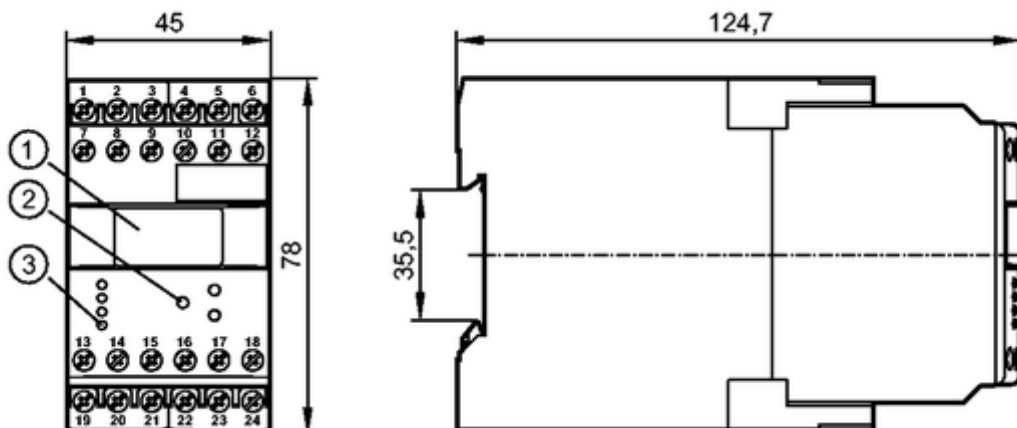


ecomat200**DD2503**

MONITOR/FR-1 / 110-240VAC/DC

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

Analogue output

0/4...20 mA

programmable

Test function without external frequency

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]

110...240 AC (50...60 Hz) / 27 DC (typ. 24 DC)

Voltage tolerance [%]

-20...+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): 5 kHz (corresponds to min. pulse length / space 0.1 ms)

Outputs

Relay

Contact rating	6 A (250 V AC); B300, R300
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Transistor

Transistor outputs	pnp; external supply switching voltage/current: 24 V DC / max. 15 mA; short-circuit protected
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analogue

Analogue output	0/4...20 mA
Max. load [Ω]	500
	limitation: 20.5 mA; accuracy: 1 % (of the final value)

Measuring / setting range

Setting range [pulses/min.]	1...60000 (0.1...1000 Hz)
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Accuracy / deviations

Measuring error [% of the final value]	< 1
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Environment

Ambient temperature [$^{\circ}\text{C}$]	-40...60
Storage temperature [$^{\circ}\text{C}$]	-40...85
Max. relative air humidity [%]	80 (31 $^{\circ}\text{C}$), linearly decreasing to 50 % (40 $^{\circ}\text{C}$)
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 (2 x AWG 14)
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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: analogue output (+)
 23: analogue output (-)
 24: transistor output 2 pnp

Remarks	
Remarks	overvoltage category II; degree of soiling 2
Pack quantity [piece]	1

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