

# Monitoring relay - EMD-FL-C-10 - 2866022

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Monitoring relay for monitoring 1-phase currents of 0 ... 10 A AC/DC, overcurrent/undercurrent or window, error memory, wide range power supply unit, 2 changeover contacts

## Product Description


Increasingly higher demands are being placed on safety and system availability - across all sectors. Processes are becoming more and more complex, not only in mechanical engineering and the chemical industry, but also in plant and automation technology. Demands on power engineering are also increasing constantly. Error-free and therefore cost-effective operation can only be achieved through continuous monitoring of important network and system parameters. Electronic monitoring relays in the EMD series are available for a wide range of monitoring tasks to avoid the consequences of errors or to keep them within limits. The operating states are indicated using colored LEDs, errors that may occur can be sent to a control system via a floating contact or can shut down a part of the system. Some device versions are equipped with startup and response delays in order to briefly tolerate measured values outside the set monitoring range.

## Your advantages

- Variable supply voltage range
- Adjustable via potentiometer on the front
- Separately adjustable startup and response delays



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 975005
GTIN	4017918975005

## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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### Dimensions

Width	22.5 mm
Height	90 mm

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## Technical data

### Dimensions

Depth	113 mm
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### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
	-25 °C ... 40 °C (corresponds to UL 508)
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	15 % ... 85 %
Degree of protection	IP40 (Housing)
	IP20 (Connection terminal blocks)
Noise immunity	EN 61000-6-2

### Input data

Input current range	0 mA ... 100 mA (Connection terminals: I1 and GND)
	0 A ... 1 A (Connection terminals: I2 and GND)
	0 A ... 10 A (Connection terminals: I3 and GND)
Overload capacity	800 mA (at $I_N = 100$ mA)
	3 A (at $I_N = 1$ A)
	12 A (at $I_N = 10$ A)
Maximum temperature coefficient	< 0.1 %/K
Function	Overcurrent
	Undercurrent
	Window
	Error memory
Min. setting range	5 % ... 95 % (from $I_N$ )
Max. setting range	10 % ... 100 % (from $I_N$ )
Setting range for response delay	0.1 s ... 10 s
Setting range for starting delay	0 s ... 10 s
Basic accuracy	± 5 % (of scale end value)
Setting accuracy	≤ 5 % (of scale end value)
Repeat accuracy	≤ 2 %
Recovery time	500 ms

### Contact side

Contact type	2 floating changeover contacts
Maximum switching voltage	250 V AC (in acc. with IEC 60664-1)
Interrupting rating (ohmic load) max.	750 VA (3 A/250 V AC, module aligned, ≤ 5 mm spacing)
	1250 VA (5 A/250 V AC, module not aligned, ≥ 5 mm spacing)
Output fuse	5 A (fast-blow)

### Power supply

Supply voltage range	24 V AC ... 240 V AC -15 % ... +10 %
	24 V DC ... 240 V DC -20 % ... +25 %

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## Technical data

### General

Mechanical service life	approx. $2 \times 10^7$ cycles
Operating mode	100% operating factor
Mounting position	any
Assembly instructions	on standard DIN rail NS 35 in accordance with EN 60715
Electromagnetic compatibility	Conformance with EMC directive
Housing insulation material	Polyamide PA, self-extinguishing

### Connection data

Connection method	Screw connection
Stripping length	8 mm
Conductor cross section solid	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	20 ... 14
Tightening torque	1 Nm

### Standards and Regulations

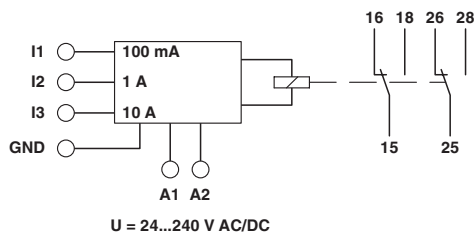
Low Voltage Directive	Conformance with Low Voltage Directive
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Standards/regulations	EN 50178
Rated insulation voltage	300 V
Rated surge voltage	4 kV
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	III

### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Block diagram



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## Classifications

### eCl@ss

eCl@ss 10.0.1	27371802
eCl@ss 11.0	27371802
eCl@ss 4.0	27371100
eCl@ss 4.1	27371100
eCl@ss 5.0	27371800
eCl@ss 5.1	27371800
eCl@ss 6.0	27371800
eCl@ss 7.0	27371802
eCl@ss 9.0	27371802

### ETIM

ETIM 2.0	EC001440
ETIM 3.0	EC001440
ETIM 4.0	EC001440
ETIM 6.0	EC001440
ETIM 7.0	EC001440

### UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121535
UNSPSC 11	39121535
UNSPSC 12.01	39121535
UNSPSC 13.2	41113637
UNSPSC 18.0	41113637
UNSPSC 19.0	41113637
UNSPSC 20.0	41113637
UNSPSC 21.0	41113637

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / EAC / EAC / cULus Listed

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#### Ex Approvals

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### Approval details

## Monitoring relay - EMD-FL-C-10 - 2866022

### Approvals

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
EAC			TR_TS_D_00573_c
EAC			RU*C- DE.*08.B.00010
cULus Listed			

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