

6.2 List of fault or alarm indications



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6.3 Causes and corrective actions

(1) Error message

A message regarding operational troubles is displayed. Output is not shutdown.


Operation panel indication	HOLD	HOLD
Name	Operation panel lock	
Description	Operation lock mode is set. Operation other than  is invalid. (Refer to page 225)	
Check point	—	
Corrective action	Press  for 2s to release lock.	

Operation panel indication	LOCD	LOCD
Name	Password locked	
Description	Password function is active. Display and setting of parameter is restricted.	
Check point	—	
Corrective action	Enter the password in Pr. 297 Password lock/unlock to unlock the password function before operating. (Refer to page 199).	

Operation panel indication	Er1	Er 1
Name	Write disable error	
Description	<ul style="list-style-type: none"> You attempted to make parameter setting when Pr. 77 Parameter write selection has been set to disable parameter write. Frequency jump setting range overlapped. 	
Check point	<ul style="list-style-type: none"> Check the setting of Pr. 77 Parameter write selection. (Refer to page 196). Check the settings of Pr. 31 to Pr. 36 (frequency jump). (Refer to page 125) 	


Operation panel indication	Er2	Er 2
Name	Write error during operation	
Description	When parameter write was performed during operation with a value other than "2" (writing is enabled independently of operation status in any operation mode) is set in Pr. 77 and the STF (STR) is ON.	
Check point	<ul style="list-style-type: none"> Check the Pr. 77 setting. (Refer to page 196). Check that the inverter is not operating. 	
Corrective action	<ul style="list-style-type: none"> Set "2" in Pr. 77. After stopping operation, make parameter setting. 	


Operation panel indication	Er4	Er 4
Name	Mode designation error	
Description	Appears if a parameter setting is attempted in the NET operation mode with Pr. 77 ≠ "2".	
Check point	<ul style="list-style-type: none"> Check that operation mode is PU operation mode. Check the Pr. 77 setting. (Refer to page 196). 	
Corrective action	<ul style="list-style-type: none"> After setting the operation mode to the "PU operation mode", make parameter setting. (Refer to page 103) After setting Pr. 77 = "2", make parameter setting. 	





Operation panel indication	Err.	Err.
Name	Inverter reset	
Description	<ul style="list-style-type: none"> Appears at the execution of a reset command, which is given via CC-Link communication or from  on the operation panel. Appears at powering OFF. 	
Corrective action	<ul style="list-style-type: none"> Turn OFF the reset command 	

(2) Warning


When a warning occurs, the output is not shut off.


Operation panel indication	OL	
Name	Stall prevention (overcurrent)	
Description	During acceleration	When the output current (output torque when <i>Pr. 277 Stall prevention current switchover = "1"</i>) of the inverter exceeds the stall prevention operation level (<i>Pr. 22 Stall prevention operation level, etc.</i>), this function stops the increase in frequency until the overload current decreases to prevent the inverter from resulting in overcurrent trip. When the overload current has reduced below stall prevention operation level, this function increases the frequency again.
	During constant-speed operation	When the output current (output torque when <i>Pr. 277 Stall prevention current switchover = "1"</i>) of the inverter exceeds the stall prevention operation level (<i>Pr. 22 Stall prevention operation level, etc.</i>), this function reduces frequency until the overload current decreases to prevent the inverter from resulting in overcurrent trip. When the overload current has reduced below stall prevention operation level, this function increases the frequency up to the set value.
	During deceleration	When the output current (output torque when <i>Pr. 277 Stall prevention current switchover = "1"</i>) of the inverter exceeds the stall prevention operation level (<i>Pr. 22 Stall prevention operation level, etc.</i>), this function stops the decrease in frequency until the overload current decreases to prevent the inverter from resulting in overcurrent trip. When the overload current has decreased below stall prevention operation level, this function decreases the frequency again.
Check point	<ul style="list-style-type: none"> • Check that the <i>Pr. 0 Torque boost</i> setting is not too large. • Check that the <i>Pr. 7 Acceleration time</i> and <i>Pr. 8 Deceleration time</i> settings are not too small. • Check that the load is not too heavy. • Are there any failure in peripheral devices? • Check that the <i>Pr. 13 Starting frequency</i> is not too large. • Check that the <i>Pr. 22 Stall prevention operation level</i> is appropriate 	
Corrective action	<ul style="list-style-type: none"> • Increase or decrease the <i>Pr. 0 Torque boost</i> setting 1% by 1% and check the motor status. (<i>Refer to page 113</i>) • Set a larger value in <i>Pr. 7 Acceleration time</i> and <i>Pr. 8 Deceleration time</i>. (<i>Refer to page 135</i>) • Reduce the load weight. • Try Advanced magnetic flux vector control and General-purpose magnetic flux vector control. • Change the <i>Pr. 14 Load pattern selection</i> setting. • Set stall prevention operation current in <i>Pr. 22 Stall prevention operation level</i>. (The initial value is 150%.) The acceleration/deceleration time may change. Increase the stall prevention operation level with <i>Pr. 22 Stall prevention operation level</i>, or disable stall prevention with <i>Pr. 156 Stall prevention operation selection</i>. (Operation at OL occurrence can be selected using <i>Pr. 156</i>.) 	


