

PROTECTIVE FUNCTIONS

Name	Cause(s)	Display on digital operator	Display on remote operator/copy unit ERR1****
Over-current protection	The inverter output was short-circuited, or the motor shaft is locked or has a heavy load. These conditions cause excessive current for the inverter, so the inverter output is turned off.	E01	OC.Drive
		E02	OC.Decel
		E03	OC.Accel
		E04	Over.C
Overload protection(*1)	When a motor overload is detected by the electronic thermal function, the inverter trips and turns off its output.	E05	Over.L
Braking resistor overload protection	When the regenerative braking resistor exceeds the usage time allowance or an over-voltage caused by the stop of the BRD function is detected, the inverter trips and turns off its output.	E06	OL.BRD
Over-voltage protection	When the DC bus voltage exceeds a threshold, due to regenerative energy from the motor, the inverter trips and turns off its output.	E07	Over.V
EEPROM error(*2)	When the built-in EEPROM memory has problems due to noise or excessive temperature, the inverter trips and turns off its output.	E08	EEPROM
Under-voltage error	A decrease of internal DC bus voltage below a threshold results in a control circuit fault. This condition can also generate excessive motor heat or cause low torque. The inverter trips and turns off its output.	E09	Under.V
CT(Current transformer) error	If a strong source of electrical interference is close to the inverter or abnormal operations occur in the built-in CT, the inverter trips and turns off its output.	E10	CT
CPU error	When a malfunction in the built-in CPU has occurred, the inverter trips and turns off its output.	E11	CPU
External trip	When a signal to an intelligent input terminal configured as EXT has occurred, the inverter trips and turns off its output.	E12	EXTERNAL
USP error	An error occurs when power is cycled while the inverter is in RUN mode if the Unattended Start Protection (USP) is enabled. The inverter trips and does not go into RUN mode until the error is cleared.	E13	USP
Ground fault	The inverter is protected by the detection of ground faults between the inverter output and the motor during power-up tests. This feature protects the inverter only.	E14	GND.Flt.
Input over-voltage protection	When the input voltage is higher than the specified value, it is detected 60 seconds after power-up and the inverter trips and turns off its output.	E15	OV.SRC
Instantaneous power failure	When power is cut for more than 15ms, the inverter trips and turns off its output. If power failure continues, the error will be cleared. The inverter restarts if it is in RUN mode when power is cycled.	E16	Inst.P-F
Inverter thermal trip	When the inverter internal temperature is higher than the specified value, the thermal sensor in the inverter module detects the higher temperature of the power devices and trips, turning off the inverter output.	E21	OH.FIN
Gate array error	Communication error has occurred between CPU and gate array.	E23	GA
Phase loss detection	One of three lines of 3-phase power supply is missing.	E24	PH.Fail
IGBT error	When an instantaneous over-current has occurred, the inverter trips and turns off its output to protect main circuit element.	E30	IGBT
Thermistor error	When the thermistor inside the motor detects temperature higher than the specified value, the inverter trips and turns off its output.	E35	TH
Braking error	The inverter turns off its output when it can not detect whether the braking is ON or OFF within waiting time set at b024 after it has released the brake. (When braking is enabled at b120)	E36	BRAKE
Out of operation due to under-voltage	Due to insufficient voltage, the inverter has turned off its output and been trying to restart. If it fails to restart, it goes into the under-voltage error.	----	UV.WAIT
Expansion card 1 connection error	An error has been detected in an expansion card or at its connecting terminals.	E60 - E69	OP1-0 - OP1-9
Expansion card 2 connection error		E70 - E79	OP2-0 - OP2-9

*1: Reset operation is acceptable 10 seconds after the trip.

*2: Check the parameters when EEP ROM error occurs.

Status Display

Code	Description	Code	Description
0	Reset	5	f0 Stop
1	Stop	6	Starting
2	Deceleration	7	DB
3	Constant Speed	8	Overload Restriction
4	Acceleration	9	Auto-tuning

How to access the details about the present fault

