of the step back operation	In case of using step back function, execute the robot operation command by step start or cycle start.
737D	Cannot step back further	1	Cannot step back further.	Execute the robot operation command by step start or cycle start.
737E	No operation history	1	No operation command data to be used in step back function was found.	Execute the robot operation command by step start or cycle start.
737F	Restart operation busy	1	In execution of step back operation, or in execution of step start / cycle start to the starting point of the step back operation.	Execute step start or cycle start again.
738A	Cannot change nonexistent parameter	2	A variable specified with the program does not exist. (The table number or element number is out of range.)	Read the program again and change or correct the program so that the table number and element number is within the range.
738B	Cannot change this parameter by program	3	A variable specified with a program cannot be changed from the program.	Read the program again and delete this command or correct the variable so that it is available to use.
738C	No RETURN position	3	RETURN command was used by the program not executed with GOSUB.	Review the program and correct the RETURN position or GOSUB.

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Code	Message	Level	Description	Remedy
738D	Return stack of the program is destroyed	4	The content of the Return stack is destroyed.	1. Switch off the controller power switch and restart the operation. 2. Recompile the program. 3. Notify us if the condition is not improved by the recompile.
738E	CRC error of BP's data	5	A break-point data error was detected.	Release all break points, turn OFF the power switch of the controller, and specify break points for operation again.
7395	Cannot start program during stop	3	The program cannot be started during stopping process.	After some time, restart the program.
7396	An integer type variable cannot be used	3	Integer variables cannot be used in approximate comparison operation.	Change the variable type to single-precision or double-precision real.
739B	Failure to allocate task control area	4	Memory area for multitasking program manager was not normally allocated.	Turn OFF the power switch of the controller and restart the operation.
739C	Failure to initialize prog. exe. process	4	An error occurred when the multitasking program process section was initialized.	Turn OFF the power switch of the controller and restart the operation.
739D	Failure to initialize step exe. process	4	An error occurred when the step execution process section was initialized.	Turn OFF the power switch of the controller and restart the operation.
739E	Failure to load execution file	4	The controller could not load the execution form file.	1. Check that the execution form file and the mutual reference file were transmitted from WINCAPSII to the controller, before you execute loading. 2. Check that another error occurs in execution of loading with the error log function. If the error occurred, remove the cause of the error and reload them. 3. Check that no error occurs when a program is transferred from WINCAPSII to the controller. 4. Check that no error occurs when the compiling is executed in the controller. 5. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
739F	Failure to create internal task	4	Creation of a task, used in the internal process, failed.	Turn OFF the power switch of the controller and restart the operation.
73A1	Failure to delete semaphore	4	Semaphore was not deleted normally.	1. Check if the semaphore ID given with the GIVESEM statement is the same as that taken with the CREATESEM statement. 2. Turn OFF the power switch of the controller and restart the operation.
73A2	Failure to create semaphore	4	Creation of a task used in the internal process failed.	Turn OFF the power switch of the controller and restart the operation.

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Code	Message	Level	Description	Remedy
73A3	Failure to terminate cycle process	4	The termination process for the CYCLE option executing section of the RUN statement could not execute.	Turn OFF the power switch of the controller and restart the operation.
73A4	Failure to initialize cycle process	4	Initialization for the CYCLE option executing section of the RUN statement could not execute.	Turn OFF the power switch of the controller and restart the operation.
73A5	Failure to start cycle process	4	The start process for the CYCLE option executing section of the RUN statement could not execute.	Turn OFF the power switch of the controller and restart the operation.
73A6	Forbidden process tried during loading	4	A process command not available to execute attempted to execute in program load processing.	1. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 2. Check that no error occurs when compiling is executed in the controller. 3. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73A7	Cannot take cycle process semaphore	4	Internal process semaphore for execution of CYCLE option of RUN statement was not taken normally.	Turn OFF the power switch of the controller and restart the operation.
73A8	Failure to write Interpreter queue	4	Transfer of an execution contents command to the program executing section failed.	Turn OFF the power switch of the controller and restart the operation.
73A9	Failure to release cycle process semaphore	4	Internal process semaphore for execution of CYCLE option of RUN statement was not released normally.	Turn OFF the power switch of the controller and restart the operation.
73AA	Cannot allocate interpreter memory	4	Memory area for execution form file interpreter was not allocated normally.	Turn OFF the power switch of the controller and restart the operation.
73AB	Undefined variable format (1) appeared	4	Attempted to interpret variable data; however, different data from the variable data appeared in the execution form file.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.

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Code	Message	Level	Description	Remedy
73AC	Undefined variable format (2) appeared	4	Attempted to interpret the variable data; however, different data from the variable data appeared in the execution form file.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73AD	Non-integer type variable appeared	4	Integer data attempted to interpret; however, different data from the integer data appeared in the execution form file.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73AE	Program internal No. not defined	4	Attempted to be read a program number in program load processing; however, the number did not appear.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73AF	Program define start command not found	4	Attempted to read the program definition; however, the command declaring the program start did not appear.	1. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 2. Check that no error occurs when compiling is executed in the controller. 3. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73B0	Program define No. out of setting range	4	A program internal definition number was read; however, the value was out of permissible range.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.

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Code	Message	Level	Description	Remedy
73B1	Cannot allocate program define memory area	4	Working memory for copying program contents in the program loading process was not allocated normally.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII. 5. The program size total number exceeds the system permissible value. Reduce the number of programs, which construct the project, recompile and load them.
73B2	Program size differs from definition	4	Program size declaration appeared at the head of the program definition and the practical program size did not match that definition.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73B3	Local variable not initialized	4	1. A local variable was declared. The variable contents attempted to read without assigning a value at least once. 2. A attempted calling a subroutine; however, the corresponding program could not be found. 3. HOME is not set before execution of the GOHOME command.	Case 1.: · Read the program again and correct the program so that the value is assigned before the value of the local variable is read, after the program is loaded. Case 2.: · Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. · Check that no error occurs when compiling is executed in the controller. · Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII. Case 3.: Set the home position with the HOME command.
73B4	Failure to allocate variable reading area	4	Process area to read variable data from could not be allocated.	Turn OFF the power switch on the controller and restart the operation.

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Code	Message	Level	Description	Remedy
73B5	Undefined variable format (1) appeared	4	Attempted to interpret variable data; however, data different from the variable data appeared in the execution form file.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73B6	Undefined variable format (2) appeared	4	Attempted to interpret variable data; however, data different from the variable data appeared in the execution form file.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73B8	Failure to write load data	4	Attempted to transmit data to the process section, in order to load the program; however, transfer writing failed.	Turn OFF the power switch on the controller and restart the operation.
73B9	Failure to read load data	4	The process section attempted to read data, in order to load a program. However, the reading failed. An attempted to transmit data to the process section and to load the program, by transfer writing failed.	Turn OFF the power switch on the controller and restart the operation.
73BA	Program restart failed	4	The RUN command could not restart the program, which was in a hold status, due to the halt.	Set the program to the stop status and execute again, from the top.
73BB	Failure to specify start program	4	Program start was attempted by the teach pendant I/O or PAC RUN command. But the controller failed to specify the program number at the program interpreter.	Turn OFF the power switch on the controller and restart the operation.
73BC	Program suspension failed	4	Attempt was made to suspend the program. But, it was terminated because of failure.	Turn OFF the power switch on the controller and restart the operation.
73BD	Program restart failed	4	The controller failed to restart the program in hold status.	Set the program to stop status and run the program again from the top.

