

13 Trip information and measures

13.1 Contents of trip information and alarm information and measures

Notifications made in the event of errors are of the following types.
Confirm the parameters are set as intended. PCM002Z is useful to do it.

Trip	The output of the inverter is turned OFF for protection of the inverter or external equipment. A fault signal can be output if a function assigned to an output terminal. (A fault signal is assigned to terminal [FL] in the default setting.)
Alarm	Indicates a condition that the inverter or external equipment may be damaged if continued. A signal can be output if a function assigned to an output terminal. (There are some alarms that cannot output signals, such as key failure.) Undervoltage, etc. are displayed with blinking on the operation panel.
Pre-alarm	A condition close to the trip level. A signal can be output if a function assigned to an output terminal. "C", "P", "L", and "H" blink in the operation panel during run for overcurrent, overvoltage, overload, and overheat, respectively.
Message	Informs you of a condition of the inverter and setting error. It is not an alarm.

If a problem occurs, make failure diagnosis according to the table below before contacting your Toshiba distributor.

(1) Trip information

An error code is in decimal notation.

Trip display			Error code	Trip name	Description	Remedies
LED display	LCD display					
E	E	E	17	Emergency off	Emergency off is input. 1) When the run command was not from the operation panel, the [STOP/RESET] key on the operation panel was pressed twice. 2) A signal was input to the input terminal to which emergency off was assigned. 3) Emergency off was input from communication.	- Reset after solving problems. - Clear the emergency off command.
E - 11	E-11	E-11	43	Brake answer error *	The system side does not reply even after the time set for [F630: Brake answer waiting time] elapsed.	- Check the system side. - Check if the [F630] setting is correct. If not using it, set [F630] to "0.0: Disabled".
E - 12	E-12	E-12	44	PG error	1) PG is disconnected. 2) An error exists in PG wiring. 3) The PG voltage is improper.	- Check the PG wiring. - Check if the PG settings are correct. [F376: PG select]

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Trip display			Error code	Trip name	Description	Remedies
LED display	LCD display					
E - 13	E-13	E-13	45	Abnormal speed error	1) When [Pt: V/f Pattern 1] = "0" to "9", an overspeed condition occurred. If overspeed parameters [F623] ≠ 0.0 and [F624] ≠ 0.0, the estimated speed continued to be outside the range of (output frequency - [F624]) to (output frequency + [F623]) for the time set for [F622]. 2) If [Pt: V/F Pattern 1] = "10" - "11", overspeed continued due to, for example, a PG error. If overspeed parameters [F623] ≠ 0.0 and [F624] ≠ 0.0, the speed feedback value continued to be outside the range of (output frequency - [F624]) to (output frequency + [F623]) for the time set for [F622]. 3) Due to overvoltage limit operation, the output frequency exceeded [FH: Maximum frequency] + 12 Hz or [FH] + [vL: Base frequency] × 0.1. 4) If [Pt: V/f Pattern 1] = "3" - "6" or "9" - "12", the speed control gain is low and at the overshoot at the completion of acceleration/deceleration is large. 5) When [Pt: V/f pattern 1] = "6", the motor was operated without the PM motor connected.	1), 3) • Check whether a problem exists in the input voltage. • When the regenerative energy is large, install a braking resistor (option). 2) Check the PG wiring and setting. 4) Increase the value of [F459]. 5) Connect the PM motor or set [Pt: V/f pattern 1] = "0".
E - 18	E-18	E-18	50	Analog input disconnecting *	The input level of terminal [VI/II] became equal to or less than the setting value of [F633: VI/II analog input disconnection detection level].	• Check if the signal line connected to terminal [VI/II] is disconnected. • Check if the [F633] setting is correct.
E - 19	E-19	E-19	51	CPU communication error	1) The option for VF-AS1 (VEC004Z to VEC007Z) was installed. 2) Communication error between control CPUs.	1) Use the option for VF-AS3J (VEC014Z to VEC017Z). 2) Turn off the power and then turn it on again. If the error occurs again, contact your Toshiba distributor.
E - 20	E-20	E-20	52	Over torque boost	• The setting value of [F402: Automatic torque boost] is very high. • The motor impedance is low.	Set the motor parameter according to the motor characteristic, and perform auto-tuning. [vL: Base frequency 1] [vLv: Base frequency voltage 1] [F405: Motor rated capacity] [F415: Motor rated current] [F417: Motor rated speed] [F400: Offline auto-tuning], etc.
E - 21	E-21	E-21	53	CPU1 fault B	Control CPU fault.	Error inside the inverter. Contact your Toshiba distributor.
E - 22	E-22	E-22	54	Ethernet option fault	Ethernet option fault.	Error inside the inverter. Contact your Toshiba distributor.
E - 23	E-23	E-23	55	Option fault (slot A)	1) I/O extension 1 (ETB013Z) is connected to option slots A and B. 2) An unsupported communication option is connected to VF-AS3J. 3) The ambient temperature is out of the operating temperature range. 4) Error in the option connected to option slot A.	1) Remove one from I/O extension 1 (ETB013Z). 2) Use the communication option for VF-AS3J. 3) Turn off the inverter power and make it cool down. 4) Error in the option. If E-23 reproduced after power reset, contact your Toshiba distributor.

