TROUBLE SHOOTING

Inverter is provided with functions of warning and protection such as over voltage, low voltage and over current. Once fault occurs, protection function shall act, inverter output stops, fault contactor act and also free running of motor shall stop. For causes and corrective measures of fault, display of fault shall be taken for reference. Fault records shall be stored into computer memory inside AC motor drive (fault records for recent six times shall be available), and records shall be read at digital control keypad.

Attention shall be paid that, pressing RESET after fault shall only be available after fault has been eliminated.

1. Alarm and corrective measures

Display	Descriptions of fault	Corrective measures
oc	Inverter detects over current at output side.	1.Check rated current of motor complies with that of inverter. 2.Check that there is no short circuit in U, V, and W. 3.Check that no short circuit or grounding occur to connection of motor. 4.Check that screws are securely tightened to AC motor drive. 5.Increase acceleration time (1-09, 1-11). 6.Check there is no over load to motor.
ou	Inverter detects over voltage at DC high voltage side.	1.Check input voltage is within rated voltage range of inverter, and see that no voltage surge occurs. 2.If over voltage occurs at DC high voltage side of inverter caused by inertia back up voltage, deceleration time shall be increased.
oH	Inverter detects over heat, exceeding protection level.	1.Check that ambient environment is not over heat. 2.Check radiator and air fan is running. 3.Check enough clearance for air flowing is provided to inverter is with.
Lu	DC high voltage side over low inside inverter.	1.Check power supply voltage is correct. 2.Check no sudden heavy load.
oL	Output current exceeds allowable current of inverter. 60sec shall be in station if 150% of rated current of AC motor drive is output.	1.Check motor over load. 2.Decrease torque (7-02) to improve set value. 3.Increase output capacity of AC motor drive.
oL 1	Inner electric relay protection acts	1.Check motor over load. 2.Check rated current (07-00) of motor is proper. 3.Check electric relay function setting 4.Increase motor capacity.
oL2	Motor load overlarge	1.Check motor load is not overlarge. 2.Check over-torque detection level setting (06-03).

Display	Descriptions of fault	Corrective measures
EF	Inverter stops output when external multifunction terminals (EF) and DCM (NPN mode) closed.	Depress RESET key after alarm eliminated.
cF1	Inner memory IC data writing alarm	1.Supply power again after power off. 2.Factory maintenance and overhaul
cF2	Inner memory IC data reading alarm	1.Depress RESET key and reset parameter to factory setting. 2.If unavailable, search for factory maintenance and overhaul.
cF3.1	Internal temperature is over high at power-on test	1.Check the environment temperature, whether it is too high. 2.If the environment temperature is normal, send to factory for service.
cF3.2	Over voltage of inverter internal DC voltage side at power-on test	1.Check the input voltage, whether it is within the rated input voltage of inverter. 2.If the input voltage is normal, send to factory for service.
cF3.3	Under voltage of inverter internal DC voltage side at power-on test	1.Check whether the input power supply voltage is normal. 2.If the input voltage is normal, send to factory for service.
HPF.1	Circuit fault of over voltage protection	Factory service
HPF.3	Circuit fault of over current protection	Factory service
bb	Inverter stops output when external multifunction terminals and DCM (NPN mode) closed.	“bb” shall disappear immediately after signal source eliminated.
CE--	Communication fault	1.Check the connection condition of communication circuit. 2.Check the communication format.
Errb	Wobble frequency setting alarm, the central frequency of wobble frequency is lower than width, or the max. value of wobble frequency exceeds the upper and lower limit of frequency.	Reset the correct wobble frequency parameter.

2.Troubleshooting for faults in general

Alarm	Check points	Treatment
Motor doesn't run	Check connection of power supply to terminals L1/R, L2/S, L3/T?	Input power supply Supply power again after power firstly interrupted. Verify voltage class of power supply Tighten screws for terminals
	Check voltage output from output terminals U, V, W.	Supply power again after power firstly interrupted.
	Check motor is not blocked due to load over-large	Decrease load to make motor running available
	Check fault of inverters	Check wiring and correct it if necessary in accordance with reference for alarm.
	Check fwd/rev run reference achieved	
	Check input of Analog frequency setting	Verify wiring for analog frequency input signal Verify frequency input set voltage
	Verify operation mode setting	Controlled by digital operator.
Contrary rotation direction of motor	Check wiring for output terminals U, V, W	Match correctly with terminals U, V, W of motor
	Check wiring for FWD/REV run	Verify wiring and correct if necessary
Velocity variation unavailable for motor running	Check wiring for analog frequency input	Verify wiring and correct if necessary
	Check operation mode setting	Check and verify operation mode setting
	Check motor is free from overload.	Decrease load
Motor running speed over high or over low	Check specification(number of poles and voltage)of motor	Confirm specification of motor
	Check gear proportion	Confirm gear proportion
	Check Max output frequency setting	Confirm Max output frequency setting
	Check voltage is not dropping at motor side	Verify V/f curve setting
Speed variation fault during motor running	Check motor overload	Decrease load
	Check load is not in sharp variation	Decrease load variation Increase capacity of inverter and motor.
	Check no phase failure occur to power supply	For single phase mode, fix AC reactor to power supply side Verify wiring for Three phase mode.