

**2 PRIEDAS. DAŽNUMINĖS PAVAROS MICRO MASTER MM75/2
PARAMETRŲ KODAI**

6. FAULT CODES

In the event of a failure, the inverter switches off and an error code appears on the display. The last error that occurred is stored in parameter P930. e.g. '0004' indicates that the last error was F004.

Fault Code	Cause	Corrective Action
F001	Overvoltage	Check whether supply voltage is within the limits indicated on the rating plate. Increase the ramp down time (P003) or apply braking resistor (option). Check whether the required braking power is within the specified limits.
F002	Overcurrent	Check whether the motor power corresponds to the inverter power. Check that the cable length limits have not been exceeded. Check motor lead and motor for short-circuits and earth faults. Check whether the motor parameters (P081 – P086) correspond with the motor being used. Check the stator resistance (P089). Increase the ramp-up time (P002). Reduce the boost set in P078 and P079. Check whether the motor is obstructed or overloaded.
F003	Overload	Check whether the motor is overloaded. Increase the maximum motor frequency if a motor with high slip is used.
F004	Overheating of motor (monitoring with PTC)	Check whether the motor is overloaded. Check the connections to the PTC. Check that P087 has not been set to '1' without a PTC being connected.
F005	Inverter overtemperature or motor overtemperature by I^2t calculation ¹	Check that the ambient temperature is not too high. Check that the air inlet and outlet are not obstructed. Check that the motor current does not exceed the value set in P083.
F006	Mains phase missing ² (3-phase units only)	Check the mains supply and correct.
F008	USS protocol timeout	Check the serial interface. Check the settings of the bus master and P091 – P093. Check whether the timeout interval is too short (P093).
F009	Undervoltage	Check the supply voltage.
F010	Initialisation fault ³	Check the entire parameter set. Set P009 to '0000' before power down.
F011	Internal interface fault ³	Switch off power and switch on again.
F013	Programme fault ³	Switch off power and switch on again.
F015	Failure to start on the fly	Try setting P016 to a different value.
F106	Parameter fault P006	Parameterise fixed frequency(ies) and/or motor potentiometer on the digital inputs.
F112	Parameter fault P012/P013	Set parameter P012 < P013.
F151 – F154	Digital input parameter fault	Change the settings of digital inputs P052 to P055.
F188	Automatic calibration failure	Motor not connected to inverter – connect motor. If the fault persists, set P088 = 0 and then enter the stator resistance of the motor into P089 manually.
F201	P006 = 1 while P201 = 2	Change parameter P006 and/or P201.
F212	Parameter fault P211/P212	Set parameter P211 < P212.

¹ This trip can only be reset by switching off the inverter and switching on again, even when the unit is cool.

² Only active on 3-phase 400 – 500 V MICRO MASTERS. It will only detect the missing phase when the inverter is operating at > 50% load.

³ Ensure that the wiring guidelines described in section 2.1 have been complied with.

When the fault has been corrected the inverter can be reset. To do this press button **P** twice (once to display P000 and the second time to reset the fault), or erase the fault via a binary input (see parameters P051 – P055 in section 5).

7.7 Parameter Summary List

- ⊖ = Parameter can be changed during operation.
 • • • = Value depends on the rating of the inverter.

Parameter	Function	Range [Default]	Parameter	Function	Range [Default]
P000	Operating display	—	P034 ⊖	Jog ramp down time (seconds)	0 – 650.0 [10.0]
P001 ⊖	Display selection	0 – 7 [0]	P041 ⊖	1st fixed frequency (Hz)	0 – 650.00 [5.00]
P002 ⊖	Ramp up time (seconds)	0 – 650.0 [10.0]	P042 ⊖	2nd fixed frequency (Hz)	0 – 650.00 [10.00]
P003 ⊖	Ramp down time (seconds)	0 – 650.0 [10.0]	P043 ⊖	3rd fixed frequency (Hz)	0 – 650.00 [20.00]
P004 ⊖	Smoothing (seconds)	0 – 40.0 [0.0]	P044 ⊖	4th fixed frequency (Hz)	0 – 650.00 [40.00]
P005 ⊖	Digital frequency setpoint (Hz)	0 – 650.00 [0.00]	P045	Inversion fixed setpoints 1 – 4	0 – 7 [0]
P006	Frequency setpoint type selection	0 – 2 [0]	P046 ⊖	5th fixed frequency (Hz)	0 – 650.00 [0.00]
P007	Enable/disable front panel buttons	0 – 1 [1]	P047 ⊖	6th fixed frequency (Hz)	0 – 650.00 [0.00]
P009 ⊖	Parameter protection setting	0 – 3 [0]	P048 ⊖	7th fixed frequency (Hz)	0 – 650.00 [0.00]
P010	Display scaling	0 – 500.00 [1.00]	P049 ⊖	8th fixed frequency (Hz)	0 – 650.00 [0.00]
P011	Frequency setpoint memory	0 – 1 [0]	P050	Inversion fixed setpoints 5 – 8	0 – 7 [0]
P012 ⊖	Minimum motor frequency (Hz)	0 – 650.00 [0.00]	P051	Selection control function, DIN1 (terminal 8), fixed frequency 5	0 – 18 [1]
P013 ⊖	Maximum motor frequency (Hz)	0 – 650.00 [50.00]	P052	Selection control function, DIN2 (terminal 9), fixed frequency 4	0 – 18 [2]
P014 ⊖	Skip frequency (Hz)	0 – 650.00 [0.00]	P053	Selection control function, DIN3 (terminal 10), fixed frequency 3	0 – 18 [6]
P015 ⊖	Automatic restart	0 – 1 [0]	P054	Selection control function, DIN4 (terminal 11), fixed frequency 2	0 – 18 [6]
P016 ⊖	Start on the fly	0 – 4 [0]	P055	Selection control function, DIN5 (terminal 12), fixed frequency 1	0 – 18 [6]
P017 ⊖	Smoothing type	1 – 2 [1]	P056	Digital input debounce time	0 – 2 [0]
P018 ⊖	Automatic restart after fault	0 – 1 [0]	P061	Selection relay output RL1	0 – 13 [6]
P021 ⊖	Minimum analogue frequency (Hz)	0 – 650.00 [0.00]	P062	Selection relay output RL2	0 – 13 [8]
P022 ⊖	Maximum analogue frequency (Hz)	0 – 650.00 [50.00]	P063	External brake release delay (seconds)	0 – 20.0 [1.0]
P023 ⊖	Analogue input type	0 – 2 [0]	P064	External brake stopping time (seconds)	0 – 20.0 [1.0]
P024 ⊖	Analogue setpoint addition	0 – 2 [0]	P065	Current threshold for relay (A)	0 – 99.9 [1.0]
P025 ⊖	Analogue output	0 – 105 [0]	P070	Braking Resistor Duty Cycle (MICRO MASTER only)	0 – 4 [0]
P031 ⊖	Jog frequency right (Hz)	0 – 650.00 [5.00]	P071 ⊖	Slip compensation (%)	0 – 200 [0]
P032 ⊖	Jog frequency left (Hz)	0 – 650.00 [5.00]	P072 ⊖	Slip limit (%)	0 – 500 [250]
P033 ⊖	Jog ramp up time (seconds)	0 – 650.0 [10.0]	continued over		

