

## 5.2.2 Fault message list

**Warning**

When the motor pulses are canceled, there is no information about the motor speed. The calculated speed actual value is then set to 0. The motor pulses can be deleted as a result of fault messages.

Table 5-12 Fault message list

Fault message	Fault	Cause
F-04	Fault for D/A conversion	<ul style="list-style-type: none"> <li>If this message is continually repeated, the control board is defective</li> </ul>
F-05	Motor current = 0	<ul style="list-style-type: none"> <li>All of the enable signals are present, but a motor is not connected</li> <li>A motor contactor has not pulled-in.</li> <li>All of the enable signals are present, but at least one of the parameters P-160, P-166, P-057, P-059 is equal to zero.</li> <li>Defective DC link fuse</li> <li>Interrupted DC link busbars</li> </ul>
F-07	Data save on the FEPROM unsuccessful	<ul style="list-style-type: none"> <li>If the fault message repeatedly occurs during a data save operation, then the FEPROM is defective.</li> <li>If the fault message occurred immediately after powering-up the drive converter, the drive converter was powered-down during a data save operation. This means that the last parameter changes have not been saved. A new data save must be initiated.</li> </ul>
F-08	Irrevocable data loss	<ul style="list-style-type: none"> <li>Defective FEPROM → replace the control board</li> </ul>
F-11	Frequency setpoint > maximum frequency	<ul style="list-style-type: none"> <li>Ribbon cable, control board – gating board is defective or is not connected</li> <li>Motor is not connected or a phase is missing</li> <li>Defective power supply of the gating board</li> <li>Defective DC link fusing</li> <li>DC link busbars interrupted</li> <li>Motor stalled, as the motor or controller parameters are completely incorrect</li> <li>The IM module is connected to a monitoring module without DC link voltage sensing, and a value was not entered in P-061 for the DC link voltage</li> <li>For the gearbox stage changeover, the speed limiting P-029 was reduced, although the motor is rotating above this limit.</li> <li>Defective motor</li> </ul>
F-13	Field controller is at its limit	<ul style="list-style-type: none"> <li>Motor data or controller data completely incorrect</li> <li>Entered motor data and circuit configuration type Y/Δ of the motor do not match</li> <li>Motor stalled, as the motor or controller data are completely incorrect</li> </ul>

Table 5-12 Fault message list

Fault message	Fault	Cause
F-14	Motor overtemperature	<ul style="list-style-type: none"> <li>Motor overloaded</li> <li>Motor current too high, e.g. due to incorrect motor data</li> <li>Defective temperature sensor (motor)</li> <li>Defective motor fan</li> <li>Winding short circuit, motor</li> </ul>
F-15	Drive converter overtemperature	<ul style="list-style-type: none"> <li>Drive converter overloaded (incorrect motor/converter assignment, incorrect load duty cycle, clock cycle frequency too high)</li> <li>Ambient temperature too high</li> <li>Fan in the IM module failed</li> <li>Defective temperature sensor in the IM module</li> <li>After cooling below <math>50^{\circ}\text{C} \pm 15\text{K}</math>, acknowledgement is only possible by powering-down and powering-up again</li> </ul>
F-16	Illegal power module code number	<ul style="list-style-type: none"> <li>Incorrect code number 3 in P-095 selected (for power modules without automatic recognition)</li> <li>Incorrect code number selected in P-095 (for power modules with automatic recognition). From FW 3.00</li> </ul>
F-17	$I_{0\text{ motor}} > I_{\text{rated power module}}$	<ul style="list-style-type: none"> <li>Incorrect motor/converter assignment</li> </ul>
F-19	Temperature sensor motor <ul style="list-style-type: none"> <li>Interrupted</li> <li>Short-circuit only KTY 84</li> </ul>	<ul style="list-style-type: none"> <li>Defective temperature sensor</li> <li>Connection to the sensor interrupted or short-circuited</li> </ul>
F-51	Parameterizing error: Rated torque too high	<ul style="list-style-type: none"> <li>Rated torque (calculated) from P160.M and P163.M greater than 650 Nm From FW 2.00</li> </ul>
F-52	Parameterizing error: Illegal torque constant	<ul style="list-style-type: none"> <li>Illegal ratio of <math display="block">\frac{P-160.M \cdot P-164.M}{P-161.M \cdot P-163.M \cdot P-171.M}</math> From FW 2.00</li> </ul>
F-53	Parameterizing error: Rated motor current too low	Ratio between the rated motor current and rated power module current too low
F-60	Error for the automatic setting routine	<ul style="list-style-type: none"> <li>Automatic setting routine was interrupted</li> <li>Automatic setting routine did not provide any useful values</li> <li>Speed limiting (P-029, P-174) effective <math>n_{\text{max}} &lt; (f_{\text{rated}} \cdot 60\text{ s/min})/p</math></li> <li>Configuration Y/<math>\Delta</math> and rated data interchanged</li> <li>Other causes, refer to Section 4</li> </ul>
F-90	Max. speed BERO exceeded	<ul style="list-style-type: none"> <li>Pulse number P131.M incorrectly parameterized</li> <li>Interrupted cable</li> </ul>

**Faults**

After

- **Power ON**

Operator display inactive

- minimum of two phases missing (NE/monitoring module)
- minimum of two input fuses have failed (NE/monitoring module)
- defective electronics power supply in the NE/monitoring module
- equipment bus connection (ribbon cable) IM module ↔ NE/monitoring module not inserted or defective
- defective IM module
- defective EPROM/FEPRM
- firmware not loaded

- **Controller enable**

Motor rotates counter clockwise, although the IM module outputs a clockwise rotating field or vice versa

- motor rotating field incorrect as the feeder cables are interchanged (interchange 2 phases)

