MITSUBISHI ELECTRIC

Mitsubishi Electric Industrial Robot

# CR800 Series Controller
# Instruction Manual
# Troubleshooting

CR800-D
CR800-R
CR800-Q

# SAFETY PRECAUTIONS

Always read the following precautions and the separate "Collaborative Robot Safety Manual" before starting use of the robot to learn the required measures to be taken.

| | |
|---|---|
| ⚠DANGER | Precaution indicating cases where there is a risk of operator fatality or serious injury if handling is mistaken. Always observe these precautions to safely use the robot. |
| ⚠WARNING | Precaution indicating cases where the operator could be subject to fatalities or serious injuries if handling is mistaken. Always observe these precautions to safely use the robot. |
| ⚠CAUTION | Precaution indicating cases where operator could be subject to injury or physical damage could occur if handling is mistaken. Always observe these precautions to safely use the robot. |

## ⚠DANGER

- Provide a fence or enclosure during operation to prevent contact of the operator and robot.
  Installation of safety fence

## ⚠WARNING

- Prepare a device that allows operation to be stopped immediately during teaching work. (This also applies to maintenance work with the power source turned ON.)
  Setting of emergency stop switch

## ⚠CAUTION

- All teaching work must be carried out by an operator who has received special training. (This also applies to maintenance work with the power source turned ON.)
  Enforcement of safety training
- For teaching work, prepare a work plan related to the methods and procedures of operating the robot, and to the measures to be taken when an error occurs or when restarting. Carry out work following this plan. (This also applies to maintenance work with the power source turned ON.)
  Preparation of work plan
- During teaching work, place a sign indicating that teaching work is in progress on the start switch, etc. (This also applies to maintenance work with the power source turned ON.)
  Indication of teaching work in progress
- Establish a set signaling method to the related operators for starting work, and follow this method.
  Signaling of operation start
- As a principle turn the power OFF during maintenance work. Place a sign indicating that maintenance work is in progress on the start switch, etc.
  Indication of maintenance work in progress
- Before starting work, inspect the robot, emergency stop switch and other related devices, etc., and confirm that there are no errors.
  Inspection before starting work

The points of the precautions given in the separate "Collaborative Robot Safety Manual" are given below.

Refer to the actual "Collaborative Robot Safety Manual" for details.

## ⚠ DANGER

- When automatic operation of the robot is performed using multiple control devices (GOT, programmable controller, push-button switch), the interlocking of operation rights of the devices, etc. must be designed by the customer.
- Do not connect the Handy GOT when using the GOT direct connection function of this product. Failure to observe this may result in property damage or bodily injury because the Handy GOT can automatically operate the robot regardless of whether the operation rights are enabled or not.
- Do not connect the Handy GOT to a programmable controller when using an iQ Platform compatible product with the CR800-R/Q series. Failure to observe this may result in property damage or bodily injury because the Handy GOT can automatically operate the robot regardless of whether the operation rights are enabled or not.
- Do not remove the SSCNET III cable while power is supplied to the multiple CPU system or the servo amplifier. Do not look directly at light emitted from the tip of SSCNET III connectors or SSCNET III cables of the Motion CPU or the servo amplifier. Eye discomfort may be felt if exposed to the light. (Reference: SSCNET III employs a Class 1 or equivalent light source as specified in JIS C 6802 and IEC60825-1 (domestic standards in Japan).)
- Do not remove the SSCNET III cable while power is supplied to the controller. Do not look directly at light emitted from the tip of SSCNET III connectors or SSCNET III cables. Eye discomfort may be felt if exposed to the light. (Reference: SSCNET III employs a Class 1 or equivalent light source as specified in JIS C 6802 and IEC60825-1 (domestic standards in Japan).)
- Attach the cap to the SSCNET III connector after disconnecting the SSCNET III cable. If the cap is not attached, dirt or dust may adhere to the connector pins, resulting in deterioration connector properties, and leading to malfunction.

## ⚠ WARNING

- Securely install the hand and tool, and securely grasp the workpiece. Failure to observe this could lead to personal injuries or damage if the object comes off or flies off during operation.
- Securely ground the robot and controller. Failure to observe this could lead to malfunctioning by noise or to electric shock accidents.
- When carrying out teaching work in the robot's movement range, always secure the priority right for the robot control. Failure to observe this could lead to personal injuries or damage if the robot is started with external commands.
- When the robot arm has to be moved by hand from an external area, do not place hands or fingers in the openings. Failure to observe this could lead to hands or fingers catching depending on the posture.

## ⚠CAUTION

- Use the robot within the environment given in the specifications. Failure to do so could lead to a drop or reliability or faults. (Temperature, humidity, atmosphere, noise environment, etc.)
- Transport the robot with the designated transportation posture. Transporting the robot in a non-designated posture could lead to personal injuries or faults from dropping.
- Always use the robot installed on a secure table. Use in an instable posture could lead to positional deviation and vibration.
- Wire the cable as far away from noise sources as possible. If placed near a noise source, positional deviation or malfunction could occur.
- Do not apply excessive force on the connector or excessively bend the cable. Failure to observe this could lead to contact defects or wire breakage.
- Make sure that the workpiece weight, including the hand, does not exceed the rated load or tolerable torque. Exceeding these values could lead to errors or faults.
- Indicate the operation state during robot operation. Failure to indicate the state could lead to operators approaching the robot or to incorrect operation.
- Keep the jog speed as low as possible, and always watch the robot. Failure to do so could lead to interference with the workpiece or peripheral devices.
- After editing the program, always confirm the operation with step operation before starting automatic operation. Failure to do so could lead to interference with peripheral devices because of programming mistakes, etc.
- Make sure that if the safety fence entrance door is opened during automatic operation, the door is locked or that the robot will automatically stop. Failure to do so could lead to personal injuries.
- Never carry out modifications based on personal judgments, or use non-designated maintenance parts.
  Failure to observe this could lead to faults or failures.
- Do not stop the robot or apply emergency stop by turning the robot controller's main power OFF. If the robot controller main power is turned OFF during automatic operation, the robot accuracy could be adversely affected. Moreover, it may interfere with the peripheral device by drop or move by inertia of the arm.
- Do not turn off the main power to the robot controller while rewriting the internal information of the robot controller such as the program or parameters.
  If the main power to the robot controller is turned off while in automatic operation or rewriting the program or parameters, the internal information of the robot controller may be damaged.
- Make sure there are no mistakes in the wiring. Connecting differently to the way specified in the manual can result in errors, such as the emergency stop not being released. In order to prevent errors occurring, please be sure to check that all functions (such as the teaching box emergency stop, customer emergency stop, and door switch) are working properly after the wiring setup is completed.
- Use the network equipments (personal computer, USB hub, LAN hub, etc) confirmed by manufacturer. The thing unsuitable for the FA environment (related with conformity, temperature or noise) exists in the equipments connected to USB. When using network equipment, measures against the noise, such as measures against EMI and the addition of the ferrite core, may be necessary. Please fully confirm the operation by customer. Guarantee and maintenance of the equipment on the market (usual office automation equipment) cannot be performed.

## ⚠ CAUTION

- To maintain the security (confidentiality, integrity, and availability) of the robot and the system against unauthorized access, DoS[*1] attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
  Mitsubishi Electric shall have no responsibility or liability for any problems involving robot trouble and system trouble by unauthorized access, DoS attacks, computer viruses, and other cyberattacks.
  *1 DoS: A denial-of-service (DoS) attack disrupts services by overloading systems or exploiting vulnerabilities, resulting in a denial-of-service (DoS) state.

# INTRODUCTION

Thank you for purchasing the Mitsubishi industrial robot. This instruction manual describes the causes and measures for errors that may occur while using the robot.
If an error should occur, refer to this manual and take appropriate measures.
This manual is applicable to both the iQ Platform-compatible CR800-R/Q series and the standalone CR800-D series. Note that the errors that occur for each series are described as "CR800-R only", "CR800-D only", "CR860-R only", and "CR860-D only".
Notice
*ONLY QUALIFIED SERVICE PERSONNEL MAY INSTALL OR SERVICE THE ROBOT SYSTEM.
*ANY PERSON WHO PROGRAM, TEACHES, OPERATE, MAINTENANCE OR REPAIRS THE ROBOT SYSTEM IS TRAINED AND DEMONSTRATES COMPETENCE TO SAFELY PERFORM THE ASSIGNED TASK.
*ENSURE COMPLIANCE WITH ALL LOCAL AND NATIONAL SAFETY AND ELECTRICAL CODES FOR THE INSTALLATION AND OPERATION OF THE ROBOT SYSTEM.

# CONTENTS

# 1 Error list

## 1.1 Error No.

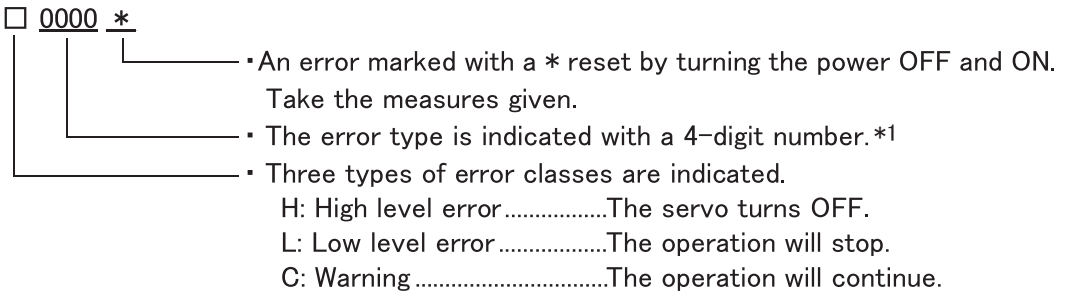
When an error occurs, ERROR LED at the front of the controller will turn on or blink.

| ERROR LED status | Details |
|---|---|
| On | Low-level error, or warning occurred. |
| Flashing | High-level error occurred. |
| Off | Normal operation. |

The four-digit error number (number except the one character of the head.) is displayed on LCD of T/B. Example: In the case of C0010, display the display and the error message for "0010."
In addition, the alarm rings at 0.5-second intervals while an error is occurring. When resetting the power supply, if the interval between turn-on and turn-off of a controller is too short, the alarm rings at 0.1-second intervals.
The following shows messages, causes, and measures corresponding to error Nos.
☞ Page 22 Cause and measures against the error
A detailed message will be displayed on the Error History screen of the T/B depending on the No. of the error occurred. Check the message by displaying the Error History screen after resetting the error.
If the error recurs even after the measures in the table are taken, contact your service provider.

### Meaning of error Nos.

The meaning of error Nos. is shown below.




*1 The axis No. may be indicated at the last digit of the error No.
Example) H0931 No. 1 axis motor overcurrent.

## 1.2 Cause and measures against the error

The following shows details, causes, and measures corresponding to error Nos.
Note) The contents of the error caused with option products are written in the instruction manual of the option.
Refer to each instruction manual.

### H0001

| | |
|---|---|
| Error message | Fail safe error (SRVOFF) |
| Cause | The system may be abnormal. |
| Measures | Turn the power OFF and ON once. If it comes back, contact to your service provider. |

### H0002

| | |
|---|---|
| Error message | Fail safe error (STOP) |
| Cause | The system may be abnormal. |
| Measures | Turn the power OFF and ON once. If it comes back, contact to your service provider. |

## H0003

| | |
|---|---|
| Error message | The system is abnormal. |
| Cause | The problem of the system is the cause. |
| Measures | If it comes back, contact to your service provider. |

## H0004 *

| | |
|---|---|
| Error message | CPU Watch dog error |
| Cause | CPU was not normally treatable |
| Measures | It is necessary to change some parts when not improvement. If it comes back, contact to your service provider.<br>* The "CPU" part in each message varies according to the CPU in which an error is detected.<br>RCPU_main, CCPU_main, RCPU_sub, CCPU_sub, CPU_main, CPU_sub, FPGA, RCPU_PLD, CCPU_PLD |

## H0006 *

| | |
|---|---|
| Error message | CPU process error |
| Cause | CPU was not normally treatable |
| Measures | It is necessary to change some parts when not improvement.<br>* The "CPU" part in each message varies according to the CPU in which an error is detected.<br>RCPU_main, CCPU_main, RCPU_sub, CCPU_sub, CPU_main, CPU_sub, FPGA |

## H0008 *

| | |
|---|---|
| Error message | CPU synchronization error |
| Cause | CPU synchronization was failed |
| Measures | Turn the power OFF and ON once. |

## H0009 *

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Version UP (ALL) |
| Cause | Version UP (ALL) |
| Measures | Turn the power OFF and power ON once |
| Error message | Version UP (MAIN) |
| Cause | Version UP (MAIN) |
| Measures | Turn the power OFF and power ON once |
| Error message | Version UP (SERVO) |
| Cause | Version UP (SERVO) |
| Measures | Turn the power OFF and power ON once |
| Error message | The servo s/w was written |
| Cause | The servo s/w was written |
| Measures | Please release an error by reset operation<br>* This error can be reset without turning on the power supply again. |
| Error message | Rewriting failed servo(Er.*) |
| Cause | Servo S/W couldn't be read. |
| Measures | When it occurs, contact your service provider<br>* The number (1 to 7) which indicates the cause of the error is shown in "*" in the error message. |

## C0010

| | |
|---|---|
| Error message | Illegal Version (file) |
| Cause | The version is inconsistent. |
| Measures | The file has been automatically initialized. The program is being deleted. |

## C0011

| | |
|---|---|
| Error message | Illeagal Version (system data) |
| Cause | The version is inconsistent. |
| Measures | The file has been automatically initialized. Turn the power OFF and ON once. |

## C0012

| | |
|---|---|
| Error message | Initialize (error log) |
| Cause | The error log has been initialized because of version mismatch or the error log file is abnormal. |
| Measures | Reset the alarm, and continue the operation. |

## C0013 *

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Illeagal file |
| Cause | Data including programs may have been damaged. |
| Measures | Contact your service provider as the initialization operation is required. |
| Error message | Illegal system SD card |
| Cause | File Crash |
| Measures | File Initial operation |

## H0014 *

| | |
|---|---|
| Error message | System error (illegal MECHA) |
| Cause | A character string cannot exceed 14 characters. |
| Measures | Re-input the correct name. |

## H0015 *

| | |
|---|---|
| Error message | Illeagal Version (file) |
| Cause | Illeagal Version (file) |
| Measures | Contact the maker. |

## L0016 *

| | |
|---|---|
| Error message | Turn the power OFF and ON once |
| Cause | The time from turning the power OFF to turning the power ON again is too short. |
| Measures | Give more time before turning the power ON again after turning the power OFF. |

## C0018

| | |
|---|---|
| Error message | The robot model was selected. |
| Cause | The robot model was selected. |
| Measures | Reset the error. |

## H0020 *

| | |
|---|---|
| Error message | System Error (same name is Backup data.) |
| Cause | The data of the system backup area is abnormal. |
| Measures | Please consult your service provider. |

## H0021 *

| | |
|---|---|
| Error message | System Error (Backup data is Count over.) |
| Cause | The control region is overflowing. |
| Measures | Please consult your service provider. |

## H0022 *

| | |
|---|---|
| Error message | System Error (Backup data is no area.) |
| Cause | The region is too small. |
| Measures | Please consult your service provider. |

## C0023

| | |
|---|---|
| Error message | Variables save failure (Program) |
| Cause | Power was shutdown before saving program external variables. |
| Measures | It is necessary to change some parts when not improvement. |

## C0024

| | |
|---|---|
| Error message | Variables save failure (User) |
| Cause | Power was shutdown before saving user-defined external variables. |
| Measures | The power supply unit might be deteriorated. |

## H0028 *

| | |
|---|---|
| Error message | Memory error (ECC) |
| Cause | 2bit error of ECC was detected (***) |
| Measures | Turn the power OFF and ON once<br>* The part where an error is detected is shown in "***" in the message.<br>nvSRAM, FROM, RCPU_DRAM, RCPU_L2C, CCPU_DRAM, CCPU_L2C, R_nvSRAM, R_DRAM, R_L2C |

## C0029

| | |
|---|---|
| Error message | Memory error (ECC) |
| Cause | 1bit error of ECC was detected (***) |
| Measures | When it frequently occurs, contact your service provider<br>* The part where an error is detected is shown in "***" in the message.<br>nvSRAM, FROM, RCPU_DRAM, RCPU_L2C, CCPU_DRAM, CCPU_L2C, R_nvSRAM, R_DRAM, R_L2C |

## L0030

| | |
|---|---|
| Error message | Hand error. LS release |
| Cause | This is a user setting error. |
| Measures | Reset the error after removing the cause. |

## L0031

| | |
|---|---|
| Error message | Air pressure error |
| Cause | This is a user setting error. |
| Measures | Reset the error after releasing the cause. |

## C0032

| | |
|---|---|
| Error message | HIOTYPE parameter not set |
| Cause | HIOTYPE parameter needs to be changed |
| Measures | Please set the HIOTYPE parameter (-1: Not set/0: Source/1: Sink) |

## H0035 *

| | |
|---|---|
| Error message | Hand 24V line error |
| Cause | The hand 24V line is cut off due to overload or overvoltage |
| Measures | The hand may be faulty. Turn off the power supply, and check that a short or ground fault has not occurred with the 24 V power supply wire of the electric hand connector (HND), which exits the robot flange. |

## H0039

| | |
|---|---|
| Error message | Door Switch Signal line is faulty. |
| Cause | The one point of contact in 2 points of contact of the door switch has broken. Or wiring is not the double lines. |
| Measures | Confirm whether there is any problem in wiring of the switch. And, please confirm whether it is wiring of the double line. The door switch is wired for redundancy so check that both contacts are functioning in the same manner.<br>Refer to the "Examples of safety measures" given in separate "Standard Specifications Manual" for door switch wiring. |

## H0040

| | |
|---|---|
| Error message | Door Switch Signal is Input |
| Cause | The door switch is open. |
| Measures | Confirm whether the door switch input signal is connected correctly. And close the door connected to the input signal of door switch. |

## H0041 *

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Comm. error (Remote I/O #1). |
| Cause | Communication line is illegal. |
| Measures | For the CR800-R/Q series, check that the remote I/O communication cable between the CPU and the controller is grounded and connected correctly.<br>When using the electric operated hand or the multi-function hand, check the wiring and ground condition around the hand. |
| Error message | The CRC error of remote I/O channel 1 occurs |
| Cause | An error was found in the communication line for remote I/O channel 1. |
| Measures | For the CR800-R/Q series, check that the remote I/O communication cable between the CPU and the controller is grounded and connected correctly.<br>When using the electric operated hand or the multi-function hand, check the wiring and ground condition around the hand. |

## H0042 *

| | |
|---|---|
| Error message | Comm. error (Remote I/O #2). |
| Cause | Communication line is illegal. |
| Measures | Checks the remote I/O cable connection in the CR750-Q/CR751-Q controller. |

## H0044 *

| | |
|---|---|
| Error message | Comm. error (Remote I/O #4) |
| Cause | Communication line is illegal. |
| Measures | Check the cable or power supply |

## H0045 *

| | |
|---|---|
| Error message | Comm. error (Remote I/O #5) |
| Cause | Communication line is illegal. |
| Measures | Check the cable or power supply |

## H0046

| | |
|---|---|
| Error message | Faulty wiring (Mode sel. switch). |
| Cause | The state of doubled wiring is not matching (Mode sel. switch). |
| Measures | Turn off the power and confirm whether wiring of the switch is right. Wiring needs to be doubled. Refer to the separate manual, "Standard Specifications Manual" for wiring of the mode selector switch. |

## H0047

| | |
|---|---|
| Error message | OCL detect |
| Cause | OCL detect |
| Measures | Please check the line (O/P Emergency Stop) |

## H0049

| | |
|---|---|
| Error message | Faulty Line (T/B Enable Switch) |
| Cause | The state of doubled line is not matching (T/B Enable Switch) |
| Measures | Please check the line (T/B Enable Switch) |

## H0050

| | |
|---|---|
| Error message | EMG signal is input. (external) |
| Cause | The external emergency stop is being input.<br>If the emergency stop of T/B or O/P turns on with CR860-D/R/Q controller, this error may occur simultaneously. |
| Measures | Clear the command of external emergency stop, teaching pendant emergency stop, or operation panel emergency stop. If the error persists, check the wiring of the external emergency stop line. If it comes back, contact your service provider.<br>Refer to "Examples of safety measures" in the "Standard Specifications Manual" for external emergency stop switch wiring. |

## H0051

| | |
|---|---|
| Error message | Wiring of the external emergency stop is abnormal. |
| Cause | If the emergency stop of T/B turns on, this error may occur simultaneously. |
| Measures | Turn OFF the power supply.<br>Confirm whether there is any problem in wiring of the external emergency stop switch. And, please confirm whether it is wiring of the dual line. Refer to the “Examples of safety measures” given in separate “Standard Specifications Manual” for external emergency stop switch wiring. Turn on the power supply again after checking. |

## H0053

| | |
|---|---|
| Error message | EMG signal is input.(Add.Axis2) |
| Cause | The external emergency stop to addition axis amplifier is inputting. |
| Measures | Check the emergency stop of Additional Axis servo amp. Or the EM1 (forced outage) line of the addition axis may be open. Please confirm connection. In addition, the External Emergency Stop 1 and 2 are separated. The "External Emergency Stop 1" is for I/F card, and the "External Emergency Stop 2" is for main device of the amplifier |

## H0054

| | |
|---|---|
| Error message | Faulty wiring (External EMG power) |
| Cause | The state of doubled wiring is not matching (External EMG) |
| Measures | Please check the wiring (External Emergency Stop) |

## H0059

| | |
|---|---|
| Error message | Faulty wiring (Enabling Device) |
| Cause | The state of doubled wiring is not matching (Enabling Device) |
| Measures | The state of duplex enabling device wiring is not consistent.<br>Check the wiring. |

## H0060

| | |
|---|---|
| Error message | EMG signal is input. (O.Panel) |
| Cause | EMG signal is input. (O.Panel) |
| Measures | Clear the command of operation panel emergency stop. |

## H0061 *

| | |
|---|---|
| Error message | Faulty line (O/P EMG) |
| Cause | The state of doubled line is not matching (O/P Emergency Stop) |
| Measures | If it comes back, contact your service provider. |

## H0070

| | |
|---|---|
| Error message | EMG signal is input. (T.Box) |
| Cause | EMG signal is input. (T.Box) Or when using the UL specification, the brake release switch is turning ON. |
| Measures | Cancel the T/B emergency stop. Check the emergency stop switch of teaching pendant.. Or when using the UL specification, turn OFF the brake release switch.<br>If the alarm cannot be canceled, check the fuse of the safe unit (TZ348). If the fuse broke off, exchange new fuse. |

## H0071

| | |
|---|---|
| Error message | EMG line is faulty.(T.Box) |
| Cause | The emergency stop line isn't stable. |
| Measures | Confirm whether there is any problem in wiring of the external emergency stop switch. And, please confirm whether it is wiring of the double line. Refer to the "Examples of safety measures" given in separate "Standard Specifications Manual" for external emergency stop switch wiring. Turn on the power supply again after checking. |

## H0074

| | |
|---|---|
| Error message | Faulty line (T/B Enable/Disable). |
| Cause | The state of doubled line is not matching (T/B Enable/Disable). |
| Measures | Confirm whether T/B is connected correctly. If it comes back, contact to your service provider. |

## H0075

| | |
|---|---|
| Error message | TB communication error |
| Cause | Communication between the RC and TB was cut off. |
| Measures | If it comes back, contact your service provider. |

## H0076 *

| | |
|---|---|
| Error message | TB connection error |
| Cause | Cannot detect TB connection. |
| Measures | Contact the manufacturer if this error reoccurs. |

## H0077 *

| | |
|---|---|
| Error message | Electric double layer overvolt. |
| Cause | A power supply of a substrate in the robot is broken |
| Measures | Turn the power OFF and contact your service provider |

## H0083 *

| | |
|---|---|
| Error message | Fuse is blown (hand) |
| Cause | The pneumatic hand's power fuse has broken. Possibly the power supply line of the hand input/output signal short-circuited. |
| Measures | Confirm that the hand input/output cables shown below are connected correctly with no short circuit caused by biting of the cables.<br>• Hand input cables (HC1 to HC8) and cables connected to them.<br>• Hand output cables (GR1 to GR8) and cables connected to them.<br>Exchange the fuse. For further information, refer to the following page:<br>☞ Page 135 Place where hand fuse replacement is required<br>If the error recurs after replacing the fuse, contact the manufacturer. |

## H0086

| | |
|---|---|
| Error message | Hand module overcurrent |
| Cause | The motorized hand's motor or circuit board has broken. |
| Measures | Exchange the motorized hand's motor or circuit board. |

# H0090

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Fuse is blown (brake) |
| Cause | A brake failure or a ground fault of brake cable may have caused the error. |
| Measures | There are two brake fuses inside the robot controller. Replace both the fuses by referring to the following page:<br>☞ Page 135 Place where a brake fuse replacement is required.<br>If it comes back after replacing the fuses, contact to your dealer. |
| Error message | Fuse is blown (T/B) |
| Cause | The cable may be disconnected or ground fault. |
| Measures | Confirm whether there is any problem in cable. Turn on the power supply again after checking.<br>If it comes back, contact to your dealer. |

# L0091

| | |
|---|---|
| Error message | Can't access the Special signal |
| Cause | The dedicated output signal is assigned to the specified signal. This signal cannot be used in duplicate. |
| Measures | Confirm whether the same dedicated output number is assigned to the separate dedicated output signal. Change the output No., or change the dedicated output assignment parameter. |

# H0095

| | |
|---|---|
| Error message | Brake release switch is turning on. |
| Cause | Cannot execute while brake release switch is turning on. |
| Measures | Please check the brake release switch and turn it off. |

# H0097 *

| | |
|---|---|
| Error message | Abnormal MC status |
| Cause | The duplex magnetic contactor status signal status is not consistent. |
| Measures | The status of the duplex system for the magnetic contactor (MC) is not consistent. After turning OFF the power, turn ON the power again to reset the error. If the same error recurs, contact the manufacturer. |

# H0098 *

| | |
|---|---|
| Error message | Abnormal SR status |
| Cause | The duplex safety relay status signal status is not consistent. |
| Measures | The status of the duplex system for the safety relay (SR) is not consistent. After turning OFF the power, turn ON the power again to reset the error. If the same error recurs, contact the manufacturer. |

# H0099 *

| | |
|---|---|
| Error message | S/W ver. is illegal (***) |
| Cause | Servo software with an old version is installed. |
| Measures | Change to the correct version of software is necessary. Contact your service provider.<br>* The correct version of servo software is shown in (***).<br>* The error message and "software" of the cause are changed as follows according to the software in which an error occurs.<br>CCPU main system, OS, RCPU sub system, CCPU sub system, servo S/W, FPGA OS, sub system, FPGA system, boot |

# C0099

| | |
|---|---|
| Error message | R/C ver. is illegal (***) |
| Cause | R/C with an old version is installed. |
| Measures | Change to the correct version of software is necessary. Contact your service provider.<br>* The correct version of software is shown in (***). |

## H0100 *

| | |
|---|---|
| Error message | Temperature in RC is too high |
| Cause | The cooling fan is not operating, or the air filter is clogged. |
| Measures | Check the operation of the intake fan, or clean or replace the fan filter if necessary.<br>Confirms that the environmental temperature is the specification range.<br>When it comes back, contact to the dealer. |

## L0101

| | |
|---|---|
| Error message | Temperature in RC is too high |
| Cause | The cooling fan is not operating, or the air filter is clogged. |
| Measures | Check the operation of the intake fan, or clean or replace the fan filter if necessary.<br>Confirms that the environmental temperature is the specification range.<br>When it comes back, contact to the dealer. |

## C0102

| | |
|---|---|
| Error message | Temperature in RC is too high |
| Cause | The cooling fan is not operating, or the air filter is clogged. |
| Measures | Check the operation of the intake fan, or clean or replace the fan filter if necessary.<br>Confirms that the environmental temperature is the specification range.<br>When it comes back, contact to the dealer. |

## H0103 *

| | |
|---|---|
| Error message | Temp. in robot CPU is too high |
| Cause | Ambient temperature of robot CPU becomes high |
| Measures | Please lower ambient temperature to the specification range |

## L0104

| | |
|---|---|
| Error message | Temp. in robot CPU is too high |
| Cause | Ambient temperature of robot CPU becomes high |
| Measures | Please lower ambient temperature to the specification range |

## C0105

| | |
|---|---|
| Error message | Temp. in robot CPU is too high |
| Cause | Ambient temperature of robot CPU becomes high |
| Measures | Please lower ambient temperature to the specification range |

## H0117 *

| | |
|---|---|
| Error message | 12V power supply error (brake) |
| Cause | The output of the power supply deviated from the specified range |
| Measures | Turn the power OFF and contact your service provider.<br>This error may have been triggered by the following errors. If this is the case, follow the solutions to each error.<br>H0216: Current sensor failure<br>H221n: STR (ROBOT torque error 2) |

## H0118 *

| | |
|---|---|
| Error message | Break overcurrent |
| Cause | An excessive current flowed to the power supply |
| Measures | Shut off the robot power, and contact the manufacturer. |

## H0119 *

| | |
|---|---|
| Error message | Power supply overcurrent (hand) |
| Cause | An overcurrent was detected in the hand power supply |
| Measures | Check that the following cables are connected correctly (for example, there is no short circuit due to pinching).<br>• Hand input cables and cables connected to them.<br>• Hand output cables and cables connected to them. |

## C0120 *

| | |
|---|---|
| Error message | Instantaneous power failure |
| Cause | The power was OFF for 20msec or more |
| Measures | Check the power supply connection and power supply state |

## H0130 *

| | |
|---|---|
| Error message | The initialization connection error of system remote I/O. |
| Cause | Communication line of System Remote I/O is illegal |
| Measures | Check that the communication cable is grounded and connected correctly.<br>For the CR800-R/Q series, power on the robot controller and then the robot CPU. |

## C0150

| | |
|---|---|
| Error message | Undefined robot serial number |
| Cause | Undefined robot serial number |
| Measures | Input the robot serial number. Refer to the following manuals for information on how to set the serial number.<br>For the RV-5AS, refer to "CR800-05VD Controller Instruction Manual Controller Setup and Maintenance".<br>For robots other than the RV-5AS, refer to "CR800 Series Controller Instruction Manual Controller setup, basic operation, and maintenance". |

## C0151

| | |
|---|---|
| Error message | Undefined robot serial number |
| Cause | Undefined robot serial number |
| Measures | Input the robot serial number |

## C0152

| | |
|---|---|
| Error message | Unmatched robot serial number |
| Cause | Robot arm that connection was replaced |
| Measures | Please confirm the connected robot body is not replaced. If replaced, correct the combination.<br>If this error occurs after purchasing the robot arm or changing robot arm and controller combination, please input the serial number. Refer to the following manuals for information on how to set the serial number.<br>For the RV-5AS, refer to the section "Input the serial number" in "CR800-05VD Controller Instruction Manual Controller Setup and Maintenance".<br>For robots other than the RV-5AS, refer to the section "Input the serial number" in "CR800 Series Controller Instruction Manual Controller setup, basic operation, and maintenance".<br>After correcting the combination, please confirm that the programs and parameters you use are set to the robot controller before starting robot operation. |

## H016m

m=1 to 3

| | |
|---|---|
| Error message | Cannot use PIO I/F and Unit |
| Cause | The I/O Channel number of PIO interface and PIO unit overlaps. |
| Measures | Select either of Parallel I/O interface or Parallel I/O unit. |