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Code	Message	Level	Description	Remedy
73C0	Failure to read break point reading area	4	The controller failed to secure the reading area to read the break point setting lines.	Turn OFF the power switch on the controller and restart the operation.
73C1	Cannot set no more break points	4	The number of break points attempted to set for the program exceeds the upper limit.	Release unnecessary break points and set again.
73C2	No break point is set in a line	4	Attempt was made to delete the break point at a line where no break point was set.	Check if a break point is set on the line where the break point attempted to delete.
73C3	Program stop designation undefined	4	Attempt was made to set an undefined status process, to designate status for the break point, program execution trace, step start and step stop.	Turn OFF the power switch on the controller and restart the operation.
73C4	Step stop specify semaphore not prepared	4	Step stop was attempted. But the required internal semaphore was not prepared.	Turn OFF the power switch on the controller and restart the operation.
73C6	Failure to create break point semaphore	4	Internal semaphore for the break point process was not created normally.	Turn OFF the power switch on the controller and restart the operation.
73C7	Failure to take break point semaphore	4	Internal semaphore for the break point process was not taken normally.	Turn OFF the power switch on the controller and restart the operation.
73C8	Failure to delete break point semaphore	4	Internal semaphore for the break point process was not deleted normally.	Turn OFF the power switch on the controller and restart the operation.
73C9	Failure to obtain task status	4	The program operation status was not obtained normally.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73CA	Failure to obtain task information	4	Attempted to obtain the program information; however, the information recorded section could not be found.	Turn OFF the power switch on the controller and restart the operation.

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Code	Message	Level	Description	Remedy
73CB	Failure to search task information	4	The program information recorded section was searched; however, it could not be found.	1. The number of PAC programs, which construct the project, exceeds the set upper limit. Reduce the number of the PAC programs. Then, recompile and load them. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73CC	Failure to allocate task info record area	4	When the program was being loaded, the program information attempted to record; however, it could not record because the record area was full.	1. The number of PAC programs, which construct the project, exceeds the set upper limit. Reduce the number of the PAC programs. Then, recompile and load them. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73CD	Wrong data type of command argument	4	When the program was executed, a command argument of a type, which does not correspond to the command attempted to execute, appeared.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73CE	Failure to get version char. string area	4	The program tried to get the software specification version but failed to allocate the record memory area.	Turn OFF the power switch on the controller and restart the operation.
73CF	Failure to read type P variables	4	Type P variables were not normally read from the temporary storage.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.

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Code	Message	Level	Description	Remedy
73D0	Failure to read type T variables	4	Type T variables were not normally read from the temporary storage.	1. Check that the controller software version corresponds to that of WINCAPSII. 2. Check that no transmit error occurs when an execution form file is transmitted from WINCAPSII to the controller. 3. Check that no error occurs when compiling is executed in the controller. 4. Use WINCAPSII or the controller and create the execution form file again. When you do this, set the DATE INSPECTION option to invalid in WINCAPSII.
73D2	Interpreter failure	4	Data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73D3	Code undefined	4	The controller attempted to execute an unexpected command. The following possible reasons are considered. 1. If teaching was done with a personal computer, perhaps WINCAPSII and the controller version do not match. 2. The controller attempted to execute unsupported commands. 3. Data in the controller was somehow corrupted.	Case 1: Replace the version with the right one. Case 2: Do not manually execute unsupported commands. Case 3: Turn OFF the power switch on the controller and restart the operation.
73D4	Lack of memory	4	A newly declared variable area could not be secured.	Delete the declaration of unused variables and increase the memory space. If the teach pendant displays the program contents, close the window for operation.
73D5	Register failure	4	Data in the controller was corrupted.	Turn OFF the power switch of the controller and restart the operation.
73D6	Unsupported command	4	The controller attempted to execute unexpected command. The following possible reasons are considered. 1. (If teaching was done with a personal computer.) WINCAPSII and controller version do not match. 2. The controller attempted to execute unsupported commands. 3. Data in the controller was somehow corrupted.	In case of 1: Replace the version with the right one. In case of 2: Do not manually execute unsupported commands. In case of 3: Turn OFF the power switch of the controller and restart the operation.
73D7	Data size error	4	Data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.