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Trip display			Error code	Trip name	Description	Remedies
LED display	LCD display					
E - 24	E-24	E-24	56	Option fault (Slot B, PG feedback option)	1) During run, it is detected that the PG feedback option is not connected. 2) [F376] is set to a value other than "0", but the PG feedback option is not connected. 3) The ambient temperature of option connected to option slot B is out of the operating temperature range. 4) Error in the option connected to option slot B.	1) Check if the encoder wiring is disconnected. 2) Connect the PG option, or set [F376] to "0". 3) Turn off the inverter power and make it cool down. 4) Error in the option. If E-24 reproduced after power reset, contact your Toshiba distributor.
E - 26	E-26	E-26	58	CPU2 fault	Control CPU fault.	Error inside the inverter. Contact your Toshiba distributor.
E - 29	E-29	E-29	61	Control power option failure *	1) Error in the control power supply unit. 2) The setting of [F647: Control power option failure detection] is improper.	1) When the input voltage of the control power supply unit is normal and the voltage between [+SU]-[CC] terminals is under 20 Vdc, it is an error in the control power supply unit. Contact your Toshiba distributor. 2) When not using the control power supply unit, set [F647] to "0".
E - 31	E-31	E-31	63	Rush current suppression relay fault	1) Error on the rush current suppression relay. 2) The power was turned ON/OFF frequently.	1) Error inside the inverter. Contact your Toshiba distributor. 2) Instead of turning ON/OFF the power, turn ON/OFF the run command.
E - 32	E-32	E-32	64	PTC failure *	1) PTC protection for the motor was activated. 2) PTC abnormality of cable disconnection. 3) Short circuit occurred in PTC circuit. 4) Wrong function assignment on PTC input terminals.	1) Check motor temperature. 2) Check PTC and the cable. 3) Confirm if PTC resistance is 50Ω or more. 4) Make sure the parameter setting, refer to [6. 31. 22]
E - 37	E-37	E-37	66	Servo lock error	1) The lock up torque or more external load is applied to the motor. 2) Setting of motor parameters is improper.	1) Reduce the load to apply the servo lock. 2) Set the motor parameter according to the motor characteristic, and perform auto-tuning. [vL: Base frequency 1] [vLv: Base frequency voltage 1] [F405: Motor rated capacity] [F415: Motor rated current] [F417: Motor rated speed] [F400: Offline auto-tuning], etc.
E - 39	E-39	E-39	71	PM control error	During auto-tuning or initial position estimation, the motor current became very high.	Measure inductance with an LCR meter, etc., and set it to the direct parameter.
E - 42	E-42	E-42	74	Cooling fan fault *	The cooling fan failed at frame size J11.	The cooling fan needs to be replaced. Contact your Toshiba distributor.
E - 43	E-43	E-43	75	Communication time-out (Ethernet option) *	Ethernet option communication time-out.	Check the Ethernet communication equipment and wiring.
E - 44	E-44	E-44	76	Battery of LCD operation panel failure	The calendar function is enabled and one of the following events occurs. 1) Batteries are not inserted. 2) The battery level is low. 3) The time has not yet set.	1) Insert batteries. 2) Replace the batteries. 3) After setting the time, reset the inverter.
E - 45	E-45	E-45	77	GD2 auto-tuning error	1) The estimated value of [F459] is not settled. 2) The estimated value of [F459] is outside the parameter setting range. 3) Moment of inertia auto tuning command frequency exceeds [UL] 4) Moment of inertia auto tuning command frequency is close to [UL], or inertia moment of load is too small to secure sufficient speed step width. 5) Upper limit frequency [UL] is set lower than $(([F481] + [F482]) / 100 * [VL])$.	1) Change the settings of [F481] and [F482] and perform GD2 auto-tuning again. 2) Set [F480] to "0" and set [F459] to an appropriate value. 3) Reduce [F481]. 4) Decrease [F481]. If the inertia moment of the load is too small, set "F480" = "0" and set [F459] to an appropriate value. 5) Modify the value of [UL], [F481] or [F482] following the relation as below. $(([F481] + [F482]) / 100 * [VL]) < [UL]$

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Trip display			Error code	Trip name	Description	Remedies
LED display	LCD display					
E-46	E-46	E-46	78	The position control ready signal is turned off during position control	1) The position control ready signal (LI: 178/179) is turned off during position control. 2) When [A527] is "2" or "12", the 0 point dog start signal (LI: 186/187) is turned off during return to origin.	1) Until position control is completed, keep the position control ready signal ON. 2) Until return to origin is completed, keep the 0 point dog start signal ON.
E-47	E-47	E-47	79	Exceed position detection upper limit	1) When [A522] is "1", the current position is above the upper limit. 2) The ratio of the electronic gear ([A524]/[A525]) exceeds the limit.	1) Check the position detection upper limit parameters ([A518], [A519], [A520], [A521]). 2) Check that the ([A524]/[A525]) ratio is in the range of 1/20 to 50.
E-60	E-60	E-60	92	External 24V input overvoltage	The input voltage of terminal [+SU] is high.	Check the external 24 V power supply.
E-99	E-99	E-99	88	Trip for test *	Trip for test occurred.	With [F699] set to "88", a trip for test occurs. Reset if no problem is found.
EEP1	EEP1	EEP1	18	EEPROM fault 1	An error occurred during internal data writing.	Turn off the power and then turn it on again. If the error occurs again, contact your Toshiba distributor.
EEP2	EEP2	EEP2	19	EEPROM fault 2	1) While [tyP: Default setting] was being set, the power was turned OFF or a momentary power failure occurred. 2) An error occurred during internal data reading.	1) Set [tyP] again. If the error occurs again, contact your Toshiba distributor. 2) Turn off the power and then turn it on again. If the error occurs again, contact your Toshiba distributor.
EEP3	EEP3	EEP3	20	EEPROM fault 3	EEPROM is abnormal.	Contact your Toshiba distributor.
EF1	EF1	EF1	33	Grounding fault *	1) A grounding fault occurred in the output wiring or the motor. 2) In the event of rapid acceleration/ deceleration, an error due to the motor occurred.	1) Check if a grounding fault occurred in the wiring on the output side and the motor. 2) Increase the acceleration/deceleration time. [ACC/dEC: Acc/Dec time 1], etc.
EF2	EF2	EF2	34	Grounding fault * (This trip is activated during running for CPU1 version 118 or more.)	1) A grounding fault or a short circuit occurred on the output side. 2) In the event of rapid acceleration/ deceleration, an error due to the motor occurred. 3) For models with frame sizes J1 to J5, other equipments are connected to VF-AS3J([PA/+]) and [PC/-] terminals.	1) Check if a grounding fault or a short circuit occurred in the wiring on the output side or the motor. 2) Increase the acceleration/deceleration time. [ACC/dEC: Acc/Dec time 1], etc. 3) Set the parameter [F636: Ground fault trip] = "0: None".
EPH1	EPH1	EPH1	8	Input phase loss *	A phase loss has occurred on the input side.	Check if a phase loss has occurred in the wiring on the input side.
EPHO	EPHO	EPHO	9	Output phase loss *	1) A phase loss occurred on the output side. 2) The output current is small as compared with the motor rated current (less than 8%).	1) Check if a phase loss has occurred in the wiring on the output side. When using a PM motor ([F915] = "3", "4"), "EPHO" may occur regardless of the [F605] setting. 2) Set [F605] to "0".
ErIF	ErIF	ERIF	93	Error input F * (This trip is activated for CPU1 version 118 or later.)	1) Abnormal contact or wiring of the relay that turns the "Fwd run" signal and the "Fwd run 2" signal on and off. 2) The "Fwd run" signal and the "Fwd run 2" signal are not input at the same time.	1) Check the monitor information of the input terminals to ensure that the contact inputs to the inverter are correct. If the contacts are not operating correctly, correct the contacts and wiring. 2) Check the sequence of inputs and make sure that they are input simultaneously. If they are not being input at the same time, correct the sequence. Alternatively, adjust [A281: Run command monitoring delay time].
ErIR	ErIR	ERIR	94	Error input R * (This trip is activated for CPU1 version 118 or later.)	1) Abnormal contact or wiring of the relay that turns the "Rev run" signal and the "Rev run 2" signal on and off. 2) The "Rev run" signal and the "Rev run 2" signal are not input at the same time.	1) Check the monitor information of the input terminals to ensure that the contact inputs to the inverter are correct. If the contacts are not operating correctly, correct the contacts and wiring. 2) Check the sequence of inputs and make sure that they are input simultaneously. If they are not being input at the same time, correct the sequence. Alternatively, adjust [A281: Run command monitoring delay time].
Err2	Err2	ERR2	21	RAM fault	Control RAM fault.	Error inside the inverter. Contact your Toshiba distributor.
Err3	Err3	ERR3	22	ROM fault	Control ROM fault.	Error inside the inverter. Contact your Toshiba distributor.