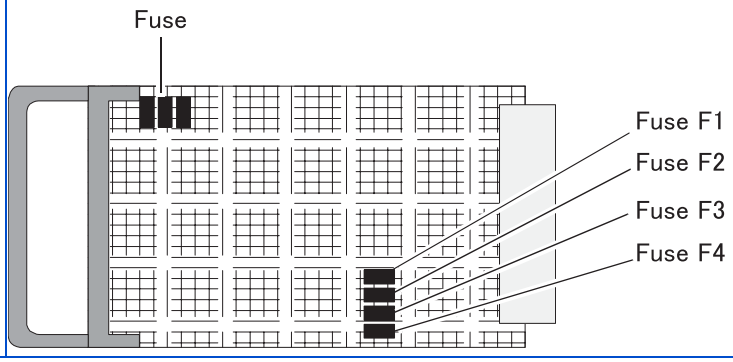
# H017m

m=1 to 2

| | |
|---|---|
| Error message | Parallel I/O interface H/W error. |
| Cause | The parallel-input/output card broke or the external power source for the parallel input/outputs was cut off. |
| Measures | If it comes back, exchange the Parallel I/O interface card. |

# H018m

m=1 to 2

| | |
|---|---|
| Error message | Fuse is blown.(PIO) (Slot m-Fn) |
| Cause | Fuse is blown.(Parallel I/O interface) |
| Measures | Change fuse (Parallel I/O interface) |
| Details | The electric fuse Fn (n= 1-4) of the parallel input output interface installed to the option slot m (m= 1-2) is open.<br>Removes the cause by which the fuse open and replaces the fuse.<br>  |

# H0210 *

| | |
|---|---|
| Error message | Power supply error (***) |
| Cause | The power supply output voltage is out of the specified range. |
| Measures | The output voltage of the power supply in the robot controller is the specified value or higher/lower. After turning OFF the power, turn ON the power again to reset the error. If the same error recurs, contact the manufacturer.<br>* The part where an error is detected is shown in "***" in the message.<br>24V, 5V, 3.3V, 2.5V, 1.8V, RCPU 1.5V, CCPU 1.5V, 1.2V, RCPU 1.15V, CCPU 1.15V, 1.1V, Ether 1V, ServoM 1V, ServoS 1V |

# H0211 *

| | |
|---|---|
| Error message | Power supply error (***) |
| Cause | The power supply output voltage is out of the specified range. |
| Measures | The output voltage of the power supply in the robot CPU is the specified value or higher/lower. After turning OFF the power, turn ON the power again to reset the error. If the same error recurs, contact the manufacturer.<br>* The part where an error is detected is shown in "***" in the message.<br>5V, 3.3V, 2.5V, 1.8V, 1.5V, 1.3V, 1.15V, 1V, FPGA |

# H0212 *

| | |
|---|---|
| Error message | Power supply error |
| Cause | The output of the power supply deviated from the specified range. |
| Measures | Turn the power OFF and ON once. After turning OFF the power, turn ON the power again to reset the error. If the same error recurs, contact the manufacturer. |

# H0213 *

| | |
|---|---|
| Error message | Power supply error |
| Cause | The output of the power supply deviated from the specified range. |
| Measures | Turn the power OFF and ON once. After turning OFF the power, turn ON the power again to reset the error. If the same error recurs, contact the manufacturer. |

## H0214 *

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Set the power supply to 100V |
| Cause | The parameter is different from detected voltage |
| Measures | The detected power supply voltage is 100V, but the power supply voltage set in the parameter is 200V. Set the voltage to 100V, then cycle the power. The power must be cycled for the change to take effect. |
| Error message | Set the power supply to 200V |
| Cause | The parameter is different from detected voltage |
| Measures | The detected power supply voltage is 200V, but the power supply voltage set in the parameter is 100V. Set the voltage to 200V, then cycle the power. The power must be cycled for the change to take effect. |

## C0215

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Changed the power supply to 100V |
| Cause | The parameter is changed for 100V power supply |
| Measures | The power supply voltage set in this parameter has been changed to 100V. Reset the error. |
| Error message | Changed the power supply to 200V |
| Cause | The parameter is changed for 200V power supply |
| Measures | The power supply voltage set in this parameter has been changed to 200V. Reset the error. |

## H0216 *

| | |
|---|---|
| Error message | Current sensor failure (**)<br>Note) "**" represents Jn (n: axis number). |
| Cause | The current sensor has output an abnormal value<br>An error has been detected in the current sensor of the axis shown in the error message. |
| Measures | Ensure the robot is functioning properly before using it, i.e., it is not vibrating or making strange noises. If there is a fault or error H0216 re-occurs, it may not be possible to use the robot safely. Stop using the robot and contact the manufacturer.<br>If there is no fault, check if it is false detection using the following step. If it is false detection, decrease the speed or change the motion path. If it not false detection, stop using the robot and contact the manufacturer.<br><How to check for false detection><br>Run the error detected axis at an override speed of 10% or more for at least 10 seconds. If this error does not occur, it is false detection.<br>The following errors may also occur in conjunction with this error. Follow the solutions to the errors noted below.<br>H081n: Voltage error at accel/decel (n: axis number)<br>H0117: 12V power supply error (brake)<br>H096n: Excessive error 1 |

## C0217

| | |
|---|---|
| Error message | Current sensor failure (**)<br>Note) "**" represents Jn (n: axis number). |
| Cause | The current sensor failure was detected during previous use |
| Measures | An error was previously detected with the current sensor. Ensure that the robot is functioning properly before using it.<br>If an error occurs, stop using the robot and contact the manufacturer.<br>If there is no fault, check if it is false detection using the following step. If it is false detection, decrease the speed or change the motion path. If it not false detection, stop using the robot and contact the manufacturer.<br><How to check for false detection><br>Run the error detected axis at an override speed of 10% or more for at least 10 seconds. If this error does not occur, it is false detection. |

## H0220 *

| | |
|---|---|
| Error message | Memory fault (main CPU) |
| Cause | A memory fault is detected. |
| Measures | A fault (inconsistent data between writing/reading, broken retention data) is detected for the memory (DRAM) to which the main CPU has access. After turning OFF the power, turn ON the power again to reset the error. If the same error recurs, contact the manufacturer. |

## H0230 *

| | |
|---|---|
| Error message | Safety parameter error (***) |
| Cause | Detect errors in safety parameter value |
| Measures | The safety parameter setting is not correct. Check the parameter setting shown in the "(***)" part of the error message, and set an appropriate value.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H0231 *

| | |
|---|---|
| Error message | Parameter CRC error (***) |
| Cause | Detect CRC errors in safety parameter value |
| Measures | Check the parameter setting shown in the "(***)" part of the error message, and set an appropriate value.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## C0240

| | |
|---|---|
| Error message | Setting mismatch of safety function |
| Cause | The safety function is disabled. |
| Measures | Safety logic settings is set but safety function is disabled.<br>Delete Safety Logic settings or Enable Safety Function.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H0241 *

| | |
|---|---|
| Error message | Fault in Safety Communication |
| Cause | Detect a fault in safety communication. |
| Measures | Turn the power OFF and ON once<br>If the same error recurs, contact the manufacturer.<br>This error also occurs when the machine lock or the controller CPU drive mode is enabled. Disable these functions and turn the power off and then on again.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H0242 *

| | |
|---|---|
| Error message | Fault in Safety Data |
| Cause | Detect a fault in safety data. |
| Measures | Turn the power OFF and ON once<br>If the same error recurs, contact the manufacturer.<br>The occurrence of "Fault in safety data (S_CMD)" and "Fault in safety data (S_ALM)" may have triggered the following error. If this is the case, follow the solution to this error.<br>H221n: STR (ROBOT torque error)<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H0243 *

| | |
|---|---|
| Error message | *** function is not available |
| Cause | The Safety Function is not supported by this robot |
| Measures | "(***)" indicates the safety function. Disable the safety function.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## C0244

| | |
|---|---|
| Error message | Setting mismatch of safety IO |
| Cause | Safety IO logic is set, but the safety IO is disabled. |
| Measures | Delete the safety IO logic settings or enable safety IO.<br>For further information refer to the separate "Robot Safety Option Instruction Manual". |

## C0245

| | |
|---|---|
| Error message | Setting mismatch of Safety Comm. |
| Cause | Safety comm. logic is set, but safety comm. function is disabled. |
| Measures | Delete the safety communication logic settings or enable safety communication.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0246 *

| | |
|---|---|
| Error message | Safety comm. unavailable |
| Cause | The safety communication (CC-Link IE TSN) function is not supported by this robot. |
| Measures | Disable the safety communication function.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0247 *

| | |
|---|---|
| Error message | Safety comm. unavailable |
| Cause | The safety communication (CC-Link IE TSN) is not supported by this robot. |
| Measures | Disable the settings of the safety communication function (CC-Link IE TSN).<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0248 *

| | |
|---|---|
| Error message | Safety comm. N/W is not selected |
| Cause | The network of safety comm. function is not selected. |
| Measures | Configure the network selection settings.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0249 *

| | |
|---|---|
| Error message | Safety comm. N/W select error |
| Cause | Multiple networks for the safety communication function have been selected. |
| Measures | Check and correct the network selection settings of the safety parameter.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0250 *

| | |
|---|---|
| Error message | Illegal setting of safety IO I/F |
| Cause | Safety IO and Safety comm. are disabled. |
| Measures | To enable the safety function, enable either safety IO or safety communications.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H0251 *

| | |
|---|---|
| Error message | Illigal setting of safety IO I/F |
| Cause | Both safety IO and safety communication are set to valid. Safety IO and safety communication cannot be used together. |
| Measures | Disable either safety IO or safety communications.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H0252 *

| | |
|---|---|
| Error message | N/W module slot error |
| Cause | There is no available module in the slot No. specified in the communication settings of the safety communication function (CC-Link IE TSN). |
| Measures | Use the RJ71GN11-T2 with the supported version or later as a network module.<br>Check and correct the module No. settings for safety parameter communication settings, then cycle the power.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0253 *

| | |
|---|---|
| Error message | N/W module ver. error |
| Cause | The network module specified in the communication settings of the safety communication function (CC-Link IE TSN) does not support this function. |
| Measures | Check the network module version.<br>Use the RJ71GN11-T2 with the supported version or later as a network module.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0254 *

| | |
|---|---|
| Error message | Safety comm. illegal IP address |
| Cause | The master station IP address of the communication destination of the safety communication function (CC-Link IE TSN) does not match the setting value of the network module. |
| Measures | Check and correct the IP address settings of the master station for safety parameter communication settings, then cycle the power.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0255 *

| | |
|---|---|
| Error message | Safety comm. illegal IP address |
| Cause | The IP address of the host station of the safety communication function (CC-Link IE TSN) does not match the setting value of the network module. |
| Measures | Check and correct the IP address settings of the host station for safety parameter communication settings, then cycle the power.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0256 *

| | |
|---|---|
| Error message | Safety comm. parameter error |
| Cause | A communication setting parameter error has occurred in the safety communication function (CC-Link IE TSN). |
| Measures | • Check and correct the IP addresses of the master and host stations.<br>• Check that the transmission interval monitoring time satisfies the set conditions.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H0260 *

| | |
|---|---|
| Error message | EMG circuit diagnosis error |
| Cause | Voltage diagnosis error |
| Measures | Turn off the power and then on again.<br>If the error persists, check the wiring of the external emergency stop line. If it comes back, contact your service provider.<br>Refer to "Examples of safety measures" in the "Standard Specifications Manual" for external emergency stop switch wiring. |

## H0270 *

| | |
|---|---|
| Error message | Voltage diagnosis error |
| Cause | Voltage diagnosis error |
| Measures | Turn the power OFF and ON once |

## H0280 *

| | |
|---|---|
| Error message | STO circuit diagnosis error |
| Cause | STO citcuit error |
| Measures | Turn the power OFF and ON once |

## H0290 *

| | |
|---|---|
| Error message | PLD control error |
| Cause | PLD control error |
| Measures | Turn the power OFF and ON once |

## H0310

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Mecha board access error |
| Cause | Failed in access to a Mecha board |
| Measures | Please confirm the connection with Mecha board |
| Error message | Mecha board buffer access error |
| Cause | Cannot store more than 100 of the data to send/receive buffer |
| Measures | Please confirm the communication with Mecha board |

## H0311 *

| | |
|---|---|
| Error message | RemoteI/O unit config error |
| Cause | The multiple RemoteI/O units which do not support are connected |
| Measures | Please confirm the constitution of RemoteI/O unit<br>When extended safety unit is connected, restart the unit.<br>For further information refer to the separate "Robot Safety Option Instruction Manual". |

## H0315

| | |
|---|---|
| Error message | Can't access the D-device area |
| Cause | This area cannot be used in duplicate |
| Measures | Please change the D-device start number in parameter DDEVVLn |

## H0316

| | |
|---|---|
| Error message | The D-device area is out of range |
| Cause | An area corresponding to the variable type can't be allocated |
| Measures | Please change the D-device start number in parameter DDEVVLn |

## H0317

| | |
|---|---|
| Error message | The D-device variable duplication |
| Cause | Cannot be doubly allotted to one variable |
| Measures | Please change the variable name in parameter DDEVVLn |

## C0330

| | |
|---|---|
| Error message | Undefined hand condition |
| Cause | Hand conditions have not been changed from initial values. |
| Measures | Set the parameter HNDDATn (n = 0 to 8) or HNDCHK.<br>Refer to "Functions set with parameters" in the CR800 Series Controller Instruction Manual: Detailed explanations of functions and operations. |

## C043n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier motor overheat |
| Cause | The motor or encoder’s thermal protector activated. |
| Measures | Reduce the speed and acceleration of the robot. |

## C049n *

n indicates the fan number (1 to 8).

| | |
|---|---|
| Error message | Alarm of fan in the robot |
| Cause | Fan in the robot might be out of order |
| Measures | Please exchange the fan in the robot |

## H050n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo axis setting error |
| Cause | The setting of the axis number selection switch is illegal |
| Measures | Confirm the setting of the axis selection switch |

## H0510 *

| | |
|---|---|
| Error message | The converter setting is illegal |
| Cause | The external emergency-stop input power was detected except external emergency-stop mode. |
| Measures | Setting is wrong. When it comes back, contact to the dealer. |

## H0520 *

| | |
|---|---|
| Error message | Robot axis setting illegal |
| Cause | The setting of the servo axis used by the mechanism is duplicated with another mechanism's axis. |
| Measures | Correctly set. |

## H053n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo sys. error (memory) |
| Cause | The servo amplifier memory IC's check sum is illegal. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H054n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo sys. error (over run) |
| Cause | The servo amplifier software data process did not end within the specified time. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H055n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo sys. error (mag. pole pos) |
| Cause | An error was detected in the magnetic pole position detection signal of the detector. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H056n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo sys. error (A/D) |
| Cause | 1) An error was found in the servo amplifier's A/D converter during initialization.<br>2) The stop signal or servo OFF signal was input when the door switch signal or EMG signal was input. |
| Measures | 1) Turn the power OFF and ON once. If it comes back, contact your service provider.<br>2) Do not input the door switch signal or EMG signal with another signal simultaneously. |

## H057n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder error (EEPROM) |
| Cause | An error was detected in EEPROM data of the serial pulse encoder. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H058n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder error (LED) |
| Cause | The LED of the serial pulse encoder has been deteriorated. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H059n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder error (position data) |
| Cause | An error was detected in the position data within a single rotation of the encoder. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H060n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder no-signal detection 1 |
| Cause | An error was detected in the operating input of the detector mounted on the edge of the motor. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H061n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder no-signal detection 2 |
| Cause | An error was detected in the operating input of the detector mounted on the edge of the machine. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H062n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier LSI error |
| Cause | An operation error was detected in the LSI of the servo amplifier. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H063n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Unused axis servo error |
| Cause | A power module error occurred in an axis which not use the movement control. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H064n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | System error (ABS CPU) |
| Cause | An error in the CPU of the absolute position linear scale was detected. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H065n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Absolute position error |
| Cause | An error was detected in the absolute position detection circuit within the absolute position linear scale. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H066n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Incremental position error |
| Cause | An error was detected in the relative position detection circuit within the absolute position linear scale. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H067n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder CPU error |
| Cause | An error was detected in the CPU of the position detector. |
| Measures | Turn the power OFF and ON once. Also, carefully check whether there is no deviation in the operating position of the robot. If it is deviated, set the origin position (OP) again. For more information about the operating procedure, refer to the separate volume, "Instruction Manual/Robot Arm Setup to Maintenance." If it comes back, contact your service provider. |

## H068n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder LED error |
| Cause | Deterioration of the position detector's LED was detected. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H0690 *

| | |
|---|---|
| Error message | Regeneration circuit error |
| Cause | A regenerative transistor or resistor error was detected. This error may also occur when the power supply voltage is high. |
| Measures | Turn the power OFF and ON once.  If it comes back, contact your service provider. |

## H0700 *

| | |
|---|---|
| Error message | P.S. external contactor fusing |
| Cause | The contactor was turned ON even though READY is OFF. |
| Measures | Turn the power OFF and ON once.  If it comes back, contact your service provider. |

## H0710 *

| | |
|---|---|
| Error message | Servo amp. relay error. |
| Cause | The relay on servo cpu card did not turn ON. |
| Measures | Turn the power OFF and ON once.  If it comes back, contact your service provider. |

## H0711 *

| | |
|---|---|
| Error message | Discharge resistance relay error |
| Cause | Discharge resistance circuit on converter is state-of-discharge |
| Measures | Turn the power OFF and ON once |

## H0712 *

| | |
|---|---|
| Error message | Converter fuse fusing |
| Cause | Fuse of a converter fused for a ground fault or short circuit |
| Measures | Please exchange a fuse of a converter<br>Investigate and correct the ground fault or short circuit portion in the wiring made by the customer. Then, replace the fuse inside the controller.<br>Refer to the following page for details. (On details of the fuse, contact the manufacturer.)<br>☞ Page 137 Place where a converter fuse replacement is required<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |

## H0713 *

| | |
|---|---|
| Error message | Encoder power supply fuse trip |
| Cause | Encoder power supply fuse tripped by ground fault, short circuit |
| Measures | Turn the power OFF, wait a while, and then turn ON again |

## H0720 *

| | |
|---|---|
| Error message | Power supply watch dog |
| Cause | The converter software process did not end within the specified time. |
| Measures | Turn the power OFF and ON once.  If it comes back, contact your service provider. |

## H0730 *

| | |
|---|---|
| Error message | Power supply rush relay fusing |
| Cause | The rush resistance short-circuit relay did not turn OFF. |
| Measures | Turn the power OFF and ON once.  If it comes back, contact your service provider. |

## H0740 *

| | |
|---|---|
| Error message | Power supply main circuit error |
| Cause | The charge operation of the main circuit capacitor is not normal.<br>Connection of the external emergency stop has the mistake. |
| Measures | Turn the power OFF and ON once.<br>Confirm that the power supply voltage is in the specification value and the connection of the external emergency stop is correct.<br>If it comes back, confirm the time of occurrence of this error being "servo ON/OFF", or being "power supply OFF/ON", and contact your service provider |

## H0742

| | |
|---|---|
| Error message | Power supply main circuit error |
| Cause | A main circuit voltage has decreased because of a failure of the Safety relay on a converter card. |
| Measures | Turn the power OFF and ON once.<br>Confirm whether there is any problem in wiring of the external emergency stop switch.<br>Refer to the "Examples of safety measures" given in separate "Standard Specifications Manual" for external emergency stop switch wiring.<br>If it comes back, contact to your service provider. |

## H0743 *

| | |
|---|---|
| Error message | Power supply main circuit error3. |
| Cause | A main circuit voltage has decreased because of contactor fail. |
| Measures | Turns off the power once and turns on on the power supply again. Confirm power supply voltage and the connection of the external emergency stop. When it comes back, contact to the dealer. |

## H0750 *

| | |
|---|---|
| Error message | Power supply memory error |
| Cause | An error in the memory circuit of converter or AD converter was detected. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H0760 *

| | |
|---|---|
| Error message | Power supply error |
| Cause | An error was detected in the data comm. with the power supply |
| Measures | Turn the power OFF and ON once |

## H0770 *

| | |
|---|---|
| Error message | Power supply process error |
| Cause | An error occurred in the process cycle of power supply |
| Measures | Turn the power OFF and ON once. Check that there is not a source of noise. If it comes back, contact your service provider. |

## H078n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier watch dog |
| Cause | The servo amplifier software process is not operating correctly. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H079n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier board error |
| Cause | An error was detected in the servo amplifier's PCB. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H080n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier clock error |
| Cause | An error was detected in the servo amplifier's clock. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H081n *

n indicates the axis number (1 to 8).

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Power supply undervoltage |
| Cause | Insufficient bus voltage was detected in main circuit. An instantaneous power failure may have occurred. |
| Measures | Check the wiring and condition of the power supply.<br>The primary power voltage may have dropped below the lower limit value of the input voltage range (with voltage fluctuation considered) due to voltage fluctuations or robot arm operations. If applicable, review the operation programs or the settings. |
| Error message | Voltage error at accel/decel |
| Cause | A motor control error was detected due to an input voltage drop |
| Measures | Turn off the power and then on again. Check the primary power voltage.<br>The primary power voltage may have dropped below the lower limit value of the input voltage range (with voltage fluctuation considered) due to voltage fluctuations or robot arm operations. If applicable, review the operation programs or the settings.<br>This error may have been triggered by the following errors. If this is the case, follow the solutions to each error.<br>H0216: Current sensor failure<br>H221n: STR (ROBOT torque error 2) |

## H0820 *, H082n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Motor ground fault |
| Cause | A motor ground fault was detected. A connection or conductance error may have occurred in the motor cable. |
| Measures | Turn the power OFF and ON once. Check connection and continuity of motor cable. |

## H083n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier overvoltage |
| Cause | The main circuit bus voltage exceeded the tolerable value. |
| Measures | Check the primary power supply voltage. Turn the power OFF and ON once. |

## H0840 *

| | |
|---|---|
| Error message | Instantaneous power failure (SRV) |
| Cause | A power shutdown status of 50 msec or longer has occurred. |
| Measures | Check the power voltage. Turn the power OFF and ON once. |

## H0850 *

| | |
|---|---|
| Error message | Power supply voltage incorrect |
| Cause | The input power (L1, L2, L3) has an open phase, the voltage is not within the specifications, or the 100V/200V specifications changeover setting is incorrect. |
| Measures | Check the power connection, power state or the setting.<br>If it comes back, contact your service provider. |

## H0860

| | |
|---|---|
| Error message | Power supply overvoltage |
| Cause | The main circuit bus voltage exceeded the tolerable value. |
| Measures | Check the power supply connection and power supply state. |

## H0870 *

| | |
|---|---|
| Error message | Power module overheat (Fan Stop) |
| Cause | A cooling fan stopped, and overheat occurred |
| Measures | Check the rotation of fan, and the connector connected to a fan |

## H0880 *, H088n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Power module overheat |
| Cause | Overheating of the power module regenerative resistor was detected. |
| Measures | Turn the controller power OFF, wait a while, and then turn ON again. If it comes back, contact your service provider. |

## H089n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier motor overheat |
| Cause | The position detector's thermal protector activated. |
| Measures | Turn the controller power OFF, wait a while, and then turn ON again. Decrease the acceleration/deceleration time of the operation speed, for instance.<br>Refer to "Detailed explanation of command words"/"Accel (Accelerate)," "Ovrd (Override)" and "Spd (Speed)," or "Detailed explanation of Robot Status Variable"/"M_SetAdl," "M_LdfAct" and "Functions set with parameters"/"JADL (Optimum acceleration/deceleration adjustment rate)" of the Separate Volume, "INSTRUCTION MANUAL/Detailed Explanation of Functions and Operations." |

## H090n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Absolute position overspeed |
| Cause | It moved 45 mm/sec or faster with the absolute position linear scale during initialization. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H091n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier overspeed |
| Cause | A speed exceeding the motor's tolerable speed was detected. |
| Measures | Turn the power OFF and ON once.  If it comes back, contact your service provider. |

## H0920 *, H092n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Power module overcurrent |
| Cause | A servo amplifier or power supply overcurrent was detected. An error was detected in the servo amplifier's gate circuit. A connection or conductance error may have occurred in the motor cable. |
| Measures | Confirms the connection of the machine cable and the locomotion-axis cable. If it comes back, contact your service provider. |

## H093n *

n indicates the axis number (1 to 8).

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Motor overcurrent |
| Cause | An excessive current flowed to the motor, or the A/D converter output is abnormal. An abnormality may have occurred in the connection of the motor's power line. |
| Measures | Turn the power OFF and ON once. Confirms the connection of the machine cable and the locomotion-axis cable etc. If it comes back, contact your service provider. |
| Error message | Motor overcurrent (Grounding) |
| Cause | The motor power cable is in contact with ground |
| Measures | Turn the power OFF and ON once. Confirms the connection of the machine cable and the locomotion-axis cable etc. If it comes back, contact your service provider. |

## H094n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Overload (over weight 1) |
| Cause | Operation tight for a motor (operation with high duty) was performed more than fixed time. |
| Measures | Decrease the acceleration/deceleration time of the operation speed, for instance.<br>Refer to "Detailed explanation of command words"/"Accel (Accelerate)," "Ovrd (Override)" and "Spd (Speed)," or "Detailed explanation of Robot Status Variable"/"M_SetAdl," "M_LdfAct" and "Functions set with parameters"/"JADL (Optimum acceleration/deceleration adjustment rate)" of the Separate Volume, "INSTRUCTION MANUAL/Detailed Explanation of Functions and Operations."<br>Confirms that conveyance conditions (hand mass, work-piece mass) are less than specification values.<br>When it comes back, contact to the dealer. |

## H095n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Overload (over weight 2) |
| Cause | The maximum output current continued for more than one second. |
| Measures | Check the load weight and the robot pressing, etc.<br>Confirms that conveyance conditions (hand mass, work-piece mass) are less than specification values.<br>When it comes back, contact to the dealer. |

## H096n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Excessive error 1 |
| Cause | The position error exceeded at servo ON.<br>Moreover, this error may occur during the emergency-stop deceleration. |
| Measures | • Check the factors such as the load weight and the push force. Check the connection of motor power line (such as the machine cable and the locomotion-axis cable). If the surrounding temperature is low, or if the system is started after a long stop, perform a low-speed run-in or use the warm-up mode.<br>• If this error occurs when acceleration and deceleration control is fixed for tracking operation, etc., reduce the acceleration/deceleration time (Accel command), movement speed (Ovrd command), etc. High hand offset (eccentricity) amounts are more likely to cause this error. Moreover, this error may occur during the emergency-stop deceleration. For further information on each command, refer to the "INSTRUCTION MANUAL/Detailed explanations of functions and operations".<br>• If this error occurs when operating in the joint coordinate system compliance mode (Cmp Jnt command), increasing the value of the parameter CMPJCLL will reduce the occurrence of this error.<br>Refer to "Detailed explanation of command words"/"Cmp Jnt (Compliance Joint)" and "Movement parameter"/"CMPJCLL (Current limit level for Cmp Jnt)" in the "INSTRUCTION MANUAL/Detailed explanations of functions and operations".<br>This error may have been triggered by the following errors. If this is the case, follow the solutions to each error.<br>H0216: Current sensor failure<br>H221n: STR (ROBOT torque error 2) |

## H097n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Excessive error 2 |
| Cause | The position error exceeded at servo OFF. |
| Measures | Check the moving robot arm by something power. When it comes back, contact to the dealer. |

## H098n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Excessive error 3 |
| Cause | Abnormal motor power line connection. |
| Measures | Check the connection of motor power line. When the excessive error 1 was detected, the current of the motor is off. |

## H101n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Collision detection |
| Cause | A collision was detected. |
| Measures | 1) If the robot has stopped by interference with peripheral equipment, move the arm to part from peripheral equipment using jog operation. Depending on the level of collision, the collision detection error may occur again. In that case, turn on the servo power again and do jog operation. If it still recurs, release the brake and move the arm by hand.<br>2) If this error occurs without having collided, please adjust the collision detection level. If collision is detected incorrectly during automatic operation, enlarge the setting value of the parameter (COLLVL) corresponding to axis. If collision is detected incorrectly during jog operation, enlarge the setting value of the parameter (COLLVLJG) corresponding to axis. However, since the detection level drops by enlarging the set value, don't enlarge too much. And, the incorrect detection can be reduced when setup value of parameter (HNDDATn, WRKDATn) is correct.<br>3) If the speed excessive error has occurred at the same time, the torque alteration by rapid speed change may be detected as a collision state. Remove other causes of the error and confirm movement again.<br>4) In case of operation under the environment of low temperature or after the long term stoppage, the collision detection error may occur by viscous transmutation of the grease used. In such a case, operate by accustoming at low speed (warm-up), or use the warm-up operation mode. |

## H102n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo AMP over-regeneration |
| Cause | The additional axis exceeded the regenerative performance limit. |
| Measures | Check the regenerative capacity and parameters for the additional axis.<br>If it comes back, contact your service provider. Regeneration resistance may be disconnected. |

## H1030 *

| | |
|---|---|
| Error message | Power supply over-regeneration |
| Cause | The converter's regenerative performance limit was exceeded. |
| Measures | Wait at least 15 minutes in the power ON state, and then turn the power OFF and ON.<br>If it comes back, contact your service provider. Regeneration resistance may be disconnected. |

## H104n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder init communication error |
| Cause | An abnormality may have occurred in the position detector cable connection. |
| Measures | 1) Turn the power OFF and ON once. If it comes back, contact your service provider.<br>2) When instantaneous power failure errors occur simultaneously, turn on the power supply again. |

## H105n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder init communication error |
| Cause | Initial communication with the encoder was not possible |
| Measures | Check the encoder cable connection |

## H106n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder communication error |
| Cause | Communication between the encoder and detector was cut off |
| Measures | Check the encoder cable connection |

## H107n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder communication error |
| Cause | Communication with the position detector was cut off. |
| Measures | Confirms the signal cable of the machine cable and the locomotion-axis cable etc. If it comes back, contact your service provider. |

## H108n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo AMP communication error |
| Cause | An abnormality may have occurred in the communication cable connection. |
| Measures | Turn off the power and then on again. If it comes back, contact your service provider.<br>CR800-R/Q series: Check the connection between the robot CPU system and the controller. |

## H1090 *, H109n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo AMP initialization error |
| Cause | An abnormality may have occurred in the servo axis settings (parameters, rotary switches). |
| Measures | Turn off the power and then on again. If it comes back, contact your service provider.<br>CR800-R/Q series: Check the connection between the robot CPU system and the robot controller, and power on the robot controller and then the robot CPU.<br>Using the additional axis: Check the axis setting switch, cable connection with the robot controller, parameter settings, whether the power is supplied to the additional axis amplifier, the type of the amplifier, etc. When applying a power supply, turn on the additional axis amplifier first, then turn on the robot controller. |

## H110n *

| | |
|---|---|
| Error message | Servo com. receive error |
| Cause | Abnormality occurred in data reception from a servo amplifier |
| Measures | Check the communication cable connection and conductivity |

## H1110 *

| | |
|---|---|
| Error message | Servo communication timeout |
| Cause | Data from a servo amplifier is not received |
| Measures | Check the communication cable connection and conductivity |

## H111n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP comm. error |
| Cause | A communication error was detected between the servo amplifier and PC. |
| Measures | Check the communication cable connection and conductivity. If it comes back, contact your service provider. |

## H112n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder ABS position data lost |
| Cause | The absolute position data in the position detector was lost. The voltage of the robot-arm or additional axis's backup battery may be dropping. |
| Measures | If this error occurs while using the robot controller with the RV-8CRL or RV-5AS, there may be a problem with the encoder. Please contact the manufacturer.<br>If the error occurs while using the controller with any other robot, replace the controller battery, then set the origin using the ABS method. Re-teaching is unnecessary since position data can be fully restored if the origin is set using the ABS method. Refer to separate "Instruction Manual/Robot Arm Setup and Maintenance" for ABS method.<br><br>If the voltage of robot battery is low, reset the error, and set up the origin by ABS method. Then, the robot can be operated without replacing the battery. However, this error occurs again when the controller is re-turned on. It is recommended to replace the battery at the earliest opportunity. |

## H113n *

n indicates the axis number (1 to 8).

