

## Solid-state relay module - PLC-OSC- 24DC/TTL - 2982728

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PLC solid-state relay with screw connection, for mounting on DIN rail NS 35/7.5, input: 24 V DC, output: TTL (5 V DC)

### Your advantages

- ✓ 6.2 mm narrow design width
- ✓ Screw and spring-cage connection
- ✓ Resistant to vibrations and shocks
- ✓ Status indicator
- ✓ Bridging options
- ✓ Integrated protection circuit
- ✓ Switching power TTL (5 V), fan out = 1



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 10 pc                                                                                                   |
| GTIN         | <br>4 046356 170604 |
| GTIN         | 4046356170604                                                                                           |
| Sales Key    | 08                                                                                                      |

### Technical data

#### Note

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

#### Dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 80 mm  |
| Depth  | 86 mm  |

#### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Ambient temperature (operation) | -25 °C ... 60 °C |
|---------------------------------|------------------|

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## Technical data

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Degree of protection                    | IP20             |

### Input data

|                                                      |                                    |
|------------------------------------------------------|------------------------------------|
| Nominal input voltage $U_N$                          | 24 V DC                            |
| Input voltage range in reference to $U_N$            | 0.8 ... 1.2                        |
| Input voltage range                                  | 19.2 V DC ... 28.8 V DC            |
| Rated actuating voltage $U_C$                        | 24 V DC                            |
| Switching threshold "0" signal in reference to $U_N$ | < 0.4                              |
| Switching threshold "1" signal in reference to $U_N$ | > 0.8                              |
| Typical input current at $U_N$                       | 3.4 mA                             |
| Typical response time                                | 35 $\mu$ s                         |
| Typical turn-off time                                | 35 $\mu$ s                         |
| Operating voltage display                            | Yellow LED                         |
| Type of protection                                   | Reverse polarity protection        |
|                                                      | Surge protection                   |
| Protective circuit/component                         | Parallel polarity protection diode |
| Surge voltage protection                             | > 33 V                             |
| Transmission frequency                               | 1 kHz                              |
| Power dissipation for nominal condition              | 0.08 W                             |

### Output data

|                                                  |                                                   |
|--------------------------------------------------|---------------------------------------------------|
| Designation                                      | Output data                                       |
| Output nominal voltage                           | 5 V DC                                            |
| Output voltage range                             | 4.5 V AC ... 6 V AC                               |
| Limiting continuous current                      | A TTL load (Fan out = 1)/50 mA for switching mode |
| Fan out                                          | 1                                                 |
| Surge voltage protection                         | > 8 V                                             |
| Voltage drop at max. limiting continuous current | < 80 mV                                           |
| Output circuit                                   | 3-conductor, ground-referenced                    |
| Type of protection                               | Reverse polarity protection                       |
|                                                  | Surge protection                                  |
| Protective circuit/component                     | Parallel polarity protection diode                |

### Connection data, input side

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection name                  | Input side                                   |
| Connection method                | Screw connection                             |
| Stripping length                 | 8 mm                                         |
| Screw thread                     | M3                                           |
| Conductor cross section solid    | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 26 ... 14                                    |

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## Technical data

### Connection data, output side

|                                  |                      |
|----------------------------------|----------------------|
| Connection name                  | Output side          |
| Connection method                | Screw connection     |
| Stripping length                 | 8 mm                 |
| Screw thread                     | M3                   |
| Conductor cross section solid    | 0.14 mm² ... 2.5 mm² |
| Conductor cross section flexible | 0.14 mm² ... 2.5 mm² |
| Conductor cross section AWG      | 26 ... 14            |

### General

|                                        |                                                                  |
|----------------------------------------|------------------------------------------------------------------|
| Test voltage input/output              | 2.5 kV <sub>rms</sub> (50 Hz, 1 min.)                            |
| Mounting position                      | any                                                              |
| Assembly instructions                  | In rows with zero spacing                                        |
| Operating mode                         | 100% operating factor                                            |
| Flammability rating according to UL 94 | V0                                                               |
| Designation                            | Air clearances and creepage distances between the power circuits |
| Standards/regulations                  | IEC 60664                                                        |
|                                        | EN 50178                                                         |
| Degree of pollution                    | 2                                                                |
| Overvoltage category                   | III                                                              |

### Standards and Regulations

|                                        |                                                                  |
|----------------------------------------|------------------------------------------------------------------|
| Connection in acc. with standard       | CUL                                                              |
| Designation                            | Air clearances and creepage distances between the power circuits |
| Standards/regulations                  | IEC 60664                                                        |
|                                        | EN 50178                                                         |
| Rated insulation voltage               | 250 V DC                                                         |
| Rated surge voltage                    | 4 kV                                                             |
| Insulation                             | Basic insulation                                                 |
| Degree of pollution                    | 2                                                                |
| Overvoltage category                   | III                                                              |
| Flammability rating according to UL 94 | V0                                                               |

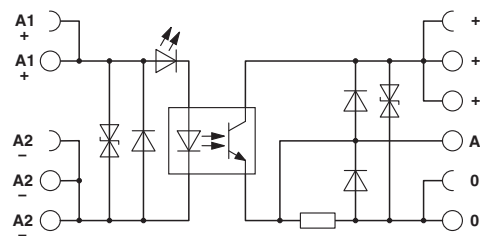
### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

Solid-state relay module - PLC-OSC- 24DC/TTL - 2982728

Circuit diagram



Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

|                |                                                                                     |                                                                                                                                                       |               |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Listed      |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 172140 |
| UL Recognized  |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
| cUL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
| cUL Listed     |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 172140 |
| EAC            |  | RU C-<br>DE.A*30.B.01082                                                                                                                              |               |

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### Approvals

cULus Recognized



cULus Listed



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