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LED display	LCD display					
Err4	Err4	ERR4	23	CPU1 fault A	Control CPU fault.	Error inside the inverter. Contact your Toshiba distributor.
Err5	Err5	ERR5	24	Communication time-out (RS485) *	RS485 communication time-out.	Check the communication equipment and wiring on RS485 communication.
Err6	Err6	ERR6	25	Gate array fault	Error in the gate array.	Error inside the inverter. Contact your Toshiba distributor.
Err7	Err7	ERR7	26	Current detector fault	1) Error in the output current detector 2) Error in the cooling fan	1), 2) Error inside the inverter. Contact your Toshiba distributor.
Err8	Err8	ERR8	27	Communication time-out (option)	Communication option time-out.	Check the communication equipment and wiring on communication option.
Err9	Err9	ERR9	28	Panel disconnection during run *	During run with a run command from the operation panel and remote panel, the cable connecting the inverter and panel are disconnected.	Check the connection on the inverter and panel.
Et n	Etn	ETN	40	Auto-tuning error	1) The motor parameter does not match the motor characteristic. 2) Conducted auto-tuning while the motor is rotating. 3) The output frequency does not increase within a certain period of time.	1) Set the motor parameter according to the motor characteristic. [vL: Base frequency 1] [vLv: Base frequency voltage 1] [F405: Motor rated capacity] [F415: Motor rated current] [F417: Motor rated speed], etc. 2) Check that the motor is stopped, and conduct auto-tuning again. 3) Check that the motor is not stopped while the output frequency is rising on the system side.
Et n 1	Etn1	ETN1	84	Auto-tuning error 1	1) The motor is not connected. 2) Something other than the motor is connected. 3) In the induction motor, an improper value, a synchronized motor speed value, or a value close to it is set for [F417: Motor rated speed].	1) and 2) Check that the motor is connected. 3) Set [F417] according to the motor rating.
Et n 2	Etn2	ETN2	85	Auto-tuning error 2	The motor parameter does not match the motor characteristic.	Set the motor parameter according to the motor characteristic. [vL: Base frequency 1] [vLv: Base frequency voltage 1] [F405: Motor rated capacity] [F415: Motor rated current] [F417: Motor rated speed], etc.
Et n 3	Etn3	ETN3	86	Auto-tuning error 3	1) The setting of [vL: Base frequency 1] or [F417: Motor rated speed] does not match the motor rating. 2) Power supply of power circuit does not turn on.	1) Set [vL: Base frequency 1] or [F417: Motor rated speed] according to the motor rating. 2) Turn on power supply of power circuit.
Et y P	EtyP	ETYP	41	Inverter type error	1) An internal error exists. 2) Replaced the printed circuit board (contact your Toshiba distributor for replacing the printed circuit board).	1) Error inside the inverter. Contact your Toshiba distributor. 2) Set [tyP: Default setting] to "6: Initialize typeform".

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Trip display			Error code	Trip name	Description	Remedies
LED display	LCD display					
OL 1	OC1	OC1	1	Overcurrent (during acceleration)*	1) The acceleration time is short. 2) [Pt: V/F Pattern 1] does not match the characteristics of the machine. 3) A momentary power failure occurred, and an attempt was made to start the rotating motor. 4) An attempt was made to run the special motor (impedance low). 5) An attempt was made to run a low inductance motor such as a high-speed motor. 6) If [Pt] = "11", the PG polarities are wrong. 7) If [F614: Pulse width of short circuit detection at start] = "0" and [F613: Short circuit detection at start] = "2" or "3", the output side of the inverter was shortcircuited. 8) It may result in grounding fault. 9) Leakage current influence due to long motor cable.	1) Increase the acceleration time. [ACC: Acceleration time 1], etc. 2) Set [Pt: V/F Pattern 1] according to the machinery. 3) Set [F301: Auto-restart]. Depending on the characteristics of the machinery, [F302: Regenerative power ride-through] of "1" is also effective. 4) If [Pt] is set to "0", "1", "2", or "7", lower [vb: Manual torque boost]. If [Pt] is other than "0", "1", "2", and "7", conduct auto-tuning with [F400: Offline auto-tuning]. [F402: Automatic torque boost] is set to match the motor. 5) Replace the inverter with one with a large capacity. 6) Check the PG polarities. 7) Check the wiring and insulation on the output side of the inverter. 8) Check the cable and the motor for grounding faults. 9) Refer to section [2. 5. 3] for leakage current measure.
OL 2	OC2	OC2	2	Overcurrent (during deceleration)*	1) The deceleration time is short. 2) An attempt was made to run a low inductance motor such as a high-speed motor. 3) If [Pt] = "11", the PG polarities are wrong. 4) If [F614: Pulse width of short circuit detection at start] = "0" and [F613: Short circuit detection at start] = "2" or "3", the output side of the inverter was shortcircuited. 5) It may result in grounding fault. 6) Leakage current influence due to long motor cable.	1) Increase the deceleration time. [dEC: Deceleration time 1], etc. 2) Replace the inverter with one with a large capacity. 3) Check the PG polarities. 4) Check the wiring and insulation on the output side of the inverter. 5) Check the cable and the motor for grounding faults. 6) Refer to section [2. 5. 3] for leakage current measure.
OL 3	OC3	OC3	3	Overcurrent (during constant speed running)*	1) The load changed rapidly. 2) An error occurred in the machinery (something got stuck, etc.). 3) An attempt was made to run a low inductance motor such as a high-speed motor. 4) If [Pt] = "11", the PG polarities are wrong. 5) If [F614: Pulse width of short circuit detection at start] = "0" and [F613: Short circuit detection at start] = "2" or "3", the output side of the inverter was short-circuited. 6) It may result in grounding fault. 7) Leakage current influence due to long motor cable. 8) Over current occurs during exciting forcing. 9) When following function is used with Sine Wave Filter. • DC braking • Auto restart (in case of setting [F491: Speed search method] = "1" or "2") • Output phase loss detection (at startup, [F605: Output phase loss detection] = "1", "2", or "4")	1) Suppress load fluctuation. 2) Check whether a problem exists in the machinery. 3) Replace the inverter with one with a large capacity. 4) Check the PG polarities. 5) Check the wiring and insulation on the output side of the inverter. 6) Check the cable and the motor for grounding faults. 7) Refer to section [2. 5. 3] for leakage current measure. 8) Decrease [F456: Exciting forcing level] 9) Adjust [F457: Exciting forcing control gain]. Recommended value is "20Hz" (Default: 50Hz).
OL R 1	OCA1	OCA1	5	Overcurrent (U-phase arm)*	Error on IGBT in U-phase.	Error inside the inverter. Contact your Toshiba distributor.
OL R 2	OCA2	OCA2	6	Overcurrent (V-phase arm)*	Error on IGBT in V-phase.	Error inside the inverter. Contact your Toshiba distributor.
OL R 3	OCA3	OCA3	7	Overcurrent (W-phase arm)*	Error on IGBT in W-phase.	Error inside the inverter. Contact your Toshiba distributor.
OL L	OCL	OCL	4	Overcurrent (load side at startup)	1) A short circuit occurred on the output side. 2) The motor and output side wiring have defective insulation. 3) The impedance of the motor is low.	1) Check the wiring on the output side. 2) Check the insulation on the output side. 3) Set [F613: Short circuit detection at start] to "2" or "3".