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Encoder per rotation data error |
| Cause | An error was detected in the position detector's one rotation data. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |
| Error message | Encoder data scattered |
| Cause | Position deviation by scattered encoder data occurred |
| Measures | Turns off the power supply once and turns on again. Check that there is not a source of excessive vibration. If it comes back, contact your service provider. |

## H114n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP Comm. data error (CRC) |
| Cause | A CRC error was detected in the data from servo amplifier. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |

## H115n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Large command position |
| Cause | The command position from the RC is abnormally large. |
| Measures | command is executed, execute Mov P_Fbc before Cmp Off. Or cycle the power. If the same error recurs, contact the manufacturer. |

## H116n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP Comm. error (frame) |
| Cause | An error was detected in the communication frame from servo amplifier. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |

## H117n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP Comm. error (info) |
| Cause | An error was detected in the communication information from the RC. |
| Measures | Check the communication cable connection and conductivity. If it comes back, contact your service provider. |

## H118n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier feedback error 1 |
| Cause | Pulses skipped in the position detector's feedback signal. |
| Measures | Check the detector cable connection and conductivity. If it comes back, contact your service provider. |

## H119n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier feedback error 2 |
| Cause | Displacement occurred in the feedback amounts between the detectors on the motor edge and on the machine edge. |
| Measures | Check the detector cable connection and conductivity. If it comes back, contact your service provider. |

## H1200 *

| | |
|---|---|
| Error message | SRV-AMP Comm. data error (CRC) |
| Cause | A CRC error was detected in the communication data from the servo amplifier. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |

## H121n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP Comm. data error (ID) |
| Cause | A data ID error was detected in the communication data from the servo amplifier. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |

## H122n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP Comm. data error (axis No) |
| Cause | An axis No. error was detected in the communication data from the servo amplifier. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |

## H123n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP Comm. data error (SubID) |
| Cause | A Sub ID error was detected in the communication data from the servo amplifier. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |

## H1240 *

| | |
|---|---|
| Error message | SRV-AMP Comm. data error (frame) |
| Cause | An No. of received frames error was detected in the communication data from the servo amplifier. |
| Measures | Turns off the power supply once and turns on again. If it comes back, contact your service provider. |

## H125n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo amplifier parameter error |
| Cause | An error was detected in the servo parameter. |
| Measures | Confirms whether the type displayed on the rated name plate of controller and T/B is the same.<br>If different, restores the type data (backup data).<br>If it comes back, contact your service provider. |

## C126n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder communication error |
| Cause | Initial communication could not be established with the low-speed serial type absolute position linear scale. |
| Measures | Check the detector cable connection and conductivity. If it comes back, contact your service provider. |

## C127n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder communication error |
| Cause | The serial data of absolute position was abnormally transmitted. |
| Measures | Check the detector cable connection and conductivity. Moreover, confirms carefully that the moving position of the robot has not deviated, and if it has deviated, sets up the origin again. Refer to separate "Instruction Manual/Robot Arm Setup and Maintenance" for operation method.<br>If it comes back, contact your service provider. |

## C128n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder serial format error |
| Cause | Absolute position serial data format was incorrect. |
| Measures | Check the detector cable connection and conductivity. Moreover, confirms carefully that the moving position of the robot has not deviated, and if it has deviated, sets up the origin again. Refer to separate "Instruction Manual/Robot Arm Setup and Maintenance" for operation method.<br>If it comes back, contact your service provider. |

## C129n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Absolute position fluctuation |
| Cause | The absolute position data fluctuated when the power was turned ON. |
| Measures | Check whether the axis moved due to arm dropping or external force when the power was turned ON. |

## C130n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo AMP MP scale F/B error |
| Cause | Excessive displacement was detected in the feedback amounts between the detector and the MP scale. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## C131n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo AMP MP scale offset error |
| Cause | Excessive displacement was detected in the feedback amounts between the detector and the MP scale. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## C132n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Multi-rotation data error |
| Cause | An error was detected in the position detector's multi-rotation data. |
| Measures | If this error occurs while using the robot controller with the RV-8CRL or RV-5AS, there may be a problem with the encoder. Please contact the manufacturer.<br>If this error occurs while using the controller with any other robot, the origin position may be misaligned. Cycle the power of the controller, then set the origin using the ABS method. Refer to separate "Instruction Manual/Robot Arm Setup and Maintenance" for ABS method.<br>(Even if this warning occurs, unless the controller is re-turned on, it can operate perfectly. However, when re-turning on the controller, the position gap may occur. Please be sure to set up the origin by ABS method after re-turning on the controller power supply. Current position data returns to the normal position before error occurrence.)<br>When it comes back, contact to the dealer. |

## C133n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder battery voltage low |
| Cause | The battery voltage supplied to the position detector dropped. |
| Measures | Replace the backup battery. For more information about the replacement procedure, refer to the separate volumes, "Instruction Manual/ Robot Arm Setup to Maintenance".<br>Even if this warning occurs, unless the controller is re-turned on, it can operate perfectly. However, if the battery consumption is intense, the Encoder ABS position data lost error (H112n) may occur when the controller is re-turned on. It is recommended to replace the battery at the earliest opportunity. |

## C134n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Over-regeneration warning |
| Cause | The regenerative level of the additional axis has risen to 80% or more. |
| Measures | Check the regenerative capacity and parameters for the additional axis.<br>If it comes back, contact your service provider. Regeneration resistance may be disconnected. |

## C135n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Overload warning |
| Cause | The overload level reached 95% or more. |
| Measures | Check the load weight and the robot for collisions, etc. |

## H136n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Absolute position counter error |
| Cause | The counter of absolute position is illegal. |
| Measures | Confirm whether the connection of encoder cable and the battery voltage of arm is falling. |

## C137n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Illegal parameter (servo) |
| Cause | A parameter was set exceeding the setting range. |
| Measures | The parameter has not been changed. Reset the correct value. If it comes back, contact your service provider. |

## C138n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Removing control axis (servo) |
| Cause | An instruction to remove the axis was issued by the controller. |
| Measures | Cancel the instruction of removing axis. |

## H1390

| | |
|---|---|
| Error message | Emergency stop (Servo amplifier) |
| Cause | The emergency stop command has been input from the RC |
| Measures | Release the emergency stop state |

## C1400

| | |
|---|---|
| Error message | regeneration(AUX) frequency over |
| Cause | Regeneration at the limit has occurred frequently |
| Measures | Check the regeneration capacity |

## H1410 *

| | |
|---|---|
| Error message | Instantaneous power interruption |
| Cause | The power was momentarily interrupted |
| Measures | Check power specification, and wiring of power and external emergency stop |

## C1420

| | |
|---|---|
| Error message | Over-regeneration warning |
| Cause | The regeneration level reached 80? or more. |
| Measures | Lower the robot's movement speed.<br>If it comes back, contact your service provider. Regeneration resistance may be disconnected. |

## C1430

| | |
|---|---|
| Error message | Servo amplifier main circuit OFF |
| Cause | The servo turned ON while the main circuit power was OFF |
| Measures | Turn the main circuit power ON |

## H144n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | System error (servo 2) |
| Cause | Trouble occurred in the current processing processor. |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H1450 *

| | |
|---|---|
| Error message | Instantaneous power interruption |
| Cause | The power was momentarily interrupted at the power supply |
| Measures | Check power specification, and wiring of power and external emergency stop |

## H1460 *

| | |
|---|---|
| Error message | Power supply overcurrent |
| Cause | Overcurrent in the power module in the power supply. |
| Measures | Check the AC power line. If it comes back, contact your service provider. |

## H1470 *

| | |
|---|---|
| Error message | Frequency error |
| Cause | AC frequency is out of range. |
| Measures | Check the AC power line frequency. If it comes back, contact your service provider. |

## H148n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Power supply parameter error |
| Cause | Illegal at the power supply parameter |
| Measures | Turn the power OFF and ON once. If it comes back, contact your service provider. |

## H1490 *

| | |
|---|---|
| Error message | Power supply overheat |
| Cause | Overheating of the power module or regenerative resistance |
| Measures | For the CR800 controller, replace or clean the air filter.<br>For the CR860 controller, check the rotation of the fan on the back of the converter.<br>If it comes back, contact your service provider. |

## H1491

| | |
|---|---|
| Error message | Illegal converter thermal servo AMP. |
| Cause | Overheating of servo AMP converter. |
| Measures | Turn the power OFF, wait a while, and then turn ON again. |

## H1492 *

| | |
|---|---|
| Error message | Power supply converter overheat |
| Cause | Overheating of the converter was detected |
| Measures | Turn the power OFF, wait a while, and then turn ON again |

## H1493 *

| | |
|---|---|
| Error message | Rush resistance overheat |
| Cause | Overheating of the rush resistance was detected |
| Measures | Turn the power OFF, wait a while, and then turn ON again |

## H1494 *

| | |
|---|---|
| Error message | Discharge resistance overheat |
| Cause | Overheating of the discharge resistance was detected |
| Measures | Turn the power OFF, wait a while, and then turn ON again |

## H1495 *

| | |
|---|---|
| Error message | motor power line error |
| Cause | The motor power line conductivity is illegal |
| Measures | Check the connection of the power line. Check that the machine cable is connected properly without disconnection. |

## H150n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Motor combination error |
| Cause | The servo motor which does not correspond to addition axis servo amplifier is connected. |
| Measures | Confirm the specifications of servo amplifier and the motor. |

## H151n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SRV-AMP USB comm. error |
| Cause | A communication error was detected between the servo amp and PC |
| Measures | Check the communication cable connection and conductivity |

## H152n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Servo motor output watt over |
| Cause | The output wattage of the servo motor exceeded ratings |
| Measures | Lower the rotation speed of the servo motor |

## H154n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Communication error between units |
| Cause | The transmission data between servo amplifier units is illegal |
| Measures | Check the communication cable connection and conductivity |

## H1550 *

| | |
|---|---|
| Error message | Emergency stop is a breakdown |
| Cause | The external emergency stop input is illegal |
| Measures | Turn the power OFF and ON once. When it comes back, contact to the dealer. |

## H156n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Excessive error 4 |
| Cause | The axis moved while executing servo ON processing. |
| Measures | If it comes back, contact your service provider. |

## H157n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Non-registered servo error. (This error may be caused by the error on the amplifier for additional axis.) |
| Cause | A non-registered servo alarm occurred. |
| Measures | Confirms the code by LED of servo additional axis amplifier, and refer to the instruction manual of servo amplifier.<br>If the alarm cannot be reset, turn the power OFF and ON. If it comes back, contact your service provider. |

## C158n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Non-registered servo warning. (This caution may be caused by the warning on the amplifier for additional axis.) |
| Cause | A non-registered servo warning occurred. |
| Measures | Confirms the code by LED of servo additional axis amplifier, and refer to the instruction manual of servo amplifier. If the alarm cannot be reset, turn the power OFF and ON. If it comes back, contact your service provider. |

## H1600 *

| | |
|---|---|
| Error message | Mechanism un-setting. |
| Cause | The mechanism is not set up. |
| Measures | Set up one or more of mechanism. If this alarm occur after the restoring the data of controller check the restored data. If it comes back, contact your service provider. |

## H1601 *

| | |
|---|---|
| Error message | Unmatched robot model |
| Cause | Robot arm that connection is not correct |
| Measures | Please confirm the connected robot arm.<br>If the robot has been replaced with RH-3CRH, RH-6CRH6020, or RH-6CRH7020, refer to "Connecting with the controller" in the separate manual "INSTRUCTION MANUAL/Robot Arm Setup and Maintenance". |

## H1610 *

| | |
|---|---|
| Error message | System error (illegal MEMECH) |
| Cause | The mechanism module name is illegal or not registered. |
| Measures | Correctly set. If it comes back, contact your service provider. If it comes back, contact your service provider. |

## C1620

| | |
|---|---|
| Error message | Illegal robot No. |
| Cause | When specifying the mechanism number by the external communications protocol, the mechanism number not existing was specified. |
| Measures | Specify the existing mechanism number. |

## C1630

| | |
|---|---|
| Error message | Cannot servo ON (during error) |
| Cause | The servo cannot be turned ON during a servo error. |
| Measures | Reset the servo error before turning the servo ON. |

## C1640

| | |
|---|---|
| Error message | Cannot servo ON (DEADMAN OFF) |
| Cause | The servo cannot be turned ON while the enable switch is OFF. |
| Measures | Turn the enable switch ON before turning the servo ON. |

## C1650

| | |
|---|---|
| Error message | Cannot servo ON (brake OFF) |
| Cause | The servo cannot be turned ON when there is an axis with the brakes released. |
| Measures | Lock the brakes for all axes before turning the servo ON. |

## C1660

| | |
|---|---|
| Error message | Cannot servo ON (SRVON process) |
| Cause | The servo cannot be turned ON during the servo ON process. |
| Measures | Operate it after servo ON process is finished. |

## C1670

| | |
|---|---|
| Error message | Cannot servo ON (SRVOFF process) |
| Cause | The servo OFF process is being carried out. |
| Measures | Operate it after servo OFF process is finished. |

## H1680

| | |
|---|---|
| Error message | Cannot servo ON (timeout) |
| Cause | The servo did not turn ON within the specified time. |
| Measures | Turn the power supply OFF and ON once.<br>If it comes back, confirm that power supply voltage is in the specification value, and connection of the external emergency stop is correct.<br>And, when using the addition axis, confirm that the power supply voltage to the servo amplifier of addition axes is in the specification value and connection of AXMC is correct. If it comes back, contact your service provider. |

## H1681

| | |
|---|---|
| Error message | Unexpected servo OFF |
| Cause | The servo turned OFF unexpectedly. |
| Measures | Confirm that primary power supply voltage is in the specification value and wiring of the external emergency stop line is correct.<br>When using the additional axis, confirms whether the alarm occur on the additional axis.<br>If it comes back, contact your service provider. |

## H1682

| | |
|---|---|
| Error message | Servo ON Timeout (Safety relay). |
| Cause | A main circuit voltage did not rise because of a failure of the Safety relay on a converter card. |
| Measures | Turn the power OFF and ON once.<br>Confirm that wiring of the external emergency stop line is correct.<br>Confirm whether there is any problem in wiring of the external emergency stop switch. Refer to the "Examples of safety measures" given in separate<br>"Standard Specifications Manual" for external emergency stop switch wiring.<br>Please confirm whether in use of addition axis, there is any failure in the servo amplifier for addition axes.<br>If it comes back, contact to your service provider. |

## H1683

| | |
|---|---|
| Error message | Servo ON Timeout. (Contactor) |
| Cause | A main circuit voltage did not rise because of contactor welded. |
| Measures | Turns off the power supply once and turns on again.<br>Confirm that primary power supply voltage is in the specification value and wiring of the external emergency stop line is correct.<br>When it comes back, contact to the dealer. |

## C1690

| | |
|---|---|
| Error message | Cannot brake operation (DEADMAN) |
| Cause | The servo cannot be turned ON while the enable switch is OFF. |
| Measures | Turn the enable switch ON before turning the servo ON. |

## C1700

| | |
|---|---|
| Error message | Cannot brake operation (EMG) |
| Cause | The brakes cannot be released while the emergency stop is input. |
| Measures | Release the emergency stop state before operating. |

## C1710

| | |
|---|---|
| Error message | Cannot brake operation (SRVON) |
| Cause | The brakes cannot be operated during servo ON. |
| Measures | Turn the servo OFF before operating. |

## C1720

| | |
|---|---|
| Error message | Cannot brake operation (BRK OFF) |
| Cause | The brakes cannot be released during the brake release process. |
| Measures | Operate it after brake is released. |

## C1730

| | |
|---|---|
| Error message | Cannot brake operation (BRK ON) |
| Cause | The brakes cannot be locked during the brake lock process. |
| Measures | Operate it after brake is locked. |

## C1740

| | |
|---|---|
| Error message | Servo parameter change failure |
| Cause | Other parameters cannot be changed during the parameter change process. |
| Measures | Carry out the parameter change process again. |

## C1750

| | |
|---|---|
| Error message | Servo parameter change failure |
| Cause | Changes of the servo parameter failed. |
| Measures | Carry out the parameter change process again. |

## C1760

| | |
|---|---|
| Error message | Illegal origin data |
| Cause | The origin setting data is not correct. |
| Measures | Set the correct origin setting data.<br>Confirm mistakes such as "1(one)" and "I(alphabet)", or "O(alphabet)" and "0(zero)", etc. |

## C1761

| | |
|---|---|
| Error message | Illegal origin data in robot arm |
| Cause | The origin data is illegal in robot arm |
| Measures | Setting the origin |

## C1770

| | |
|---|---|
| Error message | Origin setting incomplete |
| Cause | The origin is not set. |
| Measures | Re-execute after setting the origin. |

## C1780

| | |
|---|---|
| Error message | Cannot set origin (illegal axis) |
| Cause | The origin was not set simultaneously for the interference axis. |
| Measures | Set the origin simultaneously for the interference axis. For example, the J3 axis and the J4 axis of the RH type robot. Please refer to the section of origin setting of separate manual: "Robot Arm Setup and Maintenance" for details. |

## C1781

| | |
|---|---|
| Error message | Cannot set origin (SRVON) |
| Cause | The origin was set during servo ON. |
| Measures | Turn the servo OFF before setting the origin. |

## H179n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Illegal parameter (MEJAR) |
| Cause | The parameter (MEAJAR) setting is illegal.<br>Or the setting value of the parameter related to addition axis control have exceeded the controllable operating range. |
| Measures | The useful range of the operating range setting parameter (MEAJAR) is -131072.00 to +131072.00. Correct, if the set value is over the range.<br>Or confirm the setting value of the parameter related to addition axis control. |

## H1800 *

| | |
|---|---|
| Error message | Illegal parameter (MEMAR) |
| Cause | The ABS operation range setting parameter MEMAR setting is incorrect. (Minus side value is larger than "0", or plus side value is smaller than "0") |
| Measures | Set the value of the parameter "MEMAR" within the limits. |

## H1810 *

| | |
|---|---|
| Error message | Illegal parameter (USERORG) |
| Cause | The user origin setting parameter USERORG setting is incorrect. |
| Measures | Correct the parameter USERORG. |

## L182n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Pos. data disagree.Check origin |
| Cause | Position data changed during power off. |
| Measures | Check the origin, re-install if shifting. Re-set up the origin only for the axis which deviated by the ABS method. Refer to separate "Instruction Manual/Robot Arm Setup and Maintenance" for ABS method. |

## L1830

| | |
|---|---|
| Error message | JRC. Exseeds the Pos. limit |
| Cause | The JRC instruction exceeding the operation range was executed. |
| Measures | Check the current position and the operating range. |

## L184n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | JRC Qtt. Setting Too Large |
| Cause | The movement amount setting of the JRC is excessive. |
| Measures | Correct the JRCQTT parameter. |

## C1850

| | |
|---|---|
| Error message | Instantaneous power failure |
| Cause | There was the momentary power failure. |
| Measures | Check the power supply connection and power supply state. |

## L1860

| | |
|---|---|
| Error message | Illegal parameter (TLC) |
| Cause | The setting of the TLC parameter that sets the approach direction was incorrect. |
| Measures | Correct the TLC parameter. (=X/Y/Z) |

## L1864

| | |
|---|---|
| Error message | FTP parameter setting error (***)<br>Note) "***" is substituted with the "parameter name". |
| Cause | The FTP communication parameter setting lies outside the range. |
| Measures | Check the setting and correct. |

## C1870

| | |
|---|---|
| Error message | Cooling fan stopped |
| Cause | Cooling fan in the controller might be out of order. |
| Measures | Contact the manufacturer if this error reoccurs. |

## H188n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Jn addition axis amplifier cooling fan stop. |
| Cause | The cooling fan of the addition axis amplifier of Jn axis may be out of order. |
| Measures | Please replace the cooling fan of addition axis amplifier.<br>* Please also refer to the instruction manual of the servo amplifier of usage. |

## C189n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Jn addition axis amplifier cooling fan rev fall. |
| Cause | The cooling fan of the addition axis amplifier of Jn axis may be out of order. |
| Measures | Please replace the cooling fan of addition axis amplifier.<br>* Please also refer to the instruction manual of the servo amplifier of usage. |

## C1940

| | |
|---|---|
| Error message | Agitating fan stopped |
| Cause | The fan for agitating inside the robot controller has stopped. |
| Measures | If it comes back, contact your service provider. |

## H195n

| | |
|---|---|
| Error message | Additional axis AMP error *** |
| Cause | Alarm of the addition axis servo amplifier was detected. |
| Measures | Refer to the instruction manuals of addition axis servo amplifier for the details of alarm.<br>"***" of the error message corresponds to the alarm number of addition axis servo amplifier (MR-J4-□B).<br>(The error reset methods differ for each alarm number of addition axis servo amplifier.) |

## C196n

| | |
|---|---|
| Error message | Additional axis AMP Warning *** |
| Cause | Warning of the addition axis servo amplifier was detected. |
| Measures | Refer to the instruction manuals of addition axis servo amplifier for the details of warning.<br>"***" of the error message corresponds to the warning number of addition axis servo amplifier (MR-J4-□B). |

## C1970

| | |
|---|---|
| Error message | Agitating fan stopped (robot) |
| Cause | The agitating fan in the robot stopped |
| Measures | Confirm the rotation of the agitating fan<br>* According to the type of the stopped fan, "inside the robot arm" and "inside the robot base" are shown separately. |

## C198n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Encoder LED diagnostic warning 1 |
| Error message | Encoder LED diagnostic warning 2 |
| Error message | Encoder LED diagnostic warning 3 |
| Cause | Encoder LED may have deteriorated. |
| Measures | If the same warning recurs, contact the manufacturer.<br>Once a warning occurs, it will not recur until the power is cycled or 720 hours (30 days) have elapsed after the occurrence. |

## L2000

| | |
|---|---|
| Error message | The servo is OFF |
| Cause | Because servo is turned off, the robot can't move. |
| Measures | Turn the servo ON and then restart. |

## L2010

| | |
|---|---|
| Error message | Pulse output was not possible |
| Cause | There is an error in the pulse output designation. |
| Measures | Correct the program. |

## L2020

| | |
|---|---|
| Error message | Reading external position data |
| Cause | A command that cannot be executed while reading the external commands was executed. |
| Measures | Correct the program. |

## L2030

| | |
|---|---|
| Error message | JOG operation cannot be accepted |
| Cause | The JOG operation request was issued when the JOG operation request could not be accepted. |
| Measures | Changes the JOG mode after the JOG operation. |

## H2031 *

| | |
|---|---|
| Error message | "Illegal parameter(JOGTSJ,JOGJSP)" |
| Cause | The parameter JOGTSJ, JOGJSP settings are not correct. [JOGPSP], [JOGJSP] = (element 1, element 2) = (constant high, constant low) |
| Measures | Set the set dimension to 5 or less. |

## H2040

| | |
|---|---|
| Error message | Teaching position is not correct. |
| Cause | Change the teaching position. |
| Measures | The work coordinates were not able to be calculated from the teaching position. The cause is the following content.<br>1. Two points are the same position.<br>2. Three points line up on the straight line.<br>Confirm and correct the teaching position |

## L2041

| | |
|---|---|
| Error message | Can't calculate frame transformation coordinates. |
| Cause | The position data that defines the coordinate system used with frame transformation are on the same point or arranged on a straight line so the coordinate system could not be calculated. |
| Measures | Change the position data to appropriate positions so the coordinate system can be calculated. |

## L2042

| | |
|---|---|
| Error message | Frame transformation coordinates are not set |
| Cause | Frame transformation was attempted even though the coordinate system for frame transformation was not set. |
| Measures | Set the coordinate system or cancel frame transformation.<br>Check that the MvSpl command argument <Frame transformation> designation is correct. |

## L2050

| | |
|---|---|
| Error message | CPU processing time exceeds |
| Cause | Because the function made effective is many at the same time |
| Measures | The CPU processing time exceeded the limiting value. Please take measures of either of following.<br>1. If interference avoidance function is activated, changes some cylinder models into the sphere model, or reduces the number of the models for checking .<br>2. Invalidate some functions of following.<br>Interference avoidance, User definition area, Free plane limit, Collision detection, Compliance, Tracking, Force sense<br>3. Reduces the Interrupt definition function currently used by the program. |

## H2090

| | |
|---|---|
| Error message | In interference zone n. (n indicates the zone number (1 to 32).) |
| Cause | Movement outside the user-defined area "n" range was attempted. |
| Measures | Adjust the position. |

## H211n

n indicates the plane number (1 to 8).

| | |
|---|---|
| Error message | Free plane n overrun |
| Cause | Movement outside the plane defined with free plane "n" was attempted. |
| Measures | Adjust the position. |

## H212n

n indicates the plane number (1 to 8).

| | |
|---|---|
| Error message | Free plane n overrun |
| Cause | Movement outside the plane defined with free plane "n" was attempted. |
| Measures | Adjust the position. |

## H2129

| | |
|---|---|
| Error message | Free plane limit data illegal |
| Cause | The free plane data setting value is illegal. |
| Measures | The two points are the same in the three points of parameter: SFCnp.<br>The value of parameter: SFCnAT is except "0, 1, -1". |

## H213n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Jn Speed is excessive (command) |
| Cause | The speed instruction value of n axis exceeded the permissible value.<br>When moving by the linear interpolation (or circle interpolation), needs to rotate the motor at the big speed depending on the pose. If the specified speed is large, the speed instruction value to the motor may exceed the permissible value. |
| Measures | Please lower moving speed by the Ovrd command and Spd command or change the movement position. |

## H214n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Jn +ABS limit over |
| Cause | The axis "n" + ABS limit was exceeded. |
| Measures | Referring to "Operation to Temporarily Reset an Error that Cannot Be Canceled" in the separate volume, "Instruction Manual/Detailed Explanation of Functions and Operations", reset the error and move the axis "n" within the operation range using JOG operation. |

## H215n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Jn -ABS limit over |
| Cause | The axis "n" - ABS limit was exceeded. |
| Measures | Referring to "Operation to Temporarily Reset an Error that Cannot Be Canceled" in the separate volume, "Instruction Manual/Detailed Explanation of Functions and Operations", reset the error and move the axis "n" within the operation range using JOG operation. |

## H216n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Jn (+) angle exceeds the limit |
| Cause | The axis "n" + Joint limit was exceeded. When the teach mode, numerical "0" is set to n. |
| Measures | Adjust the position. |

## H217n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Jn (-) angle exceeds the limit |
| Cause | The axis "n" - Joint limit was exceeded. When the teach mode, numerical "0" is set to n. |
| Measures | Adjust the position. |

## H2181

| | |
|---|---|
| Error message | X(+) data exceeds the limit |
| Cause | The X axis + XYZ limit was exceeded. |
| Measures | Adjust the position. |

## H2182

| | |
|---|---|
| Error message | Y(+) data exceeds the limit |
| Cause | The Yaxis + XYZ limit was exceeded. |
| Measures | Adjust the position. |

## H2183

| | |
|---|---|
| Error message | Z(+) data exceeds the limit |
| Cause | The Z axis + XYZ limit was exceeded. |
| Measures | Adjust the position. |

# H2191

| | |
|---|---|
| Error message | X(-) data exceeds the limit |
| Cause | X(-) data exceeds the limit |
| Measures | Adjust the position. |

# H2192

| | |
|---|---|
| Error message | Y(-) data exceeds the limit |
| Cause | Y(-) data exceeds the limit |
| Measures | Adjust the position. |

# H2193

| | |
|---|---|
| Error message | Z(-) data exceeds the limit |
| Cause | Z(-) data exceeds the limit |
| Measures | Adjust the position. |

# H220m

m: monitoring plane, area, or axis number (1 to 8)

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | SLP (Position error:CMD Plane) |
| Cause | SLP function detects position command exceeded the limit value. |
| Measures | Please confirm the robot movement or related parameter setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SLP (Position error:FB Plane) |
| Cause | SLP function detects position feedback exceeded the limit value. |
| Measures | Please confirm the robot movement or related parameter setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SLP (Position error:CMD Area) |
| Cause | SLP function detects position command exceeded the limit value. |
| Measures | Please confirm the robot movement or related parameter setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SLP (Position error:FB Area) |
| Cause | SLP function detects position feedback exceeded the limit value. |
| Measures | Please confirm the robot movement or related parameter setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SLP (Joint error:CMD) |
| Cause | SLP function detects joint command exceeded the limit value. |
| Measures | Please confirm the robot movement or related parameter setting. |
| Error message | SLP (Joint error:FB) |
| Cause | SLP function detects joint feedback exceeded the limit value. |
| Measures | Please confirm the robot movement or related parameter setting. |

# H221n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | STR (ROBOT torque error) |
| Cause | Safety Torque Range monitoring detected over the torque limit |
| Measures | The STR function has detected feedback torque that exceeds the fixed, permissible torque range. Remove the cause of the collision. Then check that it is safe to restart the operation before doing so. If the error still occurs, review the operation of the robot and settings such as hand and workpiece settings.<br>The STR function may not detect changes in torque accurately at low temperatures, causing the error "H221n" to occur. To clear this error, warm up the robot using the warm-up operation while the robot is in high-speed operation mode. Warming up an affected joint by releasing its brake and moving it around will also clear this error.<br>The following errors may be triggered if the torque level is close to the limits of the permissible torque range. If any of these errors occur, cycle the controller power and check the robot operation.<br>H0242: Fault in Safety Data (S_CMD)<br>H0242: Fault in Safety Data (S_ALM) |

# H221n *

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | STR (ROBOT torque error 2) |
| Cause | Excessive torque was detected during stop operation. |
| Measures | Torque exceeding the permissible torque was detected while the robot decelerated. Remove the cause of the collision. Then check that it is safe to restart the operation before doing so. If the error still occurs, review the operation of the robot and settings such as the permissible torque and hand load settings.<br>The following errors may also occur in conjunction with this error. Follow the solutions to the errors noted below.<br>H081n: Voltage error at accel/decel (n: axis number)<br>H0117: 12V power supply error (brake)<br>H096n: Excessive error 1<br>This error cannot be reset even in recovery mode. |

# H222m *

m indicates the DSI number (1 to 8).

| | |
|---|---|
| Error message | DSI inconsistency |
| Cause | The duplex DSI status is not consistent. |
| Measures | The duplex DSI signal ON/OFF status is not consistent. Check the following for the DSI.<br>• DSI wiring<br>• Duplex signal ON/OFF status<br>• ON/OFF status switching timing (The error occurs when the ON/OFF status remains inconsistent between the duplex signals for about 0.1 seconds or more.)<br>For further information refer to the separate "Robot Safety Option Instruction Manual". |

# H2230 *

| | |
|---|---|
| Error message | Mismatch of Dual Safety Output |
| Cause | State of the redundant wiring do not match (Dual Safty Output) |
| Measures | Turn the power OFF and ON once.<br>If the same error recurs, contact the manufacturer.<br>Refer to the separate "Robot Safety Option Instruction Manual". |

# H2231 *

| | |
|---|---|
| Error message | Mismatch of Dual Safety Output Feedback |
| Cause | State of Dual Safty Output and the feeedback do not match |
| Measures | Turn the power OFF and ON once.<br>If the same error recurs, contact the manufacturer.<br>Refer to the separate "Robot Safety Option Instruction Manual". |

## H2240 *

| | |
|---|---|
| Error message | Origin data change |
| Cause | The origin data is changed during execution of the position monitoring function. |
| Measures | The error occurs when the origin data is changed by setting the origin during execution of the position monitoring function. After turning OFF the power, turn ON the power again to reset the error.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## C2250

| | |
|---|---|
| Error message | Safety function execution disabled (No origin setting) |
| Cause | The safety function cannot be executed because the origin is not set. |
| Measures | The safety monitoring function is not activated when the origin is not set. Set the origin.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H2260 *

| | |
|---|---|
| Error message | Safety Unit communication error |
| Cause | Extended Safety Unit communication failed |
| Measures | To use the safety monitoring function, it is necessary to connect the extended safety unit of the robot safety option to the controller. Connect the extended safety unit.<br>If the error occurs even when the Safety extension unit is connected, check that the Safety extension unit is powered on. Or check whether pseudo-input mode has been enabled.<br>For further information refer to the separate "Robot Safety Option Instruction Manual".<br>If none of these solutions rectify the problem, the Safety extension unit may be faulty. Contact Mitsubishi Electric. |

## H2261 *

| | |
|---|---|
| Error message | Extended safety unit's No. error |
| Cause | The extended safety unit’s station No. is illegal. |
| Measures | Set the extended safety unit’s station No. to 2.<br>For further information refer to the separate "Robot Safety Option Instruction Manual". |

## H2270

| | |
|---|---|
| Error message | Cannot servo ON (SS1/STO active) |
| Cause | The servo cannot be turned ON while SS1/STO is active. |
| Measures | Disable SS1 before turning the servo ON.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H2280

| | |
|---|---|
| Error message | SS1 deceleration time exceeded |
| Cause | The robot didn't stop within deceleration time from SS1 enabled. |
| Measures | Please confirm the robot movement and the load, stop speed parameter (SFSPZERO) setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## H2281

| | |
|---|---|
| Error message | SS2 deceleration time exceeded |
| Cause | The robot didn't stop within deceleration time from SS2 enabled. |
| Measures | Please confirm the robot movement and the load, stop speed parameter (SFSPZERO) setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

# H2282

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | SOS (Position error) |
| Cause | Detect the change of position FB on SOS |
| Measures | An error that the position FB has changed on SOS due to external force was detected.<br>Eliminate the cause of the external force or perform the risk assessment. Then modify the value of the parameter "SOSTLRNC" to extend the acceptable range of SOS.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SOS (Speed error) |
| Cause | Detect FB speed over on SOS. |
| Measures | Please check external force or related parameter settings.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SOS (Position command error) |
| Cause | Detect the change of position CMD on SOS. |
| Measures | Please confirm the robot movement or related parameter setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SOS (Speed command error) |
| Cause | Detect CMD speed over on SOS. |
| Measures | Please confirm the robot movement or related parameter setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

# H230n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | SLS (Joint Speed Error) |
| Cause | Speed monitor detected the speed over. |
| Measures | A speed feedback exceeding the limit speed is detected by the speed monitoring function. Check the robot movement or the monitoring speed setting. Or else, check the delay time (parameterSLSDLY) setting.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

# H231n

n indicates the direction in which an error is detected,

1: Composite speed, 2: X+, 3: X-, 4: Y+, 5: Y-, 6: Z+, 7: Z-

| | |
|---|---|
| Error message | SLS (XYZ Speed Error) |
| Cause | Speed monitor detected the speed over. |
| Measures | A speed feedback exceeding the limit speed is detected by the speed monitoring function.<br>Check the following.<br>1) Robot movement and monitoring speed setting<br>2) Deceleration monitoring period (if it is too short)<br>(A deceleration monitoring period is the waiting time from when the SLS command is enabled until when monitoring starts.)<br>3) Execution line (if it is the Tool command or M_Tool variable) of the program in the error state<br>For details on 1) and 2), refer to the "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual".<br>Since 3) occurs when the Tool command or M_Tool variable is executed before the robot's movement is completed (the feedback speed becomes zero), take one of the following countermeasures. For further information, refer to the "Instruction Manual/Detailed explanations of functions and operations".<br>• Create position data including tool conversion data using relative operations without using the Tool command or M_Tool variable.<br>Program examples |

| Before | After |
|---|---|
| Mov P1<br>Tool Ptool1<br>Mov P2 | Mov P1<br><br>Mov P2 * Inv(Ptool1) * P_tool |

• Add the Dly command before the Tool command or M_Tool variable. Alternatively, specify a positioning completion condition for the immediately preceding operation command using a Fine command so that the Tool command or M_Tool variable will be executed after the robot's movement is completed (the feedback speed becomes zero).