Operation panel indication	oL	
Name	Stall prevention (overvoltage)	
Description	During deceleration	<ul style="list-style-type: none"> • If the regenerative energy of the motor becomes excessive to exceed the regenerative energy consumption capability, this function stops the decrease in frequency to prevent overvoltage trip. As soon as the regenerative energy has reduced, deceleration resumes.
		<ul style="list-style-type: none"> • If the regenerative energy of the motor becomes excessive when regeneration avoidance function is selected (<i>Pr. 882 = 1</i>), this function increases the speed to prevent overvoltage trip. (<i>Refer to page 211</i>).
Check point	<ul style="list-style-type: none"> • Check for sudden speed reduction. • Check that regeneration avoidance function (<i>Pr. 882, Pr. 883, Pr. 885, Pr. 886</i>) is used. (<i>Refer to page 211</i>). 	
Corrective action	The deceleration time may change. Increase the deceleration time using <i>Pr. 8 Deceleration time</i> .	



Operation panel indication	PS	
Name	PU stop	
Description	Stop with  on the operation panel is set in <i>Pr. 75 Reset selection/PU stop selection</i> . (For <i>Pr. 75</i> , refer to page 194.)	
Check point	Check for a stop made by pressing  on the operation panel.	
Corrective action	Turn the start signal OFF and release with  .	



Causes and corrective actions

Operation panel indication	RB	
Name	Regenerative brake prealarm	
Description	Appears if the regenerative brake duty reaches or exceeds 85% of the <i>Pr. 70 Special regenerative brake duty</i> value. When the setting of <i>Pr. 70 Special regenerative brake duty</i> is the initial value (<i>Pr. 70</i> = "0"), this warning does not occur. If the regenerative brake duty reaches 100%, a regenerative overvoltage (E. OV_) occurs. The RBP signal can be simultaneously output with the [RB] display. To assign the RBP signal to the terminal Y0 or a virtual terminal of CC-Link communication, set "7 (positive logic) or 107 (negative logic)" in one of <i>Pr.190 to Pr.192 and Pr.313 to Pr.315 (output terminal function selection)</i> . (Refer to page 167).	
Check point	<ul style="list-style-type: none"> Check that the brake resistor duty is not high. Check that the <i>Pr. 30 Regenerative function selection</i> and <i>Pr. 70 Special regenerative brake duty</i> settings are correct. 	
Corrective action	<ul style="list-style-type: none"> Increase the deceleration time. Check that the <i>Pr. 30 Regenerative function selection</i> and <i>Pr. 70 Special regenerative brake duty</i> settings. 	

Operation panel indication	TH	
Name	Electronic thermal relay function prealarm	
Description	Appears if the cumulative value of the <i>Pr. 9 Electronic thermal O/L relay</i> reaches or exceeds 85% of the preset level. If it reaches 100% of the <i>Pr. 9 Electronic thermal O/L relay</i> setting, a motor overload trip (E. THM) occurs. The THP signal can be simultaneously output with the [TH] display. To assign the THP signal to the terminal Y0 or a virtual terminal of CC-Link communication, set "8 (positive logic) or 108 (negative logic)" in one of <i>Pr.190 to Pr.192 and Pr.313 to Pr.315 (output terminal function selection)</i> . (Refer to page 167).	
Check point	<ul style="list-style-type: none"> Check for large load or sudden acceleration. Is the <i>Pr. 9 Electronic thermal O/L relay</i> setting is appropriate? (Refer to page 142) 	
Corrective action	<ul style="list-style-type: none"> Reduce the load and frequency of operation. Set an appropriate value in <i>Pr. 9 Electronic thermal O/L relay</i>. (Refer to page 142) 	