* For OC1 to OC3 and for OCA1 to OCA3 in the 240V class and 18.5 kW to 45 kW and in the 480V class and 22 kW to 75 kW, it may not be possible to reset the inverter unless the power is turned off.

Trip display			Error code	Trip name	Description	Remedies
LED display	LCD display					
OLr	OCr	OCR	36	Overcurrent (Braking resistor) * VFAS3J-2550P, 4900PC or larger	1) When [F304: Dynamic braking, OLr trip] is set to "Enabled", • The braking resistor is not connected. • The braking resistor connection is disconnected. • A braking resistor with less than the minimum allowable resistance value is connected. 2) A short circuit occurred between [PB] and [PC-]. 3) IGBT error on the dynamic braking drive circuit control.	1) Check if an adequate braking resistor is connected. When a braking resistor is not necessary, set "Disabled" for [F304]. 2) Check if there are any problems with the impedance of the braking resistor, wiring, etc. 3) Error inside the inverter. Contact your Toshiba distributor. * When "OCr" occurs, turn off the power and then turn it on again.
OH	OH	OH	16	Overheat	1) Cooling fan is end of life or failure. 2) High or low ambient temperature outside the specified range. 3) The cooling fan vent is blocked. 4) Other heating elements are in close proximity. 5) Heavy load. • Temperature sensor failure (when it always occurs even after resetting after a while at ambient temperature within the specification range).	1) If the cooling fan does not operate during operation, the fan needs to be replaced. Please contact your Toshiba distributor. 2) Use at an ambient temperature within the specified range. 3) Secure enough space for the inverter. 4) Do not place heating elements near the inverter. 5) • Reduce the load. -Lower [F300: Carrier frequency]. -Set [F316: Carrier frequency control] = "1: Automatic reduction", "3: Automatic reduction, 480V class compatible". 6) Please contact your Toshiba distributor.
OH2	OH2	OH2	46	External thermal trip *	A signal of external thermal trip is input.	Check that the motor is not overloaded.
OH9	OH9	OH9	91	Abnormal overheat	Abnormal overheat was detected inside.	Error inside the inverter. Shut down the power immediately, and contact your Toshiba distributor.
OL1	OL1	OL1	13	Overload (Inverter)	1) Sudden acceleration occurs and the acceleration time is short. 2) [Pt: V/F Pattern 1] does not match the characteristics of the machine. 3) A momentary power failure occurred, and an attempt was made to start the rotating motor. 4) The DC braking current is large. 5) The load is high for the inverter capacity.	1) Increase the acceleration time. [ACC: Acceleration time 1], etc. 2) Set [Pt: V/F Pattern 1] according to the machinery. 3) Set [F301: Auto-restart]. Depending on the characteristics of the machinery, [F302: Regenerative power ride-through] of "1" is also effective. 4) Set small values to [F251: DC braking current] and [F252: DC braking time]. 5) Replace the inverter with one with a large capacity.
OL2	OL2	OL2	14	Overload (Motor) *	1) The motor is locked up. 2) Operation continues in the low-speed range. 3) The motor is overloaded. 4) The setting of the electronic thermal does not match the motor characteristic. 5) [Pt: V/F Pattern 1] does not match the characteristics of the machine.	1) Check the machinery. 2), 3), and 4) Set the electronic thermal according to the motor. [OLM: Motor overload protection characteristic], [tHrA: Motor overload protection current 1], etc. 5) Set [Pt: V/F Pattern 1] according to the machinery.
OL3	OL3	OL3	62	Overload (IGBT)	1) During run in the low-speed range (15 Hz or less) at a high carrier frequency, overload occurred. 2) A momentary power failure occurred, and an attempt was made to start the rotating motor. 3) Over current occurs during exciting forcing.	1) • Reduce the load. • Lower the [F300: Carrier frequency]. Or, set [F316: Carrier frequency control] to "Valid decrease". • Increase the output frequency. 2) Set [F301: Auto-restart]. Depending on the characteristics of the machinery, [F302: Regenerative power ride-through] of "1" is also effective. 3) Decrease [F456: Exciting forcing level]

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LED display	LCD display					
OLr	OLr	OLR	15	Overload (Braking resistor) *	1) The braking current is large. 2) The deceleration time is short.	Common to 1) and 2) • Increase the deceleration time. [dEC: Deceleration time 1], etc. • Replace the braking resistor (option) with one with a large capacity, and set [F309: Braking resistor capacity].
OP1	OP1	OP1	10	Overvoltage (during acceleration)	1) The input voltage is high and showed abnormal fluctuation. 2) A connection is made to a system such as the one below. • The power supply capacity is 500 kVA or more. • The power factor improvement capacitor was opened/closed. • Equipment that uses a thyristor is connected to the same system. 3) A momentary power failure occurred, and an attempt was made to start the rotating motor.	1) Use it within the power supply voltage range. When no problem is found in the input voltage, install an input AC reactor (option). 2) Install an input AC reactor (option). 3) Set [F301: Auto-restart]. Depending on the characteristics of the machinery, [F302: Regenerative power ride-through] of "1" is also effective.
OP2	OP2	OP2	11	Overvoltage (during deceleration)	1) The deceleration time is short and the regenerative energy is large. 2) [F305: Overvoltage limit operation] is set to "1: Disabled". 3) The input voltage is high and showed abnormal fluctuation. 4) A connection is made to a system such as the one below. • The power supply capacity is 500 kVA or more. • The power factor improvement capacitor was opened/closed. • Equipment that uses a thyristor is connected to the same system.	1) • Increase the deceleration time. [dEC: Deceleration time 1], etc. • When the regenerative energy is large, install a braking resistor. 2) Change [F305] to "0", "2", and "3" for Overvoltage limit operation. When the deceleration time is limited, install a braking resistor (option). 3) Use it within the power supply voltage range. When no problem is found in the input voltage, install an input AC reactor (option). 4) Install an input AC reactor (option).
OP3	OP3	OP3	12	Overvoltage (during constant speed)	1) The input voltage is high and showed abnormal fluctuation. 2) A connection is made to a system such as the one below. • The power supply capacity is 500 kVA or more. • The power factor improvement capacitor was opened/closed. • Equipment that uses a thyristor is connected to the same system. 3) The power supply is grounded at a point other than a neutral point. (Example: The power supply has delta connection with single phase grounding) 4) The motor was rotated with the force on the load side, and it became to regenerative status.	1) Use it within the power supply voltage range. When no problem is found in the input voltage, install an input AC reactor (option). 2) Install an input AC reactor (option). 3) Referring to [2. 4. 4], disconnect the grounding capacitor or reduce the capacitor capacity. 4) Install a braking resistor (option).
Ot	Ot	OT	32	Overtorque *	During run, the load torque reached the overtorque level.	• Check the load side. • Check if the overtorque detection setting is correct. [F615: Overtorque trip] [F616: Overtorque detection level during power running] [F617: Overtorque detection level during regenerating] [F618: Overtorque detection time], etc.
Ot2	Ot2	OT2	65	Overtorque 2 *	1) The output current during power running reached [F601: Stall prevention level] or more, and the time set for [F452: Stall detection time during power running] elapsed. 2) The power running torque during power running reached [F441: Power running torque limit level] or more, and the setting time in [F452: Stall detection time during power running] elapsed.	• Reduce the load. • Increase the detection level of [F601] or [F441].