• Decrease the movement speed so that the Tool command or M_Tool variable will be executed after the robot's movement is completed (the feedback speed becomes zero).

# H2320

| | |
|---|---|
| Error message | SF robot control error |
| Cause | The robot motion command and the feedback are inconsistent. |
| Measures | The robot position command and the feedback position are inconsistent. Check the details of the robot movement, the terminal load setting, or interference with the peripheral equipment.<br>For further information refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

# H2370 *

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | SF (Process error) |
| Cause | The Safety Function is not normally executed. |
| Measures | Turn the power OFF and ON once.<br>If the same error recurs, contact the manufacturer.<br>Refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |
| Error message | SF (Process Counter error) |
| Cause | The Safety Function of servo CPU is not normally executed. |
| Measures | Turn the power OFF and ON once.<br>If the same error recurs, contact the manufacturer.<br>Refer to the separate "Robot Safety Option Instruction Manual" or "Safety Communication Function Instruction Manual". |

## L240n

n: Robot CPU No.

| | |
|---|---|
| Error message | The "*" the interference avoidance function detected interference with.<br>Note) "(*)": shows the detected model. If "A1" is displayed in place of the asterisk, the interference avoidance function detected interference with arm No.1. If "T3" is displayed in place of the asterisk, the interference avoidance function detected interference with the 3rd tool model. |
| Cause | The interference avoidance function detected interference during automatic operation. |
| Measures | Release the collision avoidance state |

## L241n

n: Robot CPU No.

| | |
|---|---|
| Error message | The "*" the interference avoidance function detected interference with.<br>Note) "(*)": shows the detected model. If "A1" is displayed in place of the asterisk, the interference avoidance function detected interference with arm No.1. If "T3" is displayed in place of the asterisk, the interference avoidance function detected interference with the 3rd tool model. |
| Cause | The interference avoidance function detected interference during Jog operation. |
| Measures | Release the collision avoidance state |

## L2420

| | |
|---|---|
| Error message | Collision avoidance comm. error |
| Cause | Collision avoidance comm. error |
| Measures | Check the robot controller |

## L2421

| | |
|---|---|
| Error message | A lot of colli. avoidance models |
| Cause | A lot of collision avoidance models |
| Measures | Reduce the collision avoidance models |

## L2430

| | |
|---|---|
| Error message | Collision avoidance re-detect |
| Cause | Collision avoidance was already detected |
| Measures | Move the robot arm from the interference area and resume the operation. |

## L2500

| | |
|---|---|
| Error message | Tracking encoder data error |
| Cause | An error was detected in the data of tracking encoder. |
| Measures | 1) The conveyor rotates at the fixed velocity.<br>2) The connection of the encoder.<br>3) The earth of the earth wire. |

## L2510

| | |
|---|---|
| Error message | Tracking parameter reverses |
| Cause | Tracking parameter[EXCRGM*] Setting value reverses |
| Measures | Check the parameter[EXCRGM*] value. |

## L2520

| | |
|---|---|
| Error message | Tracking parameter is range over |
| Cause | Tracking parameter[TRBUF] Setting value is range over.<br>Setting range: element 1=1-8, element 2=1-64 |
| Measures | Check the parameter[TRUBF] value. |

## L2530

| | |
|---|---|
| Error message | There is no area where data is written. |
| Cause | There is no area where data is written. |
| Measures | Please read the data by using TrRd |

## L2540

| | |
|---|---|
| Error message | There is no read data. |
| Cause | There is no read data. |
| Measures | Please use TrRd after executing TrWrt. |

## L2560

| | |
|---|---|
| Error message | Illegal parameter of Tracking. |
| Cause | The value of the parameter: EXTENC is outside the range. setting range: 1-8. |
| Measures | Please check the value of parameter. |

## L2580

| | |
|---|---|
| Error message | No workpiece in the tracking area. |
| Cause | There is no workpiece in the tracking buffer or “TrkMv On” command is executed.<br>Before the workpiece enters to the tracking area. |
| Measures | Execute “TrkMv On” command when the workpiece is in the tracking area. |

## L2601

| | |
|---|---|
| Error message | Start pos. exseeds the limit |
| Cause | The start position is outside the operation range. |
| Measures | Adjust the position. |

## L2602

| | |
|---|---|
| Error message | DSTN pos. exseeds the limit |
| Cause | The target position is outside the operation range. |
| Measures | Adjust the position. |

## L2603

| | |
|---|---|
| Error message | Med pos. data exseeds the limit |
| Cause | The intermediate position is outside the operation range. |
| Measures | Adjust the position. |

# L2610



One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Spline interpolation error (Spline file) |
| Cause | An error related to the spline file occurred. |
| Measures | Refer to the error details No. and check the details of the occurring error. Then take actions for those error details. |
| Error message | Can't open spline file |
| Cause | The spline file corresponding to the spline No. designated with the MvSpl command could not be opened. |
| Measures | Check that the spline No. designation is correct, and that the target spline file is saved in the controller. |
| Error message | Spline file is broken |
| Cause | The spline file contents did not match the checksum. |
| Measures | Open the target spline file and check the contents. Then, save the file again to recreate the spline file. Write the new file to the controller again. |
| Error message | Spline file is not supported. |
| Cause | The designated spline file cannot be used with the current controller. |
| Measures | Check the spline file and controller versions. It may be necessary to upgrade the software version. |
| Error message | Can't change spline file. |
| Cause | The target spline file is currently being used for spline interpolation (file is open). |
| Measures | A spline file currently being used for spline interpolation (file is open) cannot be exported to the controller, deleted or renamed. Carry these out after spline interpolation ends. |
| Error message | Can't get data. |
| Cause | The spline file is closed so the data cannot be retrieved. |
| Measures | Reset the program, and then execute the MvSpl command again. |
| Error message | The setting of Ex-T is illegal |
| Cause | The setting of Ex-T is illegal |
| Measures | Please confirm the number and the content of the file |
| Error message | Cannot make the spline file |
| Cause | The specified spline file is opened already |
| Measures | Please confirm the specified number |

# L2611

One of the errors below is detected.

Please take measures corresponding to an error message.

The four digits displayed after the error message indicate the path point number at error occurrence.

| | |
|---|---|
| Error message | Spline interpolation error (path point) |
| Cause | An error related to the path point registered in the spline file has occurred. |
| Measures | Refer to the error details No. and check the details of the occurring error. Then take actions for those error details. |
| Error message | Path points are too close (nnnn) |
| Cause | The distance between path points is too short, or the speed command in respect to the path point distance is too high. |
| Measures | "nnnn" in the error message indicates the path point No. causing the error. Review this path point's position, or review the spline interpolation command speed.<br>* The high speed spline interpolation command has been added to the software version A3a. With this function enabled, a command speed higher than what was previously possible can be specified for the distance between the respective path points. Refer to the separate manual “Instruction Manual/Detailed Explanation of Functions and Operations” in details. |
| Error message | The posture variation is too large (nnnn) |
| Cause | The variation in posture between path points is too large. (The posture variation angle exceeds 150 degrees.) |
| Measures | "nnnn" in the error message indicates the path point No. causing the error. Review the posture so that the posture variation amount for this path point is smaller, or add a path point to reduce the posture variation amount in the single block. |
| Error message | Path point's configuration flag is incorrect (nnnn) |
| Cause | A different path point is registered for the configuration flag value. |
| Measures | "nnnn" in the error message indicates the path point No. causing the error. Review this path point's position, and change it so it is the same configuration flag as the other path points. |
| Error message | Path point is not registered |
| Cause | The Specified path point is not registered |
| Measures | Please confirm the number and the content of the file |
| Error message | Cannot open the path point file |
| Cause | The specified path point file does not exist |
| Measures | Please confirm the file name and existence of the file |
| Error message | The format of file is different |
| Cause | The format of file is different |
| Measures | Please confirm the format of the file |
| Error message | The number of point is illegal |
| Cause | The number of path point is illegal |
| Measures | Please confirm the file and the content of the file |

# L2612



One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Spline interpolation error (Execution error) |
| Cause | An error related to the spline interpolation execution conditions occurred. |
| Measures | Refer to the error details No. and check the details of the occurring error. Then take actions for those error details. |
| Error message | This robot does not support spline interpolation. |
| Cause | Spline interpolation was attempted with a robot that does not support spline interpolation. |
| Measures | Use a different movement command than spline interpolation. |
| Error message | Can't execute with these start conditions. |
| Cause | Spline interpolation was attempted with a robot program in a slot having the start conditions ALWAYS•ERROR. |
| Measures | Spline interpolation cannot be executed with a slot having the start conditions ALWAYS•ERROR. Delete spline interpolation or change the start conditions to START. |
| Error message | Another spline interpolation is being executed |
| Cause | Multiple spline interpolations cannot be executed simultaneously. |
| Measures | Check whether spline interpolation was attempted with a different robot during spline interpolation, or whether spline interpolation was directly attempted while spline interpolation was halted. |
| Error message | Can't execute step return |
| Cause | Step return was attempted in respect to spline interpolation. |
| Measures | Spline interpolation does not support the step return operation. Do not attempt step return. |

# L2613

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Spline interpolation error (interpolation process) |
| Cause | An error occurred during the spline interpolation process. |
| Measures | Refer to the error details No. and check the details of the occurring error. Then take actions for those error details. |
| Error message | Not enough path points |
| Cause | There are less than four path points registered in the spline file. |
| Measures | At least four path points are required to execute spline interpolation. Use a spline file in which four or more path points are registered. |
| Error message | Not enough arc designated points (nnnn) |
| Cause | Three consecutive path points are not designated for the spline interpolation arc. |
| Measures | The number of points in the arc containing the path point No. "nnnn" displayed in the error message is insufficient. To generate an arc, an arc for three consecutive path points must be designated. This error occurs if there are only two consecutive points. Add another path point in the arc designation to move with an arc path. |
| Error message | Block data calculation error (ssssssss) |
| Cause | An error occurred in the process to calculate the data related to the spline interpolation block. |
| Measures | The details of the error differ according to "ssssssss" in the error message.<br>• Reg.Pt.:<br>The information on the number of path points saved in the spline file does not match the number of path points actually registered. Open the spline file in the Spline File Edit screen once, save it again and export it to the controller.<br>• Cir.Arc:<br>The arc could not be generated. Check that the path points for the arc designation are not arranged on a straight line.<br>• Frm.Cnv.:<br>The frame transformation calculation failed. Review the path point positions.<br>• Blk.Stp.:<br>Generation of the data for the block stopped, and spline interpolation could not be executed. Reset the program.<br>• PtoJ.:<br>The joint angle cannot be calculated at the position. Review the path point positions. |
| Error message | Block data does not exist |
| Cause | The load in the process for the controller during spline interpolation was large, and the data for the spline interpolation block could not be generated in time. |
| Measures | Check whether the load in the spline interpolation execution process can be reduced in the following ways.<br>• Stop simultaneous execution of functions related to movement such as the collision detection function or visual control function.<br>• Review the multi-tasks and reduce the number of slots executed simultaneously.<br>• Reduce the dedicated output signal assignments.<br>• Reduce the spline interpolation command speed. |
| Error message | Spline interpolation command calculation error (nnnn) |
| Cause | An error occurred in the process for calculating the spline interpolation position commands. |
| Measures | Review the position of path point No. "nnnn" indicated in the error message or the MvSpl command argument's setting value.<br>Check that the cancel angle is set correctly. (Does the spline curve bend suddenly?) |

# L2614

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Spline interpolation error (other functions) |
| Cause | A function that cannot be used with the spline interpolation was executed. |
| Measures | Refer to the error details No. and check the details of the occurring error. Then take actions for those error details. |
| Error message | Tracking function is enabled |
| Cause | The tracking function was enabled when attempting spline interpolation. |
| Measures | Spline interpolation and tracking function cannot be executed simultaneously. Disable the tracking function before executing spline interpolation. |
| Error message | Can't change tool/base setting |
| Cause | The tool/base setting was changed during spline interpolation execution. |
| Measures | The tool/base setting cannot be changed during spline interpolation (including when halted). Change the settings after spline interpolation ends. |
| Error message | Can't execute Jrc command |
| Cause | The Jrc command was executed during spline interpolation. |
| Measures | The Jrc command cannot be executed during spline interpolation (including when halted). Execute the command after spline interpolation ends. |

# L2615

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Spline interpolation error (exceeds setting range) |
| Cause | A setting value related to spline interpolation exceeds the setting range. |
| Measures | Refer to the error details No. and check the details of the occurring error. Then take actions for those error details. |
| Error message | M_SplVar setting value exceeds setting range |
| Cause | A value exceeding the range was substituted into M_SplVar. |
| Measures | Substitute a value within the setting range (0 to 32767). |
| Error message | M_SplVar setting range exceeds setting range (nnnn) |
| Cause | A value exceeding the setting range is set in the spline file. |
| Measures | Change the setting for the path point No. "nnnn" indicated in the error message so it is within the range (–1 to 32767). |
| Error message | Tolerance setting value exceeds range (nnnn) |
| Cause | The tolerance designation in the spline file exceeds the range. |
| Measures | Change the tolerance designation for the path point No. "nnnn" indicated in the error message so it is within the range (0 to 100). |
| Error message | Output signal exceeds range (nnnn) |
| Cause | The head No. for the signal output in the spline file exceeds the range. |
| Measures | Change the head No. of the signal output for the path point No. "nnnn" indicated in the error message so it is within the range (–1 to 32767). |
| Error message | Interpolation setting information exceeds range |
| Cause | Data with value exceeding the range was found in the spline file interpolation setting information. |
| Measures | Open the target spline file and check the contents. Then, save the file again to recreate the spline file. Write the new file to the controller again. |
| Error message | Header information exceeds range |
| Cause | Data with value exceeding the range was found in the spline file header information. |
| Measures | Open the target spline file and check the contents. Then, save the file again to recreate the spline file. Write the new file to the controller again. |

# L2621

| | |
|---|---|
| Error message | Tracking function is enabled. |
| Cause | The tracking function and Ex-T control function cannot be enabled simultaneously. |
| Measures | When using the Ex-T control function, disable the tracking function. |

# L2622

| | |
|---|---|
| Error message | Singular point passage function is enabled. |
| Cause | The singular point passage function and Ex-T control function cannot be enabled simultaneously. |
| Measures | When using the Ex-T control function, disable the singular point passage function. |

# H264n

n indicates the axis number (1 to 8)

| | |
|---|---|
| Error message | Add axis FLS signal is input |
| Cause | Add axis FLS signal is input |
| Measures | Release the brake and move the arm by hand. Or, referring to "Operation to Temporarily Reset an Error that Cannot Be Canceled" in the separate volume "Instruction Manual/Detailed Explanation of Functions and Operations", reset the error and move the axis "n" within the operation range using JOG operation. |

# H265n

n indicates the axis number (1 to 8)

| | |
|---|---|
| Error message | Add axis RLS signal is input |
| Cause | Add axis RLS signal is input |
| Measures | Release the brake and move the arm by hand. Or, referring to "Operation to Temporarily Reset an Error that Cannot Be Canceled" in the separate volume "Instruction Manual/Detailed Explanation of Functions and Operations", reset the error and move the axis "n" within the operation range using JOG operation. |

# L2660

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Error concerning axis coop |
| Cause | The error concerning the axis coop occurred |
| Measures | Please Confirm the content by a detail number of the error |
| Error message | Illegal robot No.(axis trk) |
| Cause | The designated robot No. is illegal |
| Measures | Set the correct robot No. |
| Error message | Illegal axis No.(axis trk) |
| Cause | The designated axis No. is illegal |
| Measures | Set the correct axis No. |
| Error message | Illegal unit system (axis trk) |
| Cause | A rotary axis is designated |
| Measures | Please designate a linear drive axis |
| Error message | Origin unsetting (axis trk) |
| Cause | Axis tracking cannot be executed because of origin unsetting |
| Measures | Please set the origin and turn the power OFF and ON |
| Error message | Illegal robot No.(base coop) |
| Cause | The designated robot No. is illegal |
| Measures | Set the correct robot No. |
| Error message | Illegal axis No.(base coop) |
| Cause | The designated axis No. is illegal |
| Measures | Set the correct axis No. |
| Error message | Illegal unit system (base coop) |
| Cause | A rotary axis is designated |
| Measures | Please designate a linear drive axis |
| Error message | Origin unsetting (base coop) |
| Cause | Base coop cannot be executed because of origin unsetting |
| Measures | Please set the origin and turn the power OFF and ON |

# L2661

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Error concerning axis coop (combi.) |
| Cause | The function cannot be used at the same time with the axis coop |
| Measures | Please confirm the content by a detailed number of the error |
| Error message | Cannot be used (axis trk) |
| Cause | A synchronous addition axis control is effective |
| Measures | Invalidate a synchronous addition axis control |
| Error message | Cannot be used (base coop) |
| Cause | Tracking function is effective |
| Measures | Invalidate the tracking function |
| Error message | Cannot be used (base coop) |
| Cause | A synchronous addition axis control is effective |
| Measures | Invalidate a synchronous addition axis control |
| Error message | Jrc cannot be executed |
| Cause | The base coop is executing |
| Measures | Please do not use Jrc command |
| Error message | Interpolation cannot be executed |
| Cause | An addition axis is going to move |
| Measures | Please do not move an addition axis |
| Error message | Cannot be used (base coop) |
| Cause | Interference avoidance function is effective |
| Measures | Invalidate the interference avoidance function |

# L2662

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Work setting cannot be changed |
| Cause | The additional axis tracking is executing |
| Measures | Please change after the work coop is invalid |
| Error message | This work cannot use |
| Cause | The setting is not done(axis trk) |
| Measures | Please confirm a set valuse and then execute |

# H2663

| | |
|---|---|
| Error message | Origin data was changed |
| Cause | Origin data was changed about the base cooperation target axis |
| Measures | Turn the power OFF and ON once |

# L2700

| | |
|---|---|
| Error message | Cmp error (different mode) |
| Cause | The designated mode is different from the current mode. |
| Measures | Execute Cmp Off and then designate. |

# C2710

| | |
|---|---|
| Error message | Cmp error (displacement) |
| Cause | The displacement magnitude of the compliance operation exceeded the specified value. |
| Measures | Correct the program, position or other item so that the displacement magnitude can be reduced. |

## H2720

| | |
|---|---|
| Error message | Cmp error (joint angle) |
| Cause | Cmp Command exceeds the limit of a joint angle. |
| Measures | Adjust the position data or reduce the displacement. |

## C272n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Cmp error (Jn joint angle) |
| Cause | Cmp Command exceeds the limit of joint angle of joint "n" axis |
| Measures | Change the position data or reduce displacement. |

## C273n

n indicates the axis number (1 to 8).

| | |
|---|---|
| Error message | Cmp error (Jn axis speed) |
| Cause | Cmp Command exceeds the limit of speed of joint "n" axis. |
| Measures | Change the position data or slow down. |

## C2740

| | |
|---|---|
| Error message | Cmp error (coordinates conv.) |
| Cause | An error was detected in the coordinates conversion of Cmp command. |
| Measures | Adjust the position data. |

## L2750

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Cannot execute while tracking |
| Cause | Cannot execute while tracking |
| Measures | Execute Trk Off and then execute |
| Error message | Cannot invalidate F.Ctrl (Trk) |
| Cause | Force control cannot be invalidated while executing tracking |
| Measures | Please invalidate the tracking function |
| Error message | Unable to disable force sense control. (Tracking being performed) |
| Cause | Unable to disable force sense control while tracking function being executed. |
| Measures | Try again after disabling the tracking function. |

## H2760

| | |
|---|---|
| Error message | The force sense control offset limit was reached. |
| Cause | The robot attempted to move beyond the force sense control offset limit. The maximum value for the offset limit is limited by the parameter FSCORMX. This error will occur when current position coordinate data exceeds the maximum offset from the start position set with FSCORMX. |
| Measures | Change the value of parameter FSCORMX or change the position so that the robot operates within the limits of the force sense control conditions. |

## H2770

| | |
|---|---|
| Error message | Outside offset position movement range (**)<br>Note) "**" is substituted with "±Jn" (n is axis No.) |
| Cause | The position after force sense control offset lies outside the range.<br>The robot may have been moved near the movement range limit. |
| Measures | Review the movement position or force sense control settings, and ensure that the offset position does not exceed the movement range. |

## H2780

| | |
|---|---|
| Error message | Offset position speed over (**)<br>Note) "**" is substituted with "Jn" (n is axis No.) |
| Cause | The speed of movement to the position after offsetting with force sense control exceeded the speed limit.<br>The movement speed may be too fast, or the robot may have been moved at the singular point adjacent. |
| Measures | Review the movement speed and movement position, or the force sense control settings. |

## L2800

| | |
|---|---|
| Error message | Illegal position data |
| Cause | This may occur for a position to which the robot cannot reach. |
| Measures | Adjust the position. |

## L2801

| | |
|---|---|
| Error message | Illegal position data (start) |
| Cause | This may occur for a starting position to which the robot cannot reach. |
| Measures | Adjust the position. |

## L2802

| | |
|---|---|
| Error message | Illegal position data (dstn) |
| Cause | This may occur for a ending position to which the robot cannot reach. |
| Measures | Adjust the position. |

## L2803

| | |
|---|---|
| Error message | Illegal assisting  position data (intmed) |
| Cause | The intermediate path at the straight line interpolation and the route at circle interpolation are the position which the robot cannot move. |
| Measures | Confirm the error occurrence line and confirm that there is no position which the robot cannot move. And please correct the data of starting position, midway position, or ending position . |

## L2804

| | |
|---|---|
| Error message | SPDOPT can't be operated |
| Cause | A singular point area exists on the locus. |
| Measures | Change a interpolation type or destination position. |

## L2810

| | |
|---|---|
| Error message | Posture flag is disagree |
| Cause | The structure flag of the start point and end point don't match. |
| Measures | Adjust the position data.<br>The start points and destination points (end points) of the structure flags FL1 and FL2 must be the same when specifying the trajectory with commands such as the Mvs command. Operate the robot with the Mov command or make sure the start and end points of the structure flags match. The operation path will change when switching to operating the robot with the Mov command. Ensure that the robot does not interfere with peripherals. For further information on structure flags, refer to "Configuration flag" in the CR800 Series Controller Instruction Manual: Detailed explanations of functions and operations. |

## H2820

| | |
|---|---|
| Error message | Illegal Accel ratio |
| Cause | This occurs when the acceleration/deceleration ratio is too small. |
| Measures | Adjust the acceleration/deceleration ratio to a larger value. |

## H2830

| | |
|---|---|
| Error message | System error (ipol posture type) |
| Cause | The Type argument of the Mov instruction was set to -1 or a similar value. |
| Measures | Change the Type argument of the Mov instruction to a correct value (0, 1, etc). |

## H2840

| | |
|---|---|
| Error message | System error (ipol parameters) |
| Cause | The parameter may have been damaged. |
| Measures | If it comes back, contact your service provider. |

## H2850

| | |
|---|---|
| Error message | System error (ipol norm) |
| Cause | The norm is illegal. A problem occurred in internal computation processing. |
| Measures | If it comes back, contact your service provider. |

## H2860

| | |
|---|---|
| Error message | System error (ipol type) |
| Cause | An illegal interpolation process method is being used. A problem occurred in internal computation processing. |
| Measures | If it comes back, contact your service provider. |

## H2870

| | |
|---|---|
| Error message | System error (ipol data undef) |
| Cause | The interpolation position data has not been defined. A problem occurred in internal computation processing. |
| Measures | If it comes back, contact your service provider. |

## H2880 *

| | |
|---|---|
| Error message | System error (ipol data area) |
| Cause | The memory is insufficient for the inside operation. |
| Measures | If it comes back, contact your service provider. |

## H2890

| | |
|---|---|
| Error message | System error (undefined err) |
| Cause | An undefined error number was generated in internal computation processing. |
| Measures | If it comes back, contact your service provider. |

## L2900

| | |
|---|---|
| Error message | System ERROR M00 to M04 |
| Cause | An error occurred in the internal processing. |
| Measures | If it comes back, contact your service provider. |

## L2920

| | |
|---|---|
| Error message | Direct teaching is disable |
| Cause | Direct teaching is disable in Manual mode |
| Measures | Reset the error. After switching the mode to AUTOMATIC, teach the robot directly. |

## L2921

| | |
|---|---|
| Error message | Can't execute program |
| Cause | Can’t execute program during direct teaching |
| Measures | Reset the error. After teaching the robot directly, check safety before running a robot program. |

## L2922

| | |
|---|---|
| Error message | Can’t operate in this posture |
| Cause | Can’t operate in singular point |
| Measures | If the robot is taught directly in Translational motion or Rotational motion mode, the arm cannot avoid passing a singularity (where the rotational axes of J4 and J6 align). To continue direct teaching, start the direct teaching function, and operate the robot in Joint free mode. Prevent the arm from passing a singularity using Joint jog operation. |

## C2923

| | |
|---|---|
| Error message | Parameter can't be changed |
| Cause | Parameter can’t be changed during direct teaching |
| Measures | Parameters cannot be changed during direct teaching. After resetting the error, check that the direct teaching function is OFF, and change parameters again. |

## L2924

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Direct teaching is disable |
| Cause | Direct teaching is disable during force control |
| Measures | Force sense control and the direct teaching function cannot be used together. To teach the robot directly, use direct run command "Fsc Off" to disable force sense control and then start the direct teaching function. |
| Error message | Direct teaching is disable |
| Cause | Direct teaching is disable during compliance control |
| Measures | Compliance control and the direct teaching function cannot be used together. To teach the robot directly, use direct run command "Cmp Off" to disable compliance control and then start the direct teaching function. |
| Error message | Direct teaching is disable |
| Cause | Direct teaching is disable during stop input |
| Measures | The direct teaching function cannot be started while a stop command is being input. Clear the command. |
| Error message | Direct teaching is disable |
| Cause | Direct teaching is disable during High Speed Operation |
| Measures | Direct teaching is disabled during high speed operation. Please change the mode to collaborative operation mode. |
| Error message | Direct teaching is disable |
| Cause | Direct teaching is disable during SS2 enabled |
| Measures | Direct teaching is not available while SS2 is being input. Disable SS2. |
| Error message | Direct teaching is disable |
| Cause | Direct teaching is disable during Vibration suppression mode |
| Measures | Direct teaching is not available while vibration suppression mode (MvTune 4) is activated. Exit or reset the robot program that is currently running. |

## H2925 *

| | |
|---|---|
| Error message | Direct teaching System fault |
| Cause | Failed in start or end processing |
| Measures | The direct teaching function has failed to start or switch off. Turn on the power again. If it comes back, contact your service provider. |

## L3100

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Processor Call Stack over |
| Cause | Too many function calls or local variables. |
| Measures | Correct the program and re-execute. |
| Error message | System ERROR (Call Stack) |
| Cause | Processor Call Stack defect |
| Measures | Possible problem with execution sequence of Function command. |

# L3110

One of the errors below is detected.
Please take measures corresponding to an error message.
Refer to the separate manual, “Instruction Manual/Detailed Explanation of Functions and Operations” or “Instruction Manual/Force Sensor Function” in details.

| | |
|---|---|
| Error message | Arg. value range over |
| Cause | Arg. value is outside range.<br>For the PtoJ function, a position which the robot cannot reach or a singular point was set as the arg. value. |
| Measures | Please confirm the range of the argument and set a correct value |
| Error message | The force sense control command argument lies outside the range. |
| Cause | A value outside the range was set for the force sense control command argument. |
| Measures | Check the argument range and set a correct value. |
| Error message | The force sense control status variable argument lies outside the range. |
| Cause | A value outside the range was set for the force sense control status variable argument. |
| Measures | Check the argument range and set a correct value. |
| Error message | The force sense control related argument lies outside the range. |
| Cause | A value outside the range was set for the force sense control related argument. |
| Measures | Check the argument range and set a correct value. |
| Error message | The Mo trigger No. lies outside the range. |
| Cause | A value outside the range was set for the Mo trigger No. |
| Measures | Check the setting range and set a correct value. |
| Error message | Def MoTrg command argument error |
| Cause | An unusable variable or different mechanical No. was set. |
| Measures | Set a usable variable or same mechanical No. |
| Error message | Arg. value range over (MVA2) |
| Cause | Argument value range is over (MVA2) |
| Measures | Check the argument range and reinput |

# L3120

| | |
|---|---|
| Error message | No. of arg. is over |
| Cause | No. of argument is over |
| Measures | Please confirm the range of the argument and set a correct value |

