

## Solid-state relay module - EMG 17-OV-TTL/ 24DC/2 - 2943259

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Power solid-state relay, with LED and protective circuit in input and output circuits, input: TTL 5 V DC, output: short-circuit-proof, 24 V DC/max. 2 A

### Product Features

- ✓ RC protective circuit
- ✓ EMG-17-OV, short-circuit-proof with indicator LED
- ✓ Protective circuit in input and output
- ✓ Zero voltage switch
- ✓ Electrical isolation
- ✓ Status indicator



### Key commercial data

|                      |                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit         | 1 PCE                                                                                                   |
| GTIN                 | <br>4 017918 107543 |
| Custom tariff number | 85364190                                                                                                |
| Country of origin    | GERMANY                                                                                                 |

### Technical data

#### Note:

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---------------------------------------------------------------------------|

### Dimensions

|        |         |
|--------|---------|
| Width  | 17.5 mm |
| Height | 75 mm   |
| Depth  | 102 mm  |

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## Technical data

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |
| Degree of protection                    | IP20             |

### Input data

|                                                      |                                      |
|------------------------------------------------------|--------------------------------------|
| Nominal input voltage $U_N$                          | 5 V (TTL)                            |
| Input voltage range in reference to $U_N$            | 0.8 ... 1.2                          |
| Switching threshold "0" signal, voltage              | 0.8 V (TTL)                          |
| Switching threshold "0" signal in reference to $U_N$ | (0.8 V; TTL)                         |
| Switching threshold "1" signal voltage               | 2 V (TTL)                            |
| Switching threshold "1" signal in reference to $U_N$ | (2 V; TTL)                           |
| Typical input current at $U_N$                       | 2.6 mA                               |
| Typical response time                                | 170 $\mu$ s                          |
| Typical turn-off time                                | 190 $\mu$ s                          |
| Status display                                       | Yellow LED                           |
| Type of protection                                   | Protection against polarity reversal |
|                                                      | Surge protection                     |
|                                                      | Free running                         |
| Protective circuit/component                         | Polarity protection diode            |
|                                                      | Suppressor diode                     |
|                                                      | Damping diode                        |
| Auxiliary voltage TTL input                          | 5 V DC $\pm$ 20 %                    |
| Auxiliary current TTL input                          | 2.8 mA                               |
| Transmission frequency                               | 1000 Hz                              |

### Output data

|                                                  |                                             |
|--------------------------------------------------|---------------------------------------------|
| Output voltage range                             | 10 V DC ... 30 V DC                         |
| Limiting continuous current                      | 2 A (see derating curve)                    |
| Leakage current                                  | 150 $\mu$ A                                 |
| Peak offstate voltage                            | 33 V DC (Collector-emitter reverse voltage) |
| Current limitation at short-circuits             | > 2 A (short-circuit resistant)             |
| Voltage drop at max. limiting continuous current | $\leq$ 0.3 V                                |
| Output circuit                                   | 3-conductor, ground-referenced              |
| Indication                                       | Red LED                                     |
| Type of protection                               | Protection against polarity reversal        |
|                                                  | Free-wheeling diode                         |
|                                                  | Surge protection                            |
| Protective circuit/component                     | Polarity protection diode                   |

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## Technical data

### Output data

|  |                  |
|--|------------------|
|  | Damping diode    |
|  | Suppressor diode |

### Connection data

|                                        |                     |
|----------------------------------------|---------------------|
| Connection method                      | Screw connection    |
| Stripping length                       | 8 mm                |
| Screw thread                           | M3                  |
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.     | 4 mm <sup>2</sup>   |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG/kcmil min. | 24                  |
| Conductor cross section AWG/kcmil max  | 12                  |

### General

|                                         |                           |
|-----------------------------------------|---------------------------|
| Test voltage input/output               | 2.5 kV                    |
|                                         | 2.5 kV AC                 |
| Mounting position                       | Any                       |
| Assembly instructions                   | In rows with zero spacing |
| Operating mode                          | 100% operating factor     |
| Inflammability class according to UL 94 | V0                        |
| Standards/regulations                   | IEC 60664                 |
|                                         | EN 50178                  |
|                                         | IEC 62103                 |
| Rated surge voltage / insulation        | Basic insulation          |
| Pollution degree                        | 2                         |
| Surge voltage category                  | III                       |

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.0 | 27371001 |
| eCl@ss 5.1 | 27371001 |
| eCl@ss 6.0 | 27371001 |
| eCl@ss 7.0 | 27371001 |
| eCl@ss 8.0 | 27371001 |

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### Classifications

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001504 |
| ETIM 3.0 | EC001504 |
| ETIM 4.0 | EC001504 |
| ETIM 5.0 | EC001504 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121542 |
| UNSPSC 11     | 39121542 |
| UNSPSC 12.01  | 39121542 |
| UNSPSC 13.2   | 39121542 |

### Approvals

#### Approvals

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Approvals

GOST

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Ex Approvals

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Approvals submitted

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#### Approval details

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| GOST  |
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### Drawings

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Circuit diagram