* It is possible to specify whether to enable or disable trips with a parameter.

Trip display			Error code	Trip name	Description	Remedies
LED display	LCD display					
OTC3	OTC3	OTC3	69	Overtorque/ Overcurrent *	Overtorque or overcurrent on the shock monitoring function was detected.	- Check the load side. - When no problem is found, check if the shock monitoring function setting is correct. [F590: Shock monitoring] - [F598: Shock monitoring detection condition]
PrF	PrF	PRF	59	STO circuit fault	Error in the safe torque off (STO) circuit.	Contact your Toshiba distributor.
SOUT	SOUT	SOUT	47	PM step-out *	1) Rapid load fluctuation occurred. 2) Rapid acceleration/deceleration is observed. 3) The motor shaft is locked up. 4) Output side phase loss occurred.	1), 2) Increase the acceleration/deceleration time. [ACC: Acceleration time 1], [dEC: Deceleration time 1], etc. 3) Check the motor and release the lock. 4) Check the wiring on the output side.
UC	UC	UC	29	Undercurrent *	The output current in operation declined to the undercurrent detection level.	- Check the load side. - Check that the undercurrent detection setting is correct. [F610: Undercurrent trip], [F611: Undercurrent detection level], [F612: Undercurrent detection time], etc.
UP1	UP1	UP1	30	Undervoltage (Power circuit) *	The input voltage (power circuit) declined.	- Check the input voltage. - Check that the undervoltage detection setting is correct. [F625: Undervoltage detection level], [F627: Undervoltage trip], etc. - To avoid trip in momentary power failure, set [F627] = "0: Disabled", and set [F301: Auto-restart] and [F302: Regenerative power ride-through] to "1".
Ut	Ut	UT	60	Undertorque *	During run, the load torque declined to the undertorque level or less.	- Check the load side. - Check that the undertorque detection setting is correct. [F651: Undertorque trip] [F652: Undertorque detection level during power running] [F653: Undertorque detection level during regen] [F654: Undertorque detection time], etc.
UTC3	UTC3	UTC3	70	Undertorque/ Undercurrent *	Undertorque or undercurrent on the shock monitoring function was detected.	- Check the load side. - When no problem is found, check if the shock monitoring function setting is correct. [F590: Shock monitoring] - [F598: Shock monitoring detection condition]

* It is possible to specify whether to enable or disable trips with a parameter.

(2) Alarm information

Alarm display			Alarm name	Estimated factor	Remedies
LED display	LCD display				
R - 09	A-09	A-09	Panel disconnection alarm	During run with a run command from the operation panel and remote panel, the cable connecting the inverter and panel are disconnected.	Check the connection on the inverter and panel.
R - 17	A-17	A-17	Key failure alarm	- The [RUN] or [STOP/RESET] key on the operation panel is pressed and held for 20 seconds or more. - The operation panel key has failed.	Check the operation panel. If the error occurs again, contact your Toshiba distributor.
R - 18	A-18	A-18	Analog input disconnecting alarm	The input level of terminal [VI/II] became equal to or less than the setting value of [F633: VI/II analog input disconnection detection level].	- Check if the signal line connected to terminal [VI/II] is disconnected. - Check if the [F633] setting is correct. - If alarm "A-18" occurs with [F644] = "2", "3", or "5", "A-18" cannot be canceled even if the disconnection is solved. Turn off the power and then turn it on again.
R - 29	A-29	A-29	Control power supply option alarm	- Control power supply voltage between [+SU] and [CC] is low. - The setting of [F647: Control power option error detection] is in-correct.	- Check the voltage of the control power supply input between [+SU] and [CC]. 20Vdc or more is required. - If you do not use the control power option, set [F647] = "0". * The "A-29" alarm automatically recovers when the control power supply voltage becomes normal.
R - 43	A-43	A-43	Communication alarm (Ethernet option)	Condition similar to a communication time-out trip.	Perform the same remedies as those for communication time-out "E-43".
COFF	COFF	COFF	Control power option alarm	- Undervoltage on the control power supply input between [+SU] and [CC]. - The setting of [F647: Control power option failure detection] is improper.	- Check the voltage of the control power supply input between [+SU] and [CC]. 20 Vdc or more is required. - When not using the control power supply unit, set [F647] to "0". * When "COFF" occurs, turn off the power and then turn it on again.
MOFF	MOFF	MOFF	Undervoltage alarm	The input voltage (power circuit) declined.	Check the input voltage. If no problem is found, internal error may be the issue. Contact your Toshiba distributor.
PrA	PrA	PRA	STO function activated	- The [STO] terminal is open. - The slide switch [SW1] is set to "PLC". - The control terminal block has been removed. Or poor contact. [P24 / PLC] (24Vdc power output) is overloaded. - Incorrect polarity of the surge absorption diode connected between the [P24 / PLC]-[OUT1] to [OUT4] terminals. - The input voltage of the [STO] terminal has dropped.	- When not using the [STO] terminal function, close between [STO] and [P24 / PLC] (short-circuited with a short-circuit bar as standard). - When using in Sink logic, change [SW1] to "SINK". When using with "PLC", it is necessary to connect the 24Vdc power supply between the [P24 / PLC]-[CC] terminals. - Install the control terminal block correctly. - If the [STO]-[P24 / PLC] is closed, check the load on the [P24 / PLC] terminal. Use [P24 / PLC] (24Vdc power output) within 200mA including the transition period. - Check the polarity of the diode. - Check the input voltage of the [STO] terminal. * If "PrA" occurs by opening the [STO] terminal during operation, turn off the operation signal once.
tUn1	tUn1	TUN1	Brake learning error	- The load is heavy. - Parameter setting is improper. - Braking operation is abnormal.	- Perform learning with no load or light load in about 3 % or less rating. - Set the motor parameter and learning related parameters in advance. - Check the brake.
tUn2	tUn2	TUN2	Light-load high-speed learning operation error	Error in light-load high-speed learning operation.	Check the light-load high-speed learning operation. Refer to "Crane application" (E6582103).
tUn3	tUn3	TUN3	Light-load high-speed learning error	Setting of the motor parameter is improper.	Set the motor parameter according to the motor.