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Code	Message	Level	Description	Remedy
73D8	User code area not registered	3	The variables have not been initialized.	Read the program again and initialize the variables.
73D9	No user code	3	Data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73DA	Type mismatch	4	Data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73DB	Data tag error	4	1. Data type is different. 2. Data in the controller was somehow corrupted.	1. Read the program again and check that there is an assignment to different type data and correct it. 2. Turn OFF the power switch on the controller and restart the operation.
73DC	Improper data length	4	1. The maximum number of characters exceeds the character string type. 2. Data in the controller was somehow corrupted.	1. Read the program again and check that there is an assignment to different type data and correct it. 2. Turn OFF the power switch on the controller and restart the operation.
73DD	Zero division error	4	The expression operation of which the denominator becomes 0 was attempted.	Read the program again and initialize the variables. Delete or change the operation to divide by 0.
73DE	External reference	4	The value of the approximation comparison parameter exceeds the permissible range.	Reconsider the value of the approximation comparison parameter.
73DF	User code range error	4	Data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73E0	User code range over	4	Data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73E1	User code not registered	4	Data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73E2	Time data error	3	Time data attempted to operate with the character string functions. However, the value not permissible.	Reconsider the time data and change it to a permissible value.
73E3	Lack of memory	4	The newly declared variable area could not be secured.	Delete the declaration of unused variables and increase the memory space. If the teach pendant displays the program contents, close the window for operation.
73E4	Out of I/O range	3	An I/O number, which is outside the available range, was specified.	Read the program again and delete the command, which attempted to operate the I/O number, not available to use.
73E5	Undefined input/output device	4	Device not available was selected.	Read the program again and delete the command which, attempted to operate the device, not available to use.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
73E6	Stack overflow	4	The data area, which can be used by the program, is overfilled.	Turn OFF the power switch on the controller and restart the operation.
73E7	Stack underflow	4	Data area that can be used by the program is insufficient.	Turn OFF the power switch on the controller and restart the operation.
73E8	Pose data error	4	The data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73E9	Semaphore error	4	The data in the controller was somehow corrupted.	Turn OFF the power switch on the controller and restart the operation.
73EA	Syntax error	4	1. The data type is different. 2. Character string not initialized was used. 3. The data in the controller was somehow corrupted.	1. Read the program again to check if there is an assignment with different type data and correct it. 2. Initialize (assign the data) the character string. 3. Turn OFF the power switch on the controller and restart the operation.
73EB	Undefined joint type	4	Attempt was made to move unusable joint.	Read the program again and delete the command for moving the unusable joint.
73EC	Unsupported command	4	The controller tried to execute unexpected commands. The possible causes are as follows: 1. Execution of an unsupported command. 2. Controller data was destroyed due to some reason.	Case 1: Do not manually execute unsupported commands. Case 2: Turn OFF the power switch on the controller and reboot the operation.
73ED	Unsupported command	4	The controller tried to execute unexpected commands. The possible causes are as follows: 1. Execution of an unsupported command. 2. Controller data was destroyed due to some reason.	Case 1: Do not manually execute unsupported commands. Case 2: Turn OFF the power switch on the controller and reboot the operation.
73EE	Cannot run (max. number of tasks)	4	The number of tasks, which exceeded the set number of user tasks, attempted to run.	Correct the number of user tasks, reboot the controller and try the operation again.
73EF	Variable/element No. out of set range	3	Subscripts of array variables or element number types T, J and P exceeded the permissible range.	Read the program again and change it so that the array subscript or the element number types T, J and P become permissible values or extend the array area.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
73F0	Index error	4	Array variable subscripts were not out of range.	Read the program again and change the values so that the array subscript becomes the permissible value.
73F1	No project	4	Although the execution available project was not present, loading was attempted.	Create a project.
73F2	Domain error	4	The robot program arguments are out of range.	Read the program again and change the value so that the argument becomes the permissible value.
73F3	Value out of range	4	The robot program arguments are out of range.	Read the program again and change the value so that the argument becomes the permissible value.
73F4	All memory initial (variable area error)	5	A failure was found in the variable storage area in program loading.	This is information that the system found an error and the correction process was finished. However, because all the variables are initialized, execute the process to return the values of the variables back to their original values.
73F5	Local variable initialized	2	A value of the local variable was initialized.	This is information that due to program transmission and compiling all the local variables are initialized.
73F6	Cannot fetch position w/o CAL execution	3	Obtaining a position is not available because CAL is not executed.	Return to the arm menu and execute CAL.
73F7	Specified tool No. not usable	3	The specified TOOL number cannot be used.	Change the TOOL number in the program to the permissible value.
73F8	Failure to create semaphore	4	Semaphore was not created normally.	The maximum number of semaphores was exceeded. Reduce the number of created semaphores.
73F9	Failure to delete semaphore	4	Semaphore was not deleted normally.	The semaphore to be deleted is not found. Review the usage of DELETESEM function.
73FA	Failure to take semaphore	4	Semaphore was not taken normally.	The semaphore is used by another task. Review the usage of TAKESEM function.
73FB	Semaphore taking timeout	3	Timeout error occurred in taking semaphore.	The semaphore is used by another task. Review the usage of TAKESEM function.
73FC	Failure to release semaphore	3	Semaphore was not released normally.	The semaphore to be released is not found. Review the usage of GIVESEM function.
73FD	Failure to release the tasks waiting semaphore	3	Semaphore-waiting tasks were not released normally.	Semaphore to be released is not found. Review the usage of FLUSHSEM function.
73FE	Cannot start program with arguments	2	A program with arguments cannot run from the teach pendant, the operating panel or an external device.	If you are calling a program with arguments, use another program.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
73FF	Cannot start program during the HALT process execution.	2	Attempted to start a program during HALT processing. (This error will occur also in Teach Check mode if you start a program immediately after releasing the deadman switch.)	Wait for a while and then restart the program. If HALT is commanded to all tasks, no program can run until all tasks come to stop. If step-stop is commanded to all tasks but any task is stopped by WAIT statement so as not to step-stop, then satisfy the WAIT condition to step-stop the task or stop that task. (If placed in Slow mode with the SS function, the task will come into the same state.) When operating the robot through I/Os, switching the external mode or Auto Enable will cause stop to all tasks, so the program cannot start for a while. Wait for a second or more and start the program.
75B0	Client port open error	3	The specified client port is already occupied or invalid.	Change the port or correct the client port settings.
7780	The max number of folders was exceeded.	3	The number of folders created has exceeded the limit (256).	Decrease the number of folders below the limit and then try again.
7799	The maximum number of TSR was exceeded.	3	The number of active supervisory tasks has exceeded its limit (32).	Modify the program so that the number of active supervisory tasks does not exceed 32.
779A	Ex-Joint is selected	3	The specified command cannot be executed when an additional axis is selected as a robot axis.	Select an axis other than additional axes and retry.
779B	The maximum number of files was exceeded.	3	The number of files created in the controller has exceeded the limit: 256 for PAC files and 256 for the combination of header files and operation panel files.	Decrease the number of files and then try again.
779F	Failure to turn on the motor power	3	An error occurred because of failure in turning the motor ON for some reason during MOTOR instruction execution, or because of timeout in consecutive MOTOR instruction activation.	Restart after checking and eliminating the cause of failure in turning the motor power ON.
77B7	MOTOR OFF command while robot is running.	3	The MOTOR OFF command cannot execute when the robot is running.	Correct your program so as not to execute the MOTOR OFF command when the robot is running.
77B8	MOTOR ON command with deadman switch off.	3	In Robot System "Type A," the MOTOR ON command cannot execute when the deadman switch is released in Manual mode or Teach check mode.	When executing the MOTOR ON command in Manual mode or Teach check mode, hold down the deadman switch.
77D1	Undefined arm group	4	Attempted to get an undefined arm group.	Correct the program. Or define the arm group, turn the controller power off and then on, and start the operation again.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
77D2	Arm group has been taken	4	Attempted to get any other different arm group from that already gotten.	Correct the program so as not to get the different arm group in the same program.
77E4	EX(EXA) option can use only exjoint	3	The EX (EXA) option cannot drive the robot joints.	Correct the program so that no robot joint is included in the EX (EXA) option.
77E5	This joint is not available	3	The position of the extended joint disabled cannot be taken.	Correct the program. Or enable the extended joint, turn the controller power off and then on, then start the operation again.
77E6	Cannot take semaphore of invalid joint	3	Cannot get an arm group containing an extended joint disabled.	Correct the program. Or enable the extended joint, turn the controller power off and then on, then start the operation again.
77E7	Boundless rotatory joint isn't available	3	This command or operation cannot execute to a boundless rotatory joint.	Release the joint from the boundless rotation or do not execute this command or operation to the boundless rotatory joint.
77E8	Not set boundless rotatory joint	3	This command or operation cannot execute to a limited rotatory joint.	Set the joint for boundless rotation or do not execute this command or operation to the limited rotatory joint.
77E9	Can't execute INIT (EXECUTING INIT)	4	During execution of an INIT command, the controller attempted to execute any other INIT command.	Correct the program so that during execution of an INIT command, any other INIT command will not run.
77EA	Can not start Program in Manual Mode	3	In Manual or Teach Check mode, a supervisory task attempted to start a user task.	Stop the supervisory task or delete a user task start instruction written in the supervisory task.
77EB	Cannot execute this command by TSR	3	To prohibit robot motions, a supervisory task called the TAKEARM command.	Correct the program so that robot motions are written in a user task.
77EC	TSR setting is "Not Use Supervisor TASK."	2	Attempted to start a supervisory task, but the supervisory task mode has been disabled.	Enable the supervisory task mode and restart the robot controller.
77ED	Cannot start TSR	3	Attempted to run a supervisory task in generall tasks.	Correct the program not to attempt to start a supervisory task in generall tasks.
77EE	TSR can't be started continuously	1	A supervisory task is not allowed to start in succession.	To run a supervisory task in succession explicitly, correct the program so that the repetitions loop inside the supervisory task.
77EF	Failure to do calibration (INIT)	3	Failed to CAL due to any cause during execution of INIT.	Fix the CAL failure cause and restart the robot controller.

2 Controller Error Code Table

Code	Message	Level	Description	Remedy
77F0	Failure to turn on the motor power (INIT)	3	Failed to turn the motor on due to any cause during execution of INIT. INIT commands executed in succession have caused a timeout error.	Fix the failure cause and restart the robot controller.
77F1	Command exclusive to TSR	3	In a general task, you attempted to execute a command(s) exclusively allowed for a supervisory task.	Correct the program so that the command executes in a supervisory task.
77F2	COM-DATA length too short	3	In binary transmission, the data length specified by <inputbytes> in linputb command is too short.	Send data whose length matches that specified by <inputbytes> from external equipment to the robot controller.
77F6	DETECT command is invalid.	3	Attempted to execute the DETECT command when disabled.	Enable the DETECT command.
77F7	Can't execute this operation by TSR	3	Attempted to execute operations unsupported by a supervisory task, e.g., step-run and starting of general tasks by a supervisory task at the occurrence of an error.	Perform supported operations. Or correct the program so that it will cause no error.
77F8	TSR start canceled	2	The power was turned on with the deadman switch being held down, so no supervisory task has not started. NOTE: This message will appear even when the supervisory task function is disabled if you turn the power on with the deadman switch being held down.	To start a supervisory task when turning the power on, do not press the deadman switch. If this message appears when the supervisory task function is disabled, then delete it and proceed to your task.
77F9	I/O output (Not depend on the setting)	2	Since a supervisory task is enabled, the I/O may be outputted independently of the machine lock setting.	If a supervisory task is enabled, be careful with the I/O status which may be changed.
77FA	It is the undefined axis	3	Attempted to detect an undefined axis.	Use a DETECT command to define a robot joint or extended-joint that is applicable to JOINT.
77FB	I/O number has overlapped	3	The same I/O number has been double assigned in any other program.	Declare any other I/O. Or avoid turning on the same I/O in the DETECT command at the same time.
77FC	Can't execute program (error occurring)	3	Since an error has occurred, the supervisory task cannot start any general task program.	Correct the user program, settings, and conditions so that no error will occur in it.

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Code	Message	Level	Description	Remedy
77FD	The I/O number which is not declared	3	Attempted to turn off the I/O number that had not been turned on in the DETECT command.	Set the I/O number declared in the same program.

