

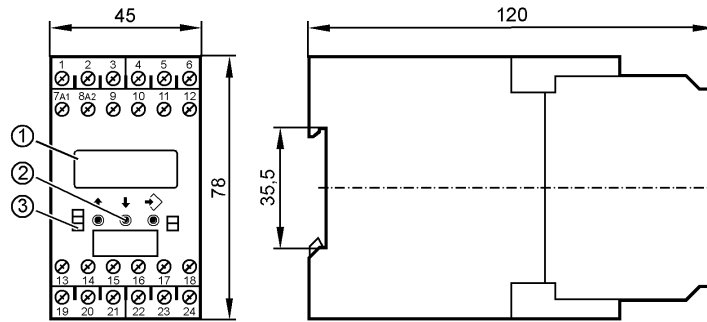
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**ecomat200**<sup>®</sup>  
 DD2002



MONITOR/FR-2 /230VAC

Evaluation systems, power supplies



- 1: LCD display; 7/14-segment
- 2: Programming buttons
- 3: LEDs



Product characteristics

MONITOR	
FR-2	
Housing for DIN rail mounting	
2 relay outputs	
2 transistor outputs	
programmable	
Test function without external frequency	
Key function	
Application	
Application	double pulse evaluation system with $\mu$ processor for frequency, rotational speed, speed and machine cycles
Switching function	1 switch point each for monitoring overspeed/underspeed and acceptable range
Electrical data	
Nominal voltage [V]	230 AC (50...60 Hz) / 24 DC
Voltage tolerance [%]	$\pm 10$
Power consumption [VA]	5 (3 W)
Inputs	
Inputs	<p>pnp/npn; NAMUR (24 V)</p> <p>auxiliary supply: typ. 24 V DC / 15 mA; short-circuit protected</p> <p>threshold pnp: &gt; 12 V on; &lt; 5 V off</p> <p>threshold npn: &gt; 15 V off; &lt; 8 V on</p> <p>input frequency (max): 5 kHz (corresponds to min. pulse length / space 0.1 ms)</p>
Outputs	
Relay	
Contact rating	8 A (1250 VA / 250 V AC)
Transistor	
Transistor outputs	<p>pnp; external supply</p> <p>switching voltage/current: 24 V DC / max. 15 mA; short-circuit protected</p>
Measuring / setting range	
Setting range [pulses/min.]	1...60000 (0.1...1000 Hz)
Accuracy / deviations	
Measuring error [% of the final value]	< 1
Environment	

**DD2002 - MONITOR - eclass: 27279213 / 27-27-92-13**

Ambient temperature	[°C]	-20...60
Storage temperature	[°C]	-25...80
Max. relative air humidity	[%]	75 (35°C)
Protection housing / terminals		IP 50 / IP 20
<b>Tests / approvals</b>		
EMC		EN 61010 : 2001 EMC 89/336/EEC EN 61000-6-3 : 2007 EN 61000-6-2 : 2005
<b>Mechanical data</b>		
Housing materials		plastics
Weight	[kg]	0.344
<b>Displays / operating elements</b>		
Input pulses	LED	yellow
Output status indication	LED	green (lights when the relay is energised / the transistor is closed)
Function display	LED	LCD display; 7/14-segment
<b>Electrical connection</b>		
Connection		dual-chamber terminals 2 x 2.5 mm <sup>2</sup>
<b>Wiring</b>		
1: DC Supply voltage (L-) 2: DC Supply voltage (L+) 3: supply transistor outputs (L+) 4: sensor signal 1 pnp 5: DC Sensor supply (L+) 6: DC Sensor supply (L-) 7: AC/DC Supply voltage 8: AC/DC Supply voltage 9: n.c. 10: sensor signal 1 npn 11: sensor signal 2 pnp 12: sensor signal 2 npn 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: n.c. 23: n.c. 24: transistor output 2 pnp		
<b>Remarks</b>		
Remarks		overvoltage category II; degree of soiling 2
Pack quantity	[piece]	1

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