(3) Pre-alarm information

Pre-alarm display			Pre-alarm name	Estimated factor	Remedies
LED display		LCD display			
⌈	C	Overcurrent alarm	Overcurrent pre-alarm	Inverter output current at or exceeding the stall prevention level flows.	Perform the same remedies as those for overcurrent "OC1", "OC2", and "OC3".
H	H	Overheat alarm	Overheat pre-alarm	- The inverter internal temperature reached the overheat protection pre-alarm level. - The PTC detection temperature reached the PTC pre-alarm level.	Perform the same remedies as those for overheat "OH". Perform the same remedies as those for PTC failure "E-32".
ℓ	L	Motor overload alarm/ Inverter overload alarm	Motor overload pre-alarm	- The overload integral value reached 51% of the overload trip value. - The temperature of the power circuit element reached the overload pre-alarm level.	Perform the same remedies as those for overload "OL1", "OL2", and "OL3".
P	P	Overvoltage alarm	Overvoltage pre-alarm	- The input voltage (DC detection) increased to or above the overvoltage limit operation level. - The input voltage (DC detection) increased suddenly.	Perform the same remedies as those for overvoltage "OP1", "OP2", and "OP3".
⌥	T	Communication alarm	Communication pre-alarm (RS485, option)	Communication is interrupted for the time set for the communication time-out or longer.	Perform the same remedies as those for communication time-out "Err5" and "Err8".

(4) Message information

Message display			Message name	Description	Remarks
LED display	LCD display				
$R - 01$	A-01	A-01	V/f 5-point setting error 1	When [Pt: V/f Pattern 1] = "7: V/f 5-point setting", two or more from [vL], [F190], [F192], [F194], [F196], and [F198] are set to the same value other than 0.0 Hz.	Set a different value for each parameter.
$R - 02$	A-02	A-02	V/f 5-point setting error 2	The inclination of V/f is large.	- Set V/f 5-point and [vLv]/[vL] for the V/f inclination to be gentle. - Increase the value of [vL] or decrease the value of [vLv].
$R - 05$	A-05	A-05	Over frequency error	Tries to run the motor at a frequency exceeding 10 times of the base frequency.	- Check that the base frequency setting is correct. [vL: Base frequency 1], etc. - Operate the motor at a frequency within 10 times of the base frequency.
$R - 07$	A-07	A-07	Speed gain setting error	In case of vector control ([Pt: V/f Pattern 1] = "3" to "6" or "9" to "12") and [F485: Speed control response selection] = "2", duplicate values that are not 0Hz are set with [F466] and [A687] to [A689].	Check the setting of [F466], [A687] to [A689].
$R - 08$	A-08	A-08	Torque limit setting error	In cases other than [Pt: V/f Pattern 1] = "0", "1" and "7", duplicate values that are not 0Hz are set from [F436] to [F439].	Check the setting of [F436] to [F439].
$R51R$	ASIA	ASIA	Setting for Asia	Setting for Asia is selected in the setup menu.	-
$Rt n$	Atn	ATN	Auto tuning...	Auto-tuning is in progress.	A message that indicates auto-tuning in progress. No problem if the message disappears in several seconds.
CHn	CHn	CHN	Setting for China	Setting for China is selected in the setup menu.	-
CLr	CLr	CLR	Reset command acceptable	The following operation was performed after a trip occurred. 1) Press the [STOP] key once. 2) Set the reset terminal ON. (During a trip resetting operation)	Reset is performed with each of the following operations. 1) Press the [STOP] key one more time. 2) Set the reset terminal OFF.
$COME$	COME	COME	Communication error of LED remote panel (option)	There is an error in the connection between LED remote panel and inverter unit. A communication error has occurred.	Check the connection (connector and communication cable) between LED remote panel and inverter unit. The LED remote panel does not support multi-drop connection. Check the settings of the parameters ([F801] to [F809]).
$data$	data	DATA	Arbitrary display by communication	[F710: Standard mode display] = "30: Arbitrary display by communication" is set.	Change the setting of [F710].
db	db	DB	During DC braking	DC braking is in progress.	-
$dbOn$	dbOn	DBON	During motor shaft fixing	Motor shaft fixing is in progress.	A message indicates the motor fixing control in progress. When standby is turned OFF, the control stops.
$E1$	E1	E1	Panel display one digit overflow	The display digit on the operation panel overflowed by one digit.	-
$E2$	E2	E2	Panel display two digits overflow	The display digit on the operation panel overflowed by two digits.	-
$E3$	E3	E3	Panel display three digits overflow	The display digit on the operation panel overflowed by three digits.	-
$EASy$	EASy	EASY	Easy mode	Switched to [Easy mode].	-
End	End	END	Last of data	The last data item in [History function].	-

Message display			Message name	Description	Remarks
LED display	LCD display				
<i>E O F F</i>	EOFF	EOFF	Emergency off command acceptable	When the run command was not from the panel, the [STOP] key on the operation panel was pressed once.	To cause an emergency off, press the [STOP] key one more time. Otherwise, press any other key.
<i>E r r 1</i>	Err1	ERR1	Frequency point setting error	The settings of point 1 and point 2 of the frequency command are close.	Set point 1 and point 2 of the frequency command apart from each other.
<i>E U</i>	EU	EU	Setting for Europe	Setting for Europe is selected in the setup menu.	-
<i>F A I L</i>	FAIL	FAIL	Password mismatch	The number entered for [F739: Password verification] does not match [F738: Password setting].	-
<i>F i r E</i>	FlrE	FIRE	During fire speed run/forced run	Fire speed run/forced run is in progress. ("FlrE" and the output frequency are alternately displayed.)	A message indicates fire speed run/forced run in progress. It stops when the power is turned OFF.
<i>F J O G</i>	FJOG	FJOG	Fwd JOG	Forward jog run is in progress.	-
<i>H E A d</i>	HEAd	HEAD	Head of data	The first data item in [History function].	-
<i>H I</i>	HI	HI	Upper limit of setting value	The upper limit of the setting value.	-
<i>i n i t</i>	INIt	INIT	Initializing...	- Initialization is in progress by setting [tYP: Default setting] to "3" or "13". - Region setting is in progress with the setup menu.	No problem if the display shows "0.0" in several seconds.
<i>J P</i>	JP	JP	Setting for Japan	Setting for Japan is selected in the setup menu.	-
<i>L O</i>	LO	LO	Lower limit of setting value	The lower limit of the setting value.	-
<i>L S t P</i>	LStP	LSTP	During run sleep	Run sleep is in progress.	-
<i>n ---</i>	n---	N---	No detailed information of past trip	While "nErr" and a value are alternately displayed, the "OK" key is pressed to read detailed information.	Normal display.
<i>n E r r</i>	nErr	NERR	No error	No trip records in the past trip records on [Monitor mode].	-
<i>O F F</i>	OFF	OFF	Standby OFF	The input terminal to which standby was assigned is OFF.	-
<i>P A S S</i>	PASS	PASS	Password match	A number is entered for [F739: Password verification], and it matched [F738: Password setting].	-
<i>r J O G</i>	rJOG	RJOG	Rev JOG	Reverse jog run is in progress.	-
<i>r t r y</i>	rtry	RTRY	During Retry/Speed search	Retry/speed search is in progress.	-
<i>S E t</i>	Set	SET	Region setting acceptable	- Displayed when the power is turned on for the first time. - Displayed after [SEt] is set to "0".	In the setup menu, set the region to use.
<i>S r v o</i>	Srvo	SRVO	During servo lock	Servo lock is in progress.	-
<i>S t d</i>	Std	STD	Setting mode	Switched to [Setting mode].	-
<i>S t O P</i>	STOP	STOP	During deceleration stop at power failure	- Deceleration stop at power failure is in progress. [F302]="2" - Synchronized stop is in progress. [F302]="3", "4"	- A message indicates deceleration stop during power failure. The stop state is kept until the run command is turned OFF. - Synchronized stop is performed when power failure synchronized signal is ON or a power failure occurs.
<i>t U n</i>	tUn	TUN	Learning...	Learning the brake sequence or light-load high-speed operation is under execution.	To cancel learning, stop the inverter and set [F329: Light-load high-speed learning function] to "0".

