

# Monitoring relay - EMD-FL-RP-480 - 2900177

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Monitoring relay for effective power monitoring in 1- and 3-phase networks of 0...7.2 kW, underload, overload, window, motor winding temperature, error memory, supply voltage can be selected via power module, 2 PDTs

## Product Description


Requirements pertaining to safety and system availability increase constantly – regardless of the industry. Processes are becoming more and more complex, not only in the mechanical engineering and chemical industry but also in system and automation technology. Demands on power engineering are also constantly on the rise. Error-free and therefore cost-effective operation can only be achieved through continuous monitoring of important network and system parameters. The electronic monitoring relays of the EMD series are available for various monitoring tasks. The operating states are indicated using colored LEDs, errors that may occur can be sent to a controller 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

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



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 522632
GTIN	4046356522632

## Technical data

### Dimensions

Width	45 mm
Height	90 mm
Depth	113 mm

### Ambient conditions

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## Technical data

### 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)

### Input data

Nominal input voltage $U_N$	480 V (3 N ~ 480/277 V)
Input voltage range	0 V AC ... 480 V AC (1(N) ~, single-phase load)
	0 V AC ... 480 V AC (3(N) ~, 3-phase load)
Input current range	0.15 A ... 6 A (Range: 0.75 kW and 1.5 kW)
	0.3 A ... 12 A (Range: 3 kW and 6 kW)
Overload capacity	12 A permanent
Maximum temperature coefficient	$\leq 0.02$ %/K
Function	Underload, overload, window, winding temperature monitoring
Min. setting range	5 % ... 110 % (of $P_N$ )
Max. setting range	10 % ... 120 % (of $P_N$ )
Setting range for response delay	0.1 s ... 50 s
Setting range for starting delay	1 s ... 100 s
Basic accuracy	$\pm 2$ % (of scale end value)
Setting accuracy	$\leq 5$ % (of scale end value)
Repeat accuracy	$\pm 2$ %
Total cold resistance	$< 1.5$ k $\Omega$
Response value	$\geq 3.6$ k $\Omega$ (Relay drops out)
Release value	$\leq 1.8$ k $\Omega$ (Relay picks up)
Recovery time	500 ms

### Contact side

Contact type	2 floating PDT 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, $\leq 5$ mm spacing)
	1250 VA (5 A/250 V AC, module not aligned, $\geq 5$ mm spacing)
Output fuse	5 A (fast-blow)

### Power supply

Supply voltage range	110 V AC ... 500 V AC (see Power modules)
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### 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

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## Technical data

### General

Housing insulation material	Polyamide PA, self-extinguishing
Color	green

### 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

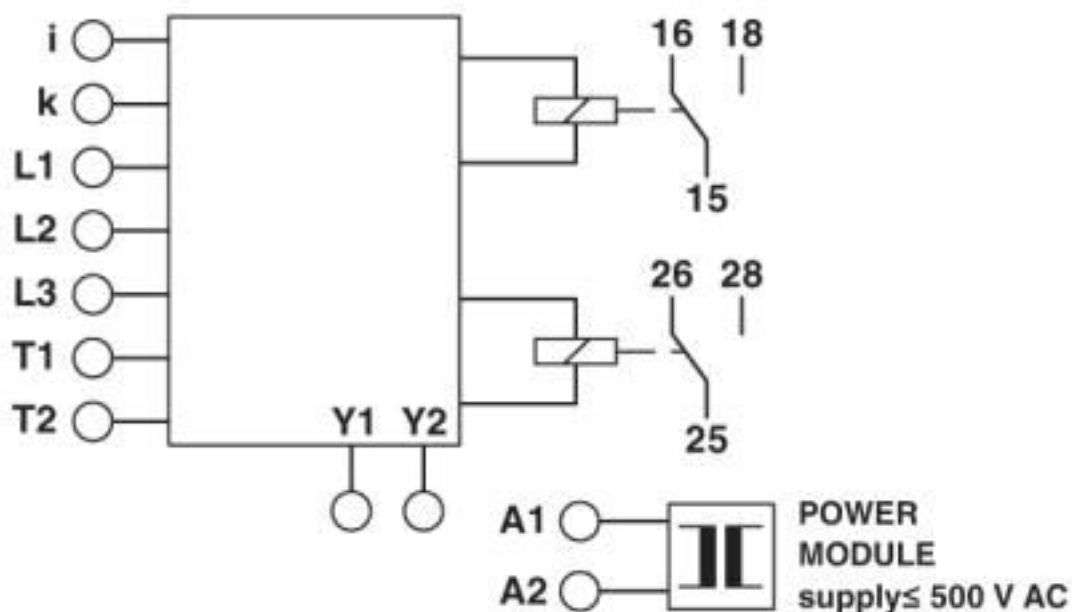
Standards/regulations	EN 50178
Rated insulation voltage	300 V
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	III

### 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	27371806
eCl@ss 4.0	27250300
eCl@ss 4.1	27250300
eCl@ss 5.0	27371800
eCl@ss 5.1	27371800
eCl@ss 6.0	27371800
eCl@ss 7.0	27371806
eCl@ss 8.0	27371806
eCl@ss 9.0	27371806

### ETIM

ETIM 3.0	EC001440
ETIM 4.0	EC001440
ETIM 5.0	EC001443
ETIM 6.0	EC001443
ETIM 7.0	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

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Approvals

EAC / EAC

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Ex Approvals

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### Approval details

# Monitoring relay - EMD-FL-RP-480 - 2900177

## Approvals

EAC		TR_TS_D_00573_c
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EAC		RU*C- DE.*08.B.00010
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## Accessories

### Additional products

Power module - EMD-SL-PS45-110AC - 2885281



Power modules, pluggable, for EMD-FL-..., supply voltage: 88 V AC ... 121 V AC

Power module - EMD-SL-PS45-120AC - 2885744



Power modules, pluggable, for EMD-FL-..., supply voltage: 108 V AC ... 132 V AC

Power module - EMD-SL-PS45-230AC - 2885294



Power modules, pluggable, for EMD-FL-..., supply voltage: 195 V AC ... 264 V AC

Power module - EMD-SL-PS45-400AC - 2885304



Power modules, pluggable, for EMD-FL-..., supply voltage: 323...456 V AC

## Monitoring relay - EMD-FL-RP-480 - 2900177

### Accessories

Power module - EMD-SL-PS45-500AC - 2885317



Power modules, pluggable, for EMD-FL-..., supply voltage: 425...550 V AC

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