Operation panel indication	MT	
Name	Maintenance signal output	
Description	Indicates that the cumulative energization time of the inverter has reached a given time. When the setting of <i>Pr. 504 Maintenance timer alarm output set time</i> is the initial value (<i>Pr. 504</i> = "9999"), this warning does not occur.	
Check point	The <i>Pr. 503 Maintenance timer</i> setting is larger than the <i>Pr. 504 Maintenance timer alarm output set time</i> setting. (Refer to page 217).	
Corrective action	Setting "0" in <i>Pr. 503 Maintenance timer</i> erases the signal.	

Operation panel indication	UV	
Name	Undervoltage	
Description	If the power supply voltage of the inverter decreases, the control circuit will not perform normal functions. In addition, the motor torque will be insufficient and/or heat generation will increase. To prevent this, if the power supply voltage decreases below about 115VAC (about 230VAC for 400V class), this function stops the inverter output and displays  . An alarm is reset when the voltage returns to normal.	
Check point	Check that the power supply voltage is normal.	
Corrective action	Check the power supply system equipment such as power supply.	

Operation panel indication	SA	
Name	Safety stop	
Description	Appears when safety stop function is activated (during output shutoff). (Refer to page 24)	
Check point	If the indication appears when safety stop function is not used, check that shorting wires between S1 and PC, S2 and PC are connected.	
Corrective action	<ul style="list-style-type: none"> When not using the safety stop function, short across terminals S1 and PC and across S2 and PC with shorting wire for the inverter to run. If  is indicated when across S1 and PC and across S2 and PC are both shorted while using the safety stop function (drive enabled), internal failure might be the cause. Check the wiring of terminals S1, S2 and PC and contact your sales representative if the wiring has no fault. 	

Operation panel indication	EV	E_U
Name	24V external power supply operation	
Description	Flickers when the main circuit power is not supplied and the 24V external power is supplied.	
Check point	<ul style="list-style-type: none"> • Check if the 24V external power is supplied. • Check if the power supply for the inverter (main circuit) is ON. Check if the power supply voltage is low. • Check if the jumper between terminal P/+ and P1 is removed. 	
Corrective action	<ul style="list-style-type: none"> • Turn ON the power supply for the inverter (main circuit). • If E_U appears by turning ON the power supply of the inverter (main circuit) while the external 24V power is supplied, check the power supply (for the main circuit). • Check if the jumper is installed securely between terminal P/+ and P1. 	

(3) Alarm

When an alarm occurs, the output is not shut off. You can also output an alarm signal by making parameter setting. (Set "98" in any of Pr. 190 to Pr. 192, Pr. 313 to Pr. 315 (output terminal function selection). Refer to page 167).

Operation panel indication	FN	F_n
Name	Fan alarm	
Description	For the inverter that contains a cooling fan, F _n appears on the operation panel when the cooling fan stops due to an alarm or different operation from the setting of Pr. 244 Cooling fan operation selection.	
Check point	Check the cooling fan for an alarm.	
Corrective action	Check for fan alarm. Please contact your sales representative.	

(4) Fault

When a fault occurs, the inverter trips and a fault signal is output.

Operation panel indication	E.OC1	E.OC 1
Name	Overcurrent trip during acceleration	
Description	When the inverter output current reaches or exceeds approximately 230% of the rated current during acceleration, the protective circuit is activated and the inverter trips.	
Check point	<ul style="list-style-type: none"> • Check for sudden acceleration. • Check that the downward acceleration time is not long for lifts. • Check for output short-circuit/ground fault. • Check that the Pr. 3 Base frequency setting is not 60Hz when the motor rated frequency is 50Hz. • Check if the stall prevention operation level is set too high. • Check if the fast-response current limit operation is disabled. • Check that regeneration is not performed frequently. (Check that the output voltage becomes larger than the V/F reference value at regeneration and overcurrent occurs due to the high voltage.) 	
Corrective action	<ul style="list-style-type: none"> • Increase the acceleration time. (Shorten the downward acceleration time for lifts.) • When "E.OC1" is always lit at starting, disconnect the motor once and start the inverter. If "E.OC1" is still lit, contact your sales representative. • Check the wiring to make sure that output short circuit/ground fault does not occur. • Set 50Hz in Pr. 3 Base frequency. (Refer to page 126) • Lower the setting of stall prevention operation level. • Activate the fast-response current limit operation. (Refer to page 120) • Set base voltage (rated voltage of the motor, etc.) in Pr. 19 Base frequency voltage. (Refer to page 126) 	

