

# PLC-OPT- 24DC/24DC/100KHZ-G - Solid-state relay module



2902974

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Input solid-state relay, with DC voltage output push-pull, transmission frequency: 100 kHz, with light indicator and protective circuit in input and output circuits, input: 24 V DC, output: 14 - 30 V DC/50 mA

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2902974       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C461          |
| Product key                          | DK62A3        |
| GTIN                                 | 4046356702782 |
| Weight per piece (including packing) | 34.9 g        |
| Weight per piece (excluding packing) | 32.86 g       |
| Customs tariff number                | 85364190      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                |                           |
|----------------|---------------------------|
| Product type   | Solid-state relay module  |
| Product family | PLC-INTERFACE             |
| Application    | 100 kHz input optocoupler |
| Operating mode | 100% operating factor     |

Insulation characteristics: Air clearances and creepage distances between the power circuits

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

Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 01.04.2026 |
|------------------------------|------------|

### Electrical properties

|                                                 |                                                     |
|-------------------------------------------------|-----------------------------------------------------|
| Maximum power dissipation for nominal condition | 0.19 W                                              |
| Test voltage (Input/output)                     | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., input/output) |

Air clearances and creepage distances between the power circuits

|                          |         |
|--------------------------|---------|
| Rated insulation voltage | 50 V DC |
| Rated surge voltage      | 0.5 kV  |

### 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                         |
| 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 $U_N$                       | 8 mA                                            |
| Typical response time                                | 1 $\mu$ s                                       |
| Typical turn-off time                                | 2 $\mu$ s                                       |
| Operating voltage display                            | Yellow LED                                      |
| Protective circuit                                   | Reverse polarity protection<br>Surge protection |
| Surge voltage protection                             | > 33 V                                          |
| Transmission frequency                               | 100 kHz                                         |

### Output data

|                             |                     |
|-----------------------------|---------------------|
| Designation                 | Output data         |
| Contact switching type      | 1 N/O contact       |
| Design of digital output    | electronic          |
| Output voltage range        | 14 V DC ... 30 V DC |
| Limiting continuous current | 50 mA               |

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|                                                  |                                                 |
|--------------------------------------------------|-------------------------------------------------|
| Quiescent current                                | 15 mA                                           |
| Surge voltage protection                         | > 35 V                                          |
| Voltage drop at max. limiting continuous current | < 2.2 V                                         |
| Output circuit                                   | 3-conductor push-pull, ground referenced        |
| Protective circuit                               | Reverse polarity protection<br>Surge protection |

## Connection data

|                                  |                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection method                | Push-in connection                                                                                                                                                          |
| Stripping length                 | 10 mm                                                                                                                                                                       |
| Conductor cross-section rigid    | 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><br>0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule)<br>2x 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule) |
| Conductor cross-section AWG      | 26 ... 14                                                                                                                                                                   |

## Dimensions

### Item dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 80 mm  |
| Depth  | 94 mm  |

## Material specifications

|       |                 |
|-------|-----------------|
| Color | gray (RAL 7042) |
|-------|-----------------|

## Environmental and real-life conditions

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Degree of protection                    | IP20             |
| Ambient temperature (operation)         | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -25 °C ... 75 °C |

## Approvals

### Corrosive gas test

|                |                                             |
|----------------|---------------------------------------------|
| Identification | ISA-S71.04. G3 Harsh Group<br>EN 60068-2-60 |
|----------------|---------------------------------------------|

## Standards and regulations

### Air clearances and creepage distances between the power circuits

|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

## Mounting

|               |                           |
|---------------|---------------------------|
| Mounting type | DIN rail mounting         |
| Assembly note | in rows with zero spacing |

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Mounting position

any

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## Drawings

Circuit diagram



# PLC-OPT- 24DC/24DC/100KHZ-G - Solid-state relay module



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## Approvals

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**cULus Listed**

Approval ID: E140324



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371604 |
| ECLASS-15.0 | 27371604 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001504 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39122300 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|                                         |              |
|-----------------------------------------|--------------|
| Fulfills EU RoHS substance requirements | Yes          |
| Exemption                               | 7(a), 7(c)-I |

### China RoHS

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-50                                                                                                                                                                                                                           |
|                                        | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | ae848b7f-347e-49fa-9871-b9d3fd082dfb |

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 1.818 kg CO2e |
|---------|---------------|

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