3 WINCAPSII Error Code Table

<System Manager>

No.	Message	Description	Action
1000	PacManager no response	No response from PAC Manager	Restart System Manager if no response is received after a short time.
1001	VarManager no response	No response from Variable Manager	Restart System Manager if no response is received after a short time.
1002	DioManager no response	No response from DIO Manager	Restart System Manager if no response is received after a short time.
1003	ArmManager no response	No response from Arm Manager	Restart System Manager if no response is received after a short time.
1004	VisionManager no response	No response from Vision Manager	Restart System Manager if no response is received after a short time.
1005	LogManager no response	No response from Log Manager	Restart System Manager if no response is received after a short time.
1006	RoboTalk no response	No response from Communication Manager	Restart System Manager if no response is received after a short time.
1007	File writing error. Check detail setting.	Cannot write a file when creating a new project.	Press INITIALIZE key of DETAIL SETTING. Also check whether respective default file names of managers are correct.
1008	File reading error	Cannot read file. Either the file does not exist or the contents are invalid.	Restart System Manager. If the file does not exist, specify a file to read.
1009	Data batch transmission failure	Data batch transmission failed. An error was generated during transmission because of something such as a wrong connection or time-out	Re-check the communication status and connection. If necessary, extend the time-out length.
100A	TAPI initialization error	Initialization failed when transmitting data over the telephone line.	Check connection of the modem and other communication devices. Initialize the state and operate again.
100C	Illegal password. Make re-entry.	Invalid password has been input.	Input correct password again.
100D	Illegal project name. Make re-entry.	The project name already exists or it is invalid.	Input the project name correctly.
100E	Illegal folder name.	Folder name is invalid.	Input the folder name correctly.
1010	New password not matching. Input again.	Invalid password entered when registering a new password.	Input a correct password.

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No.	Message	Description	Action
1011	Failed to end because either the command was canceled or a modal form is on display.	Attempt to end System Manager failed because another manager canceled the end command or because a dialog remains open.	Close all open dialogs, save the project and proceed to end the manager.
1012	FD tool no start	Failed to start FD tool.	Uninstall WINCAPSII, then install again.
1015	Operation invalid because of connection state. Reset the connection and execute again.	Operation rejected because one of the managers is connected.	Reset connection of all managers.
1016	Illegal robot dependent data. Project new creation function not usable.	Dependent data of selected robot type does not exist.	Uninstall WINCAPSII and then reinstall.
1017	Robot program wizard failed to function normally.	Program wizard is not functioning normally. Normal installation cannot be carried out.	Uninstall WINCAPSII and then reinstall.
1018	Association of VBS script file failed to function normally.	Microsoft Windows scripting host is not installed.	Install Microsoft Windows scripting host.
1019	System project data cannot be opened because it is newer than the application version.	Attempt was made to open data file created using a newer version than the current WINCAPSII.	New data cannot be directly opened. Either read data via the controller or deliver data using the FD tool.
101C	Response cannot be made because the system is busy.	Could not respond because selected manager is currently busy processing.	Wait until the processing is finished and proceed with the operation.
101D	Operation is disabled because other manager is operating. Stop the operation of other manager.	Operation was disabled because another manager is in operation.	Stop the operation of the other manager.
101E	Configuration is transmitted. Restart the controller or normal operation may not be possible.	The controller must be restarted to have the controller reflect the data contents that have been transmitted.	Restart the controller.
101F	Communication manager is already started. Shut it down once and then restart it.	Since the communication manager is already started, it is advised to restart the communication manager.	Not necessary
1021	Disc not inserted or not formatted. Insert disc.	Disc is not inserted or not formatted.	Insert formatted disc to the drive.
1022	Write error. Check the write-protect of the disc.	Disc is write-protected or broken.	Make the disc ready for writing.
102A	Failed in uploading ROM data. Retry uploading without controller power off.	Failed in uploading the ROM data because of communication error, etc.	Check communication condition and connection without controller power off. Set longer time out value if necessary.
102B	Failed in downloading ROM data.	Failed in downloading the ROM data because of communication error, etc.	1. Check communication condition and connection. Set longer time out value if necessary. 2. Check if disc capacity for writing is sufficient. (More than 4 MB is needed.)

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No.	Message	Description	Action
102D	Failed in the export of ROM data.	Failed in the export of ROM data. 1. Disc capacity is insufficient. 2. Source data is destroyed.	Check if disc capacity for writing is sufficient. (More than 4 MB is needed.)
102E	Failed in the import of ROM data.	Failed in the import of ROM data. 1. Disc capacity is insufficient. 2. Source data is destroyed.	Check if disc capacity for writing is sufficient. (More than 4 MB is needed.)
102F	Connected controller does not have the ability to cope with this function.	Connected controller does not have the ability to cope with this function.	Revise the controller for new version.
1030	SystemManager no response	No response from System Manager.	Restart System Manager in case of no response after a pause.
1031	Initialization error	Failed in the initialization at start up. The content of the previously opened project is incorrect or no file is present.	Designate the project and reopen. Make a new project.
1032	Connection error	Cannot connect to the controller.	Check connection. Check communication condition from the communication manager and connect again.
1033	Auto-response setting error	Auto-response setting through telephone line failed.	Check the condition of modem and telephone line. Initialize modem.
1034	On-hook processing error	Cannot disconnect the telephone line.	Disconnect manually from modem.
1035	Auto-receiving setting error	Failed in setting Auto-receiving to modem.	Check the condition of modem and telephone line. Initialize modem.
1036	Auto-receiving release error	Failed in releasing Auto-receiving setting of modem.	Check the condition of modem and telephone line. Initialize modem.
103B	Cannot open the designated port.	The designated port is already used or not present.	1. Terminate the application using the designated port. 2. Designate correct port.
103C	Cannot transfer a file with more than 40 bytes file name.	Cannot transfer a file with more than 40 bytes file name.	Rename the file name within 40 bytes.
103D	We do not support the connection with upper version controller.	Cannot connect to the controller having newer version than WINCAPSII (PC side software).	Install WINCAPSII of the newest version.
103E	Robot type mismatch	Connection is not allowed because the robot type of currently opened project and the controller robot type are different.	Make both robot types the same. 1. Make a new project with the same robot type of the controller. 2. Change controller robot type.
103F	ROM data update completed. After the POWER LED flash on and off, please turn off the controller and restart.	Waiting for the answer from the controller until completion of ROM update. The completion is notified by flashing of the POWER LED.	Restart the controller after checking flashing of the POWER LED.
1040	Invalid User ID ! Enter a valid User ID.	The input user ID is invalid.	Check the user ID and input the correct one.

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No.	Message	Description	Action
1041	You must register a User ID to use this function.	The user ID for the specified function has not been registered.	Register the user ID.