Operation panel indication	E.OC2	E.OC 2
Name	Overcurrent trip during constant speed	
Description	When the inverter output current reaches or exceeds approximately 230% of the rated current during constant speed operation, the protective circuit is activated and the inverter trips.	
Check point	<ul style="list-style-type: none"> • Check for sudden load change. • Check for output short-circuit/ground fault. • Check if the stall prevention operation level is set too high. • Check if the fast-response current limit operation is disabled. 	
Corrective action	<ul style="list-style-type: none"> • Keep load stable. • Check the wiring to make sure that output short circuit/ground fault does not occur. • Lower the setting of stall prevention operation level. • Activate the fast-response current limit operation. (Refer to page 120) 	

7 Causes and corrective actions

Operation panel indication	E.OC3	E.Oc3
Name	Overcurrent trip during deceleration or stop	
Description	When the inverter output current reaches or exceeds approximately 230% of the rated inverter current during deceleration (other than acceleration or constant speed), the protective circuit is activated and the inverter trips.	
Check point	<ul style="list-style-type: none"> • Check for sudden speed reduction. • Check for output short-circuit/ground fault. • Check for too fast operation of the motor's mechanical brake. • Check if the stall prevention operation level is set too high. • Check if the fast-response current limit operation is disabled. 	
Corrective action	<ul style="list-style-type: none"> • Increase the deceleration time. • Check the wiring to make sure that output short circuit/ground fault does not occur. • Check the mechanical brake operation. • Lower the setting of stall prevention operation level. • Activate the fast-response current limit operation. (<i>Refer to page 120</i>) 	

Operation panel indication	E.OV1	E.Ov1
Name	Regenerative overvoltage trip during acceleration	
Description	If regenerative energy causes the inverter's internal main circuit DC voltage to reach or exceed the specified value, the protective circuit is activated and the inverter trips. The circuit may also be activated by a surge voltage produced in the power supply system.	
Check point	<ul style="list-style-type: none"> • Check for too slow acceleration. (e.g. during downward acceleration in vertical lift load) • Check that the setting of <i>Pr. 22 Stall prevention operation level</i> is not too small. 	
Corrective action	<ul style="list-style-type: none"> • Decrease the acceleration time. • Check that regeneration avoidance function (<i>Pr. 882, Pr. 883, Pr. 885, Pr. 886</i>) is used. (<i>Refer to page 211</i>). • Set the <i>Pr.22 Stall prevention operation level</i> correctly. 	

Operation panel indication	E.OV2	E.Ov2
Name	Regenerative overvoltage trip during constant speed	
Description	If regenerative energy causes the inverter's internal main circuit DC voltage to reach or exceed the specified value, the protective circuit is activated to stop the inverter output. The circuit may also be activated by a surge voltage produced in the power supply system.	
Check point	<ul style="list-style-type: none"> • Check for sudden load change. • Check that the setting of <i>Pr. 22 Stall prevention operation level</i> is not too small. 	
Corrective action	<ul style="list-style-type: none"> • Keep load stable. • Check that regeneration avoidance function (<i>Pr. 882, Pr. 883, Pr. 885, Pr. 886</i>) is used. (<i>Refer to page 211</i>). • Use the brake resistor or brake unit as required. • Set the <i>Pr.22 Stall prevention operation level</i> correctly. 	

Operation panel indication	E.OV3	E.Ov3
Name	Regenerative overvoltage trip during deceleration or stop	
Description	If regenerative energy causes the inverter's internal main circuit DC voltage to reach or exceed the specified value, the protective circuit is activated to stop the inverter output. The circuit may also be activated by a surge voltage produced in the power supply system.	
Check point	Check for sudden speed reduction.	
Corrective action	<ul style="list-style-type: none"> • Increase the deceleration time. (Set the deceleration time which matches the moment of inertia of the load) • Longer the brake cycle. • Use regeneration avoidance function (<i>Pr. 882, Pr. 883, Pr. 885, Pr. 886</i>). (<i>Refer to page 211</i>). • Use the brake resistor or brake unit as required. 	

