## **Problems and Troubleshooting Procedure**

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, depressing RESET after fault shall only be available after fault has been eliminated.

## Abnormality Occurrence and Troubleshooting

| Alarm<br>code | Display | Descriptions of fault   | Corrective measures   |
|---------------|---------|---|---|
| d1            | oc      | Inverter detects over current at<br>output side.  | <ul><li>1.Check rated current of motor complies with that of inverter.</li><li>2.Check that there is no short circuit in U/T1, V/T2, and W/T3.</li></ul>  |
|               |         |   | 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).<br>6.Check there is no over load to motor.   |
| d2            | Ou      | Inverter detects over voltage at DC high voltage side.  | <ol> <li>Check input voltage is within rated voltage<br/>range of inverter, and see that no voltage surge<br/>occurs.</li> <li>If over voltage occurs at DC high voltage side<br/>of inverter caused by inertia back up voltage,</li> </ol> |
|               |         |   | deceleration time shall be increased.   |
| d3            | oН      | Inverter detects over heat,<br>exceeding protection level.  | <ol> <li>Check that ambient environment is not over<br/>heat.</li> <li>Check radiator and air fan is running.</li> <li>Check enough clearance for air flowing is<br/>provided to inverter is with.</li> </ol>                               |
| d4            | oL      | Output current exceeds allowable<br>current of inverter. 60 sec shall be in<br>station if 150% of rated current of<br>AC motor drive is output. | <ol> <li>Check motor over load.</li> <li>Decrease torque (7-02) to improve set value.</li> <li>Increase output capacity of AC motor drive.</li> </ol>   |
| d5            | ol I    | Inner electric relay protection acts  | <ol> <li>Check motor over load.</li> <li>Check rated current (07-00) of motor is proper.</li> </ol>   |
| d6            | EF      | Inverter stops output when external multifunction terminals (EF) and GND (Sink mode) closed.  | Depress RESET key after alarm eliminated.   |

| Alarm<br>code | Display  | Descriptions of fault  | Corrective measures   |
|---------------|----------|--|---|
| d7~d8         | Reserved |  |   |
| d9            | oc 9     | Over current during acceleration   | <ul><li>1.Check screws securing AC motor drive and motor are tightened.</li><li>2.Check insulation of wiring from U/T1,V/T2,W/T3 to motor</li></ul>   |
|               |          |  | <ul><li>3.Increase acceleration time</li><li>4.Decrease torque (7-02) to improve set value.</li><li>5.Replace with AC motor with larger output capacity.</li></ul>                              |
| d10           | ocd      | Over current during deceleration   | <ul> <li>1.Check insulation of wiring from</li> <li>U/T1,V/T2,W/T3 to motor</li> <li>2.Increase deceleration time</li> <li>3.Replace with AC motor drive with larger output capacity</li> </ul> |
| d11           | סבח      | Over current during running  | <ul> <li>1.Check insulation of wiring from</li> <li>U/T1,V/T2,W/T3 to motor</li> <li>2.Check motor running normally</li> <li>3.Replace AC motor drive with larger output capacity.</li> </ul>   |
| d12~d13       | Reserved |  |   |
| d14           | Lu       | DC high voltage side over low inside inverter.   | 1.Check power supply voltage is correct.<br>2.Check no sudden heavy load.   |
| d15           | c۶¦      | Inner memory IC data writing fault   | 1.Supply power again after power off.<br>2.Factory maintenance and overhaul   |
| d16           | cF2      | Inner memory IC data reading fault   | <ol> <li>Depress RESET key and reset parameter to<br/>factory setting.</li> <li>If unavailable, search for factory maintenance<br/>and overhaul.</li> </ol>                                     |
| d17           | 66       | When the multi-function input<br>terminal (M0-M3) is used to setting<br>this function,it close with GND, and<br>the AC motor driver stops output | "bb" shall disappear immediately after signal source eliminated.  |
| d18           | ol2      | Motor load overlarge   | 1.Check motor load is not overlarge.<br>2.Check over-torque detection level setting .   |
| d19           | cFR      | Auto accel/decel mode failure  | <ul><li>1.Check AC motor drive complies with motor properly</li><li>2.Load back up inertia overlarge</li><li>3.Sudden load variation(06-03)</li></ul>   |

| Alarm<br>code | Display             | Descriptions of fault  | Corrective measures  |
|---------------|---------------------|--|--|
| d20           | codE                | Software protection activation   | Factory maintenance and overhaul   |
| d21           | Reserved            |  |  |
| d22~d28       | cF3.1<br>~<br>cF3.7 | CF3.1 Detects temperature circuit<br>error<br>CF3.2 Detects OU circuit error<br>CF3.3 Detects low-voltage circuit<br>error<br>CF3.5 Detects over current at<br>circuit . | Factory maintenance and overhaul.  |
| d29~d31       | HPF. <br>~<br>HPF.3 | HPF.1 Detects OU circuit error<br>HPF.2 Detects CLB circuit error<br>HPF.3 Detects OC circuit error  | Factory maintenance and overhaul.  |
| d32           | cE                  | Communication fault  | <ul><li>1.Check communication signals connection<br/>(SG+,SG-)</li><li>2.Check communication format is proper.</li></ul>             |
| d33           | Reserved            |  |  |
| d34           | 5-8-                | Acceleration time is set to 0  | Reset correct acceleration time  |
| d35           | Reserved            |  |  |
| d36           | Sc                  | Abnormal control signals of IGBT bridge  | <ul><li>1.If there is a major interference source, reduce<br/>the interference</li><li>2.Factory maintenance and overhaul.</li></ul> |
| d37           | Errb                | Abnormal setting wobble frequency,<br>center frequency is less than the<br>range,Max. wobble frequency is<br>over input frequency range.                                 | Reset correct wobble frequency parameter   |