<PAC Manager>

2000	SystemManager no response	No response was received from System Manager.	Restart System Manager if no response is received after a short time
2001	LogManager no response	No response was received from Log Manager.	Restart System Manager if no response is received after a short time
2003	Initialization error	Initialization has failed. Either the contents of the previously opened project are invalid or the file does not exist.	(1) Specify the project and reopen. (2) Create a new project.
2004	File read error	File read error was generated. Either the file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.
2005	File write error	File write error was generated. File cannot be overwritten. Capacity for writing is insufficient.	(1) Expand write disk capacity. (2) Restart System Manager.
2006	Project file read error	Project file read error was generated. Either the project contents are invalid or the project file does not exist.	Specify a valid project file.
2007	Project file write error	File write error was generated. File cannot be overwritten. Write disk capacity is insufficient.	(1) Expand write disk capacity. (2) Restart System Manager.
2009	File transmission failure	File transmission has failed. Either there is a connection error or time-out occurred. The controller rejected transmission. Error generated during transmission.	(1) Check connection. (2) Check for abnormality on the controller. (3) If time-out was generated, extend the time-out length.
200A	Association application start failure	Application could not be started. Either the application does not exist or there is an invalid application association.	Re-associate the application.
200B	Configuration transmission failure	Transmission failed. Either there is a connection error or an error was generated during transmission.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
200C	Release failure	Attempt was made to release all programs.	Release by allowing at least one program to remain.
200D	Syntax error	Syntax error found in the program contents. This disables the analysis of program name and argument.	Check the syntax especially around the format of the Program Text.
200E	Registration failure	Program could not be registered in program bank. Either there is a bank file error or the write disk capacity is insufficient.	Check the write disk capacity. If there is a program bank error, create a new bank for registration.
2012	PrintManager no response	No response was received from Print Manager.	Restart System Manager if no response is received after a short time.
2013	Program information acquisition error	Failed to acquire the controller program information (status, line number for execution, cycle time). Failed to make correct communication.	(1) Check the connection. (2) Check for any error on the controller. (3) If time-out error was generated, extend the time-out length.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
2014	Variable acquisition failure	Failed to acquire variable from Variable Manager. Either there is a connection error or the Variable Manager is not functioning normally.	(1) Check the connection. (2) Check for any error on the controller. (3) If time-out error was generated, extend the time-out length.
2015	File name redundant	Specified file name already exists. Redundant file name not allowed.	Specify a separate file name.
2016	Program error number (number of warning) = <n>(<m>)	Display of the program error number (number of warning)	If any error exists, correct it and then recompile.
2017	System busy no response	Unable to make a response because selected manager is currently busy processing.	Wait until the processing is completed and then proceed with operation.
2018	Execution file name is illegal. Input the file name again.	File name of executed file is invalid	Input the file name for execution again.
2019	No further program can be added	No further programs could be added because the maximum number of programs that can be registered to the project has been reached.	Rearrange processing and decrease the number of programs in the project.
201A	File name is illegal.	File name is invalid.	Specify a valid name.
2026	Modification not possible on your current access level.	Operation is not possible on the current access level.	Login again and raise the access level. If access is currently on the Programmer level, the item cannot be accessed.
2028	Program bank read error	Program bank read error was generated. Either the contents of program bank are invalid or the program bank file itself does not exist.	(1) Specify a valid program bank file. (2) If the program bank has an error, create a new file.
2029	Class name is redundant. Make entry again.	The specified class name already exists. Redundant class name is not allowed.	Specify a separate class name.
202A	Usable printer is not incorporated.	The printer in use is not registered.	Add a printer from the Windows control panel.
202B	File copy failure	File cannot be copied. Either there is a disk error or the write disk capacity is insufficient.	Check the write disk capacity.
202C	Input data error	Input data value is invalid. Overflow generated during conversion process.	Input a valid value.
2031	Program has too many arguments. Maximum number of program arguments is 32.	Too many program arguments	Keep the number of program arguments under the upper limit.
2032	Environment setting for the editor is inappropriate.	Inappropriate value exists in the environment setting for the program editor.	Check and correct the content of the program editor environment setting.
2033	Environment setting for the make is inappropriate.	Inappropriate value exists in the environment setting for the make.	Check and correct the contents of the make environment setting.
2034	Environment setting for the compiler is inappropriate.	Inappropriate value exists in the environment setting for the compiler.	Check and correct the contents of the compiler environment setting.

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No.	Message	Description	Action
2035	Class name is illegal.	Class name is not valid.	Specify a valid class name.
2036	Illegal value	Specified value is erroneous.	Specify a valid value.
2037	Print Manager is already in use.	Print Manager is already in use. Only one manager can access the Print Manager at a time.	End the Print Manager and then try again.
2038	PAC status modification failure	Data cannot be transmitted to the controller during transmission.	(1) Check connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
2039	Connection selection failure	Cannot make connection to the controller.	Check connection. Check the communication condition from Communication Manager and try the connection again.
203A	Setting failure	Invalid contents exist in the project setting.	Check the contents of the project setting and correct.
203B	Configuration is transmitted. Restart the controller or normal operation may not be possible.	The controller must be restarted to reflect the contents of data transmitted to the controller.	Restart the controller.
203D	Either file not existent or illegal. Specify a file to open in succession.	Error was generated when opening the file.	Specify a separate file. Restart System Manager.
203E	Limit the number of characters for a program name to 64 or under.	Characters for the program name exceed 64.	Limit the number of characters for a program name to 64 or under.
203F	Remote buffer is not equal to local buffer in size. Do you want to receive the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.
2040	Remote buffer is not equal to local buffer in size. Do you want to transmit the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.
2041	Cannot transmit the execution program, because the version is mismatched between the execution program (Ver%1%) and the controller (Ver%2%). If you want to change a version of outputed data, select the others from [Tools] menu – [Options] – [Compiler] – [Output Code] in the Pac Manager and execute [Make Exec. Program] again.	The version of the execution program (Ver%1%) is different from that of the controller (Ver%2%).	Make the execution program same in version with the controller.
2043	Failed to make a new project.	[Exclusively for µVision-21] A new project cannot be made in the controller.	(1) Check the connection. (2) Check the controller mode. (It should be manual.) (3) Check no abnormality on the controller side.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
2044	Failed to delete the program.	[Exclusively for µVision-21] The file in the controller cannot be deleted.	(1) Check the connection. (2) Check the controller mode. (It should be manual.) (3) If timeout occurs, lengthen the timeout period.
2045	Failed to reset the program.	[Exclusively for µVision-21] The specified controller program cannot be reset.	(1) Check the connection. (2) Check the controller mode. (It should be automatic or teach check.)
2047	Failed to set a starting line of the program.	[Exclusively for µVision-21] The starting line of the control program cannot be set. This error occurs when the WINCAPSII does not match the controller project.	(1) Check the connection. (2) Check the controller mode. (It should be teach check.) (3) Transfer the project between the WINCAPSII and the controller for project agreement.
2048	The program file does not exist.	[Exclusively for µVision-21] The file of the object program does not exist in the WINCAPSII project. This error occurs when the WINCAPSII does not match the controller project.	Transfer the project between the WINCAPSII and the controller for project agreement.
2049	Failed to change mode.	[Exclusively for µVision-21] The controller mode cannot be changed. The mode cannot be changed during program execution.	(1) Check the connection. (2) Use the program monitor and stop the running program.
204A	Failed to stop the program.	[Exclusively for µVision-21] The specified controller program cannot be stopped.	(1) Check the connection. (2) Check the controller mode. (It should be external automatic, automatic or teach check.) (3) Transfer the project between the WINCAPSII and the controller for project agreement.
204B	Failed to run the program.	[Exclusively for µVision-21] The specified controller program cannot be started.	(1) Check the connection. (2) Check the controller mode. (It should be automatic or teach check.) (3) Transfer the project between the WINCAPSII and the controller for project agreement.
204C	Failed to run the program by a step-motion.	[Exclusively for µVision-21] The program specified by the controller cannot be executed by a step-motion.	(1) Check the connection. (2) Check the controller mode. (It should be automatic or teach check.) (3) Transfer the project between the WINCAPSII and the controller for project agreement.
204D	Failed to get data from a controller. Do you want to continue?	[Exclusively for µVision-21] No data can be obtained when the program monitor retrieves the latest data from the controller at fixed intervals.	(1) Check the connection. (2) Check no abnormality on the controller side. (3) Turn the controller power switch once and operate again.
204F	Any program is not choosed.	[Exclusively for µVision-21] The program as the processing object has not been chosen.	Choose the processing object program by the program monitor.
2052	Do you want to overwrite <Map/Execution Program (%1%)>?	Inquiry on whether or not to overwrite the execution program upon receiving.	Overwrite if there is no problem.

<Variable Manager>

3 WINCAPSII Error Code Table

No.	Message	Description	Action
3000	SystemManager no response	No response was received from System Manager.	Restart System Manager if no response is received after a short time
3001	LogManager no response	No response was received from Log Manager.	Restart System Manager if no response is received after a short time
3002	Initialization error	Initialization failed. Either the contents of the previously opened project are invalid or the file does not exist.	(1) Specify the project and reopen. (2) Create a new project.
3003	File read error	File read error was generated. Either the file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.
3004	File write error	File write error was generated. File cannot be overwritten. Capacity for writing is insufficient.	(1) Expand the write disk capacity. (2) Restart System Manager.
3005	Table transfer failure	Table transfer failed. Either the wrong connection was made or an error was generated during transfer.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
3006	Read error	Cannot read variable data.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
3007	Write error	Cannot write variable data.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
3008	PrintManager no response	No response was received from Print Manager.	Wait a short time for response. If no response is received, restart System Manager.
3009	Find What not found.	Specified character string was not found.	–
300A	Response cannot be made because the system is busy.	Could not respond because selected manager was currently busy processing.	Wait until the processing is finished and proceed with the operation.
300B	Acquire Pose failure	The robot attitude data could not be acquired from the controller.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
3011	Communication Manager is in use or RS232C is not open.	Could not make RS232C pseudo output. RS232C pseudo output cannot be executed unless all the managers are disconnected.	(1) Turn all the managers OFF. (2) Check the connection. (3) Check for abnormality on the controller. (4) If time-out error was generated, extend the time-out length.
3012	Calculator start failure. Check if the calculator is installed.	The "Calculator" application of the standard Windows accessories could not be started.	Install a calculator.
3013	Usable printer is not incorporated.	Printer in use is not registered.	Add a printer from the Windows control panel.
3014	Input data error	Input data has invalid value. Overflow was generated during conversion process.	Input a valid value.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
3016	Print Manager is already in use.	Print Manager is already in use. Only one manager can access the Print Manager at a time.	End the Print Manager and then try again.
3017	Connection selection failure	Cannot make connection to the controller.	Check the connection. Check the communication status from the Communication Manager and make connection again.
3018	Do you make a new file? If 'NO', designate the file to open next.	As the designated file could not be opened, whether to make a new file or to designate a file again is inquired. 1. File not found. 2. File is destroyed.	1. Designate the file to open again. 2. Make a new file.
3019	Improper variable setting	There is some error in variable setting.	Check the setting and input correct value.