MICRO MASTER and MIDI MASTER

Operating Instructions

Parameter	Function	Range [Default]	Parameter	Function	Range [Default]
P073 ω	DC injection braking (%)	0–250 [0]	P132	Motor current (A)	0.0–99.9 [-]
P074 ω	Motor derating curve as temperature protection	0–3 [0]	P133	Motor torque (% nominal torque)	0–250 [-]
P075 ω	Braking resistance (Ω) (MICRO MASTER only)	0/50–250 [0]	P134	DC link voltage (V)	0–1000 [-]
P076 ω	Pulse frequency	0–10 [0 or 4]	P135	Motor RPM	0–9999 [-]
P077	Control mode	0–2 [1]	P201	Closed loop mode	0–2 [0]
P078 ω	Continuous boost (%)	0–250 [100]	P202 ω	P gain	0–999.9 [1.0]
P079 ω	Starting boost (%)	0–250 [0]	P203 ω	I gain	0–99.99 [0.00]
P081	Nominal frequency for motor (Hz)	0–650.00 [50.00]	P204 ω	D gain	0–999.9 [0.0]
P082	Nominal speed for motor (RPM)	0–9999 [• • •]	P205 ω	Sample interval (x 25 ms)	1–2400 [1]
P083	Nominal current for motor (A)	0.1–99.9 [• • •]	P206 ω	Sensor filtering	0–255 [0]
P084	Nominal voltage for motor (V)	0–1000 [• • •]	P207 ω	Integral capture range (%)	0–100 [100]
P085	Nominal power for motor (kW)	0–50.0 [• • •]	P208	Sensor type	0–1 [0]
P086 ω	Motor current limit (%)	0–250 [150]	P210	Sensor reading (%)	0–100.00 [-]
P087 ω	Motor PTC enable	0–1 [0]	P211 ω	0% setpoint	0–100.00 [0.0]
P088	Automatic calibration	0–1 [0]	P212 ω	100% setpoint	0–100.00 [100.00]
P089 ω	Stator resistance (Ω)	0.01–100.00 [• • •]	P220	Minimum frequency mode	0–1 [100.00]
P091 ω	Slave address	0–30 [0]	P720 ω	Special input/output functions	0–7 [0]
P092 ω	Baud rate	3–7 [6]	P721	Analogue input voltage (V)	0.00–10.00 [-]
P093 ω	Timeout (seconds)	0–240 [0]	P722 ω	Analogue output current (mA)	0.0–20.0 [-]
P094 ω	Serial link nominal system setpoint (Hz)	0–650.00 [50.00]	P723	State of digital inputs	0–31 [-]
P095 ω	USS compatibility	0–2 [0]	P724 ω	Relay output control	0–3 [0]
P101 ω	Operation for Europe or USA	0–1 [0]	P910 ω	Local/Remote mode	0–4 [0]
P111	Inverter power rating (kW/hp)	0.0–50.0 [• • •]	P922	Software version	0–9999 [-]
P121	Enable/disable RUN button	0–1 [1]	P923 ω	Equipment system number	0–255 [0]
P122	Enable/disable FORWARD/REVERSE button	0–1 [1]	P930	Most recent fault code	0–9999 [-]
P123	Enable/disable JOG button	0–1 [1]	P931	Most recent warning type	0–9999 [-]
P124	Enable/disable Δ and ∇ buttons	0–1 [1]	P944	Reset to factory default settings	0–1 [0]
P131	Frequency setpoint (Hz)	0–650.00 [-]	P971 ω	EEPROM storage control	0–1 [1]