

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

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



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.

Product Features

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



Key commercial data

| | |
|------------------|---------------|
| package_quantity | 1 |
| GTIN | 4017918996482 |

Technical data

Dimensions

| | |
|--------|--------|
| Width | 45 mm |
| Height | 90 mm |
| Depth | 113 mm |

Ambient conditions

| | |
|-----------------------------------------|------------------------------------------|
| Ambient temperature (operation) | -25 °C ... 55 °C |
| Ambient temperature (operation) | -25 °C ... 40 °C (corresponds to UL 508) |
| Ambient temperature (storage/transport) | -25 °C ... 70 °C |

Input data

| | |
|---------------------------------|-------------|
| Nominal input voltage U_N | (3 ~ 690 V) |
| Maximum temperature coefficient | < 0.1 %/K |

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

Technical data

Input data

| | |
|----------------------------------------------------------|----------------------------------------------------------------|
| 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) |
| Interrupting rating (ohmic load) max. | 1250 VA (5 A/250 V AC, module not aligned, ≥ 5 mm spacing) |
| Output fuse | 5 A (fast-blow) |

Power supply

| | |
|-----------------------------|-------------------------------------------|
| Supply voltage range | 110 V AC ... 500 V AC (see Power modules) |
|-----------------------------|-------------------------------------------|

General

| | |
|--------------------------------------|--------------------------------------------------------|
| Mechanical service life | Approx. 2 x 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 |
| Surge voltage category | III, basic insulation (as per EN 50178) |
| Housing insulation material | Polyamide PA, self-extinguishing |
| Color | green |
| Rated insulation voltage | 600 V (According to EN 50178) |
| Conformance | CE-compliant |
| UL, USA / Canada | UL/C-UL listed UL 508 |

Connection data

| | |
|-----------------------------------------------|----------------------|
| Conductor cross section stranded min. | 0.25 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section solid min. | 0.5 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 20 |
| Conductor cross section AWG/kcmil max | 14 |
| Stripping length | 8 mm |

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

Technical data

Connection data

| | |
|-------------------|------------------|
| Connection method | Screw connection |
|-------------------|------------------|

classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27371105 |
| eCl@ss 4.1 | 27371105 |
| eCl@ss 5.0 | 27371801 |
| eCl@ss 5.1 | 27371801 |
| eCl@ss 6.0 | 27371801 |
| eCl@ss 7.0 | 27371801 |
| eCl@ss 8.0 | 27371801 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001438 |
| ETIM 3.0 | EC001438 |
| ETIM 4.0 | EC001438 |
| ETIM 5.0 | EC001438 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211916 |
| UNSPSC 7.0901 | 39121535 |
| UNSPSC 11 | 39121535 |
| UNSPSC 12.01 | 39121535 |
| UNSPSC 13.2 | 39121535 |

approvals

UL Listed / cUL Listed / cULus Listed /

Approval details

| |
|-----------------------------------------------------------------------------------------------|
| UL Listed  |
|-----------------------------------------------------------------------------------------------|

| |
|------------------------------------------------------------------------------------------------|
| cUL Listed  |
|------------------------------------------------------------------------------------------------|

| |
|--------------------------------------------------------------------------------------------------|
| cULus Listed  |
|--------------------------------------------------------------------------------------------------|

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

Drawings

Block diagram

