

## Monitoring relay - EMD-BL-PH-480 - 2903527

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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 screw 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	 4 046356 747233
GTIN	4046356747233
Weight per Piece (excluding packing)	80.000 g
Custom tariff number	85364900
Country of origin	Austria

### Technical data

#### Dimensions

Width	17.5 mm
Height	88 mm
Depth	65.5 mm

#### Ambient conditions

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## Technical data

### 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

### 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	Screw connection
Stripping length	8 mm

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## Technical data

### Connection data

Conductor cross section solid	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	20 ... 14
Torque	1 Nm ... 1 Nm

### Standards and Regulations

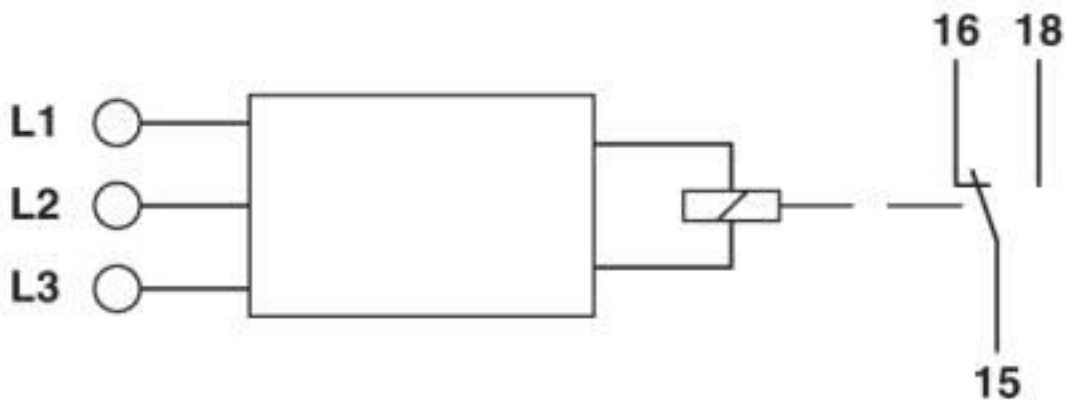
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-3
Noise immunity	EN 61000-6-2
Standards/regulations	DIN EN 60947-5-1
Rated insulation voltage	519 V (Supply circuit) 250 V (Output circuit)
Rated surge voltage	4 kV
Insulation	Basic insulation
Pollution 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



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## Classifications

### eCl@ss

eCl@ss 10.0.1	27371803
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	27371803
eCl@ss 8.0	27371803
eCl@ss 9.0	27371803

### ETIM

ETIM 4.0	EC001441
ETIM 5.0	EC001441
ETIM 6.0	EC001441
ETIM 7.0	EC001441

### 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

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

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Ex Approvals

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