Message display			Message name	Description	Remarks
LED display	LCD display				
U - - -	U---	U---	Waiting for search	Waiting for search condition in [Changed parameters search & edit].	-
U - - F	U--F	U--F	Forward searching...	Forward search in progress in [Changed parameters search & edit].	-
U n d o	Undo	UNDO	All key unlocked	When "Locked" was set for [F737: Panel keys lockout], the [ENTER] key or the [OK] key was pressed for five seconds or more.	The key operation on the operation panel is temporarily valid.
U - - r	U--r	U--R	Reverse searching...	Reverse search in progress in [Changed parameters search & edit].	-
U S R	USA	USA	Setting for North America	Setting for North America is selected in the setup menu.	-
	Connecting	CONNECTING	Communication error between LCD operation panel and control CPU	There is an error in the connection between LCD operation panel and inverter unit. A communication error has occurred.	• Check the connection between LCD operation panel and inverter unit. • If using an extension cable, check the extension cable. • The LCD operation panel does not support multi-drop connection. • Check the settings of the parameters ([F801] to [F809]).

13.2 How to reset trip



Important

- Reset the inverter that has tripped after eliminating the cause of the trip.
If it is not eliminated, the inverter will trip again even after reset. Pay enough attention.

(1) The inverter can be reset with the following four methods after a trip occurs.

(a) Panel operation

You can reset from the operation panel even if terminal run or communication run is performed when the trip occurs.

The following is an outline of the reset procedure.

- When the LED operation panel is used

- Press the [STOP/RESET] key with the trip displayed.

"CLr" blinks.

- When you press the [STOP/RESET] key again while "CLr" is blinking, the trip is reset.

The display on the screen once disappears, and the screen immediately after power on is displayed.



- When the LCD operation panel (option) is used

- Press the [STOP/RESET] key with the trip displayed.

"CLr" blinks in the main area, and "Trip reset? (STOP-Key)" is displayed on the lower side.

- The backlight is red.
(It is white when the setting of the backlight is changed.)



- When you press the [STOP/RESET] key again while "CLr" is blinking, the trip is reset.

The display on the screen once disappears, and the screen immediately after power on is displayed.

The backlight returns to white.

(b) Terminal input (external signal)

Short-circuit terminal [RES] and then release.

The inverter is reset when the terminal is released.

In the default setting, the function "8: Reset 1 (ON: Acceptance of reset command, ON→OFF: Trip reset)" is assigned to terminal [RES].

To reset with another input terminal, assignment of the reset function is required.

You can also use the "158: Reset 2" function (OFF → ON: Trip reset).

(c) Communication

For details, refer to "RS485 Communication Function Instruction Manual" (E6582301).

(d) Turning off power

Turn OFF the power and then turn it ON again.

When the power is off, some contents of the monitor at the time of the trip are lost.

To retain the contents of the monitor at the time of the trip, set [F602: Trip record retention] to "1: Retain at power off". Even after the inverter is reset with power off, the stored contents of the trip are displayed.

For details, refer to [6. 31. 6].



Important

- The inverter can be reset with power off, however, note that the equipment and the motor are damaged if the power is turned off frequently.

(2) When the inverter cannot be reset immediately after the trip

(a) For overload (inverter) "OL1", overload (motor) "OL2" and overload (braking resistor) "OLr", virtual cooling time is provided. During this time, the inverter cannot be reset by external signal or from the operation panel.

The reference virtual cooling time is as follows.

- "OL1": About 30 seconds after the occurrence of a trip
- "OL2": About 120 seconds after the occurrence of a trip
- "OLr": About 20 seconds after the occurrence of a trip

For overload (IGBT) "OL3", there is no virtual cooling time.

(b) In case of overheat "OH", the inverter checks the temperature within. Wait until the temperature in the inverter falls sufficiently before resetting the inverter.

(c) For overvoltage "OP1", "OP2", or "OP3", reset the inverter after the power circuit voltage becomes lower than the setting value of [F626: Overvoltage limit operation level].

(d) For PTC failure "E-32", reset the inverter after waiting until the motor temperature falls sufficiently.

(e) The inverter cannot be reset while the emergency off signal is being input to the input terminal.

(f) The inverter cannot be reset while a pre-alarm occurs.

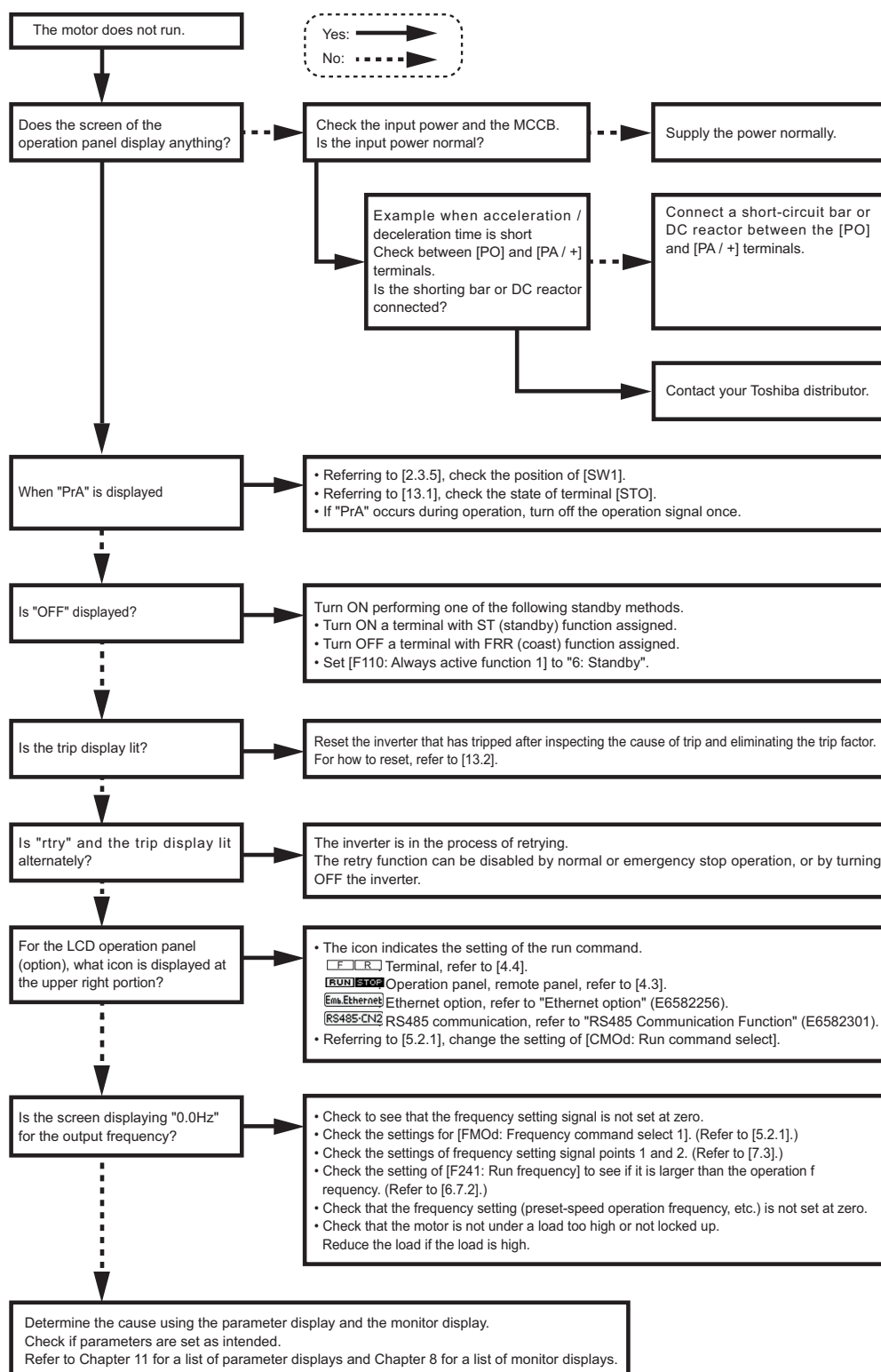
A trip cannot be reset while any of the following seven pre-alarms occurs.

