

EMD-SL-PH-400

Electronic monitoring relay for phase sequence, phase failure, and asymmetry monitoring

Data sheet
101748_en_03

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1 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.

Features

- Phase sequence monitoring
- Phase failure monitoring
- Asymmetry monitoring



WARNING: Risk of electric shock

Never carry out work when voltage is present.



Make sure you always use the latest documentation.

It can be downloaded from the product at www.phoenixcontact.net/products.

2 Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Electronic monitoring relay for phase sequence, phase failure, and asymmetry monitoring	EMD-SL-PH-400	2866077	1

3 Technical data

Input data	
Input name	Measuring input
Measured value	AC sine (48 Hz ... 63 Hz)
Nominal input voltage U_N	400 V (3 N ~ 400/230 V)
Maximum input voltage	(3 N ~ 457/264 V)
Input resistance of voltage input	15 k Ω
Setting range for response delay	\leq 350 ms (fixed setting)
Setting range for starting delay	\leq 500 ms (fixed setting)
Min setting range of the voltage threshold value	342 V AC ... 477 V AC
Function	Phase sequence, phase failure, asymmetry
Asymmetry	Fixed, approx. 30 %
Recovery time	< 100 ms
Output data	
Contact type	2 floating PDT contacts
Nominal insulation voltage	250 V AC (in acc. with IEC 60664-1)
Interrupting rating (ohmic load) max.	750 VA (3 A/250 V AC, module aligned, \leq 5 mm spacing) 1250 VA (5 A/250 V AC, module not aligned, \geq 5 mm spacing)
Output fuse	5 A (fast-blow)
Supply	
Supply voltage	(From the measured voltage)
Frequency range	48 Hz ... 63 Hz
Nominal power consumption	9 VA
General data	
Mains type	3-phase (sinus)
Mechanical service life	Approx. 2×10^7 cycles
Service life, electrical	2×10^5 cycles at ohmic load, 1000 VA
Switching frequency	max. 60 (per minute at 100 VA ohmic load) max. 6 (per minute at 1000 VA ohmic load)
Voltage drop	> 20 % (Relative to the supply voltage)
Operating mode	100% operating factor
Degree of protection	IP40 (housing) / IP20 (connection terminal blocks)
Pollution degree	2 (according to EN 50178)
Surge voltage category	III, basic insulation (as per EN 50178)
Rated insulation voltage	300 V (According to EN 50178)
Mounting	on standard DIN rail NS 35 in accordance with EN 60715
Mounting position	Any
Width	22.5 mm
Height	90 mm