<DIO Manager>

4000	SystemManager no response	No response was received from System Manager.	Restart System Manager if no response is received after a short time.
4001	LogManager no response	No response was received from Log Manager.	Restart System Manager if no response is received after a short time.
4002	Initialization error	Initialization failed. Either the contents of the previously opened project are invalid or the file does not exist.	(1) Specify the project and reopen. (2) Create a new project.
4003	DLL initialization error	DLL loading failure.	Uninstall WINCAPSII, then reinstall.
4004	File write error	File write error was generated. File cannot be overwritten. Capacity for writing is insufficient.	(1) Expand the write disk capacity. (2) Restart System Manager.
4005	File read error	File read error was generated. Either the file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.
4006	Table transmission failure	Table transmission failed. Either wrong connection was made or an error was generated during transmission.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
4007	ON-OFF selection failure	I/O ON-OFF selection to the controller has failed.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
4008	State acquisition failure	I/O status cannot be acquired from the controller.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
4009	PrintManager no response	No response was received from Print Manager.	Restart System Manager if no response is received after a short time.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
400A	Find What not found.	Specified character string was not found.	–
400B	Macro definition file creation failure	File write error was generated. File cannot be overwritten. Write capacity is insufficient.	(1) Expand write disk capacity. (2) Restart System Manager.
400C	Response cannot be made because the system is busy.	Could not respond because selected manager is currently in use.	Wait until the processing is finished and proceed with the operation.
400D	Modification not possible on your current access level.	Operation is not possible on the current access level.	Login again and raise the access level. If access is currently on the Programmer level, the item cannot be accessed.
4014	Usable printer is not incorporated.	Printer in use is not registered.	Add a printer from the Windows control panel.
4015	Input data error	Input data value is invalid. Overflow generated during conversion process.	Input a valid value.
4016	Print Manager is already in use.	Print Manager is already in use. Only one manager can access the Print Manager at a time.	End the Print Manager and then try again.
4017	Connection selection failure	Connection to the controller could not be made.	Check the connection. Check the communication status from the Communication Manager and make connection again.
4018	Configuration is transmitted. Restart the controller or normal operation may not be possible.	The controller must be restarted to have the controller reflect the data contents that have been transmitted.	Restart the controller.
4019	Do you make a new file? If 'NO', designate the file to open next.	As the designated file could not be opened, whether to make a new file or to designate a file again is inquired. 1. File not found. 2. File is destroyed. 1. File not found. File is destroyed.	1. Designate the file to open again. 2. Make a new file.
401A	Remote buffer is not equal to local buffer in size. Do you want to receive the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.
401B	Remote buffer is not equal to local buffer in size. Do you want to transmit the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.

<Arm Manager>

5000	SystemManager no response	No response was received from System Manager.	Restart System Manager if no response is received after a short time.
5001	LogManager no response	No response was received from Log Manager.	Restart System Manager if no response is received after a short time.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
5002	Initialization error	Initialization failed. Either the contents of the previously opened project are invalid or the file does not exist.	(1) Specify the project and reopen. (2) Create a new project.
5003	File write error	File write error was generated. File cannot be overwritten. Capacity for writing is insufficient.	(1) Expand write disk capacity. (2) Restart System Manager.
5004	File read error	File read error was generated. Either file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.
5005	Table transmission failure	Table transmission failed. Either the wrong connection was made or an error was generated during transmission.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
500A	PrintManager no response	No response was received from Print Manager.	Restart System Manager if no response is received after a short time.
500B	Current pose acquisition failure	Robot attitude data could not be acquired from the controller.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
500C	Illegal object name	Object name is invalid. "¥" is included in the object name.	Specify a valid object name.
500D	Cannot add object name	No more object names could be added as the upper limit was reached.	Delete unnecessary objects.
500F	Out of Memory	Windows memory shortage	(1) Do not start a multiple number of managers simultaneously. (2) Expand the memory.
5012	Modification not possible on your current access level.	Operation was not possible on the current access level.	Login again and raise the access level. If the access is currently on the Programmer level, the item cannot be accessed.
5017	Usable printer is not incorporated.	Printer in use is not registered.	Add a printer from the Windows control panel.
5018	Input data error	Invalid input data value. Overflow was generated during conversion process.	Input a valid value.
5019	Reverse conversion not allowed.	Robot attitude type could not be converted.	Use a separate type.
501A	Print Manager is already in use.	Print Manager is already in use. Only one manager can access the Print Manager at a time.	End the Print Manager and then operate again.
501B	Connection selection failure	Could not make connection to the controller.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
501C	Cannot delete root node or a node with a child node.	Specified object could not be deleted.	Delete all the child node objects, then delete the desired object.
501D	Configuration is transmitted. Restart the controller or normal operation may not be possible.	The controller must be restarted to have the controller reflect the data contents that have been transmitted.	Restart the controller.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
501E	Do you make a new file? If 'NO', designate the file to open next.	As the designated file could not be opened, whether to make a new file or to designate a file again is inquired. (1) File not found. (2) File is destroyed.	(1) Designate the file to open again (2) Make a new file.
501F	Remote buffer is not equal to local buffer in size. Do you want to receive the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.
5020	Remote buffer is not equal to local buffer in size. Do you want to transmit the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.