Operation panel indication	E.THT	E.THT
Name	Inverter overload trip (electronic thermal relay function)	
Description	If the temperature of the output transistor element exceeds the protection level under the condition that a current not less than the rated inverter current flows and overcurrent trip does not occur (230% or less), the electronic thermal relay activates to stop the inverter output. (Overload capacity 150% 60s, 200% 3s)	
Check point	<ul style="list-style-type: none"> • Check that acceleration/deceleration time is not too short. • Check that torque boost setting is not too large (small). • Check that load pattern selection setting is appropriate for the load pattern of the using machine. • Check the motor for use under overload. • Check for too high surrounding air temperature. 	
Corrective action	<ul style="list-style-type: none"> • Increase acceleration/deceleration time. • Adjust the torque boost setting. • Set the load pattern selection setting according to the load pattern of the using machine. • Reduce the load weight. • Set the surrounding air temperature to within the specifications. 	

Operation panel indication	E.THM	E.THM
Name	Motor overload trip (electronic thermal relay function) *1	
Description	The electronic thermal relay function in the inverter detects motor overheat due to overload or reduced cooling capability during constant-speed operation and pre-alarm (TH display) is output when the integrated value reaches 85% of the <i>Pr. 9 Electronic thermal O/L relay</i> setting and the protection circuit is activated to stop the inverter output when the integrated value reaches the specified value. When running a special motor such as a multi-pole motor or multiple motors, provide a thermal relay on the inverter output side since such motor(s) cannot be protected by the electronic thermal relay function.	
Check point	<ul style="list-style-type: none"> • Check the motor for use under overload. • Check that the setting of <i>Pr. 71 Applied motor</i> for motor selection is correct. (Refer to page 144). • Check that stall prevention operation setting is correct. 	
Corrective action	<ul style="list-style-type: none"> • Reduce the load weight. • For a constant-torque motor, set the constant-torque motor in <i>Pr. 71 Applied motor</i>. • Check that stall prevention operation setting is correct. (Refer to page 120). 	

*1 Resetting the inverter initializes the internal thermal integrated data of the electronic thermal relay function.

Operation panel indication	E.FIN	E.FIN
Name	Heatsink overheat	
Description	If the heatsink overheats, the temperature sensor is actuated and the inverter trips. The FIN signal can be output when the temperature becomes approximately 85% of the heatsink overheat protection operation temperature. For the terminal used for the FIN signal output, assign the function by setting "26 (positive logic) or 126 (negative logic)" in any of <i>Pr. 190 to Pr. 192, Pr. 313 to Pr. 315 (output terminal function selection)</i> . (Refer to page 167).	
Check point	<ul style="list-style-type: none"> • Check for too high surrounding air temperature. • Check for heatsink clogging. • Check that the cooling fan is not stopped (Check that F_n is not displayed on the operation panel). 	
Corrective action	<ul style="list-style-type: none"> • Set the surrounding air temperature to within the specifications. • Clean the heatsink. • Replace the cooling fan. 	

Operation panel indication	E.ILF	E.ILF
Name	Input phase loss *	
Description	Inverter trips when function valid setting (=1) is selected in <i>Pr. 872 Input phase loss protection selection</i> and one phase of the three phase power input is lost. (Refer to page 190). It may be available if phase-to-phase voltage of the three-phase power input becomes largely unbalanced.	
Check point	<ul style="list-style-type: none"> • Check for a break in the cable for the three-phase power supply input. • Check that phase-to-phase voltage of the three-phase power input is not largely unbalanced. 	
Corrective action	<ul style="list-style-type: none"> • Wire the cables properly. • Repair a break portion in the cable. • Check the <i>Pr. 872 Input phase loss protection selection</i> setting. • Set <i>Pr. 872</i> = "0" (without input phase loss protection) when three-phase input voltage is largely unbalanced. 	

* Available only for three-phase power input model.