- Inverter overload pre-alarm → Refer to (a).
- Motor overload pre-alarm → Refer to (a).
- Power circuit element overload pre-alarm → Refer to (a).
- Braking resistor overload pre-alarm → Refer to (a).
- Overheat pre-alarm → Refer to (b).

- Power circuit overvoltage pre-alarm → Refer to (c).

13.3 If the motor cannot run although no trip message is displayed

If the motor cannot run although no trip message is displayed, follow these steps to track down the cause.



13. 4 How to determine the causes of other problems

The following table provides a listing of other problems, their possible causes, and remedies.

Problems	Causes	Remedies
The motor runs in the wrong direction.	• The phase sequence of output terminals [U/T1], [V/T2], and [W/T3] is wrong.	• Invert the phases of output terminals [U/T1], [V/T2], and [W/T3].
	• The forward/reverse run signals are input inversely during terminal run.	• Invert the forward/reverse run signal inputs of the external input device. (Refer to [7. 2].)
	• The setting of [Fr: Panel Fwd/Rev run select] is incorrect during panel run.	• Change [Fr].
The motor runs but its frequency does not change.	• The load is large.	• Reduce the load.
	• The overload stall function is activated.	• Disable the overload stall function with [OLM: Motor overload protection characteristic], and reduce the load. (Refer to [5. 1. 5].)
	• The setting values of [FH: Maximum frequency] and [UL: Upper limit frequency] are too small.	• Increase the setting value of each parameter.
	• The value of the analog signal of the frequency command is small.	• Check the value of the signal, circuit, wiring, etc.
		• Check the characteristics (point 1 and point 2 settings) of the analog signal. (Refer to [7. 3].)
	• When the motor runs at a low speed, the torque boost value is too large.	• Check if an overcurrent alarm or overload alarm has occurred and adjust [vb: Manual torque boost 1] and [ACC: Acceleration time 1]. (Refer to [5. 2. 6] and [5. 1. 4].)
The motor does not accelerate or decelerate smoothly.	• The settings of [ACC: Acceleration time 1] and [dEC: Deceleration time 1] are too short.	• Increase the setting of each parameter.
A too large current flows into the motor.	• The load is large.	• Reduce the load.
	• When the motor runs at a low speed, the torque boost value is too large.	• Check if the value of [vb: Manual torque boost 1] is too large. (Refer to [5. 2. 6].)
The motor runs at a higher or lower speed than the specified one.	• The motor has an improper voltage rating.	• Use a motor with a proper voltage rating.
	• The motor terminal voltage is too low.	• Check the setting value of [vLv: Base frequency voltage 1]. (Refer to [5. 1. 2].)
		• Replace the motor wire with one of a larger size.
	• The acceleration/deceleration ratio of the gear, etc. is not correct.	• Adjust acceleration/deceleration ratio of the gear, etc.
	• The frequency command value is not correct.	• Check the value and range of the frequency command.
		• Adjust the motor to [vL: Base frequency]. (Refer to [5. 1. 2].)

Problems	Causes	Remedies
The motor speed fluctuates during run.	• The load is large or small, and load fluctuation is large.	• Reduce the load fluctuation.
	• The inverter or motor used does not have a rating large enough to drive the load.	• Replace the inverter and the motor with ones with larger capacities.
	• The frequency command fluctuates.	• Check if the frequency command such as the analog signal changes.
	• Vector control is not performed properly when [Pt: V/f Pattern 1] is set to "3" or "9".	• Check the settings and conditions of the motor parameters and vector control. (Refer to [5. 2. 4].)
Parameter settings cannot be changed.	• [F700: Parameter reading & writing access lockout] is set to "1" to "4" (Locked).	• Set [F700] to "0: (Unlocked)".
	• The password is set with [F738: Password setting].	• Input the password for [F739: Password verification] clear it. (Refer to [6. 35. 1].)
	• Input terminal functions: "200" to "203" (Parameter writing/reading locked) are assigned to one of the digital input terminals, and the input terminal is ON.	• Turn off the applicable input terminal.
	• For reasons of safety, some parameters cannot be reprogrammed while the inverter is running.	• Refer to [6. 35. 1].
RS485 communication is not possible	Refer to "Appendix 4 Troubleshooting" in "RS485 Communication Function Manual" (E6582301).	
"Data" or "0000" is displayed on the LED operation panel.	• [F710: Standard mode display] = "30: Arbitrary display by communication" is set.	• Change the setting of [F710]. See [5. 3. 3]
		• For details on [F710] = "30", refer to "RS485 Communication Function Manual" (E6582142).
A trip cannot be reset.	• A trip occurs again after a trip is reset.	• Eliminate the cause of the trip. (Refer to [13. 1].)
	• At the same time as a trip, a pre-alarm occurred.	• In the following cases, a trip cannot be reset until the cause of the pre-alarm is resolved. 1 Inverter overload pre-alarm 2 Motor overload pre-alarm 3 Power circuit element overload pre-alarm 4 Braking resistor overload pre-alarm 5 Overheat pre-alarm 6 Overvoltage pre-alarm (Refer to [13. 2 (2)] When the inverter cannot be reset immediately after the trip.)

The following is how to deal with parameter setting-related problems.

Problems	Remedies
You forget parameters which have been changed.	• You can search for all changed parameters and change their settings. For details, refer to [Changed parameters search & edit (GrU)] in [4. 2. 1].
You want to return all changed parameters to their respective default settings.	• You can return all parameters which have been changed to their default settings. For details, refer to [5. 2. 9].