

1305 TROUBLESHOOTING GUIDE

FAULT	DESCRIPTION	CORRECTIVE ACTION
Diag C Lim Fault F36	The drive output current has exceeded the software [Current Limit] and the [Cur Lim Trip En] parameter was enabled.	Check programming of [Curr Lim Trip En] parameter. Check for excess load, improper DC boost setting, DC brake volts set too high or other causes of excess current.
Drive Reset Fault F22	Occurs on power-up. It is reset by the stop input. If the input is set already, it will be cleared automatically on power-up.	Check stop connection at TB2, terminal 8.
EEprom Fault F32	EEPROM has invalid data or can not be programmed to valid data. Reset to Default Parameters and CYCLE power.	Check cable connection from main control board to power board.
Hz Err Fault F29	This fault indicates that there is not a valid operating frequency. It can be caused by any of the following: 1. [Maximum Frequency] is less than [Minimum Freq]. 2. Skip frequencies and skip bandwidth eliminate all operating frequencies. 3. 4-20mA input signal speed reference has been lost or is out of range and [4-20mA Loss Sel] is set for "Stop-Fault." 4. The adapter that was the active frequency source was disconnected.	1. Check [Minimum Freq] and [Maximum Freq] parameters. 2. Check [Skip Freq 1], [Skip Freq 2], [Skip Freq 3] and [Skip Freq Band] parameters. 3. Check for broken wires, loose connections or transducer loss at 4-20mA input, TB2. 4. Active frequency source cannot be removed.
Hz Sel Fault F30	Internal error.	Reset drive to factory defaults.
IPM Current Fault F44	The internal power module overcurrent limit had been exceeded.	Check for short circuit at the drive output or excessive load conditions at the motor, specifically cable capacitance to ground.
IPM Overtemp Fault F45	The internal power module thermal limit has been exceeded.	Check for blocked or dirty heat sink fins. Check for proper mounting and spacing. Check if the ambient temperature limit has been exceeded.
Max Retries Fault F33	Drive unsuccessfully attempted to reset a fault and resume running for the programmed number of [Reset/Run Tries].	Check fault buffer for fault code requiring reset. Correct the cause of the fault and manually clear by cycling the stop command or cycling power.
Motor Mode Flt F24	Internal error.	Reset drive to factory defaults.
Motor Stall Fault F6	The motor is stalled.	If the motor is drawing excessive current, the motor load is excessive and will not allow the drive to accelerate to set speed. A longer accel time or a reduced load may be required.
Neg Slope Fault F35	Drive software detected a portion of the volts/Hz curve with a negative slope.	Check drive programming. 1. [Maximum Voltage] parameter must be greater than [Base Voltage]. 2. [Base Voltage] parameter must be greater than [Start Boost]. 3. If the [DC Boost Select] parameter is set to "Break Point," [Base Voltage] must be greater than [Break Voltage] and [Break Voltage] must be greater than [Start Boost].
Op Error Fault F11	Internal error.	Reset drive to factory defaults.
Open Pot Fault F9	An external pot is connected and the ground lead of the pot is disconnected creating a potential drive overspeed hazard.	Check the external potentiometer circuit at TB2, terminals 1, 2 and 3 for an open circuit.
Overcurrent Fault F12	Overcurrent is detected in overcurrent hardware trip circuit.	Check for a short circuit at the drive output or excessive load conditions at the motor.

FAULT	DESCRIPTION	CORRECTIVE ACTION
Overload Fault F7	Internal electronic overload trip.	An excessive motor load exists. It must be reduced such that drive output current does not exceed the % of current set by the [Overload Current] parameter. Reduce [Start Boost]
Overspeed Fault F25	Internal error.	Reset drive to factory defaults.
Overtemp Fault F8	Temperature sensor detects excessive heat.	Check for blocked or dirty heat sink fins. Check for proper mounting and spacing (See page 2-1). Check if the ambient temperature limit has been exceeded.
Overvolt Fault F5	DC bus voltage exceeded maximum value.	Monitor the AC line for high line voltage or transient conditions. Bus overvoltage can also be caused by motor regeneration. Extend the decel time or install dynamic brake option.
Phase U Fault F38	A phase to ground fault has been detected between the drive and motor in this phase.	Check the wiring between the drive and motor. Check motor for grounded phase.
Phase V Fault F39	A phase to ground fault has been detected between the drive and motor in this phase.	Check the wiring between the drive and motor. Check motor for grounded phase.
Phase W Fault F40	A phase to ground fault has been detected between the drive and motor in this phase.	Check the wiring between the drive and motor. Check motor for grounded phase.
Power Loss Fault F3	DC bus voltage remained below 85% of nominal for longer than 0.500 sec. [Line Loss Fault] parameter is programmed to "F03 Enable".	Monitor the incoming AC line for low voltage or line power interruption.
Power Mode Fault F26	Internal error.	Reset drive to factory defaults.
Reprogram Fault F48	Occurs when drive parameters are reset to defaults.	Clear fault.
Run Boost Fault F34	An attempt has been made to set the [Run Boost] parameter to a value greater than the [Start Boost] parameter.	Verify that parameter has been programmed correctly.
Serial Fault F10	An active local bus adapter is disconnected while it possesses control of a local bus function.	Check for a break in communications line.
Undervolt Fault F4	DC Bus voltage fell below the minimum value. [Line Loss Fault] parameter is programmed to "U Volt Run".	Monitor the incoming AC line for low voltage or line power interruption.
UV Short Fault F41	Excessive current has been detected between these two drive output terminals.	Check the motor and external wiring to the drive output terminals for a shorted condition.
UW Short Fault F42	Excessive current has been detected between these two drive output terminals.	Check the motor and external wiring to the drive output terminals for a shorted condition.
VW Short Fault F43	Excessive current has been detected between these two drive output terminals.	Check the motor and external wiring to the drive output terminals for a shorted condition.