# L3130

| | |
|---|---|
| Error message | COM file is already opened |
| Cause | Opening of a file already opened was attempted. |
| Measures | Check the file No. and re-execute. |

# L3140

| | |
|---|---|
| Error message | Can't open COM file |
| Cause | The file cannot be opened. |
| Measures | Check the file No. and re-execute. |

# L3141

| | |
|---|---|
| Error message | The NVOpen command is not executed. |
| Cause | No NVOpen command was executed before execution of a command communicating with the vision sensor. |
| Measures | Revise the robot program so that the NVOpen command executes before the controller starts to communicate with the vision sensor. To operate the robot using Step operation, NVOpen must be executed in Automatic mode first and then temporarily stopped. This is because the NVOpen command will not process in Step operation. |

## L3142

| | |
|---|---|
| Error message | The communication line can not be opened. |
| Cause | The line for communication with the vision sensor can not be opened. |
| Measures | Check the communication cable or the communications parameters. |

## L3150

| | |
|---|---|
| Error message | Cannot Print (INPUT mode) |
| Cause | The file open mode is INPUT, so writing is not possible. |
| Measures | Check the file No. and open mode, and re-execute. |

## L3170

| | |
|---|---|
| Error message | Cannot Input (OUTPUT mode) |
| Cause | The file open mode is OUTPUT, so writing is not possible. |
| Measures | Check the file No. and open mode, and re-execute. |

## L3180

| | |
|---|---|
| Error message | System error (array range over) |
| Cause | System error (array range over) |
| Measures | If it comes back, contact your service provider |

## L3200

| | |
|---|---|
| Error message | This file is read only |
| Cause | The file cannot be read. |
| Measures | Check the contents of the file. |

## L3210

| | |
|---|---|
| Error message | This variable is write protected |
| Cause | Writing of this variable is prohibited. |
| Measures | Check the variable protection setting. |

## L3220

| | |
|---|---|
| Error message | Nesting over |
| Cause | A nest-over error occurred in If of the If instruction or For of the For instruction. |
| Measures | Correct the program and re-execute. |

## L3230

| | |
|---|---|
| Error message | For Next statements unmatch |
| Cause | The No. of For and Next statements do not match. |
| Measures | Correct the program and re-execute. |

## L3240

| | |
|---|---|
| Error message | Nesting over (For, While) |
| Cause | Nesting over (For, While) |
| Measures | Correct the program and re-execute. |

## L3250

| | |
|---|---|
| Error message | While WEnd statements unmatch |
| Cause | The No. of While and WEnd statements do not match. |
| Measures | Correct the program and re-execute. |

## L3251

| | |
|---|---|
| Error message | Number of jump destination exceeds 32 |
| Cause | The number of branches defined exceeded 32. |
| Measures | Correct the program and re-execute. |

## L3252

| | |
|---|---|
| Error message | If EndIf statements unmatch |
| Cause | If EndIf statements unmatch. |
| Measures | Correct the program and re-execute. |

## L3253

| | |
|---|---|
| Error message | Nesting over (If, EndIf) |
| Cause | Nesting over (If, EndIf) |
| Measures | Correct the program and re-execute. |

## L3254

| | |
|---|---|
| Error message | Select - End Select statements unmatch |
| Cause | Select - End Select statements unmatch. |
| Measures | Correct the program and re-execute. |

## L3255

| | |
|---|---|
| Error message | If Else statements unmatch |
| Cause | If Else statements unmatch. |
| Measures | Correct the program and re-execute. |

# L3256

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Function definition error |
| Cause | The error concerning the function definition occurred. |
| Measures | Please confirm the content by a detailed number of the error. |
| Error message | Function definitions exceeds max. |
| Cause | The number of function definitions exceeds 256. |
| Measures | Correct the program and re-execute. |
| Error message | Function statement is incorrect |
| Cause | Function statement position is incorrect. |
| Measures | Correct the program and re-execute. |
| Error message | Function FEnd statemets unmatch |
| Cause | Function FEnd statemets unmatch. |
| Measures | Correct the program and re-execute. |
| Error message | Undefined function |
| Cause | The called function or the assigned function is undefined. |
| Measures | Please confirm the function procedure name.<br>Change parameter FUNCSPEC to "1" when combining the Function procedure with other program read commands (CallP, XLoad, XRun, #Include). |
| Error message | Function Main called |
| Cause | Function Main called. |
| Measures | Function Main cannot be called. |
| Error message | Function Main does not exist |
| Cause | Programs that there is no Function Main cannot be executed. |
| Measures | Please add Function Main (parameterless) to the program. |
| Error message | Local var. in function was used |
| Cause | A local variable in the function procedure was used. |
| Measures | Local variables in a function procedure cannot be used. |

# L3257

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Include declaration error |
| Cause | The error concerning the include declaration occurred. |
| Measures | Please confirm the content by a detailed number of the error. |
| Error message | Include declaration exceeds max. |
| Cause | The number of include declarations exceeds 64. |
| Measures | Correct the program and re-execute. |
| Error message | Include statement is incorrect |
| Cause | Include statement position is incorrect. |
| Measures | Correct the program and re-execute. |

# L3258

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Preprocessor error |
| Cause | The error concerning the preprocessor occurred. |
| Measures | Please confirm the content by a detailed number of the error. |
| Error message | Preprocessor run line exceeds max. |
| Cause | Preprocessor execution line exceeds 1000 lines. |
| Measures | Correct the program and re-execute. |
| Error message | Preprocessor run error |
| Cause | Commands that can not execute by the preprocessor are included. |
| Measures | Correct the program and re-execute. |

# L3260

| | |
|---|---|
| Error message | Cannot exec for all slots |
| Cause | Execution with all slots designated is not possible. |
| Measures | Designate an individual slot and try again. |

# L3270

| | |
|---|---|
| Error message | The command size is exceeded |
| Cause | The command size is exceeded. |
| Measures | Specify within single-byte 256 characters. |

# L3280

| | |
|---|---|
| Error message | Cannot execute without GetM |
| Cause | The command you attempted to execute cannot be executed without GetM. Or, a non-existing mechanical number was specified. |
| Measures | Execute it after executing the RelM and GetM commands in another task slot. |

# L3281

| | |
|---|---|
| Error message | Cannot execute during RUN |
| Cause | Cannot execute during operation. |
| Measures | Cannot execute during operation. |

# L3282

| | |
|---|---|
| Error message | "Can't RUN (not select, attribute)" |
| Cause | The program is not selected or the attribute is illegal. |
| Measures | Load the program into the specified task slot. Or, change the program attributes. |

# L3285

| | |
|---|---|
| Error message | Cannot execute (RUN or WAI) |
| Cause | can't execute in the state of stopping or executing. |
| Measures | Reset the program (cancel the abort status). |

# L3286

| | |
|---|---|
| Error message | Program is empty |
| Cause | Execution of an empty program was attempted. |
| Measures | Make the program or select the correct program. |

## L3287

| | |
|---|---|
| Error message | Cannot execute (ERROR ALWAYS) |
| Cause | This command cannot be used when the start conditions are ERROR and ALWAYS. |
| Measures | Correct the program. |

## L3288

| | |
|---|---|
| Error message | Cannot execute while editing |
| Cause | That program cannot be executed because it is being edited. |
| Measures | Finish editing the program first, and then start it. |

## L3289

| | |
|---|---|
| Error message | Program does not exist (SLT*) |
| Cause | The program designated in the slot table does not exist. |
| Measures | Correct the slot parameter. |

## L3290

| | |
|---|---|
| Error message | System slot cannot be executed |
| Cause | The system slot cannot be executed. |
| Measures | Check whether another slot (user slot) is being operated. |

## L3300

| | |
|---|---|
| Error message | User slot cannot be executed |
| Cause | A user slot cannot be executed. |
| Measures | Check whether the system slot is being operated. |

## L3310

| | |
|---|---|
| Error message | Cannot execute XRun (Runing) |
| Cause | XRun is not possible as the designated slot is operating. |
| Measures | Stop the specification slot, and execute. |

## L3320

| | |
|---|---|
| Error message | Cannnot execute XRun (empty) |
| Cause | XRun is not possible as the program has not been selected. |
| Measures | Specify program name to the argument or execute XLoad. |

## L3330

| | |
|---|---|
| Error message | Cannnot execute XStp (empty) |
| Cause | XStp is not possible as the program has not been selected. |
| Measures | correct the program, and execute. |

## L3340

| | |
|---|---|
| Error message | Cannnot execute XRst (empty) |
| Cause | XRst is not possible as the program has not been selected. |
| Measures | Resetting is possible in the state of waiting only. |

## L3350

| | |
|---|---|
| Error message | Cannnot execute XRst (Running) |
| Cause | Xrst is not possible as the program is executing. |
| Measures | Stop execution, and do it. |

## L3360

| | |
|---|---|
| Error message | Cannnot execute XLoad (not PSA) |
| Cause | XLoad cannot be executed when the program cannot be selected. |
| Measures | Execute XRst, and do it. |

## L3361

| | |
|---|---|
| Error message | Can not load the program (SLT*) |
| Cause | A non-existing program was specified in the slot parameter (SLTn). |
| Measures | A non-existing program was specified in the slot parameter (SLTn). |

## L3370

| | |
|---|---|
| Error message | Cannnot execute XClr (empty) |
| Cause | XClr is not possible as the program has not been selected. |
| Measures | XClr can only be executed to enable program selection. |

## L3380

| | |
|---|---|
| Error message | Cannnot execute XClr (not PSA) |
| Cause | Program selection is not enabled. |
| Measures | Execute XClr after resetting the program (canceling the abort status). |

## L3390

| | |
|---|---|
| Error message | Cannot use arc pallet |
| Cause | Cannot use arc pallet. |
| Measures | Change to another method. |

## L3391

| | |
|---|---|
| Error message | Cannot use MVA2 |
| Cause | Cannot use MVA2 |
| Measures | Change to another method |

## L3400

| | |
|---|---|
| Error message | System error (PROC stack over) |
| Cause | System error. (Processor stack overflow) |
| Measures | If it comes back, contact your service provider |

## L3500

| | |
|---|---|
| Error message | Illegal format input (Input) |
| Cause | The type of the variable specified by Input and the type of the received data do not match. |
| Measures | Check the format. |

## L3501

| | |
|---|---|
| Error message | Illegal Receive data (EBREAD) |
| Cause | Type is different (receive data and specified variable) |
| Measures | Please confirm specified tag data of the vision. |

## L3510

| | |
|---|---|
| Error message | Failed to receive data |
| Cause | Unprocessed received data size has exceeded receive buffer limit. |
| Measures | Check data sending / receiving timing, and processing procedure. |

## L3600

| | |
|---|---|
| Error message | Jump destination does not exist |
| Cause | No jump destination was found for the Def Act, On Com and On GoTo commands. |
| Measures | Check the jump destination. |

## L3601

| | |
|---|---|
| Error message | Jump destination is incorrect |
| Cause | Jumping into program control block is prohibited. |
| Measures | Correct the program and re-execute. |

## L3700

| | |
|---|---|
| Error message | Undefined variable |
| Cause | It was attempted to reference a variable that has not been initialized. |
| Measures | Define a variable, enter an initial value, and then use it. |

## L3710

| | |
|---|---|
| Error message | Nesting over (CallP) |
| Cause | Program Call is used more than the limitation. |
| Measures | Reduce the call count of CallP (nesting). |

## L3720

| | |
|---|---|
| Error message | RC NX statements unmatch |
| Cause | RC NX statements unmatch |
| Measures | Match the numbers of RC and NX. |

## L3750

| | |
|---|---|
| Error message | Illegal positions (Def Plt) |
| Cause | Multi rotation flag (FL2 J1/J4 axis) is different |
| Measures | Specify position to become the same multi rotation flag. |

## L3760

| | |
|---|---|
| Error message | Illegal positions (Def Plt) |
| Cause | J1 or J4 axis is greatly changed (Def Plt) |
| Measures | Specify positions to be not different greatly |

## L3770

| | |
|---|---|
| Error message | This is an undefined Mo trigger. |
| Cause | An attempt was made to use an undefined Mo trigger. |
| Measures | Define the specified Mo trigger before use. |

# L3780 *

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Cannot use the MELFA Smart Plus. |
| Cause | The MELFA Smart Plus card or MELFA Smart Plus card pack is not installed in the controller.<br>When the MELFA Smart Plus card is installed, the setting of the parameter SMART+1 may be set incorrectly. |
| Measures | Install the MELFA Smart Plus card or MELFA Smart Plus card pack.<br>Set the parameter SMART+1 correctly. |
| Error message | Cannot use the MELFA Smart Plus |
| Cause | This robot does not correspond to this function |
| Measures | MELFA Smart Plus functions are not available. Inserting a MELFA Smart Plus card will trigger an error. Remove the MELFA Smart Plus card. |

# L3781

| | |
|---|---|
| Error message | Cannot use the MELFA Smart Plus. |
| Cause | The MELFA Smart Plus card or MELFA Smart Plus card pack is not installed in the controller.<br>When the MELFA Smart Plus card is installed, the setting of the parameter SMART+1 may be set incorrectly. |
| Measures | Install the MELFA Smart Plus card or MELFA Smart Plus card pack.<br>Set the parameter SMART+1 correctly. |

# L3810

| | |
|---|---|
| Error message | Different argument type |
| Cause | The type of an argument in an arithmetic operation, monadic operation, comparison operation or each function is different. |
| Measures | Designate the correct argument. |

# L3820

| | |
|---|---|
| Error message | Undefined intermediate code |
| Cause | A program or system status variable may have been damaged. |
| Measures | Restore using the backup data. If the backup data is not available, it is necessary to create a program again. |

# L3821

| | |
|---|---|
| Error message | A compilation error occurred |
| Cause | There is an error in the input syntax. |
| Measures | Check the error number in the error message. |

# L3830

| | |
|---|---|
| Error message | Cannot execute GetM |
| Cause | GET of the mechanisms is not possible. |
| Measures | Check whether the designated mechanisms are being used with a different slot. |

# L3840

| | |
|---|---|
| Error message | Return without GoSub |
| Cause | Return was executed without using GoSub. |
| Measures | Check the program. |

# L3850

| | |
|---|---|
| Error message | Undefined PLT |
| Cause | The Def Plt command was not executed. |
| Measures | Use it after defining a pallet with the Def Plt command. |

# L3860

| | |
|---|---|
| Error message | Illegal position data defined |
| Cause | There is an error in the position data. |
| Measures | Check the position data definition. |

# L3870

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Illegal mecha No. (***)<br>Note) "***" is substituted with the "robot status variable". |
| Cause | The designated mecha No. is an invalid value |
| Measures | Please set a correct mecha No. |
| Error message | The force sense control status variable mechanical No. is an invalid value. |
| Cause | An invalid variable was set for the force sense control status variable mechanical No. |
| Measures | Set a correct mechanical No. |
| Error message | The mechanical No. specified with the Def MoTrg command is an invalid value. |
| Cause | The mechanical No. specified with the Def MoTrg command is an invalid value. |
| Measures | Set a correct mechanical No. |

# L3880

| | |
|---|---|
| Error message | Illegal slot No. |
| Cause | The task slot number specified in the argument of the system status variables was invalid. |
| Measures | Input the correct slot No. |
| Error message | Invalid SCNI number in M_SCNI |
| Cause | Invalid SCNI number is input in M_SCNI. |
| Measures | Enter any value of 1 to 8.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |
| Error message | Invalid LOGIC no. in M_SCNILogic |
| Cause | Invalid LOGIC number is input in M_SCNILogic. |
| Measures | Enter any value of 1 to 3.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |
| Error message | Invalid SCNO number in M_SCNO |
| Cause | Invalid SCNO number is input in M_SCNO. |
| Measures | Enter any value of 1 to 4.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

# L3890

| | |
|---|---|
| Error message | System error (make MCODE) |
| Cause | An error has occurred when creating an operation instruction. The program may have been damaged. |
| Measures | Restore using the backup data. If the backup data is not available, it is necessary to create a program again. |

## L3900

| | |
|---|---|
| Error message | JRC Command is disable |
| Cause | The JRCEXE parameter is disabled, so it cannot be used. |
| Measures | Change the JRCEXE parameter, and then execute. |

## L3910

| | |
|---|---|
| Error message | Cannnot execute (JRC 0) |
| Cause | JRC 0 can not execute for robot arm axis. |
| Measures | Correctly set. |

## L3930

| | |
|---|---|
| Error message | This command cannot be executed |
| Cause | Collision detection is effective |
| Measures | Repeal collision detection (execute ColChk Off) |

## L3940

| | |
|---|---|
| Error message | ColChk cannot be executed |
| Cause | An exclusive function is performing with ColChk |
| Measures | Repeal the corresponding function |

## L3950

| | |
|---|---|
| Error message | NOERR cannot be executed |
| Cause | Interruption using M_ColSts is invalid |
| Measures | Define interruption using M_ColSts and confirm it |

## L3960

| | |
|---|---|
| Error message | This Act No. cannot be repealed |
| Cause | NOERR of collision detection is performed |
| Measures | Repeal this interruption after canceling NOERR |

## L3970

| | |
|---|---|
| Error message | ColChk cannot be performed |
| Cause | Collision detection serves as prohibition of use |
| Measures | Change parameter COL into use permission |

## L3980

| | |
|---|---|
| Error message | Load mode cannot be specified. |
| Cause | Prec command is executed |
| Measures | Repeal high accuracy mode (execute Prec Off) |

## L3982

| | |
|---|---|
| Error message | Cannot be used (singular point) |
| Cause 1 | This robot does not correspond to the singular point function |
| Measures 1 | Check the argument of Type specification |
| Cause 2 | Cmp command is executed |
| Measures 2 | Invalidate a compliance mode (execute Cmp Off) |
| Cause 3 | A synchronous addition axis control is effective |
| Measures 3 | Invalidate a synchronous addition axis control |
| Cause 4 | Tracking mode is effective |
| Measures 4 | Invalidate a tracking mode (execute Trk Off) |
| Cause 5 | Pre-fetch execution is effective |
| Measures 5 | Invalidate a pre-fetch execution |
| Cause 6 | This robot is a setting of the multi mechanism |
| Measures 6 | Do not use the function of passage singular point |
| Cause 7 | ColChk On command is executed |
| Measures 7 | Invalidate a collision detection (execute ColChk Off) |

## H3983

| | |
|---|---|
| Error message | Cannot execute Cnt movement |
| Cause | A structural flag or the angle of the joint is not corresponding |
| Measures | It surely positions it by Dly command etc |

## L3984

| | |
|---|---|
| Error message | Cannot be passsed (singularity) |
| Cause | Robot passes position which is very near the singular point |
| Measures | Adjust the teaching position |

## H3985

| | |
|---|---|
| Error message | Cannot be passsed (singularity) |
| Cause | Robot passes position which is very near the singular point |
| Measures | Adjust the teaching position |

# L3986

One of the errors below is detected. Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Unable to enable force sense control. (Sensor) |
| Cause | Unable to execute because the force sensor is not connected. |
| Measures | Connect the force sensor, or delete the command that cause the error. |
| Error message | Unable to enable force sense control. (Cmp command) |
| Cause | It is not possible to enable force sense control function while the compliance control function is enabled. |
| Measures | The force sense control function and compliance control function cannot be enabled simultaneously. If using the force sense control function, disable the compliance control function. |
| Error message | Unable to execute the Cmp command. (Force sense control) |
| Cause | It is not possible to enable the compliance control function while the force sense control function is enabled. |
| Measures | The force sense control function and compliance control function cannot be enabled simultaneously. If using the compliance control function, disable the force sense control function. |
| Error message | Unable to enable the collision detection function. (Force sense control) |
| Cause | It is not possible to enable the collision detection function while force sense control function is enabled. |
| Measures | The force sense control function and collision detection function cannot be enabled simultaneously. If using the collision detection function, disable the force sense control function. |
| Error message | Unable to enable force sense control. (Initialization) |
| Cause | It is not possible to perform initialization when starting force sense control. |
| Measures | Check the parameter settings. |
| Error message | This is the singular point adjacent area. (Force sense control) |
| Cause | It is not possible to move the singular point adjacent area while the force sense control function is enabled. |
| Measures | If moving the singular point adjacent area, disable the force sense control function. |
| Error message | The force sense control status is different. |
| Cause | The force sense control enabled/disabled status when resuming program operation differs from that during program operation. |
| Measures | Set the force sense control enabled/disabled status to the correct status. (This occurs only once when resuming program operation.) |
| Error message | This function cannot be used. |
| Cause | This model is not compatible with the executed force sense control function. |
| Measures | Do not use this force sense control function.<br>Contact the maker for details on the latest compatibility status. |
| Error message | Unable to change tool conversion data. (Force sense control) |
| Cause | It is not possible to change tool conversion data while the force sense control function is enabled. |
| Measures | If changing tool conversion data, disable the force sense control function. |
| Error message | Unable to change base conversion data. (Force sense control) |
| Cause | It is not possible to change base conversion data while the force sense control function is enabled. |
| Measures | If changing base conversion data, disable the force sense control function. |
| Error message | Unable to execute the Jrc command. (Force sense control) |
| Cause | It is not possible to execute the Jrc command while the force sense control function is enabled. |
| Measures | To execute the Jrc command, disable the force sense control function. |
| Error message | Disable force sense control. |
| Cause | JOG operation cannot be performed on your model while the force sense control function is enabled. |
| Measures | Disable the force sense control function. |
| Error message | Unable to perform offset cancel. (Force sense control) |
| Cause | It is not possible to perform offset cancel while the force sense control function is enabled. |
| Measures | If performing offset cancel, disable the force sense control function. |

# L3987

One of the errors below is detected. Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Force sense control is disabled. |
| Cause | Force sense control is disabled, and so unable to execute the command. |
| Measures | Enable the force sense control function. |
| Error message | Force sense control is enabled. |
| Cause | It is not possible to enable force sense control again while already enabled. |
| Measures | First disable the force sense control function, and then enable again. |
| Error message | Unable to execute the FsGChg command. |
| Cause | It is not possible to execute the FsGChg command when force control gain change is not complete. |
| Measures | Review the program so that the FsGChg command is executed after force control gain change is complete. |
| Error message | Unable to output log file. |
| Cause | FTP processing was not properly performed. |
| Measures | Check the FTP related parameter setting.<br>Check the Ethernet cable connection.<br>Check the FTP server settings at the computer. |
| Error message | The specified log file does not exist. |
| Cause | The log file for the No. specified with the FsOutLog command does not exist. |
| Measures | Check whether the log file No. is incorrect. |
| Error message | Unable to change the force sense status variable. |
| Cause | The status variable setting is currently being used by the force sense control function and so cannot be changed. |
| Measures | If changing the setting, disable the force sense control function. |
| Error message | Force sense log commands executed simultaneously. |
| Cause | It is not possible to create/output another file while creating (FsLog Off command) or outputting (FsOutLog command) a force sense log file. |
| Measures | Process after force sense log file creation/output is complete. |
| Error message | Unable to create log file. |
| Cause | Unable to create a force sense log file. |
| Measures | Check the amount of available record space in the robot controller. |
| Error message | Unable to execute the Fsc ON command. |
| Cause | It is not possible to execute the Fsc On command while changing the force control gain. |
| Measures | Execute the Fsc On command after force control gain change is complete. |
| Error message | Unable to perform log data related processing. |
| Cause | It is not possible to execute FsLog On command file while recording force sense control log data. |
| Measures | Execute the FsLog On command after log data recording is complete. |
| Error message | Force sense control is enabled. |
| Cause | The parameter setting is currently being used by the force sense control function and so cannot be changed. |
| Measures | If changing the parameter, disable the force sense control function once. |
| Error message | Unable to enable the Mo trigger. |
| Cause | The Mo trigger for the FsCtrg command executed first is enabled. |
| Measures | Execute after changing the control characteristics. |
| Error message | Mo trigger timeout |
| Cause | The Mo trigger did not turn ON within the specified time. |
| Measures | Review the Mo trigger conditions and robot program. |
| Error message | Unable to execute the FsCTrg command. |
| Cause | The control characteristics is currently being changed.<br>The Mo trigger for the FsCTrg command executed first is enabled. |
| Measures | Execute after changing the control characteristics. |
| Error message | Unable to specify the control characteristics change. |
| Cause | The control characteristics change has been set with another command. |
| Measures | Change the program so that the command is not executed at the same time as another command. |

## H3988

| | |
|---|---|
| Error message | Unable to create a position command. |
| Cause | It is not possible to convert linear position data to joint angle after offsetting with force control.<br>The position after offsetting lies outside the movement range or is a singular point. |
| Measures | Review the movement and, settings so that adjacents outside the movement range and singular point adjacents are avoided. |

## L3990

| | |
|---|---|
| Error message | ColChk cannot be used |
| Cause | This robot is a setting of the multi mechanism |
| Measures | Change parameter COL into use prohibition |

## L3991

| | |
|---|---|
| Error message | Mainte.Forecast cannot be used |
| Cause | This robot is a setting of the multi mechanism |
| Measures | Invalidate the maintenance forecast |

## L3995

| | |
|---|---|
| Error message | Can't use SQ Direct and ALWENA |
| Cause | SQ Direct function (parameter: IQMEM valid setting) can't be used Xrun, Xload, Xstp, Xrst, Servo and Reset Error command with always running program (parameter: ALWENA=1). |
| Measures | Change ALWENA parameter to 0 |

## L4000

| | |
|---|---|
| Error message | System error (time out) |
| Cause | There is a problem in the program's exclusive process. |
| Measures | If it comes back, contact your service provider. |

## L4100

| | |
|---|---|
| Error message | No. of registered file is full |
| Cause | The No. of program has been exceeded. |
| Measures | Delete any unnecessary programs. |

## L4110

| | |
|---|---|
| Error message | Memory area is full |
| Cause | The program and data have exceeded the capacity. Capacity of a program execution area is insufficient. |
| Measures | Delete any unnecessary programs or data. |

## L4120

| | |
|---|---|
| Error message | Too long program name |
| Cause | The program name is a maximum of 12 characters with 3 extension characters. |
| Measures | Set the program name to within 12 characters and 3 extension characters. |

## L4130

| | |
|---|---|
| Error message | Illegal program name |
| Cause | An illegal character was used in the program name. |
| Measures | Only numbers and alphabetic characters can be used. |

## L4140

| | |
|---|---|
| Error message | The program was not found |
| Cause | The designated program was not found. |
| Measures | Designate a different program, or create the designated program. |

## L4150

| | |
|---|---|
| Error message | Program is faulty |
| Cause | Power shutdown may have occurred during the write operation. |
| Measures | The file may have been damaged. Delete the file. |

## L4160

| | |
|---|---|
| Error message | Not a robot program |
| Cause | The designated program is not a robot program. |
| Measures | Designate a different program. |

## L4170

| | |
|---|---|
| Error message | The program is being edited |
| Cause | The program is being edited. |
| Measures | Close the program being edited. |

## L4180

| | |
|---|---|
| Error message | Program is running |
| Cause | The program is running. |
| Measures | Stop the program. |

## L4190

| | |
|---|---|
| Error message | The program is selected |
| Cause | The program is preparing to execute. |
| Measures | Reset the program.<br>The user base program is selected. Or the program to be executed is used with a different slot. |

## L4200

| | |
|---|---|
| Error message | Cannot write to file |
| Cause | Write operation is prohibited, or the file capacity is insufficient. |
| Measures | 1. Enable file writing.<br>2. Delete unnecessary files. |

## L4210

| | |
|---|---|
| Error message | Too long statement |
| Cause | The command statement length is limited to 240 characters. |
| Measures | Delete the No. of characters in the command statement to within 240 characters. |

## L4220

| | |
|---|---|
| Error message | Syntax error |
| Cause | There is an error in the syntax of the input command statement. |
| Measures | Re-input in the correct syntax after checking the contents. |

## L4230

| | |
|---|---|
| Error message | The line No. does not exist |
| Cause | There is no specified line number. |
| Measures | Check the contents, and reinput the correct line No. |

## L4240

| | |
|---|---|
| Error message | The statement is write protected |
| Cause | The command statement is write protected. |
| Measures | Cancel the write protection. |

## L4250

| | |
|---|---|
| Error message | No more lines or variables |
| Cause | Reading of lines and variables exceeding the registered ones. |
| Measures | Check the programs. |

## L4300

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Too long variable name |
| Cause | The variable name length is limited to 16 characters |
| Measures | Shorten the variable name to within 16 characters |
| Error message | Too long variable/function name |
| Cause | The variable/function name length is limited to 32 characters. |
| Measures | Shorten the variable/function name to within 32 characters. |

## L4310

| | |
|---|---|
| Error message | Illegal character is used |
| Cause | A character other than A to Z or 0 to 9 was used. |
| Measures | Use the character which can be used. |

## L4320

| | |
|---|---|
| Error message | The variable is write protected |
| Cause | The variable is write protected. |
| Measures | 1. Use a writable variable.<br>2. Cancel the write protection. |

## L4330

| | |
|---|---|
| Error message | The variable is read protected |
| Cause | The variable is read protected. |
| Measures | 1. Use a writable variable.<br>2. Cancel the write protection. |

## L4340

| | |
|---|---|
| Error message | The variable is not defined |
| Cause | The variable has not been defined. |
| Measures | Define the variable. |

## L4341

| | |
|---|---|
| Error message | The user external variable is not defined. |
| Cause | The user external variable has not been defined |
| Measures | Define the user external variable |

## L4350

| | |
|---|---|
| Error message | Duplicate definition (Val.) |
| Cause | Variables already defined cannot be redefined with the Dim or Def statements. |
| Measures | 1. Change the variable name and define.<br>2. Delete the defined variable. |

## L4360

| | |
|---|---|
| Error message | Same variable used (65535 times) |
| Cause | Example: 1 P1=P1+P2 references P1 twice and P2 once. |
| Measures | Change the program to reduce the No. of times the same variable is used. |

## L4370

| | |
|---|---|
| Error message | Error in the array element |
| Cause | 1. The array elements exceeds the define range.<br>2. The specified variable is not an array. |
| Measures | 1. Correct the number of array elements within one to the maximum elements.<br>2. Do not specify array elements. |

## L4380

| | |
|---|---|
| Error message | Cannot delete variables (used) |
| Cause | Variables used in a command statement cannot be deleted. |
| Measures | Delete the command statement using the variable. |

## L4390

| | |
|---|---|
| Error message | Variable type combination error |
| Cause | The type of the user-defined external variable is different. |
| Measures | Match the variable types. |

## L4400

| | |
|---|---|
| Error message | Program is faulty. |
| Cause | The content of the program is abnormal. |
| Measures | Delete the program. |

## L4420

| | |
|---|---|
| Error message | Line No exceeds 32767 |
| Cause | The new line No. or line gap is large. |
| Measures | Do not use line No. exceeding 32767. |

## L4430

| | |
|---|---|
| Error message | Not found the string searched |
| Cause | The character string searched for was not found. |
| Measures | Check the program. |

## L4440

| | |
|---|---|
| Error message | Duplicate definition (label) |
| Cause | A label already defined cannot be redefined. |
| Measures | 1. Change the label name.<br>2. Delete the defined label line. |

## L4460

| | |
|---|---|
| Error message | Argument value range over |
| Cause | Argument value range over. |
| Measures | Confirm the argument range, and correct the value. |

## L4470

| | |
|---|---|
| Error message | Line No can't be used |
| Cause | Line No can't be used |
| Measures | Please use the label |

## L4800

| | |
|---|---|
| Error message | System error (System base prog) |
| Cause | The base program for the system could not be opened. Or, the system base program name was not specified correctly in the parameter. |
| Measures | If it comes back, contact your service provider. |

## L4810

| | |
|---|---|
| Error message | The global variable defined by user is not available |
| Cause | The parameter "PRGUSR" is not correct. |
| Measures | To use user-defined external variables, it is necessary to set the name of the program describing only variable definitions in the PRGUSR parameter. |

