Detailed description of all fault codes, causes and remedies relevant for MGE-F / MLE-F and MGE-G / MLE-G

Note: In both R100 and PC Tool E-products some of the faults have been grouped under the same text. This is why sometimes two or more faults "show" the same text. There is no way of identifying the underlying fault of these readings.

Code (fault log)	Fault reading PC Tool	Fault reading R100	Cause/Explanation	Remedy	E-products
3	External fault	External fault	The digital input set to 'external fault' has been activated.	No remedy required - this is part of normal operation.	
4	Too many restarts (after fault finding according to the fault log code numbers.	Too many restarts	The number of permissible restarts within 24 hours has been exceeded.	Reset the fault reading by pressing "+" or "–". Read the fault in the fault log and continue	restarts fault)
30	Replace the motor bearings	Motor bearings need change (service notification)	The motor has reached the number of operating hours for the bearing service life stated in the configuration.	Replace the bearings.	
31	Replace the varistor	Motor varistor(s) need change (service notification)	The varistor has been exposed to the allowable number of transients and needs to be replaced.	Replace the varistor.	
32	Overvoltage	Overvoltage	The voltage supply is or has been too high in the starting moment or during operation. The internal DC voltage measures > 700 V for 30 seconds.	Try to locate the cause of the unstable voltage supply. 700 VDC corresponds to 500 VAC. See the motor nameplate.	
40	Undervoltage	Undervoltage	Mains supply voltage is too low in the starting moment or during operation. The internal DC voltage measures < 400 V.	Try to locate the cause of the unstable voltage supply. 400 VDC corresponds to 300 VAC. See the motor nameplate. The voltage supply may be underdimensioned.	
41	Undervoltage	Undervoltage transient	There has been a drop in the voltage supply caused by one of the following things: • supply cable too small • another big user is supplied from the same panel.	Restore proper mains supply. See the motor nameplate. Possibly check whether the problem recurs if the motor is restarted.	
45	Mains voltage asymmetry	Voltage asymmetry	The supply voltage has been or is asymmetric.	Check the supply voltage while the motor is loaded.	
49	Overload	Overcurrent	Heavy overload. Pump seized up.	Remove the cause of the seizure.	
51	Overload	Blocked motor/pump	The pump has seized up in the starting moment which causes heavy overload. The input current is very high; motor P > 120 % for 60 seconds.	Remove the cause of the seizure.	

Code (fault log)	Fault reading R100	Fault reading PC Tool E-products	Cause/Explanation	Remedy
55	Overload	Motor current protection activated (MCP)	The built-in motor-current protection function has registered a continued overload of more than 125 % of rated current for 60 seconds. Cause: • continued overload • incorrect configuration of the terminal box • fault in stator windings.	• Reduce the load by limiting the flow. • Reconfigure the terminal box. • Check the stator windings.
56	Underload	Underload	The motor is underloaded. The fault may be due to: • incorrect configuration of the terminal box • the pump has run dry.	• Check the settings of the terminal box. • Make sure that all valves in the piping system are open and that there is water in the piping system.
57	Dry running	Dry running	The pump has run dry.	Make sure that all valves in the piping system are open and that there is water in the piping system.
65	Too high motor temperature.	Motor temperature	The temperature sensor in the motor has measured a winding temperature of more than 160 °C. Cause: • dust and dirt in the cooling fins • too high ambient temperature • fault in the stator windings.	• Clean the cooling fins. • Improve the cooling. • Check the stator windings.
73	Undervoltage	Hardware shut down (HSD)	The current limit of the electronic module has been exceeded. Cause: • voltage supply to standby pump has been cut • communication cable has been cut • communication module defective.	• Re-establish the voltage supply. • Check the communication cable. • Replace communication module.
77	Duty/standby, Communication fault	Twin pump communication fault	Communication between the two pumps which have been set to duty/standby function has been interrupted. Cause: • voltage supply to standby pump has been cut • communication cable has been cut • communication module defective.	Re-establish the voltage supply. Check the communication cable. Replace communication module.
85	Other fault	Freq. conv. verification error (EEPROM)	The EEPROM has lost its contents. parameter	Try configuring the terminal box again. If this does not remedy the fault, replace the terminal box.
88	Sensor 1 signal outside signal range	Sensor fault	Sensor signal type 4-20 mA: signal below 2 mA or above 22 mA. Sensor signal type 0-20 mA: signal above 22 mA. Sensor signal type 0-10 V: signal above 11 V. • signal range set incorrectly • sensor incorrectly connected • incorrect supply voltage to sensor • sensor defective • sensor cable defective.	• Correct the signal range setting. • Connect the sensor correctly. • Check the voltage supply from the terminal box. If it is not 24 V +/– 1 V, replace the terminal box. • Replace the sensor. • Check the sensor cable.
91	Temperature sensor 1 signal outside signal range	Temperature sensor 1 signal fault	The sensor signal has been short-circuited or cut.	Replace the temperature sensor.