General Problem

Motor does not start
(No output voltage to motor)
("Stopped" is displayed on the HIM).

Action to Take

- (1) Check power circuit
 - Check supply voltage.
 - Check all fuses and disconnects.
- (2) Check motor
 - Verify that motor is connected properly.
- (3) Check control input signals.
 - Verify that ENABLE signal is present. ("Not Enabled" is displayed on the HIM)
 - Verify that START signal is present.
 - Verify that STOP signal is present.
 - Verify that RUN FORWARD and RUN REVERSE signals are NOT both active.
- (4) Check parameter mask settings
 - Verify that [START MASK] is set properly.
 - Verify that [LOGIC MASK] is set properly.
 - Verify that [LOCAL MASK] is set properly.

Drive Started but motor NOT rotating.
("At Speed 0.00 Hz" is displayed on HIM).

- (1) Check motor
 - Verify that motor is connected properly.
- (2) Check Frequency Source
 - Verify that frequency signal is present at terminal block TB2.
 - 4-20mA signal
 - 0-10V signal
 - Remote Potentiometer
 - Verify that Adapter or Preset Frequencies are set properly.
- (3) Check control input signals.
 - Verify that SW1, SW2 and SW3 are in the proper state.
- (4) Check parameter settings
 - Verify that [**FREQ SOURCE**] is showing the desired frequency source.
 - Verify that [FREQ COMMAND] is the desired value.
 - Verify that [REFERENCE MASK] is set properly.

Motor not accelerating properly.

- (1) Check motor
 - Verify that motor is connected properly.
 - Verify that no mechanical problems exist.
- (2) Check control input signals
 - Verify that SW1, SW2, and SW3 are in the proper state to select desired Accel/Decel rates.
- (3) Check parameter settings
 - Verify that [ACCEL TIME 1] and [ACCEL TIME 2] are set properly.
 - Verify that [CURRENT LIMIT] is set properly.
 - Verify that [DC BOOST SELECT] is set correctly.
 - Verify that [START BOOST] and [RUN BOOST] are set properly.

Specific Problem

Action to Take

Can't JOG from Adapter.

- (1) Verify that [JOG MASK] is set properly to allow jogging from that adapter.
- (2) Verify that [LOGIC MASK] is set properly to allow jogging from that adapter.
- (3) Is drive already running?
- (4) Examine [STOP OWNER] to verify that a maintained STOP does not exist.

Can't change direction from Adapter.

- (1) Verify that [DIRECTION MASK] is set to allow direction changes from that adapter.
- (2) Verify that [LOGIC MASK] is set to allow direction changes from that adapter.

Can't START from Adapter.

- (1) Verify that [START MASK] is set properly to allow starting from that adapter.
- (2) Verify that [LOGIC MASK] is set properly to allow starting from that adapter.
- (3) Is drive already running?
- (4) Examine [STOP OWNER] to verify that a maintained STOP does not exist.

Display indicates "Not Enabled".

- (1) Check enable signal at TB2, terminals 11 & 12.

Can't operate in "RUN FWD/RUN REV" mode.

- (1) Verify that **[INPUT MODE]** is set correctly.
- (2) Has power been cycled for above change to take effect?
- (3) Are both RUN FORWARD and RUN REVERSE switches active?

Can't change speed from Adapter.

- (1) Verify that the speed source is the adapter in question.
(examine [FREQ SOURCE] parameter).

Can't operate drive without HIM.

- (1) Verify that SW1, SW2, and SW3 are in the proper state to select the desired speed source.
(Refer to Table 5.A on page 5-23)
- (2) Verify that [FREQ SOURCE] and [FREQ COMMAND] are desired values.

Drive faults when Adapter is unplugged.

- (1) Verify that [LOGIC MASK] is set properly to allow removal of a particular Adapter while drive is powered up.
- (2) Verify that the adapter being unplugged is not the active frequency source.

PIN ID ERROR is displayed on HIM.

- (1) Unplug the HIM from the cable or drive and re-connect.

"NETWORK ERROR X" is displayed on the HIM.

- (1) Press the "UP" or "DOWN" arrow to clear the message from the HIM display.
- (2) Unplug the HIM from the cable or drive and re-connect.

Can't clear fault from Adapter or Terminal Block with stop command.

- (1) Verify that **[FAULT CLEAR MODE]** is set to "Enabled"
- (2) Verify that [FAULT MASK] is set to allow clearing of faults from chosen device.
- (3) Verify that [LOGIC MASK] is set properly.