

Monitoring relay - EMD-FL-PF-400 - 2885809

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Monitoring relay for load monitoring ($\cos \varphi = 0,1 \dots 1$) in 1- and 3-phase networks, underload, overload, 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

- Monitoring range up to 7.2 kW
- Temperature monitoring of the motor winding
- Separately adjustable startup and response delays
- Variable supply voltage range
- Detection of switched off loads



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 100779
GTIN	4046356100779

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
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Technical data

Dimensions

Height	90 mm
Depth	113 mm

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

Nominal input voltage U_N	3 N ~ 415/240 V
Input voltage range	40 V AC ... 415 V AC (1(N) ~, single-phase load)
	40 V AC ... 415 V AC (3(N) ~, 3-phase load)
Input current range	0.5 A ... 10 A (Connection terminal blocks: L1i and L1k)
Overload capacity	12 A permanent
Maximum temperature coefficient	$\leq 0.1 \text{ \%}/\text{K}$
Function	Underload
	Overload
	Window
	Error memory
Setting range for response delay	0.1 s ... 40 s
Setting range for starting delay	1 s ... 100 s
Basic accuracy	$\pm 5 \text{ \%}$ (At $\cos \phi = 0.8$)
Setting accuracy	$\leq 5 \text{ \%}$ (At $\cos \phi = 0.8$)
Repeat accuracy	$\pm 1.8 \text{ \%}$
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, $\leq 5 \text{ mm}$ spacing)
	1250 VA (5 A/250 V AC, module not aligned, $\geq 5 \text{ mm}$ 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 %)

General

Mechanical service life	approx. 2×10^7 cycles
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Technical data

General

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 ² ... 2.5 mm ²
Conductor cross section flexible	0.25 mm ² ... 2.5 mm ²
Conductor cross section AWG	20 ... 14
Tightening torque	1 Nm

Standards and Regulations

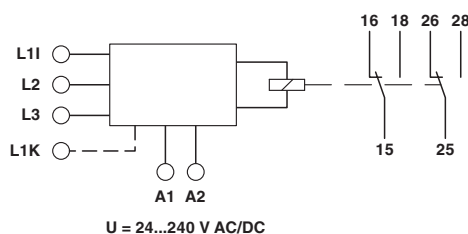
Low Voltage Directive	Conformance with Low Voltage Directive
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Standards/regulations	EN 50178
Rated insulation voltage	300 V
Rated surge voltage	4 kV
Insulation	Basic insulation
Pollution 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	27371016
eCl@ss 11.0	27371016
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	27371806
eCl@ss 9.0	27371016

ETIM

ETIM 2.0	EC001438
ETIM 3.0	EC001438
ETIM 4.0	EC001438
ETIM 6.0	EC001443

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121535
UNSPSC 11	39121535
UNSPSC 12.01	39121535
UNSPSC 13.2	39121106
UNSPSC 18.0	39121106
UNSPSC 19.0	39121106
UNSPSC 20.0	39121106
UNSPSC 21.0	39121106

Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

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Approvals

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140
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EAC			TR_TS_D_00573_c
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EAC			RU*C- DE.*08.B.00010
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cULus Listed			
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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>