

## Monitoring relay - EMD-FL-3V-500 - 2867979

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Monitoring relay for monitoring 3-phase voltages of 350...650 V AC, undervoltage, window, phase sequence, phase failure, asymmetry, supply voltage can be selected using power module, 2 PDTs

### 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.

### Product Features

- Adjustable asymmetry
- Adjustable via potentiometer on the front
- Adjustable response delay
- Variable supply voltage range



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	280.2 GRM
Custom tariff number	85364900
Country of origin	Austria

### Technical data

#### Dimensions

Width	45 mm
Height	90 mm
Depth	113 mm

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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

### Input data

Nominal input voltage $U_N$	3 ~ 500 V
Maximum temperature coefficient	< 0.1 %/K
Function	Undervoltage, window, asymmetry, phase sequence, phase failure
Min. setting range	-30 % ... 20 % (From $U_N$ )
Max. setting range	-20 % ... 30 % (From $U_N$ )
Min setting range of the voltage threshold value	350 V AC ... 600 V AC
Max. setting range of the voltage threshold value	400 V AC ... 650 V AC
Setting range for response delay	0.1 s ... 10 s
Basic accuracy	± 5 % (of scale end value)
Setting accuracy	≤ 5 % (of scale end value)
Repeat accuracy	≤ 2 %
Asymmetry	5 % ... 25% / OFF
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, ≤ 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	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
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Surge voltage category	III, basic insulation (as per EN 50178)
Housing insulation material	Polyamide PA, self-extinguishing
Color	green
Rated insulation voltage	600 V (According to EN 50178)

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## Technical data

### General

Conformance	CE-compliant
UL, USA / Canada	UL/C-UL listed UL 508

### Connection data

Conductor cross section stranded min.	0.25 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	20
Conductor cross section AWG/kcmil max	14
Stripping length	8 mm
Connection method	Screw connection

## Classifications

### eCl@ss

eCl@ss 4.0	27371105
eCl@ss 4.1	27371105
eCl@ss 5.0	27371801
eCl@ss 5.1	27371801
eCl@ss 6.0	27371801
eCl@ss 7.0	27371801
eCl@ss 8.0	27371801

### ETIM

ETIM 2.0	EC001438
ETIM 3.0	EC001438
ETIM 4.0	EC001438
ETIM 5.0	EC001438

### UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121535
UNSPSC 11	39121535
UNSPSC 12.01	39121535
UNSPSC 13.2	39121535

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## Approvals

Approvals

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Approvals

UL Listed / cUL Listed / cULus Listed

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Ex Approvals


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Approvals submitted

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## Approval details

UL Listed 

cUL Listed 

cULus Listed 

## Accessories

### Additional products

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



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

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### Accessories

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



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

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



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

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



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

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



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

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### Drawings

## Monitoring relay - EMD-FL-3V-500 - 2867979

Block diagram

