

EMD-SL-V-UV-300 - Monitoring relay



2866035

<https://www.phoenixcontact.com/us/products/2866035>

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Monitoring relay for monitoring 1-phase voltages of 0...300 V AC/DC, undervoltage, supply voltage can be selected via power module, 1 changeover contact

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.

Your advantages

- Adjustable via potentiometer on the front
- Variable supply voltage range
- Separately adjustable startup and response delays

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2866035 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C440 |
| Product key | CK4111 |
| Catalog page | Page 251 (C-5-2019) |
| GTIN | 4017918924331 |
| Weight per piece (including packing) | 134.2 g |
| Weight per piece (excluding packing) | 132.3 g |
| Customs tariff number | 85364900 |
| Country of origin | AT |

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Technical data

Product properties

| | |
|-------------------------|--------------------------------|
| Product type | Voltage monitoring relay |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 2×10^7 cycles |

Insulation characteristics

| | |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

Insulation characteristics

| | |
|----------------------|------------------|
| Insulation | Basic insulation |
| Overvoltage category | III |
| Pollution degree | 2 |

Electrical properties

| | |
|--------------------------|---|
| Service life electrical | 2×10^5 cycles at ohmic load, 1000 VA |
| Mains type | 1-phase |
| Rated insulation voltage | 300 V |
| Rated surge voltage | 4 kV |

Supply

| | |
|---------------------------|--|
| Supply voltage range | 24 V AC ... 230 V AC (see Power modules) |
| | 24 V DC (see Power modules) |
| Nominal power consumption | 2 VA (1.5 W) |

Input data

| | |
|-----------------------------------|--|
| Input name | Measuring input |
| Measured value | DC, AC sine (48 Hz ... 63 Hz) |
| Protection | ≤ 20 A |
| Input voltage range | 0 V ... 30 V AC/DC (connection terminal blocks: U1 and GND) |
| | 0 V ... 60 V AC/DC (connection terminal blocks: U2 and GND) |
| | 0 V ... 300 V AC/DC (connection terminal blocks: U3 and GND) |
| Maximum input voltage | $100 V_{rms}$ (connection terminal blocks: U1 and GND) |
| | $150 V_{rms}$ (connection terminal blocks: U2 and GND) |
| | $440 V_{rms}$ (connection terminal blocks: U3 and GND) |
| Input resistance of voltage input | 47 k Ω (connection terminal blocks: U1 and GND) |
| | 100 k Ω (connection terminal blocks: U2 and GND) |
| | 470 k Ω (connection terminal blocks: U3 and GND) |
| Frequency range | 50 Hz ... 60 Hz |
| Maximum temperature coefficient | < 0.1 %/K |
| Setting range for response delay | 0.2 s ... 10 s |
| Min. setting range | 5 % ... 95 % (From U_N) |
| Max. setting range | 10 % ... 100 % (From U_N) |
| Function | Undervoltage |

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| | |
|------------------|----------------------------|
| Basic accuracy | ± 5 % (of scale end value) |
| Setting accuracy | ≤ 5 % (of scale end value) |
| Repeat accuracy | ≤ 2 % |
| Recovery time | 500 ms |

Output data

Switching

| | |
|---------------------------------------|---|
| Contact switching type | 1 floating changeover contact |
| 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) 1250 VA (5 A/250 V AC, module not aligned, ≥ 5 mm spacing) |
| Output fuse | 5 A (fast-blow) |

Connection data

| | |
|----------------------------------|----------------------|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Conductor cross section rigid | 0.5 mm² ... 2.5 mm² |
| Conductor cross section flexible | 0.25 mm² ... 2.5 mm² |
| Conductor cross section AWG | 20 ... 14 |

Dimensions

| | |
|--------|---------|
| Width | 22.5 mm |
| Height | 90 mm |
| Depth | 113 mm |

Material specifications

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|-----------------------------|----------------------------------|
| Color | green (RAL 6021) |
| Housing insulation material | Polyamide PA, self-extinguishing |

Environmental and real-life conditions

Ambient conditions

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|---|--|
| Degree of protection (Housing) | IP40 (Housing) |
| Degree of protection (Connection terminal blocks) | IP20 (Connection terminal blocks) |
| Ambient temperature (operation) | -25 °C ... 55 °C -25 °C ... 40 °C (corresponds to UL 508) |
| Ambient temperature (storage/transport) | -25 °C ... 70 °C |
| Climatic class | 3K3 (in acc. with EN 60721) |
| Permissible humidity (operation) | 15 % ... 85 % |

Approvals

CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

UL, USA/Canada

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| | |
|----------------|-----------------------|
| Identification | UL/C-UL Listed UL 508 |
|----------------|-----------------------|

EMC data

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|-------------------------------|--|
| Low Voltage Directive | Conformance with Low Voltage Directive |
| Noise immunity | EN 61000-6-2 |
| Electromagnetic compatibility | Conformance with EMC directive |
| Noise emission | EN 61000-6-3 |

Standards and regulations

| | |
|-----------------------|----------|
| Standards/regulations | EN 50178 |
|-----------------------|----------|

Mounting

| | |
|-----------------------|--|
| Mounting type | DIN rail mounting |
| Assembly instructions | on standard DIN rail NS 35 in accordance with EN 60715 |
| Mounting position | any |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27371801 |
| ECLASS-12.0 | 27371801 |
| ECLASS-13.0 | 27371801 |

ETIM

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| ETIM 9.0 | EC001438 |
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UNSPSC

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| UNSPSC 21.0 | 41113600 |
|-------------|----------|

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Environmental product compliance

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

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