7 Causes and corrective actions

Operation panel indication	E.OLT	E.OLT
Name	Stall prevention stop	
Description	If the output frequency has fallen to 1Hz by stall prevention operation and remains for 3s, a fault (E.OLT) appears and trips the inverter. OL appears while stall prevention is being activated. E.OLT may not occur if stall prevention (OL) is activated during output phase loss.	
Check point	<ul style="list-style-type: none"> Check the motor for use under overload. (Refer to page 121). 	
Corrective action	<ul style="list-style-type: none"> Reduce the load weight. (Check the Pr. 22 Stall prevention operation level setting.) 	

Operation panel indication	E.BE	E. bE
Name	Brake transistor alarm detection	
Description	When a brake transistor alarm has occurred due to the large regenerative energy from the motor etc., the brake transistor alarm is detected and the inverter trips. <u>In this case, the inverter must be powered OFF immediately.</u>	
Check point	<ul style="list-style-type: none"> Reduce the load inertia. Check that the frequency of using the brake is proper. 	
Corrective action	Replace the inverter.	

Operation panel indication	E.GF	E. GF
Name	Output side earth (ground) fault overcurrent at start	
Description	The inverter trips if an earth (ground) fault overcurrent flows at start due to an earth (ground) fault that occurred on the inverter's output side (load side). Whether this protective function is used or not is set with Pr. 249 Earth (ground) fault detection at start. When the setting of Pr. 249 Earth (ground) fault detection at start is the initial value (Pr. 249 = "0"), this warning does not occur.	
Check point	Check for a ground fault in the motor and connection cable.	
Corrective action	Remedy the ground fault portion.	

Operation panel indication	E.LF	E. LF
Name	Output phase loss	
Description	If one of the three phases (U, V, W) on the inverter's output side (load side) is lost during inverter operation (except during DC injection brake operation and when output frequency is under 1Hz), inverter stops the output. Whether the protective function is used or not is set with Pr. 251 Output phase loss protection selection.	
Check point	<ul style="list-style-type: none"> Check the wiring. (Check that the motor is normal.) Check that the capacity of the motor used is not smaller than that of the inverter. 	
Corrective action	<ul style="list-style-type: none"> Wire the cables properly. Check the Pr. 251 Output phase loss protection selection setting. 	

Operation panel indication	E.OP1	E.OP 1
Name	Communication option fault	
Description	This function stops the inverter output when a communication line error occurs during CC-Link communication.	
Check point	<ul style="list-style-type: none"> Check if a fault is displayed on the inverter LED display. Check if the CC-Link dedicated cable has a break in it. Check if the CC-Link dedicated cables between stations are within the specified length. (Refer to the instruction manual of CC-Link master module for the cable length between CC-Link Ver. 1.00 stations.) Check if the built-in terminating resistor of the end station is turned ON, or if the one-touch connector plug equipped with terminating resistor is attached properly. 	
Corrective action	<ul style="list-style-type: none"> Refer to "Operation status indication LEDs" on page 75, and perform appropriate countermeasures. Check the connection of the CC-Link dedicated cable. Check that the CC-Link dedicated cables between stations are within the specified length. (Refer to the instruction manual of CC-Link master module for the cable length between CC-Link Ver. 1.00 stations.) Turn ON the built-in terminating resistor of the end station. Alternatively, properly attach the one-touch connector plug equipped with terminating resistor. 	

Operation Panel Indication	E.OPT	E.OPT
Name	Option fault	
Description	Appears when a communication option is connected while Pr. 296 = "0 or 100."	
Check point	Check if password lock is activated by setting Pr. 296 = "0, 100"	
Corrective action	<ul style="list-style-type: none"> To apply the password lock when installing a communication option, set Pr.296 ≠ "0,100". (Refer to page 199). If the problem still persists after taking the above measure, please contact your sales representative. 	

Operation panel indication	E. 1	E. 1
Name	Option fault	
Description	Stops the inverter output when excessive noise occurs around the inverter. Appears if the switch for manufacturer setting has been changed.	
Check point	<ul style="list-style-type: none"> Check for excess electrical noises around the inverter. Check the switch position for the manufacturer setting. 	
Corrective action	<ul style="list-style-type: none"> Take measures against noises if there are devices producing excess electrical noises around the inverter. Return the switch position for the manufacturer setting to the initial status. If the problem still persists after taking the above measure, please contact your sales representative. 	