## L4811 *

| | |
|---|---|
| Error message | The global variable redefined |
| Cause | A system global variable is defined in user global. |
| Measures | Correct the program. |

## L4820

| | |
|---|---|
| Error message | No editing program |
| Cause | The program was closed while editing. For example, the program being edited is closed when a key switch enable/disable operation is performed via the T/B during online editing on a PC. |
| Measures | Try editing the program again. |

## L4900

| | |
|---|---|
| Error message | System error (Prog Hndl) |
| Cause | The program name used by internal processing is not normal. |
| Measures | If it comes back, contact your service provider. |

## L4910

| | |
|---|---|
| Error message | Robot Language is mismatched |
| Cause | The parameter RLNG is mismatched. (2:MELFA-BASIC V, 3:MELFA-BASIC VI) |
| Measures | Re-set RLNG or select an other program. |

## L4920

| | |
|---|---|
| Error message | There is no backup data in ROM |
| Cause | There is no backup data in ROM. |
| Measures | Please operate after backup. |

## L4922

| | |
|---|---|
| Error message | Unsupported program version |
| Cause | This program was created with the new version. |
| Measures | This program cannot be opened with this robot. |

## L4930

One of the errors below is detected. Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | CavChk cannot be executed (*) |
| Cause | Collision avoidance serves as prohibition of use |
| Measures | Change parameter CAV into use permission |
| Error message | CavChk cannot be used |
| Cause | This robot does not correspond to collision avoidance |
| Measures | Delete CavChk command |

## L4931

| | |
|---|---|
| Error message | Cmp command cannot be executed |
| Cause | Collision avoidance is effective |
| Measures | Repeal collision avoidance (execute CavChk Off) |

## L4932

| | |
|---|---|
| Error message | Trk command cannot be executed |
| Cause | Collision avoidance is effective |
| Measures | Repeal collision avoidance (execute CavChk Off) |

## L4933

| | |
|---|---|
| Error message | CavChk cannot be executed |
| Cause | Cmp command is executed |
| Measures | Repeal compliance mode (execute Cnp Off) |

## L4934

| | |
|---|---|
| Error message | CavChk cannot be executed |
| Cause | Trk command is executed |
| Measures | Repeal tracking mode (execute Trk Off) |

## L4935

| | |
|---|---|
| Error message | NOERR cannot be executed |
| Cause | Interruption using M_CavSts is invalid |
| Measures | Define interruption using M_CavSts and confirm it |

## L4936

| | |
|---|---|
| Error message | This ACT No. cannot be repealed |
| Cause | NoErr of collision avoidance is performed |
| Measures | Repeal this interruption after canceling NoErr |

## L4937 *

| | |
|---|---|
| Error message | A user free area size is lack |
| Cause | The size of a user free area is smaller than that of 2K |
| Measures | Please set 2K or more to the size of a user free area.<br>(The value of the parameter QMLTCPUn (n=1 to 4))<br>If the lower bits of parameter IQMEM are 10001, the user free area must be set to a total of 2.0K (user area 0.5K + expansion area 0.5K + interference area 1.0K) because the CPU buffer memory expansion function and the interference avoidance function are enabled. |

## L4938

| | |
|---|---|
| Error message | This robot does not correspond to collision avoidance. |
| Cause | This robot does not correspond to collision avoidance. |
| Measures | Parameter CAV returns disapproval. |

## L4939

| | |
|---|---|
| Error message | CAV version of Robot No.n is old |
| Cause | Software version of Robot No.n is old |
| Measures | Interference avoidance function cannot be used because the software version of interference avoidance of the robot-n is old. Software version upgrade is required. Contact the maker. |

## L4941

| | |
|---|---|
| Error message | MvSpl command cannot be executed |
| Cause | Collision avoidance is effective |
| Measures | The spline interpolation function and collision avoidance function cannot be enabled simultaneously.<br>If using the spline interpolation function, disable the collision avoidance function. |

## L4950

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Error in a function syntax |
| Cause | Error in the definition of a function procedure. |
| Measures | Correct the definition of the function procedure. |
| Error message | Error in a parameter |
| Cause | Error in a parameter of the function. |
| Measures | Correct the parameter of the function. |
| Error message | Error in a parameter |
| Cause | The elements exceeds the range. |
| Measures | Correct the array element. |

## H5000

| | |
|---|---|
| Error message | TB Enable key is ON |
| Cause | The TB Enable key is ON in AUTOMATIC mode. |
| Measures | OFF the TB Enable key, or enter the TEACH mode |

## L5010

| | |
|---|---|
| Error message | AUTOENA signal is OFF |
| Cause | The automatic operation possible signal is OFF. |
| Measures | Turn the automatic operation possible signal ON, or enter the teach mode. |

## L5100

| | |
|---|---|
| Error message | No program is selected |
| Cause | A program is not selected for the designated slot. |
| Measures | Select a program for the designated slot. |

## L5110

| | |
|---|---|
| Error message | Continuous RUN is not possible |
| Cause | A different program name has been designated. |
| Measures | Designate the correct program name. |

## L5120

| | |
|---|---|
| Error message | Cannot select program (not PSA) |
| Cause | The specified slot is not in the program selection state. |
| Measures | Reset the program. |

## L5130

| | |
|---|---|
| Error message | Cannot execute servo on |
| Cause | A servo OFF process is taking place. |
| Measures | Wait for the servo to turn OFF before turning the servo ON. |

## L5140

| | |
|---|---|
| Error message | Cannot read the file |
| Cause | Reading is being carried out, or editing is being carried out. |
| Measures | Close the file being edited, or read after the reading is completed. |

## L5150

| | |
|---|---|
| Error message | The origin has not been set |
| Cause | The origin has not been set. |
| Measures | Refer to the chapters of “Setting the origin” and “Resetting the origin” which are described in the separate volumes “Robot Arm Setup and Maintenance”. And set the origin. |

## L5200 *

| | |
|---|---|
| Error message | Parameter error (TASKMAX) |
| Cause | The TASKMAX parameter setting value has been exceeded (initial value: 8, maximum value: 32). |
| Measures | Reduce the number of multi tasks, or change the TASKMAX parameter. |

## L5210 *

| | |
|---|---|
| Error message | Parameter error (MECHAMAX) |
| Cause | The No. of multi mechanisms has exceeded the limit. |
| Measures | Reduce the No. of multi mechanisms. |

## L5400

| | |
|---|---|
| Error message | All robot cannot be designated |
| Cause | All mechanisms cannot be specified. |
| Measures | Specify an independent mechanism number. |

## L5410

| | |
|---|---|
| Error message | Non-existent mode |
| Cause | It has been changed to a mode other than Auto/Teach. |
| Measures | Contact the maker. |

## L5420

| | |
|---|---|
| Error message | Illegal slot No. |
| Cause | A task slot number other than 1 through TASKMAX (parameter) is specified. |
| Measures | Designate the correct task slot. |

## L5430

| | |
|---|---|
| Error message | Illegal robot No. |
| Cause | The mechanism designation is illegal. |
| Measures | Designate the correct mechanism. |

## L5600

| | |
|---|---|
| Error message | Cannot execute during an error |
| Cause | Cannot execute during an error. |
| Measures | Reset the error. |

## C5610

| | |
|---|---|
| Error message | Cannot execute during STOP ON |
| Cause | Cannot execute during stop signal input. |
| Measures | Turn the stop signal OFF and execute. |

## L5620

| | |
|---|---|
| Error message | Cannot execute during CSTOP ON |
| Cause | Cannot execute during cycle stop signal input. |
| Measures | Turn the cycle stop signal OFF. |

## L5630

| | |
|---|---|
| Error message | Cannot execute during SRVOFF ON |
| Cause | Cannot execute during servo OFF signal input. |
| Measures | Turn the servo OFF signal OFF. |

## L5640

| | |
|---|---|
| Error message | Cannot execute during RUN |
| Cause | Cannot execute during operation. |
| Measures | Stop the operation, and then execute. |

## L5650

| | |
|---|---|
| Error message | Cannot execute during STOP |
| Cause | Cannot execute during stop operation. |
| Measures | Complete the stop, and then execute. |

## L5660

| | |
|---|---|
| Error message | Edit during RUN (include ALWAYS) |
| Cause | Editing cannot be performed while in operation (including continuous execution). |
| Measures | Stop the program, and then execute. |

## C5670

| | |
|---|---|
| Error message | Cannot execute during wait |
| Cause | Cannot execute during wait |
| Measures | Execute Program Reset |

## L5990

| | |
|---|---|
| Error message | System error (Illegal command) |
| Cause | Not exist command was executed. |
| Measures | Execute the correct command. |

## L6010

| | |
|---|---|
| Error message | Illegal command |
| Cause | This may have occurred because data was sent before the communication line was opened via a data link, or an unregistered communication command was sent due to the mismatch between the versions of the controller and support software. |
| Measures | Send after the communication line is opened. Or, match the versions. |

## L6011

| | |
|---|---|
| Error message | Cannot connect to controller |
| Cause | Cannot connect to controller |
| Measures | Please connect to CPU unit |

## L6020

| | |
|---|---|
| Error message | The Operation is disable |
| Cause | The operation rights have not been acquired. |
| Measures | Acquire the operation rights. |

## L6030

| | |
|---|---|
| Error message | The editing operation is disable |
| Cause | The editing operation rights have not been acquired. |
| Measures | Acquire the editing operation rights. |

## L6040

| | |
|---|---|
| Error message | System error (illegal device No) |
| Cause | A non-registered device No. was set. |
| Measures | Set a valid device. |

## C6050

| | |
|---|---|
| Error message | The file cannot be opened |
| Cause | The block file cannot be opened. |
| Measures | Check the file, and designate the correct file. |

## C6060

| | |
|---|---|
| Error message | The mode is not TEACH |
| Cause | Carry out parameter writing in the teach mode. |
| Measures | Change to the teaching mode, and then execute. |

## C6070

| | |
|---|---|
| Error message | The time cannot be set |
| Cause | The time setting can only be executed when the program is stopped and the servo is OFF. |
| Measures | Stop the program and turn the servo OFF, and then set the time. |

## C6080

| | |
|---|---|
| Error message | Com mesg is too long |
| Cause | The character string of a communication text exceeded the maximum number allowed. |
| Measures | Verify the number of characters in a comment in various settings such as parameters. |

## C6090

| | |
|---|---|
| Error message | Can not power reset of robot |
| Cause | Can not power reset of robot |
| Measures | Can not power reset of robot |

## H6100

| | |
|---|---|
| Error message | Module is not mounted. |
| Cause | A module board by HMS must be mounted in the network base card.<br>A module board is not mounted in the network base card. |
| Measures | Mount a module suitable for the network base card. |

## H6101

| | |
|---|---|
| Error message | Unsupported module mounted error |
| Cause | An unsupported HMS module board is mounted in the network base card. |
| Measures | Replace the module. |

## H6110

| | |
|---|---|
| Error message | Multiple network base cards are mounted. |
| Cause | Only one network base card can be mounted.<br>Two or more are currently mounted in the option slot. |
| Measures | Mount only one network base card. |

## H6111

| | |
|---|---|
| Error message | Another fieldbus card is mounted. |
| Cause | Only one fieldbus card can be mounted.<br>A CC-Link card, PROFIBUS card or DeviceNet card is mounted. |
| Measures | Mount only one fieldbus card. |

## H6120

| | |
|---|---|
| Error message | Network base card error n.<br>(n is a number between 1 and 4.) |
| Cause | A network base card error has been detected.<br>n=1: A watch dog timeout has occurred with the communication module.<br>n=2: An unsupported object, instance or command has been issued.<br>n=3: The received form is incorrect.<br>n=4: The I/O offset amount is incorrect.<br>n=5: IP address is incorrect.<br>n=6: Subnet mask IP address is incorrect.<br>n=7: Gateway IP address is incorrect. |
| Measures | Replace the network base card.<br>Contact the manufacturer when replacing the card. |

## L6130

| | |
|---|---|
| Error message | Network communication error n.<br>(n is a number between 1 and 2.) |
| Cause | The cable is not connected, a line error has occurred, or parameters are set incorrectly.<br>If communication is lost after connection has been established, the error will occur under the following conditions:<br>1) When the robot program has started<br>2) When the program is executed directly from RT ToolBox3<br>3) When an error causes the program to be executed<br>n=1: Ethernet cable is disconnected.<br>n=2: IP address is not established. |
| Measures | Check the cable and parameters. |

## H6140

| | |
|---|---|
| Error message | Parameter error (parameter name) |
| Cause | The parameter setting is invalid.<br>The parameter value is not within range, or the data is invalid and cannot be read. |
| Measures | Check the parameter setting value. |

## H6190

| | |
|---|---|
| Error message | Network error occurrence (error code) |
| Cause | A network error has occurred.<br>(Error code) indicates an error code which occurs between the Anybus-CC Module. |
| Measures | Check the details of the network error. |

## C6201

| | |
|---|---|
| Error message | MELFA Support is enabled |
| Cause | MELFA Support function is enabled. |
| Measures | Perform error reset before use. |

## C6202

| | |
|---|---|
| Error message | Takeover is completed |
| Cause | MELFA Support takeover is completed. |
| Measures | Perform error reset before use. |

## L6203

| | |
|---|---|
| Error message | Used SD card is invalid |
| Cause | Used SD card is invalid. |
| Measures | Use a new iQ Care MELFA Support SD card. |

## L6204

| | |
|---|---|
| Error message | MELFA Support takeover is failed |
| Cause | MELFA Support takeover is failed (ID is unmatched). |
| Measures | Start with the correct combination of the robot, robot controller, and iQ Care MELFA Support SD card registered for the iQ Care MELFA Support service. |

## L6205

| | |
|---|---|
| Error message | Failed to activate MELFA Support |
| Cause | MELFA Support activation is failed (ID is unmatched). |
| Measures | Start with the correct combination of the robot, robot controller, and iQ Care MELFA Support SD card registered for the iQ Care MELFA Support service. |

## H6206 *

| | |
|---|---|
| Error message | Takeover file is abnormal |
| Cause | Takeover file is saved in SD card abnormally. |
| Measures | Remove the file for takeover (HISTORY.ser) in the iQ Care MELFA Support SD card. Then, perform the takeover operation again. |

## H6207 *

| | |
|---|---|
| Error message | Identification is failed |
| Cause | MELFA Support identification is failed. |
| Measures | Contact the manufacturer. |

## L6208

| | |
|---|---|
| Error message | Incompatible service package |
| Cause | Warranty expansion service package is disabled to sign up. |
| Measures | Receive inspection service beforehand. If the inspection results are acceptable, you can sign up for additional warranty. |

## L6209

| | |
|---|---|
| Error message | Time configuration is abnormal |
| Cause | Time configuration is abnormal. |
| Measures | Set the correct time. Make sure that the clock is set to the time after the latest power off time (MSTPOF). |

## L6210

| | |
|---|---|
| Error message | Warranty period will be expired |
| Cause | Warranty period will be expired soon. |
| Measures | To continue the warranty extension, take over to the additional warranty package. |

## C6211

| | |
|---|---|
| Error message | Warranty period was expired |
| Cause | Warranty period was expired. |
| Measures | Have an inspection service when you sign up with the warranty extension service again. |

## C6212

| | |
|---|---|
| Error message | Warranty expansion expired soon |
| Cause | Warranty expansion service will be expired soon. |
| Measures | When you extend the warranty, take over the service to the additional warranty package. |

## C6213

| | |
|---|---|
| Error message | Predictive maintenance expired |
| Cause | Predictive maintenance function was expired. |
| Measures | When using the predictive maintenance function continuously, select a package to take over the service. |

## C6214

| | |
|---|---|
| Error message | Please enable predictive maintenance function (PMENA) |
| Cause | Predictive maintenance function is disabled. |
| Measures | Enable the iQ Care MELFA Support predictive maintenance function.<br>For details, refer to "Enabling the predictive maintenance function" in the separate manual "Industrial Robot Supporting Service iQ Care MELFA Support Instruction Manual". |

## C6216

| | |
|---|---|
| Error message | MELFA Support is deactivated (MELFA Support SD card not found) |
| Cause | MELFA Support SD card communication error. |
| Measures | Check that the iQ Care MELFA Support SD card is connected and restart the robot controller. |

## C6219

| | |
|---|---|
| Error message | Cannot execute during RUN |
| Cause | Cannot execute during operation |
| Measures | Stop the operation, then try again. |

## C6220

| | |
|---|---|
| Error message | Another data is being processed |
| Cause | It is invalid for another data processing. |
| Measures | The operation can be performed after other data processing is complete. |

## C6221

| | |
|---|---|
| Error message | SD card was not found |
| Cause | SD card was not found. |
| Measures | Check the SD card connection. |

## C6222

| | |
|---|---|
| Error message | Insufficient SD card memory |
| Cause | SD card memory is insufficient. |
| Measures | Back up the data on the SD card and delete the data, or use a new SD card. |

## C6225

| | |
|---|---|
| Error message | Restoration error |
| Cause | Unable to restore the backup data |
| Measures | Use the backup data of the robot controller of the same model and the robot arm of the same model. |

## H6226 *

| | |
|---|---|
| Error message | Restoration is completed |
| Cause | Restoration is completed. |
| Measures | Restart the robot controller. |

## C6227

| | |
|---|---|
| Error message | Backup data is abnormal |
| Cause | Backup data is abnormal. Backup may have failed in the middle of operation. |
| Measures | Check that the backup data has been successfully acquired. |

## C6228

| | |
|---|---|
| Error message | Maximum number of files exceeded |
| Cause | The maximum number of files was saved already in the SD card. |
| Measures | Back up the data on the iQ Care MELFA Support SD card and delete the data, or use a new SD card. |

## C6229

| | |
|---|---|
| Error message | MELFA Support is deactivated (ID is unmatched) |
| Cause | MELFA Support is deactivated (ID is unmatched). |
| Measures | Start with the correct combination of the robot, robot controller, and iQ Care MELFA Support SD card registered for the iQ Care MELFA Support service. |

## C6230

| | |
|---|---|
| Error message | No MELFA Support SD card |
| Cause | MELFA Support SD card is not inserted. |
| Measures | Insert a valid iQ Care MELFA Support SD card. |

## C6231

| | |
|---|---|
| Error message | Failed to open file |
| Cause | Failed to open file because target file not found. |
| Measures | Check that the SD card is installed properly, and restart the robot controller. If it recurs, contact the manufacturer. |

## C6232

| | |
|---|---|
| Error message | Failed to write file |
| Cause | Failed to write file |
| Measures | Check that the media is installed properly, and restart the robot controller.<br>Data of the file to be written to the media may be changed at the time of file writing. If a program including commands, such as PrmWrite, is running, reset the saving time so that the timing of file writing is set in the period during which the program is not running. |

## C6236

| | |
|---|---|
| Error message | RAM is insufficient |
| Cause | RAM is insufficient |
| Measures | The robot controller RAM disk storage space was insufficient when saving the automatic backup data using the recovery function.<br>Reduce the program size to reduce the capacity of the backup data, or change the setting of BKPRG so that program saving is not performed. Alternatively, restart the robot controller to delete temporary data inside the robot controller. |

## C6238

| | |
|---|---|
| Error message | Maximum data size is exceeded |
| Cause | Maximum data size of oscillograph data is exceeded. |
| Measures | Check the parameter (MSOSL) for setting the time for the oscillograph data. |

## C6239

| | |
|---|---|
| Error message | Maximum data size is exceeded |
| Cause | Maximum data size of predictive maintenance data is exceeded. |
| Measures | After backing up the predictive maintenance data, delete the file of iQ Care MELFA Support or reduce the number of saved data in the target file.<br>When deleting the file, also delete the backup data (ppmdat_backup.ser) in the system folder. |

## C6240

| | |
|---|---|
| Error message | Maximum data size is exceeded |
| Cause | Maximum data size of maintenance data is exceeded. |
| Measures | After backing up the maintenance data, delete the file in the iQ Care MELFA Support SD card or reduce the number of saved data in the target file.<br>When deleting the file, also delete the backup data (mntdat_backup.ser) in the system folder. |

## C6241

| | |
|---|---|
| Error message | Maximum data size is exceeded |
| Cause | Maximum data size of inspection data is exceeded. |
| Measures | The size of the inspection data file to be saved exceeds the upper limit of the storage memory. Reduce the data size of the inspection data. |

## C6242

| | |
|---|---|
| Error message | Maximum data size is exceeded |
| Cause | Maximum data size of history data is exceeded |
| Measures | The size of the history data file to be saved exceeds the upper limit of the storage memory. Reduce the data size of the history data. |

## H6243 *

| | |
|---|---|
| Error message | MELFA Support is reset |
| Cause | MELFA Support information of controller is reset. |
| Measures | Remove the iQ Care MELFA Support SD card and restart the robot controller. When replacing the robot arm or the robot controller, refer to "Changing the combination of the robot arm and the robot controller" in the separate manual "Industrial Robot Supporting Service iQ Care MELFA Support Instruction Manual". |

## C6244

| | |
|---|---|
| Error message | MELFA Support is deactivated |
| Cause | MELFA Support is deactivated due to dead battery. |
| Measures | Replace the battery of the robot arm. |

## C6245

| | |
|---|---|
| Error message | Failed to open history file |
| Cause | Failed to open history file. |
| Measures | If the history file does not exist, the iQ Care MELFA Support history information cannot be displayed. When the history file "HISTORY.ser" exists on the iQ Care MELFA Support SD card, delete the file.<br>* Since the contents of the history file will be lost, it is recommended to back up the file. |

## C6246

| | |
|---|---|
| Error message | Receive timeout |
| Cause | PC is not responding. |
| Measures | Check the cable connection to the computer and the communication status. |

## C6247

| | |
|---|---|
| Error message | File for takeover is abnormal |
| Cause | File for takeover is abnormal. |
| Measures | Contact the manufacturer. |

## C6248

| | |
|---|---|
| Error message | Creating the file name list |
| Cause | Cannot be executed because the file name list is being created |
| Measures | The file name list is updated immediately after startup of the controller.<br>Wait for a while, then try again. |

## C6500

| | |
|---|---|
| Error message | Not opened COM line |
| Cause | Open was not executed by the program. |
| Measures | Execute Open, and then send PRN. |

## H6530 *

| | |
|---|---|
| Error message | COMDEV parameter is illegal |
| Cause | Illegal parameter (COMDEV). |
| Measures | Correct COMDEV parameter. |

## L6600

| | |
|---|---|
| Error message | Signal number is out of range. |
| Cause | The designated signal No. has not been defined. |
| Measures | Change the signal No. to the correct No. |

## L6610

| | |
|---|---|
| Error message | Cannot output (hand input) |
| Cause | The hand input signal cannot be written. |
| Measures | Use the correct output signal. |

## L6620

| | |
|---|---|
| Error message | Cannot write (special Input) |
| Cause | The input signal cannot be written into the robot dedicated area. |
| Measures | Use an actual signal. |

## L6630

| | |
|---|---|
| Error message | Input signal cannot be written |
| Cause | This is the actual signal input mode. |
| Measures | Set a pseudo-input signal. |

## H6640 *

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Illegal param (special signal) |
| Cause | The parameter setting is illegal. |
| Measures | Correct the changed parameter. |
| Error message | Illegal setting of the dedicated signal parameter SFMODE |
| Cause | The setting of the dedicated signal parameter SFMODE (safety mode output) is illegal. |
| Measures | An error (output bit width of the output signal is less than 3 bits) exists in the dedicated output SFMODE setting. Correct the parameter setting. |

## L6641

| | |
|---|---|
| Error message | Duplicate setting (special IN) |
| Cause | The parameter setting is illegal.<br>When using the robot safety option, the DSI and DSO signals use the dedicated I/O signals 128 to 191. Consequently, this error may occur if other I/O signals are set to signals 128 to 191 while the safety function is enabled. |
| Measures | Correct the parameter of the dedicated input signal you changed. |

## H6642 *

| | |
|---|---|
| Error message | STOP is fixed signal No. 0 |
| Cause | The parameter setting is illegal. |
| Measures | Set the parameter STOP(input) to 0. |

## L6643

| | |
|---|---|
| Error message | Illegal parameter (special Sig.) |
| Cause | The parameter setting is illegal. |
| Measures | Make the ending number larger than the starting number. |

## L6650 *

| | |
|---|---|
| Error message | Duplicate setting (special OUT) |
| Cause | The parameter setting is illegal. |
| Measures | Correct the parameters.<br>When using the robot safety option, the DSI and DSO signals use the dedicated I/O signals 128 to 191. Consequently, this error may occur if other I/O signals are set to signals 128 to 191 while the safety function is enabled. |

## L6651 *

| | |
|---|---|
| Error message | Duplicate setting (HANDTYPE) |
| Cause | The parameter setting is illegal. |
| Measures | Correct the parameter. |

## L6660

| | |
|---|---|
| Error message | Cannot output (SPECIAL OUT) |
| Cause | The program setting is illegal. |
| Measures | Correct the program. |

## L6670

| | |
|---|---|
| Error message | Illegal OUT reset pattern |
| Cause | The parameters are not defined in sets of 8 characters. |
| Measures | Correct the parameters. |

## L6800 *

| | |
|---|---|
| Error message | "Cancel pseudo-input mode, PW OFF" |
| Cause | If pseudo input was canceled, it is necessary to turn the power ON again in order to prevent the erroneous operation of the robot by external input signals. |
| Measures | Turn the power OFF and then ON once. It switches to an external input signal. |

## C6900

| | |
|---|---|
| Error message | Pseudo-input signal mode |
| Cause | Set with the parameters. |
| Measures | To set a real signal, reset the parameter and then turn the power ON again. |

## C7000

| | |
|---|---|
| Error message | Copy source file was not found |
| Cause | The copy source file was not found. |
| Measures | Input the correct file name. |

## C7010

| | |
|---|---|
| Error message | Delete target file was not found |
| Cause | The delete target file was not found. |
| Measures | Input the correct file name. |

## C7020

| | |
|---|---|
| Error message | Rename target file was not found |
| Cause | The rename target file was not found. |
| Measures | Input the correct file name. |

## H7030 *

| | |
|---|---|
| Error message | System error (param size over) |
| Cause | The change capacity is too large. |
| Measures | Contact the maker. |

## C7040

| | |
|---|---|
| Error message | Parameter changes prohibited |
| Cause | Changing this parameter is prohibited as it is a dangerous parameter. |
| Measures | Contact the maker. |

## H7050

| | |
|---|---|
| Error message | File is illegal |
| Cause | This file is damaged. |
| Measures | Contact to the dealer. |

## H7060 *

| | |
|---|---|
| Error message | System error (RAM area full) |
| Cause | The capacity has been exceeded. |
| Measures | Contact the maker. |

## C7070

| | |
|---|---|
| Error message | Memory area is full |
| Cause | The program and data have already exceeded the capacity. |
| Measures | Delete any unnecessary programs or data. |

## L7071

| | |
|---|---|
| Error message | Not enough memory area for CTN |
| Cause | Continue function needs more than 100Kbytes memory area. |
| Measures | Delete any unnecessary programs. |

## C7080

| | |
|---|---|
| Error message | Can not read parameter |
| Cause | Non-existent parameter or illegal password. |
| Measures | 1. Input the correct parameter name.<br>2. Input the correct password |

## C7081

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Can not write parameter |
| Cause | Non-existent parameter or illegal password. |
| Measures | 1. Input the correct parameter name.<br>2. Input the correct password |
| Error message | Illegal CRC during parameter writing |
| Cause | The parameter CRC value is illegal. |
| Measures | An error is detected in the CRC check in the writing process of a parameter related to the safety monitoring function. Check the communication environment between the robot controller and the personal computer, and perform the writing operation again. |

## C7090

| | |
|---|---|
| Error message | Parameter comment illgal |
| Cause | The number of parameter comment characters exceeded the limit. |
| Measures | Operation will not be affected, so continue the operation. |

## C7091

| | |
|---|---|
| Error message | Parameter save failure |
| Cause | Failed to save parameter when executing instruction. |
| Measures | Check if Tool, Base, M_Tool, etc. are running continuously. |

## L7099

| | |
|---|---|
| Error message | Can not read parameter "****".<br>Note) "****" is substituted with the "parameter name". |
| Cause | The parameter doesn't exist. |
| Measures | Please confirm the parameter name. |

## H7100

| | |
|---|---|
| Error message | Robot arm serial number mismatch |
| Cause | Robot arm that connection was replaced |
| Measures | Restore or reset the preventive maintenance data or predictive maintenance data.<br>For further information, refer to the "Preventive Maintenance Function User's Instruction Manual" or the "Predictive Maintenance Function User's Instruction Manual". |

## H7300 *

| | |
|---|---|
| Error message | Loading the parameter file. |
| Cause | It is necessary to turn the power ON again to reflect the parameters. |
| Measures | Turn the power OFF and ON once. |

## C7310

| | |
|---|---|
| Error message | Changed variables weren't saved |
| Cause | The power was OFF during program execution. |
| Measures | Don't turn the power OFF during program execution. |

## L7311

| | |
|---|---|
| Error message | The power was OFF during file saving |
| Cause | The power was OFF during file saving. |
| Measures | Don't turn the power OFF during file saving. |

## L7332

| | |
|---|---|
| Error message | Can't change to RAM mode in CTN mode |
| Cause | Can't change to RAM mode in continue mode. |
| Measures | Please change to RAM mode and perform again. |

## L7340

| | |
|---|---|
| Error message | Contine function cannot be used in DRAM mode |
| Cause | Contine function cannot be used in DRAM mode |
| Measures | Please change to RAM mode and perform again |

## L7341

| | |
|---|---|
| Error message | Can't change to DRAM mode in CTN mode |
| Cause | Can't change to DRAM mode in CTN mode |
| Measures | Please change to RAM mode and perform again |

## L7342

| | |
|---|---|
| Error message | Global extension cannot be used in DRAM mode |
| Cause | Global extension cannot be used in DRAM mode |
| Measures | Please change to RAM mode and perform again |

## L7343

| | |
|---|---|
| Error message | Can't change to DRAM mode in PRGGBL mode |
| Cause | Can't change to DRAM mode in PRGGBL mode |
| Measures | Please change to RAM mode and perform again |

## L7370

| | |
|---|---|
| Error message | The password is 8 to 32 char. |
| Cause | The password is 8 to 32 characters |
| Measures | Please input the password 8 to 32 characters |

## L7371

| | |
|---|---|
| Error message | Only alphanumeric character |
| Cause | It input it excluding the alphanumeric character |
| Measures | Please input the password in the alphanumeric character |

## L7372

| | |
|---|---|
| Error message | The password is unmatch |
| Cause | The password is unmatch |
| Measures | Please input the password again |

## L7373

| | |
|---|---|
| Error message | Password lock to the programs |
| Cause | Password lock to the programs |
| Measures | Please release password |

## L7374

| | |
|---|---|
| Error message | Password lock to the parameter |
| Cause | Password lock to the parameter |
| Measures | Please release password |

## L7375

| | |
|---|---|
| Error message | Password lock to the files |
| Cause | Password lock to the files |
| Measures | Please release password |

## L7378

| | |
|---|---|
| Error message | Change password |
| Cause | The password has not been changed from the initial value. |
| Measures | The password to change functional safety related parameters has not been changed from the initial value. Change the password to new one, and perform parameter setting. The factory default password is “MELFASafetyPSWD”. |

## C7450

| | |
|---|---|
| Error message | No battery voltage (robot CPU) |
| Cause | The battery is spent. |
| Measures | The battery voltage of the robot CPU dropped to 2.5V or less.<br>Replace the battery, and then restore the robot program and parameters.<br>For more information about the replacement procedure, refer to the separate volumes, "Controller setup, basic operation, and maintenance". |

## C7451

| | |
|---|---|
| Error message | Battery voltage low (robot CPU) |
| Cause | The battery will be spent soon. |
| Measures | The battery voltage of the robot CPU dropped to 2.7V or less.<br>Back up the robot program and the parameters, and replace the battery immediately. Otherwise, they may be lost due to low voltage.<br>For more information about the replacement procedure, refer to the separate volumes, "Controller setup, basic operation, and maintenance". |

