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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 changeover contact, 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	4 046356 747240
GTIN	4046356747240
Weight per Piece (excluding packing)	80.000 g
Custom tariff number	85364900
Country of origin	Austria

## Technical data

#### Dimensions

Width	17.5 mm
Height	89.5 mm
Depth	65.5 mm

#### Ambient conditions



## 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	± 5 % (of scale end value)	
Repeat accuracy	≤ 2 %	
Asymmetry	5 % 25% / OFF	
Recovery time	> 500 ms	

## Contact side

Contact type	1 floating changeover contact
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	±10 % (= measuring voltage)

### 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
Housing insulation material	Polyamide PA 6.6, self-extinguishing
Color	gray

Connection data



## Technical data

### 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 mm² 2.5 mm²
Conductor cross section AWG	26 14

## Standards and Regulations

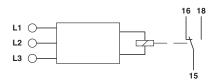
Low Voltage Directive	Conformance with Low Voltage Directive
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-3
Noise immunity	EN 61000-6-2
Standards/regulations	DIN EN 60947-5-1
Rated insulation voltage	519 V (Supply circuit)
	250 V (Output circuit)
Rated surge voltage	4 kV
Insulation	Basic insulation
Pollution degree	2
Overvoltage category	111

## **Environmental Product Compliance**

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

## Drawings

#### Block diagram



## Classifications

## eCl@ss

eCl@ss 10.0.1	27371803
eCl@ss 11.0	27371803
eCl@ss 4.0	27371100
eCl@ss 4.1	27371100

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## Classifications

## eCl@ss

eCl@ss 5.0	27371800
eCl@ss 5.1	27371800
eCl@ss 6.0	27371800
eCl@ss 7.0	27371803
eCl@ss 9.0	27371803

#### ETIM

ETIM 4.0	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

#### Approvals

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

#### Ex Approvals

## Approval details

UL Listed



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

FILE E 172140



## Approvals

cUL Listed	CUL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140
EAC	EAC		TR_TS_D_00573_c
EAC	EAC		RU*C- DE.*08.B.00010
cULus Listed	CUL LISTED		

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