<Vision Manager>

6000	SystemManager no response	No response was received from System Manager.	Restart System Manager if no response is received after a short time.
6001	PacManager no response	No response was received from PAC Manager.	Restart System Manager if no response is received after a short time.
6002	VarManager no response	No response was received from Variable Manager.	Restart System Manager if no response is received after a short time.
6003	LogManager no response	No response was received from Log Manager.	Restart System Manager if no response is received after a short time.
6004	ArmManager no response	No response was received from Arm Manager.	Restart System Manager if no response is received after a short time.
6005	Initialization error	Initialization failed. Either the contents of the previously opened project are invalid or the file does not exist.	(1) Specify the project and reopen. (2) Create a new project.
6006	DLL initialization error	DLL loading failure	Uninstall WINCAPSII, then reinstall.
6007	File write error	File write error was generated. File cannot be overwritten. Capacity for writing is insufficient.	(1) Expand the write disk capacity. (2) Restart System Manager.
6008	File read error	File read error was generated. Either the file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.
6009	Table transmission failure	Table transmission failed. Either the wrong connection was made or an error was generated during transmission.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
600A	Unused window does not exist.	Window numbers (0 ~ 511) for newly registered windows are not available.	Delete unnecessary windows.
600C	Edit window error	Window cannot be registered to the controller.	(1) Check the connection. (2) Correct the window setting.
600D	Unused model does not exist.	Search model numbers (0 ~ 99) for newly registered search models are not available.	Delete unnecessary search models.
600E	Model edit error	Search model could not be registered to the controller.	(1) Check the connection. (2) Correct the search model setting.
6011	Vision teaching error	Error was generated in communication with the vision board.	(1) Check the connection. (2) Initialize vision board from the teach pendant or turn the power OFF and ON again. (3) Restart WINCAPSII.
6012	Calibration error	Read and write from and to the vision file (*.VIS) failed. File cannot be overwritten. Write disk capacity is insufficient.	(1) Expand the write disk capacity. (2) Remove faults and try again.
6013	Variable acquisition failure	Failed to acquire variable from Variable Manager. Either there is a connection error or the Variable Manager is not functioning normally.	(1) Check the connection. (2) Check for any error on the controller. (3) If time-out error was generated, extend the time-out length.
6014	System busy no response	Unable to make response because selected manager was currently busy processing.	Wait until the processing is completed and proceed to operation.
6015	Macro definition file creation failure	Failed to write to macro definition file (vis_tab.h). File cannot be overwritten. Write disk capacity is insufficient.	(1) Expand the write disk capacity. (2) Remove faults and try again.
6016	Image data read error	Image data read error was generated. Either the file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.
6017	Image data write error	Image data write error was generated. File cannot be overwritten. Write capacity is insufficient.	(1) Expand the write disk capacity. (2) Remove faults and try again.
6018	Modification not possible on your current access level.	Operation is not possible on the current access level.	Login again and raise the access level. If access is currently on the Programmer level, the item cannot be accessed.
6020	Error of unknown reason generated. Status =	Error of unknown origin was generated during image measurement.	(1) Initialize the vision board from the teach pendant or turn the power OFF and ON again. (2) Restart WINCAPSII.
6021	Register condition is erroneously specified.	Search model could not be registered to the controller.	Correct the search model setting.
6022	Registration range is erroneously specified.	Search model registration range is erroneously specified.	Correct the registration range setting (X-coordinates, Y-coordinates, width, height, standard X-coordinates, and standard Y-coordinates).
6023	Space for registering search model is in shortage.	Vision board has no space (memory) for registering the search model.	(1) Delete unnecessary search models to acquire space. (2) Reduce the range of search model being registered.
6024	Model cannot be registered (no characteristics).	Image information in specified range has no characteristics that can be registered to the search model.	Change the range for registration and try again.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
6025	Model cannot be registered (complex).	Image information in the specified range is too complex to register to search model.	Change the range for registration and try again.
6026	Search time may become long.	Image information in specified range could be registered to the search model, but the search measurement time took too long.	No problem is expected in this case, but to shorten the search measurement time, specify a slightly more complex image in the registration range.
602B	Camera input failure	Failed to fetch camera image information on the processing screen.	Check the connection of camera specified by the camera number.
602C	Window for measuring histogram is not selected.	Rectangular window for specifying the histogram measurement range is not specified.	(1) Select the window that specifies the process range of the binary-coded registration tool. (2) Register a rectangular window for specifying the histogram measurement range to the vision board. (3) Acquire the vision board window information from 9.3.2 Get Info, in the WINCAPSII GUIDE.
602D	Measuring window is not selected.	Window for specifying the measurement range is not specified.	(1) Select a window for specifying the process range of the image analysis tool. (2) Register the window for specifying the measurement range to the vision board. (3) Acquire the vision board window information from 9.3.2 Get Info, in the WINCAPSII GUIDE.
602E	Spindle cannot be measured with the fan window.	When the shape of the window is a fan type the spindle cannot be measured.	Set the measuring mode of area, center of gravity and the spindle measurement tool to "0-Area" or "1-Center of gravity."
602F	Measuring condition is erroneously set.	Error was found in the measurement condition set for the image analysis tool.	Correct the measurement condition set for the image analysis tool.
6030	Object area for measurement does not exist.	Object (white or black) area for measurement does not exist in the specified window.	Set the object (white or black) to actual area for measurement.
6031	Window setting condition error	Window shape setting value is incorrect. Window extends beyond the screen or the respective set values are not correct.	Correct the window such that it fits in the screen. Check and correct incorrect values by referring to 14.3.1 WINDMAKE, in the PROGRAMMER'S MANUAL.
6032	Object label for measurement does not exist.	Attempted to measure the detailed data on the label with the label measurement tool despite the fact that the object label does not exist.	Press "EXECUTE" of the label measurement tool to measure the label data, then click the "Object Label Column (F)" in the "List of Measuring Results."
6033	Cannot read the code.	QR code could not be read.	(1) Fetch size of QR code may be too small to obtain measurement information. Increase the code fetch size in such a case. (2) Adjust the binary-code level so as to have QR correctly coded.
6034	Search model for measuring is not selected.	Search model for measurement is not specified.	(1) Select "Search Model" for the model search measurement tool. (2) Register the search model to the vision board. (3) Acquire the vision board search model information from 9.3.2 Get Info, in the WINCAPSII GUIDE.
6035	Search model is not registered.	Error was found with the search model specified by the model search measurement tool.	(1) Acquire the vision board search model information from 9.3.2 Get Info, in the WINCAPSII GUIDE. (2) Register the search model to the vision board.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
6036	Search model error	Error was found with the search model specified by the model search measurement tool.	Delete the search model with the error and create a new search model.
6037	Measuring time-out or the object not detected	Measurement was made under the condition specified by the model search measurement tool, but the measurement time exceeded the specified search time or the object could not be detected.	(1) Correct the measurement condition. (2) Modify the search time by referring to 9.4.1.2 General Setting, in the WINCAPSII GUIDE. (If the object cannot be detected, care should be taken since processing cannot be ended unless the set time set has elapsed.)
6038	Coordinate data inappropriate	Robot and vision coordinates input by the calibration tool are not appropriate.	Input coordinates for the robot and vision that match each of the three reference points. If they do not match the correct calibration data cannot be calculated.
603A	Controller information (Window/Search Model) acquisition failure	Error was generated in communication with the vision board and the controller information (Window/Search Model) was not acquired.	(1) Check the connection. (2) Run initialization of vision board from the teach pendant or turn the power OFF and ON again. (3) Restart WINCAPSII.
603B	Search model file does not exist locally (in the personal computer).	Search model file received earlier from the controller does not exist in the project folder.	Receive the search model from the controller according to the WINCAPSII GUIDE, "9.2.5 Transfer."
603C	Data on process screen 3 cannot be registered to the search model.	Image data on process screen 3 could not be registered to the search model.	Register image data on process screens 0 to 2 in the search model.
603D	Cannot measure process screen 3 data	Image data on process screen 3 could not be registered to the search model.	Model-search image data on process screens 0 to 2.
603E	Make the width and height of the window larger than the search model.	If the width and height of the window are smaller than the search model, the model search measurement is not possible.	Make the width and height of the window larger than the search model.
603F	Window information unmatched between the controller and personal computer.	Since the window information registered in the controller and acquired by the personal computer do not match, measurement was not possible.	Acquire the vision board window information by referring to 9.3.2 Get Info, in the WINCAPSII GUIDE.
6040	Usable printer is not incorporated.	Printer in use is not registered.	Add a printer from the Windows control panel.
6041	Input data error	Input data has invalid value. Overflow was generated during the conversion process.	Input a valid value.
6042	Robot information acquisition failure	Unable to acquire robot information from the robot controller.	(1) Check the connection. (2) Turn the controller OFF and ON again. (3) Restart WINCAPSII.
6044	PrintManager no response	No response was received from Print Manager.	Restart System Manager if no response is received after a short time.
6045	Print Manager is already in use.	Print Manager is already in use. Only one manager can access the Print Manager at a time.	End the Print Manager and then try again.
6046	Connection selection failure	Could not connect to the controller.	Check the connection. Check the communication status from the communication manager and make connection again.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
6047	Do you make new file? If 'NO', designate the file to open next.	As the designated file could not be opened, whether to make a new file or to designate a file again is inquired. (1) File not found. (2) File is destroyed.	(1) Designate the file to open again. (2) Make new file.
6048	Remote buffer is not equal to local buffer in size. Do you want to receive the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.
6049	Remote buffer is not equal to local buffer in size. Do you want to transmit the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.
604A	Display switching error	Error occurred in switching the visual monitor display. Camera is not connected properly.	Check the connection of camera designated on the display.
604B	Cannot measure	Error occurred in the probe measurement result. Cannot measure because of too many singular points on the object for processing.	Check the measurement condition and set up correct condition. Make less the singular points using filters, etc,
604C	Can't find the angle of the model. (Having no characteristics).	There is no angle characteristic in the model being used.	Use a search model whose angle can be specified.
604D	Search model to be measured has no angle. (Unsupported in the rotate search).	Rotate search fails because the rotate search information is not contained in the specified search model.	Use a search model containing the rotate search information.
604E	Search model to be measured has angle. (Unsupported in the no rotate search).	No rotate search fails because the no rotate sear information is not contained in the specified search model.	Use a search model containing the no rotate search information.

