

Monitoring relay - EMD-FL-3V-690 - 2885249

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Monitoring relay for monitoring 3-phase voltages of 483...897 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.

Your advantages

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



Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4017918996482

Technical data

Dimensions

Width	45 mm
Height	90 mm
Depth	113 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
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Technical data

Ambient conditions

	-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 ~ 690 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	483 V AC ... 828 V AC
Max. setting range of the voltage threshold value	552 V AC ... 897 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	230 V AC ... 500 V AC (see Power modules)
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General

Mechanical service life	approx. 2×10^7 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
Housing insulation material	Polyamide PA, self-extinguishing
Color	green

Connection data

Connection method	Screw connection
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Technical data

Connection data

Stripping length	8 mm
Conductor cross section solid	0.5 mm² ... 2.5 mm²
Conductor cross section flexible	0.25 mm² ... 2.5 mm²
Conductor cross section AWG	20 ... 14
Tightening torque	1 Nm

Standards and Regulations

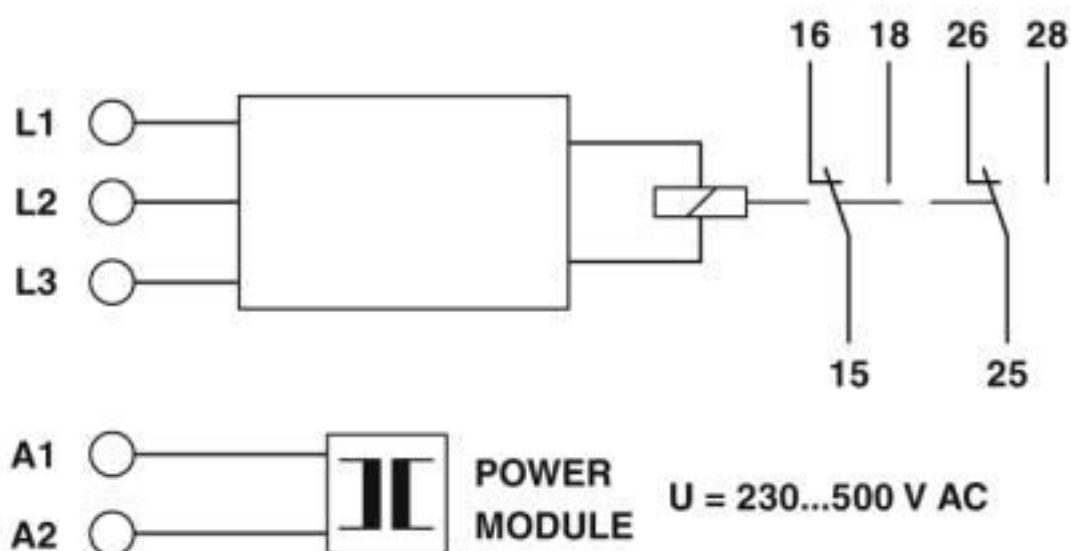
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 61000-6-3
Noise immunity	EN 61000-6-2
Standards/regulations	EN 50178
Rated insulation voltage	600 V
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	III
Low Voltage Directive	Conformance with LV directive 2006/95/EC

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	27371801
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	27371801
eCl@ss 8.0	27371801
eCl@ss 9.0	27371801

ETIM

ETIM 2.0	EC001438
ETIM 3.0	EC001438
ETIM 4.0	EC001438
ETIM 5.0	EC001438
ETIM 6.0	EC001438
ETIM 7.0	EC001438

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121535
UNSPSC 11	39121535
UNSPSC 12.01	39121535
UNSPSC 13.2	41113620
UNSPSC 18.0	41113620
UNSPSC 19.0	41113620
UNSPSC 20.0	41113620
UNSPSC 21.0	41113620

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

cUL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 172140

EAC



TR_TS_D_00573_c

EAC



RU*C-
DE.*08.B.00010

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

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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Accessories

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

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



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

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