

# Monitoring relay - EMD-BL-PH-480-PT - 2903528

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Monitoring relay for monitoring the phase sequence and asymmetry of 3-phase voltages at 208 ... 480 V AC/120 ... 277 V AC, configurable asymmetry, 1 PDT, with push-in connection

## Product Description

Safety and system availability requirements are constantly on the increase – across all industries. Processes are becoming more and more complex, not only in machine building and the chemical industry but also in building technology. The demands placed on energy technology are also constantly on the rise.

It is only by continuously monitoring key network and system parameters that error-free and therefore cost-effective operation can be achieved. Electronic monitoring relays from the EMD series are available for a wide range of monitoring tasks so that the consequences of errors can be avoided or kept within limits.

The operating states are signaled via color LEDs and any errors that occur can be sent to a controller via a floating contact or can shut down a section of the system. All device versions are equipped with response delays so that measured values outside the set monitoring range can be briefly tolerated.



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356747240

## Technical data

### Dimensions

Width	17.5 mm
Height	88 mm
Depth	65.5 mm

### Ambient conditions

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

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## Technical data

### Input data

Nominal input voltage $U_N$	480 V (3~ 208 ... 480 V/120 ... 277 V)
Function	Phase sequence, phase failure, asymmetry
Min setting range of the voltage threshold value	187 V AC
Max. setting range of the voltage threshold value	519 V AC
Setting range for response delay	0.1 s ... 10 s
Basic accuracy	$\leq 5\%$ (of scale end value)
Setting accuracy	$\pm 5\%$ (of scale end value)
Repeat accuracy	$\leq 2\%$
Asymmetry	5 % ... 25% / OFF
Recovery time	> 500 ms

### Contact side

Contact type	1 floating PDT
Maximum switching voltage	250 V AC (in acc. with IEC 60664-1)
Interrupting rating (ohmic load) max.	1250 VA (5 A / 250 V AC)
Output fuse	5 A (fast-blow)

### Power supply

Supply voltage	$\pm 10\%$ (= measuring voltage)
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### General

Mechanical service life	15x 10 <sup>6</sup> 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 2014/30/EU
Housing insulation material	Polyamide PA 6.6, self-extinguishing
Color	gray

### Connection data

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	26 ... 14

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-3
Noise immunity	EN 61000-6-2
Standards/regulations	DIN EN 60947-5-1
Rated insulation voltage	519 V (Supply circuit)
	250 V (Output circuit)

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### Standards and Regulations

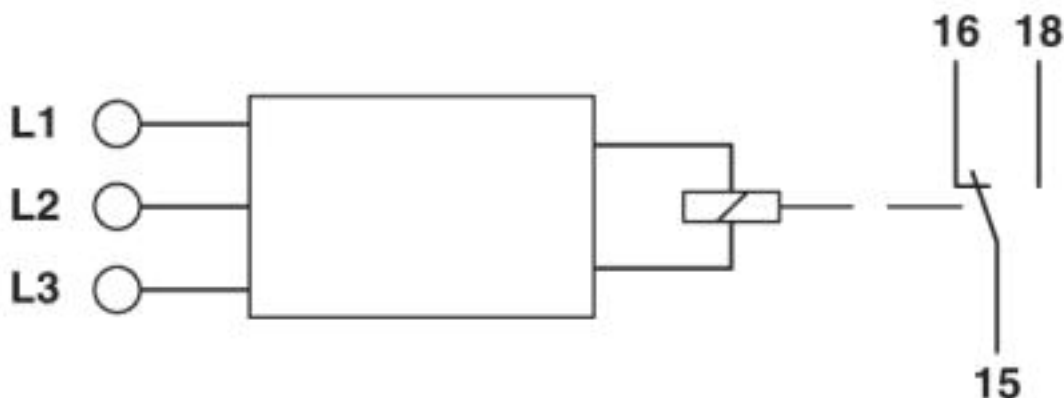
Rated surge voltage	4 kV
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	III
Low Voltage Directive	Conformance with Low Voltage Directive 2006/95/EC (valid until 2016-04-19) / 2014/35/EU (valid from 2016-04-20)

### Environmental Product Compliance

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

## Drawings

Block diagram



## Approvals

### Approvals

#### Approvals

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


#### Ex Approvals

### Approval details


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
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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
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EAC		TR_TS_D_00573_c
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EAC		TR_TS_S_00010_c
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cULus Listed	
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