<Log Manager>

7000	Initialization error	Initialization failed. Either the contents of the previously opened project are invalid or the file does not exist.	(1) Specify the project and reopen. (2) Create a new project.
7001	SystemManager no response	No response was received from System Manager.	Restart System Manager if no response is received after a short time.
7002	PacManager no response	No response from PAC Manager	Restart System Manager if no response is received after a short time.
7003	VarManager no response	No response from Variable Manager	Restart System Manager if no response is received after a short time.
7004	DioManager no response	No response from DIO Manager	Restart System Manager if no response is received after a short time.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
7005	ArmManager no response	No response from Arm Manager	Restart System Manager if no response is received after a short time.
7006	File write error	File write error was generated. File cannot be overwritten. Write disk capacity is insufficient.	(1) Expand write disk capacity. (2) Restart System Manager.
7007	File read error	File read error was generated. Either file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.
7008	Table transmission error	Table transmission failed. Either the wrong connection was made or an error was generated during transmission.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
7009	Status acquisition failure	Status information could not be acquired from the controller.	(1) Check the connection. (2) Check for abnormality on the controller. (3) If time-out error was generated, extend the time-out length.
700A	Find What not found.	Specified character string was not found.	–
700C	PrintManager no response	No response was received from Print Manager.	Restart System Manager if no response is received after a short time.
700D	Action reproduction failure	Robot failed to reproduce action according to the control log data. No reproduction action is possible if Arm Manager is connected.	Set Arm Manager connection to OFF, turn the monitor ON and proceed with reproduction action.
700E	Response cannot be made because the system is busy.	Could not respond because selected manager is currently busy processing.	Wait until the processing is finished and proceed with the operation.
7013	Usable printer is not incorporated.	Printer in use is not registered.	Add a printer from the Windows control panel.
7014	Editor environment setting is inappropriate.	Inappropriate value exists in the editor environment setting.	Check the contents of the editor environment setting and correct.
7015	Print Manager is already in use.	Print Manager is already in use. Only one manager can access the Print Manager at a time.	End the Print Manager and then try again.
7016	Connection selection failure	Could not be connected to the controller.	Check the connection. Check the communication status from Communication Manager and make connection again.
7017	Do you make new file? If 'NO', designate the file to open next.	As the designated file could not be opened, whether to make a new file or to designate a file again is inquired. 1. File not found. 2. File is destroyed.	1. Designate the file to open again. 2. Make new file.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
7018	Remote buffer is not equal to local buffer in size. Do you want to receive the common area?	The WNCAPSII and the controller buffer are different in size (data size). It is requested whether or not the common area to both. Input YES if it is desired to transmit the common area, and NO if not.	Generally input YES to transmit the common area.

<Robotalk Manager>

8000	SystemManager no response	No response was received from System Manager.	Restart System Manager if no response is received after a short time.
8001	LogManager no response	No response was received from Log Manager.	Restart System Manager if no response is received after a short time.
8002	VarManager no response	No response was received from Variable Manager.	Restart System Manager if no response is received after a short time.
8003	DioManager no response	No response was received from DIO Manager.	Restart System Manager if no response is received after a short time.
8004	ArmManager no response	No response was received from Arm Manager.	Restart System Manager if no response is received after a short time.
8005	Initialization error	Initialization failed. Either the contents of the previously opened project are invalid or the file does not exist.	(1) Specify the project and reopen. (2) Create a new project.
8006	Connection failure	Could not make connection to the controller.	Check the connection. Check the communication status from Communication Manager and make connection again.
8007	Automatic response setting failure	Automatic response setting could not be made for the telephone line connection.	Check the status of the modem and/or the telephone line. Initialize the modem.
8008	On - hook process failure	Telephone line could not be disconnected.	Disconnect the telephone line manually from the modem.
8009	Automatic terminating setting failure	Could not set the modem to automatic termination.	Check the status of the modem and/or the telephone line. Initialize the modem.
800A	Automatic terminating resetting failure	Could not reset the modem to automatic termination.	Check the status of the modem and/or the telephone line. Initialize the modem.
800F	Specified port cannot be opened.	Specified port is already in use or it does not exist.	(1) End the application using the specified port. (2) Specify a valid port.
8010	File name having characters of over 40 bytes cannot be transmitted.	File names having characters of over 40 bytes cannot be transmitted.	Limit the number of characters to less than 40 bytes for a file name.

<Others - FD Tool>

1000	File read error	File read error was generated. Either the file contents are invalid or the file does not exist.	(1) Restart System Manager. (2) Specify a valid file.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
1001	File write error	File cannot be written when creating a new project.	Press INITIALIZE of DETAIL SETTING. Also check that each manager has the correct default file name.
1002	Project name illegal. Input again.	Either the project already exists or the project name is invalid.	Input a valid project name.
1003	Folder name illegal	Folder name is invalid.	Input a valid folder name.
1004	Illegal robot dependent data. Project new creation function not usable.	Dependent data of selected robot type does not exist.	Uninstall WINCAPSII and reinstall the latest version of WINCAPSII.
1006	Either the disk is not inserted or formatted. Insert the disk.	Either the disk is not inserted in the drive or it is not formatted.	Insert a formatted disk in the drive.
1007	Insert a disk of #<n>. (Wrong disk is inserted.)	Inserted disk is not required.	Insert a valid disk in the drive.
1009	CRC error is generated. The disk content is destructed.	The contents of the disk have been destroyed.	Write the data to another disk.
100A	Cannot write. Check the disk write protect.	Cannot write to the disk. Either it is write protected or the disk has been destroyed.	(1) Cancel the disk write protect. (2) Write data to a separate disk.
100F	Read error is generated.	(1) The contents of the disk have been destroyed. (2) Data is from an unreadable version	Prepare a new disk and write the data again from the controller.
1010	Write error is generated.	The disk content is destructed.	Write the data to a separate disk.
1011	Too many program numbers. No more addition acceptable.	Number of programs that can be added to the project has reached the upper limit value (256).	Create a new project to which add programs.
1013	Cannot read the designated data (xxx) because of version mismatch.	Cannot read the designated data as the version (xxx) of the designated data does not coincide with the project version.	Make both versions coincide. 1. Make new project and change compile-output code with program manager setting and make the execution program again. Then read the FD data into this project.
1015	Cannot read the designated data (xxx) because of robot type mismatch.	Cannot read the designated data as the robot type (xxx) of the designated data does not coincide with the project robot type.	Make both robot types coincide. 1. Make new project with the same robot type and read the FD data into the project.
1016	Cannot process the designated data (xxx).	Cannot process the designated data. Cannot read the data as it is upper version data.	1. Install the newest WINCAPSII. 2. Read data via the controller.

3 WINCAPSII Error Code Table

No.	Message	Description	Action
1017	Cannot process the designated data (Ver 1.0,1.1). To change output version, select version with the program manager [Tool(T)] menu : - [Set(O)] – [Compiler] – [Output Code] . Then perform [Make Execution Program (E)].	Cannot process version 1.0x and 1.1x.	Change output version of the data. Select version with the program manager [Tool(T)] menu : - [Set(O)] – [Compiler] – [Output Code] . Then perform [Make Execution Program (E)].
1018	Cannot find xxx.	Cannot find file xxx.	Check the location of the file and make the execution program.

Vertical articulated V∗-D/-E/-F SERIES
Horizontal articulated H∗-D/-E/-F SERIES
Vision device μVision-21 SERIES
Cartesian coordinate XYC-4D SERIES
WINCAPSII

ERROR CODE TABLES (Ver. 2.2)

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DENSO WAVE INCORPORATED
Factory Automation Division

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The purpose of this manual is to provide accurate information in the handling and operating of the robot. Please feed free to send your comments regarding any errors or omissions you may have found, or any suggestions you may have for generally improving the manual.