Code (fault log)	Fault reading R100	Fault reading PC Tool E-products	Cause/Explanation	Remedy
93	Sensor 2 signal outside range	Sensor 2 signal fault	Sensor 2 signal fault	See alarm 88.
96	Setpoint signal outside range	Reference input fault	Fault in the setpoint signal may occur if: - the setpoint signal is interrupted, - the setpoint signal (4-20 mA) falls below 2 mA, or - the max.-value (4-20 mA or 0-10 V) is exceeded by 20 %. 1. Setpoint signal range incorrectly set. 2. Setpoint signal incorrectly connected. 3. Setpoint signal of an incorrect type.	1. Correct setpoint signal range setting. 2. Connect setpoint signal correctly. 3. Connect correct setpoint signal. Possibly carry out fault finding on the terminal box.
105	Overload	Electronic Rectifier Protection activated (ERP)	The electronic module/motor is heavily overloaded, and the temperature of the electronics is above 100 °C. The measured temperature can be read via PC Tool E-Products. Cause: • defective temperature sensor • continued overload • the ambient temperature is too high/the cooling is insufficient • incorrect configuration of the terminal box.	• Replace the rectifier board. • Reduce the load. • Improve the cooling. • Reconfigure the terminal box.
106	Overload	Electronic inverter protection activated (EIP)	The electronic module/motor is heavily overloaded, and the temperature of the electronics is above 100 °C. The measured temperature can be read via PC Tool E-Products. Cause: • defective temperature sensor • continued overload • the ambient temperature is too high/the cooling is insufficient • incorrect configuration of the terminal box.	• Replace the inverter board. • Reduce the load. • Improve the cooling. • Reconfigure the terminal box.
148	DE bearing temperature high	Motor drive-end (DE) hot.	The drive-end motor bearing has become too Cause: warning limit/ • Clean the motor. • The motor is dirty. alarm limit	Replace the bearing • bearing temp. • The bearing is worn. Motor drive-end (DE) bearing temp.
149	NDE bearing temperature high	Motor too hot. (NDE) bearing temp. warn. limit/ Motor non-drive-end (NDE) bearing temp. alarm limit	The non-drive-end motor bearing has Cause: • The bearing is worn. • The motor is dirty.	Replace the bearing non-drive-end become • Check and clean, if necessary: a) the fan b) the motor cooling fins.

Code (fault log)	Fault reading R100	Fault reading PC Tool E-products	Cause/Explanation	Remedy
155	Undervoltage	Inrush fault	The terminal box voltage is outside the alarm limit. Cause • fault in the voltage supply • transients in the voltage supply during operation.	• Re-establish the voltage supply. • Replace the inverter board.
156	Other fault	Internal communication to defect in the terminal box.	Internal communication fault in the pump due failure in frequency converter	Replace the terminal box.
175	Temperature sensor 2 signal outside signal range	Temperature	See alarm 91.	See alarm 91. sensor 2 signal fault
190	Limit 1 exceeded	Limit 1 exceeded	This is a monitoring function offering information, warning or alarm if a low or high limit is exceeded. The function can only be set by means of Grundfos PC Tool E-Products. The limit set has been exceeded either upwards or downwards.	The function can be set to monitor the following: • sensor 1 or 2 • Pt100 sensor 1 or 2 • external setpoint • the feedback signal. 1. Using PC Tool E-Products, check which function is being monitored. 2. Check in the pump system whether the alarm or warning is real. If it is real, remedy the fault. 3. If the alarm or warning seems to be wrong for the pump system, troubleshoot according to the selected sensor using these service instructions.
191	Limit 2 exceeded	Limit 2 exceeded		
240	Relubricate motor bearings	Motor bearings need lubrication (service notification)	The motor has reached the number of operating hours for the bearing lubrication stated in the configuration.	Lubricate the bearings.