## C7500

| | |
|---|---|
| Error message | No battery voltage (robot) |
| Cause | The battery is spent. |
| Measures | Replace the battery and set the origin. For more information about the replacement procedure, refer to the separate volumes, "Instruction Manual/Robot Arm Setup to Maintenance". |

## C7510

| | |
|---|---|
| Error message | Battery voltage low (robot) |
| Cause | The battery will be spent soon. |
| Measures | Replace the battery. For more information about the replacement procedure, refer to the separate volumes, "Instruction Manual/Robot Arm Setup to Maintenance". |

## C753n

n indicates the axis number (1 to 6).

| | |
|---|---|
| Error message | Replenishment time of grease |
| Cause | It seems that grease reached longevity |
| Measures | Replenish grease |

## C754n

n indicates the axis number (1 to 6).

| | |
|---|---|
| Error message | Exchange time of the belt |
| Cause | It seems that the belt reached longevity |
| Measures | Execute the check and the exchange of the belt |

## H7600 *

| | |
|---|---|
| Error message | Mechanism number of additional axis is illegal. |
| Cause | The value of AXMENO (mechanism No. used) parameter is illegal. |
| Measures | On the mechanical additional axis, change "0" to a value which is smaller than set to AXUNUM (number of mechanisms used). |

## H7601 *

| | |
|---|---|
| Error message | Axis number of additional axis is illegal. |
| Cause | The value of AXJNO (setting axis No.) is illegal. |
| Measures | Change the value of this parameter from 1 to 3.<br>Change the value of this parameter to a order from 1. |

## H7602 *

| | |
|---|---|
| Error message | Axis numbers of additional axis are overlap. |
| Cause | As the parameter value of AXJNO (setting axis No.), the same value is set at two or more elements. |
| Measures | Change the values of the element Nos. which set the same values at this pa-rameter AXMENO, to all different values. |

## H7603 *

| | |
|---|---|
| Error message | Unit of additional axis is illegal. |
| Cause | The value of AXUNT (unit axis) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to "0" or "1". |

## H7604 *

| | |
|---|---|
| Error message | Acceleration time of additional axis is illegal. |
| Cause | The value of AXACC (acceleration time) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to positive real numbers. |

## H7605 *

| | |
|---|---|
| Error message | Deceleration time of additional axis is illegal. |
| Cause | The value of AXDEC (deceleration time) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to positive real numbers. |

## H7606 *

| | |
|---|---|
| Error message | Gear ratio numerator of additional axis is illegal. |
| Cause | The value of AXGRTN (total speed ratio numerator) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to positive integers. |

## H7607 *

| | |
|---|---|
| Error message | Gear ratio denominator of additional axis is illegal. |
| Cause | The value of AXGRTD (total speed ratio denominator) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to positive integers. |

## H7609 *

| | |
|---|---|
| Error message | Motor rated speed of additional axis is illegal. |
| Cause | The value of AXMREV (rated speed) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to positive integers. |

## H7610 *

| | |
|---|---|
| Error message | Motor maximum speed of additional axis is illegal. |
| Cause | The value of AXJMX (maximum speed) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to positive integers. |

## H7611 *

| | |
|---|---|
| Error message | Encoder pulse of additional axis is illegal. |
| Cause | The value of AXENCR (encoder resolution) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to positive integers. |

## H7612 *

| | |
|---|---|
| Error message | JOG smoothening time constant of additional axis is illegal. |
| Cause | The value of AXJOGTS (JOG smoothening time constant) parameter is illegal. |
| Measures | Change the values of all elements of this parameter to 0 or positive real number. |

## H7613 *

| | |
|---|---|
| Error message | Turn OFF the power supply once, and turn ON it again. |
| Cause | It is necessary to turn OFF the power supply once. |
| Measures | Turn OFF the power supply of the controller, and turn it ON again. |

## H7650

| | |
|---|---|
| Error message | The force sensor quantity setting is incorrect. |
| Cause | Only 1 force sensor can be used for a single robot. |
| Measures | Check the parameter (AXJNO, AXMENO) settings to see whether multiple force sensors have been set. |

## H7651 *

| | |
|---|---|
| Error message | Force sense I/F unit initialization error |
| Cause | The force sense I/F unit was not recognized, and therefore it was not possible to successfully complete initialization. |
| Measures | Check the force sense I/F unit wiring and whether the power supply is ON. |

## H7652 *

| | |
|---|---|
| Error message | Force sense I/F unit revision illegal |
| Cause | This force sense I/F unit revision is not supported. |
| Measures | Contact the maker. |

## H766n

n indicates the sensor axis.

| | |
|---|---|
| Error message | The force sensor data exceeded the tolerance value. |
| Cause | The force acting on the force sensor exceeded the set tolerance value. |
| Measures | The permissible force sense value set in parameter FSLMTMX has been exceeded. Check that the value set in parameter FSLMTMX is suitable for the operation. The weight of the hand and force sensor will cause this error to occur when the force sensor is enabled. This is because the permissible values for the force sensor in parameter FSLMTMX are all set to "0" in the initial settings.<br>Refer to the section "Force Sensor Tolerance" in separate manual, "Instruction Manual/Force Sense Function" for details on the error recovery method. |

## H7700 *

| | |
|---|---|
| Error message | CC-Link card is illegal (Error Code). |
| Cause | CC-Link card is illegal. |
| Measures | Please exchange the CC-Link card. When it comes back, contact to the dealer. |

## H7710 *

| | |
|---|---|
| Error message | Cannot set a CC-Link master station. |
| Cause | A master station is already set by the rotary switch. |
| Measures | Set the rotary switch to other than 0. |

## H7720 *

| | |
|---|---|
| Error message | Two CC-Link interface cards are mounted. |
| Cause | Mount one card in slot 2. |
| Measures | It is not allowed to install two cards. Install only one card. |

## L7730

| | |
|---|---|
| Error message | CC-Link data link error (local station connection error) |
| Cause | There is a line error or the master station's parameter settings are invalid. |
| Measures | Review the line and parameters. |

## L7750

| | |
|---|---|
| Error message | A (CC-Link) cable is not connected or parameters do not match. |
| Cause | A cable is not connected or parameters do not match. |
| Measures | Reset the power and start again. |

## H7760 *

| | |
|---|---|
| Error message | CC-Link initialization error |
| Cause | The master station's parameters do not match. |
| Measures | Correct the parameters, and then start again. |

## L7780

| | |
|---|---|
| Error message | A CC-Link register number is outside the range. |
| Cause | A register number entered is outside the allowable range. |
| Measures | Enter the correct value. |

## L7781

| | |
|---|---|
| Error message | A signal number for CC-Link was specified. |
| Cause | A signal number for CC-Link was specified. |
| Measures | Install a CC-Link interface card. |

# H7810

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Ethernet *** parameter ERR<br>Note) "***" is substituted with the "parameter name". |
| Cause | Illegal parameter (***). |
| Measures | Correct parameter ***. |
| Error message | NETPORT/MONPORT parameter error |
| Cause | The element of NETPORT(1) and MONPORT(1/2) overlap. |
| Measures | Please set not to overlap to another port number. |
| Error message | MONPORT/SLMPPORT parameter error |
| Cause | The element of MONPORT(1/2) and SLMPPORT overlap. |
| Measures | Please set not to overlap to another port number. |
| Error message | MONPORT parameter error |
| Cause | Overlap to the CC-Link IEF Basic Port Number. |
| Measures | Please set not to overlap to another port number. |
| Error message | The setting of IP address filter start/end parameter is illegal |
| Cause | IP address start and end are not on the same network or the range is reversed. |
| Measures | Correct NETIPFLS and NETIPFLE parameters. |

# H7820

| | |
|---|---|
| Error message | Mxt Scommand timeout |
| Cause | The setting time of the MXTTOUT parameter has been exceeded. |
| Measures | Make the MXTTOUT parameter value larger. |

# H7830

| | |
|---|---|
| Error message | "Ethernet card is not installed, or command disable" |
| Cause | Ethernet card is not installed, or command disable. |
| Measures | Install Ethernet interface card. |

# H7840

| | |
|---|---|
| Error message | Mxt command Illegal received data |
| Cause | The command argument and the data type do not match. |
| Measures | Check the command and the data you are sending. |

# H7860

| | |
|---|---|
| Error message | SLMP error |
| Cause | An error related to SLMP has occurred. |
| Measures | Please confirm the content by a detailed number of the error. |

# H7861

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | SLMP parameter error |
| Cause | Illegal parameter. |
| Measures | Correct parameter. |
| Error message | SLMP SLMPPORT parameter error |
| Cause | Overlap with server port number of NETPORT. |
| Measures | Please set not to overlap to another port number. |
| Error message | SLMP SLMPPORT parameter error |
| Cause | Overlap with element of NETPORT(1) or MONPORT(1/2). |
| Measures | Please set not to overlap to another port number. |

# C7880

| | |
|---|---|
| Error message | Ethernet communication error |
| Cause | Ethernet cable is disconnected. |
| Measures | Check the Ethernet connection between the robot CPU and the robot controller.<br>If the Ethernet cable is connected and disconnected many times, wait for a while, then check the connection again.<br>If the error frequently occurs in environments susceptible to noise, take preventive measures such as installing a ferrite core to the Ethernet cable. |

# C7881

| | |
|---|---|
| Error message | Ethernet communication error |
| Cause | CPU unit - controller Ethernet communication is invalid. |
| Measures | Check the setting of the parameter [RCDUETH]. |

# C7882

| | |
|---|---|
| Error message | IP address is abnormal |
| Cause | NETIP and RCDUIP are duplicated or are not in same subnet. |
| Measures | Check the setting of the parameter [NETIP] or [RCDUIP]. |

# H8250

| | |
|---|---|
| Error message | Safety comm. Received error info |
| Cause | Error information was received from the master station with which the safety communication function (CC-Link IE TSN) is communicating. |
| Measures | Check the master station error.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

# H8252

| | |
|---|---|
| Error message | Safety comm. timeout |
| Cause | A timeout error occurred in the safety communication function (CC-Link IE TSN). |
| Measures | • Check that the parameter "safety refresh monitoring time" set on the master station is an appropriate value.<br>• Check if measures against noise in the transmission path are taken and wiring and devices have no problems.<br>• Check that no online operation is being performed from a peripheral such as the engineering tool, or no program or parameter is being written to the master station.<br>For further information refer to the separate "Safety Communication Function Instruction Manual".<br>If the same error occurs again, the possible cause is a hardware failure. Contact the manufacturer. |

## H8253

| | |
|---|---|
| Error message | Safety comm. timeout |
| Cause | A timeout error (unacceptable delay) has occurred in the safety communication function (CC-Link IE TSN). |
| Measures | • Check that the parameter "safety refresh monitoring time" set on the master station is an appropriate value.<br>• Check that the parameter "transmission interval monitoring time" set on the robot controller is an appropriate value.<br>• Check if measures against noise in the transmission path are taken and wiring and devices have no problems.<br>• Check that no online operation is being performed from a peripheral such as the engineering tool, or no program or parameter is being written to the master station.<br>For further information refer to the separate "Safety Communication Function Instruction Manual".<br>If the same error occurs again, the possible cause is a hardware failure. Contact the manufacturer. |

## H8254

| | |
|---|---|
| Error message | Safety comm. timeout |
| Cause | A transmission interval error (communication destination) of the safety communication function (CC-Link IE TSN) has occurred. |
| Measures | • Check that the parameter "transmission interval monitoring time" set on the master station (communication destination) is an appropriate value.<br>• Check if measures against noise in the transmission path are taken and wiring and devices have no problems.<br>• Check that no online operation is being performed from a peripheral such as the engineering tool, or no program or parameter is being written to the master station.<br>For further information refer to the separate "Safety Communication Function Instruction Manual".<br>If the same error occurs again, the possible cause is a hardware failure. Contact the manufacturer. |

## H8257

| | |
|---|---|
| Error message | Safety comm. data error |
| Cause | A data error has occurred in the safety communication function (CC-Link IE TSN). |
| Measures | If the same error occurs again, the possible cause is a hardware failure. Contact the manufacturer.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H8270 *

| | |
|---|---|
| Error message | System bus error |
| Cause | A system bus error was detected. |
| Measures | • Check the extension cable connection.<br>• Check the mounting status of the module.<br>• Take measures to reduce noise.<br>• If the error occurs again, the possible cause is a hardware failure of the CPU module, I/O module, master/local module, base unit, or extension cable. Contact the manufacturer. |

## H8290

| | |
|---|---|
| Error message | Safety connection error |
| Cause | A safety connection has not been established with the master station of the communication destination. |
| Measures | Perform operation after safety connection has been established.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H8291

| | |
|---|---|
| Error message | Safety connection timeout |
| Cause | Failed to establish the safety connection. |
| Measures | Check the conditions of the master station (communication destination), network devices in the communication path, and wiring.<br>To change the timeout time settings, use the parameter "SCESTTM".<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## H8292 *

| | |
|---|---|
| Error message | Out of range (Parameter: SCESTTM) |
| Cause | Safety connection timer value is out of range. |
| Measures | Check and correct the parameter "SCESTTM" for the safety connection establishment timer.<br>For further information refer to the separate "Safety Communication Function Instruction Manual". |

## L8300

| | |
|---|---|
| Error message | There are a lot of GETPOS define |
| Cause | GETPOS function are up to 8. |
| Measures | Please use the same Act No. or reset an unnecessary program. |

## L8310

| | |
|---|---|
| Error message | GETPOS undefined |
| Cause | GETPOS undefined. |
| Measures | Please define GETPOS. |

## H8320

| | |
|---|---|
| Error message | System Error (GETPOS) |
| Cause | Internal data of GETPOS is illegal. |
| Measures | Turn the power OFF and ON once. |

## H8400

| | |
|---|---|
| Error message | CTN data is illegal (Prec) |
| Cause | CTN data is illegal. It changed to Prec Off. |
| Measures | Try to set be a Prec mode again. |

## H8410 *

| | |
|---|---|
| Error message | DEVICENET Card failure |
| Cause | Abnormality of the DEVICENET card is detected. |
| Measures | Please exchange the DEVICENET card.<br>When replacing the card, contact its manufacturer for advice. |

## H8420 *

| | |
|---|---|
| Error message | DEVICENET Mode switch is outside |
| Cause | The mode switch is outside. |
| Measures | Please correct the mode switch. |

## H8421 *

| | |
|---|---|
| Error message | DEVICENET Unit number switch is outside |
| Cause | The unit number switch is outside. |
| Measures | Please correct the unit number switch. |

## H8430

| | |
|---|---|
| Error message | DEVICENET Communication error |
| Cause | Network fail or Master setting is illegal. |
| Measures | Please confirm the network (speed, cable, terminator) or the master unit. |

## H8440

| | |
|---|---|
| Error message | DEVICENET Unit number overlaps |
| Cause | There are more than one unit with the same unit number on the network. |
| Measures | Please confirm the other unit number. |

## H8441

| | |
|---|---|
| Error message | DEVICENET Network power failure |
| Cause | Network power is turned off. |
| Measures | Please turn on network power. |

## H8442

| | |
|---|---|
| Error message | DEVICENET Other units not found |
| Cause | Other units are not connected on the network. |
| Measures | Please confirm the other units. |

## H8450

| | |
|---|---|
| Error message | DEVICENET Install more than one |
| Cause | Only one 2D-TZ571 card can be installed. |
| Measures | Please install only one 2D-TZ571 card. |

## H8451

| | |
|---|---|
| Error message | DEVICENET Set other fieldbus |
| Cause | Only one. fieldbus card can be installed. |
| Measures | Only one fieldbus card is installed |

## L8460

| | |
|---|---|
| Error message | DEVICENET Timeout |
| Cause | The I/O communication was can not be done in time. |
| Measures | Please confirm the other units or power supply of network. |

## H8470 *

| | |
|---|---|
| Error message | DEVICENET Param load write error |
| Cause | Parameter can not be load and written. |
| Measures | Turn the power OFF and ON once |

## H8471 *

| | |
|---|---|
| Error message | DEVICENET Send byte is outside |
| Cause | Send byte number setting of is out of range |
| Measures | Please correct the send byte number setting |

## H8472 *

| | |
|---|---|
| Error message | DEVICENET Receive byte outside |
| Cause | Receive byte number setting is outside |
| Measures | Please correct the receive byte number setting |

## H8473 *

| | |
|---|---|
| Error message | DEVICENET Send-receive are 0 |
| Cause | Both receive and send byte number setting are 0. |
| Measures | Please change receive or send byte number setting. |

## C8490

| | |
|---|---|
| Error message | DEVICENET Communication test mode |
| Cause | It is communication test mode. |
| Measures | Please change the mode switch to 3-5 after the test ends. |

## H8491 *

| | |
|---|---|
| Error message | DEVICENET Comm-test unit number |
| Cause | Unit numbers overlap is detected by communication test. |
| Measures | Please confirm the other units number. |

## H8492 *

| | |
|---|---|
| Error message | DEVICENET Comm-test busoff |
| Cause | Busoff is detected by communication test. |
| Measures | Please confirm communication speed, cable, terminator. |

## H8493 *

| | |
|---|---|
| Error message | DEVICENET Comm-test net power |
| Cause | Network power off is detected by communication test. |
| Measures | Please turn on network power. |

## H8494 *

| | |
|---|---|
| Error message | DEVICENET Comm-test send-receive |
| Cause | Data can not send and receive normal by communication test |
| Measures | Please confirm connection situation of others, communication speed, cable and terminator |

## H8500

| | |
|---|---|
| Error message | PROFIBUS Initial error |
| Cause | An error was detected in the hardware. The hardware may be at fault. |
| Measures | Replace the 2D-TZ577 Card.<br>When replacing the card, contact its manufacturer for advice. |

## H8501

| | |
|---|---|
| Error message | PROFIBUS watch dog timer error |
| Cause | An error was detected in the hardware. The hardware may be at fault. |
| Measures | Replace the 2D-TZ577 Card.<br>When replacing the card, contact its manufacturer for advice. |

## H8502 *

| | |
|---|---|
| Error message | Plural PROFIBUS cards are set. |
| Cause | Only one card is accepted at any one time. |
| Measures | Install only one card. |

## H8503 *

| | |
|---|---|
| Error message | PROFIBUS/CC-Link cards are set. |
| Cause | Either PROFIBUS or CC-Link card is accepted at any one time. |
| Measures | Install either a PROFIBUS card or a CC-Link card. |

## H8504

| | |
|---|---|
| Error message | Either of the following messages is displayed:<br>(1) PROFIBUS self-check error n (n = 1~7).<br>(2) PROFIBUS cannot self-check. |
| Cause | An error was detected in the hardware. The hardware may be at fault. |
| Measures | Replace the 2D-TZ577 Card.<br>When replacing the card, contact its manufacturer for advice. |

## H8505

| | |
|---|---|
| Error message | Illegal param (PBMODE) |
| Cause | PBMODE parameters are not defined validly. |
| Measures | Correct PBMODE parameters. (0 - normal, 2 - self-diagnosis) |

## H8506

| | |
|---|---|
| Error message | Exchange number cannot be set. |
| Cause | Power the system off and on again. |
| Measures | If the error recurs, contact the manufacturer for advice. |

## H8507

| | |
|---|---|
| Error message | Illegal param (PBMC) |
| Cause | PBMC parameters are not defined validly. |
| Measures | Correct PBMODE parameters. (1 - Class 1, 2 - Class 2) |

## H8510

| | |
|---|---|
| Error message | PROFIBUS exchange No. is wrong. |
| Cause | Either of the following causes may be responsible:<br>(1) Station numbers stored in the flash memory are outside the prescribed range.<br>(2) An attempt was made to change to a station number being outside the prescribed range. |
| Measures | Specify PBNUM parameter with numbers in the range of 1 to 125. |

## H8520

| | |
|---|---|
| Error message | PROFIBUS St.number write error. |
| Cause | An attempt was made to change station numbers when rewriting was disabled. |
| Measures | Enter "-1" in the "station number" box (robot parameter "PBNUM = -1") so that the existing station numbers are cleared. |
| Details | An attempt was made to change station numbers when "No_Add_Chg" had been specified with "true" during station number setting from Class 2 Master Station. |

## H8530

| | |
|---|---|
| Error message | PROFIBUS St.number write error. |
| Cause | More than 60 consecutive rewrite attempts were made on the flash ROM. |
| Measures | Replace the 2D-TZ577 Card.<br>When replacing the card, contact its manufacturer for advice. |

## H8540

| | |
|---|---|
| Error message | PROFIBUS flash ROM access error. |
| Cause | An anomaly in the hardware. |
| Measures | Replace the 2D-TZ577 Card.<br>When replacing the card, contact its manufacturer for advice. |

## H8550

| | |
|---|---|
| Error message | PROFIBUS master bureau's parameter is illegal |
| Cause | Any one of the following causes may be responsible:<br>(1) Parameters established at the Master Station are incorrect.<br>(2) Set value for communication WDT is too long.<br>(3) Value specified for minimum response time Min_Tsdr is outside the prescribed range. |
| Measures | Check the slave parameter settings on the Master Station. (Refer to the instruction manual for Master Station.) |

## H8560

| | |
|---|---|
| Error message | PROFIBUS communication chip ERR |
| Cause | An anomaly in the hardware. |
| Measures | Replace the 2D-TZ577 Card.<br>When replacing the card, contact its manufacturer for advice. |

## H8570

| | |
|---|---|
| Error message | PROFIBUS communication Time-out |
| Cause | Timeout occurred in the communications with the Master Station. |
| Measures | Check Master Station state and cable connections, and choose a longer communication WDT setting. |

## H8580

| | |
|---|---|
| Error message | PROFIBUS I/O composition error. |
| Cause | Any one of the following causes may be responsible:<br>(1) Data module is not of word type.<br>(2) Swap set value is outside the prescribed range.<br>(3) Data alignment mode set value is outside the prescribed range.<br>(4) Number-of-data modules set value is outside the prescribed range.<br>(5) Data module settings are outside the prescribed range.<br>(6) Parameter setting station numbers are invalid. |
| Measures | Check the slave parameter settings on the Master Station. (Refer to the instruction manual for Master Station.) |

## L8600

| | |
|---|---|
| Error message | The vision is a unconnection |
| Cause | The vision is a unconnection |
| Measures | Please check Com No. and Parameter |

## L8601

| | |
|---|---|
| Error message | The vision can't be logged on |
| Cause | The parameter of the user-name or the password is abnormal |
| Measures | Please set the parameter correctly |

## L8602

| | |
|---|---|
| Error message | Password is abnormal |
| Cause | The password of the user-name is not corresponding |
| Measures | Please set the password correctly |

## L8603

| | |
|---|---|
| Error message | Parameter is abnormal |
| Cause | The parameter of the user-name or the password is abnormal |
| Measures | Please set the parameter correctly |

## L8610

| | |
|---|---|
| Error message | The communication is abnormal |
| Cause | The communication was cut |
| Measures | Please check the communications cable |

## L8620

| | |
|---|---|
| Error message | The vision number is abnormal |
| Cause | The number is not designated by NVOpen |
| Measures | Please check NVOpen command |

## L8621

| | |
|---|---|
| Error message | Vision program name is abnormal |
| Cause | The vision program name has exceeded 15 characters |
| Measures | Please make the program name within 15 characters |

## L8622

| | |
|---|---|
| Error message | There is no vision program |
| Cause | There is no specified vision program |
| Measures | Please check the vision program name<br>Check whether "Job Server" has been enabled. If "Job Server" is enabled, disable it. |

## L8623

| | |
|---|---|
| Error message | SKIP number is already used |
| Cause | SKIP number is already used |
| Measures | Please confirm the SKIP number |

## L8630

| | |
|---|---|
| Error message | The recognition cell is illegal |
| Cause | There is no value on the cell |
| Measures | Please check the recognition cell |

## L8631

| | |
|---|---|
| Error message | The cell is outside the range |
| Cause | The range of the cell is exceeded |
| Measures | Please check the range of the cell |

## L8632

| | |
|---|---|
| Error message | The vision is a time-out |
| Cause | There is no response from the vision |
| Measures | Please check the time-out time |

## L8633

| | |
|---|---|
| Error message | The vision is a time-out (NVTRG) |
| Cause | There is no response from the vision (NVTRG) |
| Measures | Please decrease the load of the network |

## L8634

| | |
|---|---|
| Error message | There is a comma within the range of the cell |
| Cause | There is a comma within the range of the cell |
| Measures | Please check the range of the cell |

## L8635

| | |
|---|---|
| Error message | There is no comma within the range of the cell |
| Cause | There is no comma within the range of the cell |
| Measures | Please check the range of the cell |

## L8636

| | |
|---|---|
| Error message | Vision Tag name is abnormal |
| Cause | There is no specified vision tag in the vision program |
| Measures | Please correct the vision tag name.<br>The specified vision tag does not exist in the active vision program, check if the name of the symbolic tag in Easy Builder and the tag name specified in the robot program are the same, and correct the tag name.<br>Please check the tag name, the data type, and the value.<br>In In-Sight Explorer, any of the following conditions may exist.<br>• The specified tag name does not exist.<br>• "Use English Symbolic Tags for EasyBuilder" is not selected.<br>To check whether the above item is selected, use the following procedure.<br>Click "System" in the menu bar, and then click "Options" to open the Options window. Click "User Interface".<br>Select "Use English Symbolic Tags for EasyBuilder" if necessary, click "Apply" and then "OK".<br>Recreate the vision program (job).<br>If the same error still occurs after checking "Use English Symbolic Tags for EasyBuilder", read the job data of the vision sensor and save it again.<br>Error H8636 occurs when executing the EBRead instruction and error H8637 occurs when executing the EBWrite instruction. The contents are the same. |

## L8637

| | |
|---|---|
| Error message | Failure in writing data(EBWrite) |
| Cause | Specified tag name, data type, or value is illegal. |
| Measures | Please check the tag name, the data type, and the value.<br>In In-Sight Explorer, any of the following conditions may exist.<br>• The specified tag name does not exist.<br>• "Use English Symbolic Tags for EasyBuilder" is not selected.<br>To check whether the above item is selected, use the following procedure.<br>Click "System" in the menu bar, and then click "Options" to open the Options window. Click "User Interface".<br>Select "Use English Symbolic Tags for EasyBuilder" if necessary, click "Apply" and then "OK".<br>Recreate the vision program (job).<br>If the same error still occurs after checking "Use English Symbolic Tags for EasyBuilder", read the job data of the vision sensor and save it again.<br>Error H8636 occurs when executing the EBRead instruction and error H8637 occurs when executing the EBWrite instruction. The contents are the same. |

## L8640

| | |
|---|---|
| Error message | The image trigger is abnormal |
| Cause | The trigger setting of the vision sensor is abnormal |
| Measures | Please check the trigger setting |

## L8650

| | |
|---|---|
| Error message | Please make the vision online |
| Cause | The vision sensor is off-line |
| Measures | Please make vision sensor online |

## L8660

| | |
|---|---|
| Error message | There is no authority |
| Cause | The authority of the user-name is not a full access |
| Measures | Please check user name |

## L8670

| | |
|---|---|
| Error message | Can not restart |
| Cause | It started without resetting it |
| Measures | Please reset the program |

## L8680

| | |
|---|---|
| Error message | Unknown code was received (code no.) |
| Cause | Status code of unregistration was received from vision sensor.<br>(Status cord which is not registered with robot controller was received.) |
| Measures | The status code received from vision sensor is displayed to the code no..<br>When the code no. is not the numerical value, there is a possibility which received abnormal data.<br>Please check the communication state, the communication setting, and the command argument. |

## L8700

CR800-R/Q series only

| | |
|---|---|
| Error message | Multi CPU system self-check error |
| Cause | Illegal parameter of multi CPU system and CPU is abnormal,etc. |
| Measures | Confirm details and measures of the error with GX Developer etc. |

## L8710

| | |
|---|---|
| Error message | PC I/O module parameter(m) error.<br>(m): Target parameter numbers 1-4. (correspond to QXYUNIT 1-4) |
| Cause | An illegal setting of the PC I/O module was detected. |
| Measures | Please check the value of parameter. |

## L8720

| | |
|---|---|
| Error message | Fuse is blown.(PC I/O module (m)).<br>(m): Target parameter numbers 1-4. (correspond to QXYUNIT 1-4) |
| Cause | Fuse is blown.(PC I/O module) |
| Measures | Please refer to the manual of PC I/O module. |

## L873n

n: Parameter number

| | |
|---|---|
| Error message | I/O module (m) remove error.<br>(m): Target parameter numbers 1-4. (correspond to QXYUNIT 1-4) |
| Cause | PC I/O module was removed. |
| Measures | Please mount PC I/O module. |

## H8740

| | |
|---|---|
| Error message | Controller init communication error |
| Cause | Initial communication with the controller was not possible |
| Measures | Check the communication cable connection |

## H8741

| | |
|---|---|
| Error message | CPU unit init communication error |
| Cause | Initial communication with the CPU unit was not possible |
| Measures | Check the communication cable connection |

## H8751

| | |
|---|---|
| Error message | Controller communication error |
| Cause | Communication from the controller was cut off |
| Measures | Check the communication cable connection |

## H8752

| | |
|---|---|
| Error message | CPU unit communication error |
| Cause | Communication from the CPU unit was cut off |
| Measures | Check the communication cable connection |

## H8760

| | |
|---|---|
| Error message | PLC CPU parameters are not set |
| Cause | Fixed Scan Communication Area is not set in the PLC CPU |
| Measures | Please set the Fixed Scan Communication Area in the PLC CPU |

## H8761

| | |
|---|---|
| Error message | CPU number setting is illegal |
| Cause | The setting of CPU number is different |
| Measures | Please check PLC's multi CPU setting and QMLTCPUN parameter |

## H8762 *

| | |
|---|---|
| Error message | Multi CPU parameter setting is illegal |
| Cause | The multi CPU parameter setting is incorrect. |
| Measures | Synchronization processing in the robot CPU was not properly performed due to the incorrect multi CPU parameter setting. Please check and correct the value of the multi CPU parameter setting, and then turn the power OFF and ON once. |

## H877n

n: Refer to "Cause"

| | |
|---|---|
| Error message | Controller communication error |
| Cause | Communication error was detected from controller<br>When n is any of 1 to 8: Axis number<br>When n is 9: Force sensor<br>When n is 0: Other than the above |
| Measures | Check the communication cable connection |

## H878n

n: Refer to "Cause"

| | |
|---|---|
| Error message | CPU unit communication error |
| Cause | Communication error was detected from the CPU unit<br>When n is any of 1 to 8: Axis number<br>When n is 9: Force sensor<br>When n is 0: Other than the above |
| Measures | Check the communication cable connection |

## H8790

| | |
|---|---|
| Error message | Controller error reset error |
| Cause | Can not reset controller error |
| Measures | Check the communication cable connection |

# H8800 *

One of the errors below is detected. Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | ASIC communication error |
| Cause | A failure was detected in the communication within the controller.<br>The internal temperature of the controller may be high.<br>For the CR800-R/Q series, the following conditions may also be the cause.<br>• The power on timing may be incorrect.<br>• The cable between the controller and the robot CPU may have a fault. |
| Measures | Check that the controller filter has no clogging and the ambient temperature is 40°C or less. If the error persists after taking above measures, contact the manufacturer.<br>For the CR800-R/Q series, power on the robot controller and then the robot CPU. Check the cable connection between the robot CPU and the controller. |
| Error message | ASIC CRC error |
| Cause | A failure was detected in the communication within the controller.<br>The internal temperature of the controller may be high.<br>For the CR800-R/Q series, the following conditions may also be the cause.<br>• The power on timing may be incorrect.<br>• The cable between the controller and the robot CPU may have a fault. |
| Measures | Check that the controller filter has no clogging and the ambient temperature is 40°C or less. If the error persists after taking above measures, contact the manufacturer.<br>For the CR800-R/Q series, power on the robot controller and then the robot CPU. Check the cable connection between the robot CPU and the controller. |
| Error message | ASIC short frame error |
| Cause | A failure was detected in the communication within the controller.<br>The internal temperature of the controller may be high.<br>For the CR800-R/Q series, the following conditions may also be the cause.<br>• The power on timing may be incorrect.<br>• The cable between the controller and the robot CPU may have a fault. |
| Measures | Check that the controller filter has no clogging and the ambient temperature is 40°C or less. If the error persists after taking above measures, contact the manufacturer.<br>For the CR800-R/Q series, power on the robot controller and then the robot CPU. Check the cable connection between the robot CPU and the controller. |
| Error message | ASIC overrunning error |
| Cause | A failure was detected in the communication within the controller.<br>The internal temperature of the controller may be high.<br>For the CR800-R/Q series, the following conditions may also be the cause.<br>• The power on timing may be incorrect.<br>• The cable between the controller and the robot CPU may have a fault. |
| Measures | Check that the controller filter has no clogging and the ambient temperature is 40°C or less. If the error persists after taking above measures, contact the manufacturer.<br>For the CR800-R/Q series, power on the robot controller and then the robot CPU. Check the cable connection between the robot CPU and the controller. |
| Error message | ASIC connector connection error |
| Cause | A failure was detected in the communication within the controller.<br>The internal temperature of the controller may be high.<br>For the CR800-R/Q series, the following conditions may also be the cause.<br>• The power on timing may be incorrect.<br>• The cable between the controller and the robot CPU may have a fault. |
| Measures | Check that the controller filter has no clogging and the ambient temperature is 40°C or less. If the error persists after taking above measures, contact the manufacturer.<br>For the CR800-R/Q series, power on the robot controller and then the robot CPU. Check the cable connection between the robot CPU and the controller. |
| Error message | ASIC 0byte transmission |
| Cause | A failure was detected in the communication within the controller.<br>The internal temperature of the controller may be high.<br>For the CR800-R/Q series, the following conditions may also be the cause.<br>• The power on timing may be incorrect.<br>• The cable between the controller and the robot CPU may have a fault. |
| Measures | Check that the controller filter has no clogging and the ambient temperature is 40°C or less. If the error persists after taking above measures, contact the manufacturer.<br>For the CR800-R/Q series, power on the robot controller and then the robot CPU. Check the cable connection between the robot CPU and the controller. |

## H8810

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Communication error |
| Cause | Error occurred by the data transmission to the servo |
| Measures | Check the communication cable connection. Check that there is not a source of noise. |
| Error message | Illegal ID |
| Cause | ID of the com. data with the servo is not corresponding |
| Measures | Turn the power OFF and ON once |

## H8820

| | |
|---|---|
| Error message | Communication timeout |
| Cause | The communication with the servo became a timeout |
| Measures | Turn the power OFF and ON once |

## H8830

One of the errors below is detected.

Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Amplifier unconnection |
| Cause | The servo amplifier cannot be detected |
| Measures | Check the cable connection and the power supply of amp. |
| Error message | Servo axis setting error |
| Cause | The axis setting is not correct |
| Measures | Check the servo axis settings (parameters, rotary switches) |
| Error message | Uncorrespondence amplifier |
| Cause | Uncorrespondence amplifier is connected |
| Measures | Remove the uncorrespondence amplifier |
| Error message | Uncorrespondence protocol |
| Cause | The communication protocol which does not correspond |
| Measures | Remove the uncorrespondence amplifier |
| Error message | Illegal motor ID |
| Cause | Uncorrespondence motor is connected |
| Measures | Remove the uncorrespondence motor |
| Error message | Parameter setting failure |
| Cause | A set value of the servo parameter is illegal |
| Measures | Change to a correct value |
| Error message | Illegal amp. number |
| Cause | The number of connected amplifiers is not suitable |
| Measures | Check the number of connected amplifiers |

## H887n

One of the errors below is detected. Please take measures corresponding to an error message.

| | |
|---|---|
| Error message | Transient processing error |
| Cause | Illegal demand data was transmitted |
| Measures | Turn the power OFF and ON once. If it comes back, contact to your service provider. |
| Error message | Transient processing timeout |
| Cause | There is no response to the demand from servo |
| Measures | Turn the power OFF and ON once. If it comes back, contact to your service provider. |

## L8910

| | |
|---|---|
| Error message | Function uncorrespondence |
| Cause | This robot cannot use this function. |
| Measures | Do not use this function. |

## H8920

| | |
|---|---|
| Error message | Sensor I/F unit error (**)<br>Note) "**" is substituted with the "sensor I/F unit error No." (2 hexadecimal digits) |
| Cause | An error occurred at the force sensor interface unit. |
| Measures | Refer to the following page based on the error No. in the Err. Message.<br>☞ Page 142 Force sense interface unit errors |

## C8921

| | |
|---|---|
| Error message | Sensor I/F unit warning (**)<br>Note) "**" is substituted with the "sensor I/F unit warning No." (2 hexadecimal digits) |
| Cause | A warning occurred at the force sensor interface unit. |
| Measures | Refer to the following page based on the error No. in the Err. Message.<br>☞ Page 142 Force sense interface unit errors |

## C8940

| | |
|---|---|
| Error message | Inexecutable on configure state |
| Cause | Inexecutable during configuration operations |
| Measures | Finish the configuration operation and try again. |

## H9000 to H9099

| | |
|---|---|
| Error message | User High level error |
| Cause | A high-level alarm was issued from the robot program. |
| Measures | Check the program. |

## L9100 to L9199

| | |
|---|---|
| Error message | User Low level error |
| Cause | A low-level alarm was issued from the robot program. |
| Measures | Check the program. |

## C9200 to C9299

| | |
|---|---|
| Error message | User Caution level error |
| Cause | A warning was issued from the robot program. |
| Measures | Check the program. |

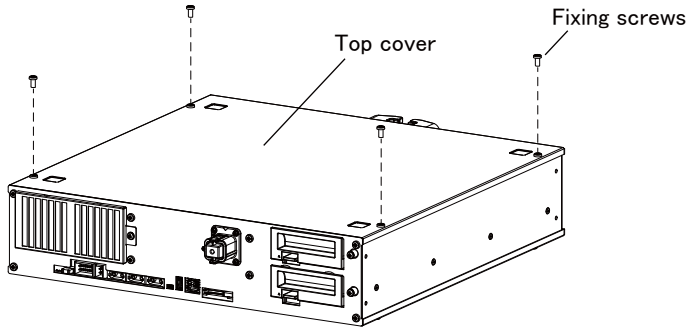
# APPENDIX

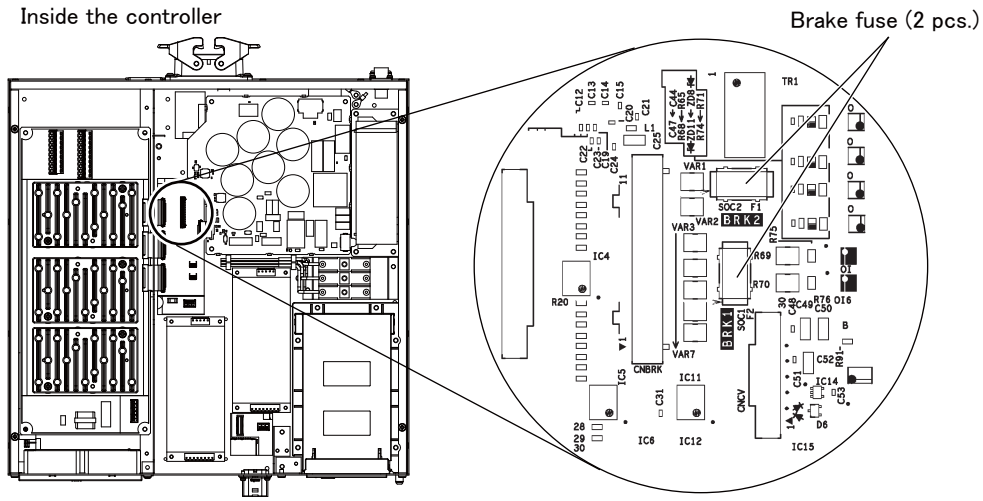
## Appendix 1 Place where fuse replacement is required

### Place where a brake fuse replacement is required.

Remove the top cover of the controller and replace the fuse (LM20) of the servo CPU board (DQ865n).

Remove the four top cover fixing screws (M4 x 8), and remove the top cover.

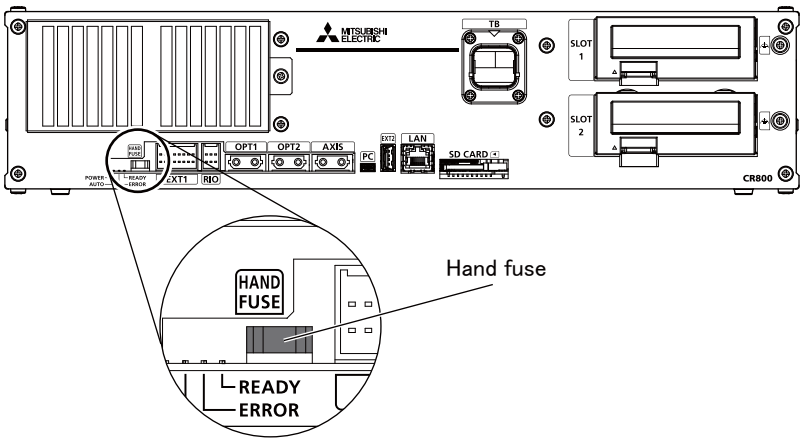



### Place where hand fuse replacement is required

Replace the fuse (LM16) of HAND FUSE at the front of the controller.

Front of the controller

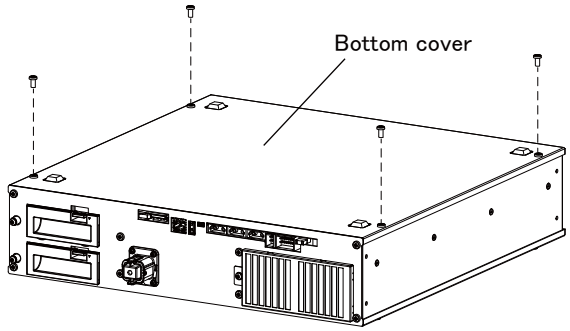


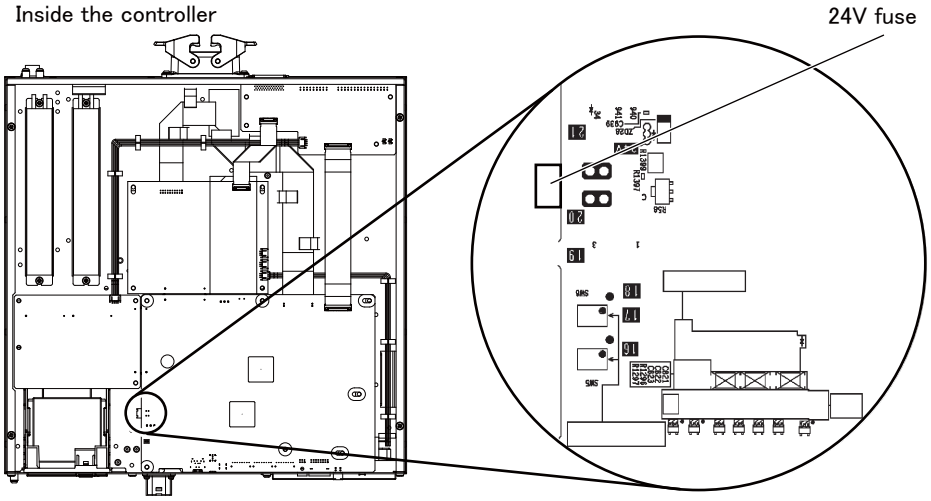

A

# Place where fuse replacement is required.

Remove the bottom cover of the controller and replace the fuse (LM40) of the CPU board (DQ171n).

Remove the four bottom cover fixing screws (M4 x 8), and remove the base plate.

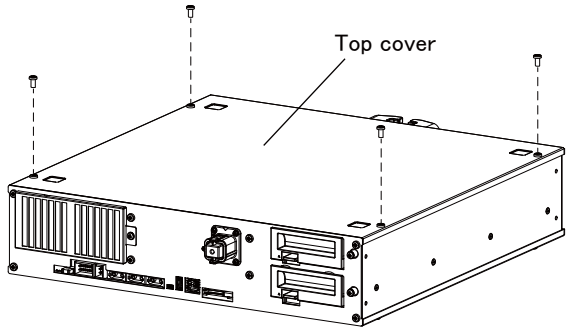


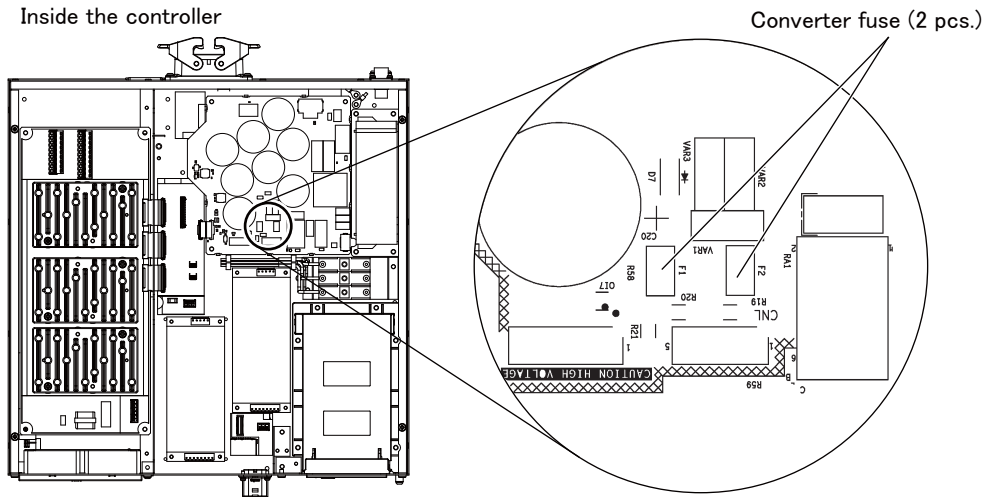



# Place where a converter fuse replacement is required

Remove the top cover of the controller and replace the fuse (HM16) of the converter board (DQ801n).

Remove the four top cover fixing screws (M4 x 8), and remove the top cover.




A

# Appendix 2 Troubles and measures

| No. | Category | Description |
|---|---|---|
| 1 | Issue | An unusual noise can be heard (from the robot arm). |
| | Cause | • Unusual noises can be caused by friction between movable parts, deformed parts, foreign matters getting inside, and defects in belt tension.<br>An unusual noise is also made from the fan and the cover bolts became loosened. |
| | Measures | • Identify the particular point from where the unusual noise is being made, and where necessary treat the problem by replacing parts, etc.<br>• When operating at slow speeds, a rattling sound can be heard from the brakes, but this is not unusual. However, if the noise gets louder as the speed gets higher, contact the manufacturer. |
| 2 | Issue | An unusual noise can be heard (from RC) |
| | Cause | • A noise is made as the internally mounted fan and its casing resonate.<br>• A noise is made by the fan catching internal wiring. |
| | Measures | • Check the state of the cover fastening.<br>• Check to see whether or not the fan is interfering with cables, etc.<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |
| 3 | Issue | The tip of the robot is vibrating. |
| | Cause | • The load conditions exceed the specified values (mass, inertia)<br>• The load condition settings are not suitable (HNDDAT and WRKDAT settings are not consistent with the load)<br>• The tip is being used near a singular point.<br>• Acceleration or deceleration is too sudden.<br>• The installation stand is not rigid enough.<br>• Vibrations from nearby equipment are being felt. |
| | Measures | • Check the load conditions and parameter settings. If needed, change the acceleration/deceleration time (command: Accel), speed (command: Ovrd), or teaching positions. For further information, refer to CR800 Series Controller Instruction Manual: Detailed explanations of functions and operations.<br>• Check the condition of the unit's installation (including external vibrations).<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |
| 4 | Issue | The servo-on cannot be performed |
| | Cause | • A servo OFF signal (SRVOFF) is being input from an external source.<br>• The operating right is not given. (IOENA parameters settings/exclusive input and output).<br>• An error is occurring.<br>• TB operation error (enabling switch, activate/deactivate) |
| | Measures | • Check for a servo OFF signal and check the operation rights.<br>• Check how to operate the TB. Check that the 3 position enabling switch is set to the middle position.<br>• If an error message is occurring please cancel it.<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |
| 5 | Issue | In automatic drive mode the system does not start up even if a startup signal is input.<br>The robot stops during automatic drive. |
| | Cause | • A stop signal (STOP/STOP2/SKIP) is being input from an external source.<br>• The operating right is not given. (IOENA parameters settings/exclusive input and output).<br>• An error is occurring.<br>• A start signal (START) has not been input.<br>• The slot attribute settings are not set to START.<br>• The program's operation commands have not been executed. |
| | Measures | • Check for a stop/startup signals and check the operation rights.<br>• Check the attributes of the program.<br>• With the robot stopped, check the status of the operation program's execution.<br>• If an error message is occurring please cancel it.<br>In no improvement is made after carrying out the above measures, please contact the manufacturer. |

| No. | Category | Description |
|---|---|---|
| 6 | Issue | The position becomes offset during automatic drive.<br>The position becomes offset after moving the equipment. |
| | Cause | • Program error (arithmetic processing, etc.).<br>• Teaching operation error.<br>• Peripheral equipment is offset.<br>• There is a setting error in the origin position data.<br>• The origin position data has been lost (battery life, etc.).<br>• Origin positions are offset (the arm was moved while the power supply was OFF, etc.)<br>• Connecting parts have come loose.<br>• Belt teeth have been skipped.<br>• Increased backlash from the reduction gear. |
| | Measures | • Check the positioning data in the area where the positioning has become offset.<br>• Check the peripheral equipment and the robot's connecting parts (hand, robot installation section, etc.)<br>• Check the remaining time on the robot battery's life.<br>• Check the position of the origin positions.<br>• Check the condition of the belt.<br>• Check whether there is any nearby interference, etc.<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |
| 7 | Issue | The leakage current breaker trips when the controller's primary power switch is turned ON.<br>The leakage current breaker trips when the servo is switched on. |
| | Cause | • Incorrect breaker selection (current capacity/drive purpose, etc.).<br>• Leakage current due to electrically conductive foreign matters (oil/moisture) getting inside.<br>• Earthing due to cable wear. |
| | Measures | • Check the specification of the breaker.<br>• Check whether or not electrically conductive foreign matters have got inside the robot's body or inside the controller.<br>• Check whether or not the cable is damaged. |
| 8 | Issue | Oil is leaking from the robot's body |
| | Cause | • Deterioration in the reducer oil seal.<br>• Too much grease was applied.<br>• A grease other than the specified grease was applied.<br>• Excess grease left on the unit when grease was applied.<br>• Foreign materials have stuck to the oil seal (dust, etc.). |
| | Measures | • Check the amount of grease that should be applied and the name and product number of the grease.<br>• Take measures to make sure that dust, etc. does not adhere to joints.<br>• After applying grease wipe off any grease that is protruding. |
| 9 | Issue | Breaker trips/overcurrent error occurs<br>(cutting oil gets inside the robot body) |
| | Cause | • Deterioration in the packing.<br>• Scaling on the packing.<br>• Using a highly permeable cutting oil.<br>• An environment that exceeds the IP functionality. |
| | Measures | • In a mist environment, pull off and replace the packing every time the cover is removed.<br>• If a highly permeable cutting fluid is being used, or in an environment that exceeds the IP functionality, purge the air and take measures on the jacket.<br>* Cutting oil that has got inside the arm must be thoroughly cleaned away or the components inside the arm are at risk of rotting. |
| 10 | Issue | The hand does not move properly (air hand) |
| | Cause | • An air leak/break in the piping.<br>• The solenoid bulb has failed.<br>• Wire breakage on the hand signal line.<br>• Hand signal line short circuit<br>• The hand IF card has failed or has been inserted incorrectly.<br>• Sink/source setting error.<br>• Hand connecting wire error<br>• Insufficient air pressure.<br>• A foreign material has got stuck in the air hose.<br>• Faulty connection in the cables that run between devices. |
| | Measures | • Carry out a check on the air hose, joints, air pressure, and connecting wire.<br>• Check the condition of the hand input/output signal.<br>• Check whether or not the controller's sink/source settings and wiring are consistent with each other.<br>• Check the condition of the connections on the cables that run between devices.<br>In the event that no improvement is made after carrying out the above measures, please contact the manufacturer. |

| No. | Category | Description |
|---|---|---|
| 11 | Issue | The hand does not move properly<br>The hand operation screen is not displayed on the TB<br>(Electric operated hand) |
| | Cause | • Wire breakage on the hand signal line.<br>• The electronic hand controller (manufactured by TAIYO Ltd.) has failed.<br>• Faulty connection in the cables that run between devices.<br>• The software version on the TB and robot controller is not compatible with the electric operated hand.<br>• The user is trying to use the electric operated hand on a model that is not compatible with the electric operated hand. |
| | Measures | • Check the connections.<br>• Check the condition of the hand input/output signal.<br>• Check the mating condition of the cables that run between devices.<br>• Check whether the software version is compatible or not.<br>• Check the model compatibility.<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |
| 12 | Issue | The hand does not move properly<br>The hand operation screen is not displayed on the TB<br>(Multi hand) |
| | Cause | • An air leak/break in the piping.<br>• The solenoid valve has failed.<br>• Wire breakage on the hand signal line.<br>• The multi hand dedicated circuit has failed.<br>• Insufficient air pressure.<br>• A foreign material has got stuck in the air hose.<br>• Faulty connection in the cables that run between devices.<br>• Wire breakage on the hand signal line.<br>• The software version on the TB and robot controller is not compatible with the multi hand.<br>• The user is trying to use the multi hand on a model that is not compatible with the multi hand. |
| | Measures | • A check on the air hose, joints, air pressure, and connections.<br>• Check the condition of the hand input/output signal.<br>• Check the connections.<br>• Check the mating condition of the cables that run between devices.<br>• Check whether the software version is compatible or not.<br>• Check the model compatibility.<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |
| 13 | Issue | Brake is not working properly |
| | Cause | [Occurs only when operating manually]<br>• T/B operation error.<br>[Occurs when operating manually and automatically]<br>• Faulty connection of the cables that run between devices.<br>• Brake failure. |
| | Measures | [Occurs only when operating manually]<br>• Check the T/B operation (operation buttons, 3 position enabling switch, etc.).<br>[Occurs when operating manually and automatically]<br>• Check the mating of the cables that run between devices.<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |
| 14 | Issue | The communication fault occurs by the equipment connected to the Ethernet cable inside the robot arm. |
| | Cause | • The Ethernet cable is not connected surely.<br>• There are the device etc. which cause the noise and the noise has applied to the Ethernet cable. |
| | Measures | • Confirm that the Ethernet cable is connected surely.<br>• If the effect by the noise can be considered, find out the noise source and remove the noise. Moreover, adds the grounding and ferrite core of the Ethernet cable if needed.<br>Recommendation ferrite core: E04SR301334 (SEIWA ELECTRIC MFG. Co.,Ltd.) |
| 15 | Issue | The T/B does not display anything. |
| | Cause | • The fuse installed in the controller may have blown out. For the fuse blowout, there may be a ground fault or short circuit in the T/B cable.<br>• The T/B might be out of order. |
| | Measures | • Investigate and correct the ground fault or short circuit portion in the wiring made by the customer.<br>If no improvement is made after carrying out the above measures, please contact the manufacturer. |

# Appendix 3 Errors involving change in specification

The specification of the following errors changes when the safety monitoring function used in the robot safety option is enabled.

For the RV-5AS, safety monitoring functions are enabled.

To reset the following errors while the safety monitoring function is enabled, reset the power supply.

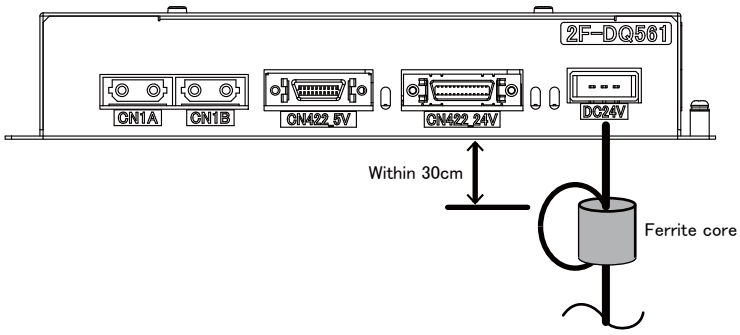
| Error | Error message |
|---|---|
| H0039 | Door Switch Signal line is faulty. |
| H0046 | Faulty wiring (Mode sel. switch). |
| H0049 | Faulty Line (T/B Enable Switch) |
| H0051 | Wiring of the external emergency stop is abnormal. |
| H0061 | EMG line is faulty.(O.Panel) |
| H0071 | EMG line is faulty.(T.Box) |
| H0074 | Faulty line (T/B Enable/Disable). |
| H1680 | Cannot servo ON (timeout) |
| H1681 | Unexpected servo OFF |
| H1682 | Servo ON Timeout (Safety relay). |
| H1683 | Servo ON Timeout. (Contactor) |

# Appendix 4 Force sense interface unit errors

The errors of the force sense interface unit used in the force sense function option.

| Error No. (Name) | Cause | Remedy |
|---|---|---|
| 12 (memory error) | Force sense interface unit internal part fault | Replace the unit. |
| 13 (S/W processing error) | | |
| 21 (sensor initial communication error) | 1) The force sensor connection cable is disconnected.<br>2) The force sensor connection cable is damaged.<br>3) Noise contamination occurred. | 1) Connect the cable.<br>2) Replace the cable.<br>3) Perform noise countermeasures.*1 |
| 25 (sensor communication error) | | |
| 34 (communication data error) | 1) The SSCNET III cable is disconnected.<br>2) The SSCNET III cable end face is dirty.<br>3) The SSCNET III cable is damaged.<br>4) Noise contamination occurred. | 1) Connect after turning OFF the power.<br>2) Wipe any dirt from the end face.<br>3) Replace the cable.<br>4) Perform noise countermeasures.*1 |
| 36 (communication error) | | |
| 38 (communication frame error) | | |
| 39 (communication axis information error) | | |
| 37 (parameter error) | The parameter value sent from the robot controller at the power-on is incorrect. | Correct the setting value of parameter FSFLCTL. |
| 88 (watchdog) | The robot controller does not operate normally. | 1) Turn on the power supply of the robot controller again.<br>2) If it comes back, contact to your service provider. |
| E4 (parameter warning) | The input value of the parameter is incorrect. | Correct the value input in parameter FSFLCTL. |

*1 Measures against noise are as follows. Take appropriate measures for the usage environment. You do not always have to take all the measures. Perform them as necessary.
1) Install a noise filter on the power supply of peripheral equipment.
2) Add a ferrite core to the 24 V power supply output cable. (Refer to the following figure.)
Install the ferrite core properly to avoid weighting the cable and connector.



# MEMO

# REVISIONS

*The manual number is given on the bottom left of the back cover.

| Revision date | *Manual number | Description |
|---|---|---|
| May 2017 | BFP-A3480 | • First print |
| June 2017 | BFP-A3480-A | • Errors were added.<br>H0315, H0316, H0317, L2660, L2661, L2662, H2663, L6011, H7860, H8740, H8741, H8751, H8752, H8760, H8761, H8770, H8780, H8790<br>• Measures of error H887n were changed. |
| September 2017 | BFP-A3480-B | • Supplementary explanation were added to measures of error C0152 and H0083. |
| February 2018 | BFP-A3480-C | • Descriptions about the CR800-Q controller were added. |
| September 2018 | BFP-A3480-D | • Supplementary explanation were added to measures of error C0152. |
| October 2018 | BFP-A3480-E | • Supplementary explanation were added to measures of error L2611. |
| December 2018 | BFP-A3480-F | • Added further explanation of the ACIN cable. |
| April 2019 | BFP-A3480-G | • Errors were added.<br>L2804, H6100, H6101, H6110, H6111, H6120, H6130, H6140, H6190, H8410, H8420, H8421, H8430, H8440, H8441, H8442, H8450, H8451, L8460, H8470, H8471, H8472, H8473, C8490, H8491, H8492, H8493, H8494, H8500, H8501, H8502, H8503, H8504, H8505, H8506, H8507, H8510, H8520, H8530, H8540, H8550, H8560, H8570, H8580, L8637<br>• Corrected error No.<br>L873n, L877n, L878n<br>• Measures of error L8622 were changed. |
| January 2020 | BFP-A3480-H | • Errors were added.<br>C0023, C0024, L3510, C7091, L8910 |
| April 2020 | BFP-A3480-J | • Added information for the RV-5AS.<br>• Deleted the cautions for the basic system structure.<br>• Errors were added.<br>H0035, H0214, C0215, H0216, C0217, L2920, L2921, L2922, C2923, L2924, H2925, H7100<br>• Revised "No.3" in section "2.3 Troubles and measures". |
| October 2020 | BFP-A3480-K | • Amended the precautions regarding the prevention of unauthorized access.<br>• Elaborated on and improved explanations.<br>H0039, L240n, L241n, L2611, H2760, L2810, L3141, L4937, L6641, L6650, H766n, L8636, L8637<br>• Added error numbers H0076 and C1870.<br>• Deleted error number H0048.<br>• Revised error level. (H6130 → L6130)<br>• Corrected other mistakes and changed some sections. |
| February 2021 | BFP-A3480-M | • Added solution for error L3256. |
| April 2021 | BFP-A3480-N | • Errors were added.<br>C0244, C0245, H0246, H0247, H0248, H0249, H0250, H0251, H0252, H0253, H0254, H0255, H0256, L3880, H8290, H8291, H8292, H8250, H8252, H8253, H8254, H8257, H8270<br>• Revised error number H7810. |
| September 2021 | BFP-A3480-P | • Corrected other mistakes and changed some sections. |
| February 2022 | BFP-A3480-R | • Software version C2d supported.<br>Added error number C0330.<br>• Corrected other mistakes. |
| March 2022 | BFP-A3480-S | • Added supplementary explanation to countermeasures for errors H0216, C0217, and H231n. |
| June 2022 | BFP-A3480-T | • Added error number C198n. |
| November 2022 | BFP-A3480-U | • Added the following error numbers.<br>C6201, C6202, L6203, L6204, L6205, H6206, H6207, L6208, L6209, L6210, C6211, C6212, C6213, C6214, C6216, C6219, C6220, C6221, C6222, C6225, H6226, C6227, C6228, C6229, C6230, C6231, C6232, C6236, C6238, C6239, C6240, C6241, C6242, H6243, C6244, C6245, C6246, C6247, C6248, C7880, C7881, C7882<br>• Elaborated on the countermeasure for H1601.<br>• Corrected other mistakes and changed some sections. |
| April 2023 | BFP-A3480-V | • Corrected an error number. (H1100 → H110n)<br>• Added countermeasures for error H115n. |

| Revision date | *Manual number | Description |
|---|---|---|
| September 2023 | BFP-A3480-W | • Added the CR860 controller.<br>• Edited SAFETY PRECAUTIONS and INTRODUCTION.<br>• Added the following error numbers.<br>H0059, H0060, H0118, H0119, H1495, H8940<br>• Corrected error messages and causes for the following error numbers.<br>L6011, H8740, H8751, H877n, H8790<br>• Corrected measures for the following error numbers.<br>H0041, H0130, H096n, H108n, H1090, H109n, H1490<br>• Added measures for errors H081n, H0850, and H0260.<br>• Corrected the cause of error C6090.<br>• Corrected causes and measures for errors H0050, H0061, and H8800.<br>• Corrected the explanation of error L8700.<br>• Corrected other mistakes and changed some sections. |
| February 2024 | BFP-A3480-X | • Corrected the cause of the following error numbers:<br>H0100, L0101, and C0102.<br>• Corrected the measure for error C1940.<br>• Deleted "Appendix 2 Fan installation place of robot controller". |

# TRADEMARKS

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BFP-A3480-X(2402)MEE

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