Operation panel indication	E.PE	E. PE
Name	Parameter storage device fault (control circuit board)	
Description	Stops the inverter output if fault occurred in the parameter stored. (EEPROM fault)	
Check point	Check for too many number of parameter write times.	
Corrective action	Please contact your sales representative. When performing parameter write frequently for communication purposes, set "1" in Pr. 342 to enable RAM write. Note that powering OFF returns the inverter to the status before RAM write.	

Operation Panel Indication	E.PE2	E.PE2
Name	Internal board fault	
Description	When the combination of the control board and the main circuit board is wrong, the inverter is tripped.	
Check point	—	
Corrective action	Please contact your sales representative.	

Operation panel indication	E.RET	E.r-ET
Name	Retry count excess	
Description	If operation cannot be resumed properly within the number of retries set, this function trips the inverter. This function is available only when Pr. 67 Number of retries at fault occurrence is set. When the initial value (Pr. 67 = "0") is set, this protective function is not available.	
Check point	Find the cause of fault occurrence.	
Corrective action	Eliminate the cause of the error preceding this error indication.	

Operation panel indication	E. 5	E. 5
	E. 6	E. 6
	E. 7	E. 7
	E.CPU	E.CPU
Name	CPU fault	
Description	Stops the inverter output if the communication fault of the built-in CPU occurs.	
Check point	<ul style="list-style-type: none"> Check for devices producing excess electrical noises around the inverter. Check if the terminal PC is shorted with the terminal SD. (E. 6/E. 7) 	
Corrective action	<ul style="list-style-type: none"> Take measures against noises if there are devices producing excess electrical noises around the inverter. Check the connection between the terminals PC and SD. (E. 6/E. 7) Please contact your sales representative. 	

Causes and corrective actions

Operation panel indication	E.MB4 to 7	E.MB4 to E.MB7
Name	Brake sequence fault	
Description	<ul style="list-style-type: none"> The inverter output is stopped when a sequence error occurs during use of the brake sequence function (Pr. 278 to Pr. 283). This protective function is not available in the initial status. (Refer to page 160). 	
Check point	Find the cause of alarm occurrence.	
Corrective action	Check the set parameters and perform wiring properly.	

Operation panel indication	E.IOH	E IOH
Name	Inrush current limit circuit fault	
Description	Stops the inverter output when the resistor of inrush current limit circuit overheated. The inrush current limit circuit fault	
Check point	Check that frequent power ON/OFF is not repeated.	
Corrective action	Configure a circuit where frequent power ON/OFF is not repeated. If the problem still persists after taking the above measure, please contact your sales representative.	

Operation panel indication	E.USB	E.USB
Name	USB communication fault	
Description	When communication has broken during the time set in Pr. 548 USB communication check time interval, this function stops the inverter output.	
Check point	<ul style="list-style-type: none"> Check the USB communication cable. 	
Corrective action	<ul style="list-style-type: none"> Check the Pr. 548 USB communication check time interval setting. Check the USB communication cable. Increase the Pr. 548 USB communication check time interval setting. Or, change the setting to 9999. (Refer to page 220). 	

Operation panel indication	E.SAF	E.SAF
Name	Safety circuit fault	
Description	Appears when safety circuit is malfunctioning. Appears when one of the lines between S1 and PC, or between S2 and PC is opened. The indication may appear when the start-up time of the 24V power supply is too long in the 24V external power supply operation.	
Check point	<ul style="list-style-type: none"> If the indication appears when safety stop function is not used, check if shorting wires between S1 and PC, S2 and PC are connected. If the indication appears when safety stop function is used, check that the safety relay module or the connection has no fault. Check if the start up of the 24V external power supply is taking 500ms or longer. 	
Corrective action	<ul style="list-style-type: none"> When not using the safety stop function, short across terminals S1 and PC and across S2 and PC with shorting wire. (Refer to page 24). When using the safety stop function, check that wiring of terminal S1, S2 and PC is correct and the safety stop input signal source such as safety relay module is operating properly. Refer to the Safety stop function instruction manual (BCN-211508-004) for causes and countermeasures. (Refer to the front cover of the Instruction Manual (Basic) for how to obtain the manual.) Set the start-up time of the 24V external power supply to be within 500ms. 	

Operation panel indication	E.13	E. 13
Name	Internal circuit fault	
Description	Stop the inverter output when an internal circuit fault occurred.	
Corrective action	Please contact your sales representative.	



NOTE

- If faults other than the above appear, contact your sales representative.