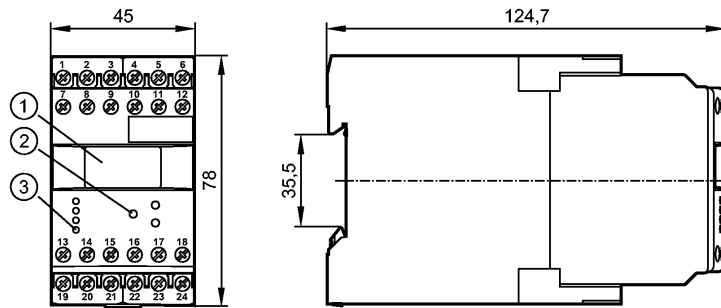


DD2510

MONITOR/FR-1 /230VAC

Evaluation systems, power supplies



- 1: OLED display
- 2: Programming buttons
- 3: LEDs



Product characteristics

MONITOR

FR-1

Housing for DIN rail mounting

2 relay outputs

2 transistor outputs

Analog output

0/4...20 mA

programmable

Key function

Application

Application: single pulse evaluation system with μ processor for frequency; rotational speed; speed and machine cycles

Switching function: 2 switch points for monitoring overspeed/underspeed and acceptable range

Electrical data

Nominal voltage	[V]	230 AC (50...60 Hz) / 24 DC
Voltage tolerance	[%]	± 10
Power consumption	[VA]	5 (3 W)
Sensor supply	[V]	19.6...27.7 DC SELV, ≤ 15 mA

Inputs

Inputs: pnp/npn; NAMUR (24 V)
 auxiliary supply: typ. 24 V DC / 15 mA; short-circuit protected
 threshold pnp: > 12 V on; < 5 V off
 threshold npn: > 15 V off; < 8 V on
 input frequency (max): 3 kHz (corresponds to min. pulse length / space 0.15 ms)

Outputs

Relay		
Contact rating		4 A (250 V AC)
Transistor		
Transistor outputs		pnp; external supply switching voltage/current: 24 V DC / max. 15 mA; short-circuit protected
analog		
Analog output		0/4...20 mA
Max. load	[Ω]	500
		limitation: 20.5 mA; accuracy: 1 % (of the final value)



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Measuring / setting range	
Setting range [pulses/min.]	1...60000 (0.1...1000 Hz)
Accuracy / deviations	
Measuring error [% of the final value]	< 1
Environment	
Ambient temperature [°C]	-40...60
Storage temperature [°C]	-40...85
Max. relative air humidity [%]	80 (31°C), linearly decreasing to 50 % (40 °C)
Protection housing / terminals	IP 50 / IP 20
Tests / approvals	
EMC	EN 61010 2011 EMC 89/336/EEC EN 61000-6-2 2005 EN 61000-6-4 2007
Mechanical data	
Housing materials	plastics
Weight [kg]	0.375
Displays / operating elements	
Input pulses LED	yellow
Output status indication LED	green (lights when the relay is energised / the transistor is closed)
Display	OLED display 128 x 64 dots luminous
Electrical connection	
Connection	dual-chamber terminals 2 x 2.5 mm ²
Wiring	
1: DC Supply voltage (L-) 2: DC Supply voltage (L+) 3: supply transistor outputs (L+) 4: sensor signal pnp 5: DC Sensor supply (L+) 6: DC Sensor supply (L-) 7: AC Supply voltage (L) 8: AC Supply voltage (N) 9: n.c. 10: sensor signal npn 11: n.c. 12: n.c. 13: Relay 1 (common) 14: Relay 1 (normally open) 15: Relay 1 (normally closed) 16: transistor output 1 pnp 17: Reset 1 pnp 18: Reset 2 pnp 19: Relay 2 (common) 20: Relay 2 (normally open) 21: Relay 2 (normally closed) 22: analog output (+) 23: analog output (-) 24: transistor output 2 pnp	
Remarks	
Remarks	overvoltage category II; degree of soiling 2
Pack quantity [piece]	1