

# PLC-V8C/PT-24DC/EM - Extension module



2905137

<https://www.phoenixcontact.com/us/products/2905137>

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PLC logic extension module with 16 I/Os, for plug-in connection to eight PLC-INTERFACE terminal blocks for extending the basic module (a maximum of two extension modules can be connected to a basic module), Push-in connection

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2905137       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C424          |
| Product key                          | DK2621        |
| GTIN                                 | 4046356919487 |
| Weight per piece (including packing) | 129.5 g       |
| Weight per piece (excluding packing) | 119.4 g       |
| Customs tariff number                | 85389099      |
| Country of origin                    | DE            |

## Technical data

### Notes

|                    |  |
|--------------------|--|
| Notes on operation | For proper use, the specifications of the installation directive (see Downloads) must be observed. For applications or use with third-party products, the specifications, and the safety and warning instructions of the respective third-party manufacturer must also be met. |
|--------------------|--|

### Utilization restriction

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

### Product properties

|                |                       |
|----------------|-----------------------|
| Product type   | Extension module      |
| Product family | PLC logic             |
| Operating mode | 100% operating factor |

### Insulation characteristics: Air clearances and creepage distances

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

### Electrical properties

#### Air clearances and creepage distances

|                          |        |
|--------------------------|--------|
| Rated insulation voltage | 50 V   |
| Rated surge voltage      | 0.8 kV |

#### Supply

|                                |                             |
|--------------------------------|-----------------------------|
| Supply voltage                 | 24 V DC                     |
| Supply voltage range           | 19.2 V DC ... 26.4 V DC     |
| Maximum input current at $U_N$ | 65 mA                       |
| Protective circuit             | Reverse polarity protection |
|                                | Surge protection            |

### Input data

#### Digital inputs

|                          |                              |
|--------------------------|------------------------------|
| Number of inputs         | 8 (2 configurable as analog) |
| Description of the input | EN 61131-2, type 3           |
| Input voltage            | 24 V DC                      |
| Signal level "0" signal  | < 5 V                        |
| Signal level "1" signal  | > 11 V                       |
| Input current "0" signal | < 1 mA                       |
| Input current "1" signal | typ. 2.5 mA                  |
| Status display           | LED (yellow)                 |

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## Analog inputs

|                     |  |
|---------------------|--|
| Number of inputs    | 2 (IN6 and IN7 are configurable as analog) |
| Input voltage range | 0 V ... 10 V                               |
| Input resistance    | > 3.5 kΩ                                   |

## Contact to PLC-INTERFACE

|                             |   |
|-----------------------------|---|
| Number of inputs            | ≤ 8   |
| Description of the input    | technical data depends on the PLC-INTERFACE terminal block used |
| Input voltage               | 19 V DC   |
| Typical current consumption | 4 mA  |
| Input resistance            | < 100 mΩ  |

## Output data

|                        |         |
|------------------------|---------|
| Number of outputs      | ≤ 8     |
| Nominal output voltage | 24 V DC |
| Nominal current        | 9 mA    |

## Connection data

### COMBICON connection

|                                  |   |
|----------------------------------|---|
| Connection method                | Push-in connection  |
| Stripping length                 | 9 mm  |
| Number of connections            | 1   |
| Number of positions              | 10  |
| Note                             | Device supply and 8 x inputs  |
| Conductor cross-section rigid    | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                  |
| Conductor cross-section flexible | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                  |
|                                  | 0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> (Ferrule with plastic sleeve)    |
|                                  | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrule without plastic sleeve) |
| Conductor cross-section AWG      | 26 ... 16   |

### PLC logic - bus

|                       |                                    |
|-----------------------|------------------------------------|
| Connection method     | Insulation displacement connection |
| Number of connections | 1                                  |
| Number of positions   | 4                                  |

## Signaling

|                |             |
|----------------|-------------|
| Status display | LED (green) |
|----------------|-------------|

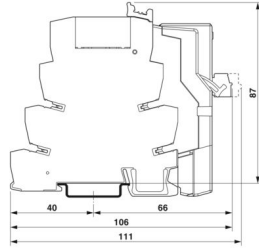
## Dimensions

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|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 50 mm  |
| Height              | 48.5 mm  |
| Depth               | 111 mm (with relay)  |
|                     | 87 mm (with relay)   |

## Material specifications

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

## Environmental and real-life conditions

### Ambient conditions

|  |                  |
|--|------------------|
| Degree of protection                           | IP20             |
| Ambient temperature (operation)                | -20 °C ... 50 °C |
| Ambient temperature (storage/transport)        | -20 °C ... 70 °C |
| Max. permissible relative humidity (operation) | 95 %             |

## Approvals

### CE

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

### UL, USA/Canada

|                |                                       |
|----------------|---------------------------------------|
| Identification | Class I, Div. 2, Groups A, B, C, D T4 |
|----------------|---------------------------------------|

### UL, Canada

|                |                                    |
|----------------|------------------------------------|
| Identification | Class I, Zone 2, Ex ec IIC Gc T4 X |
|----------------|------------------------------------|

### UL, USA

|                |                                |
|----------------|--------------------------------|
| Identification | Class I, Zone 2, AEx ec IIC T4 |
|----------------|--------------------------------|

## Standards and regulations

### Air clearances and creepage distances

|                       |                |
|-----------------------|----------------|
| Standards/regulations | EN IEC 60664-1 |
|-----------------------|----------------|

## Mounting

|               |   |
|---------------|---|
| Mounting type | Plug-in mounting                                      |
| Assembly note | can be plugged onto 8 x PLC-INTERFACE terminal blocks |

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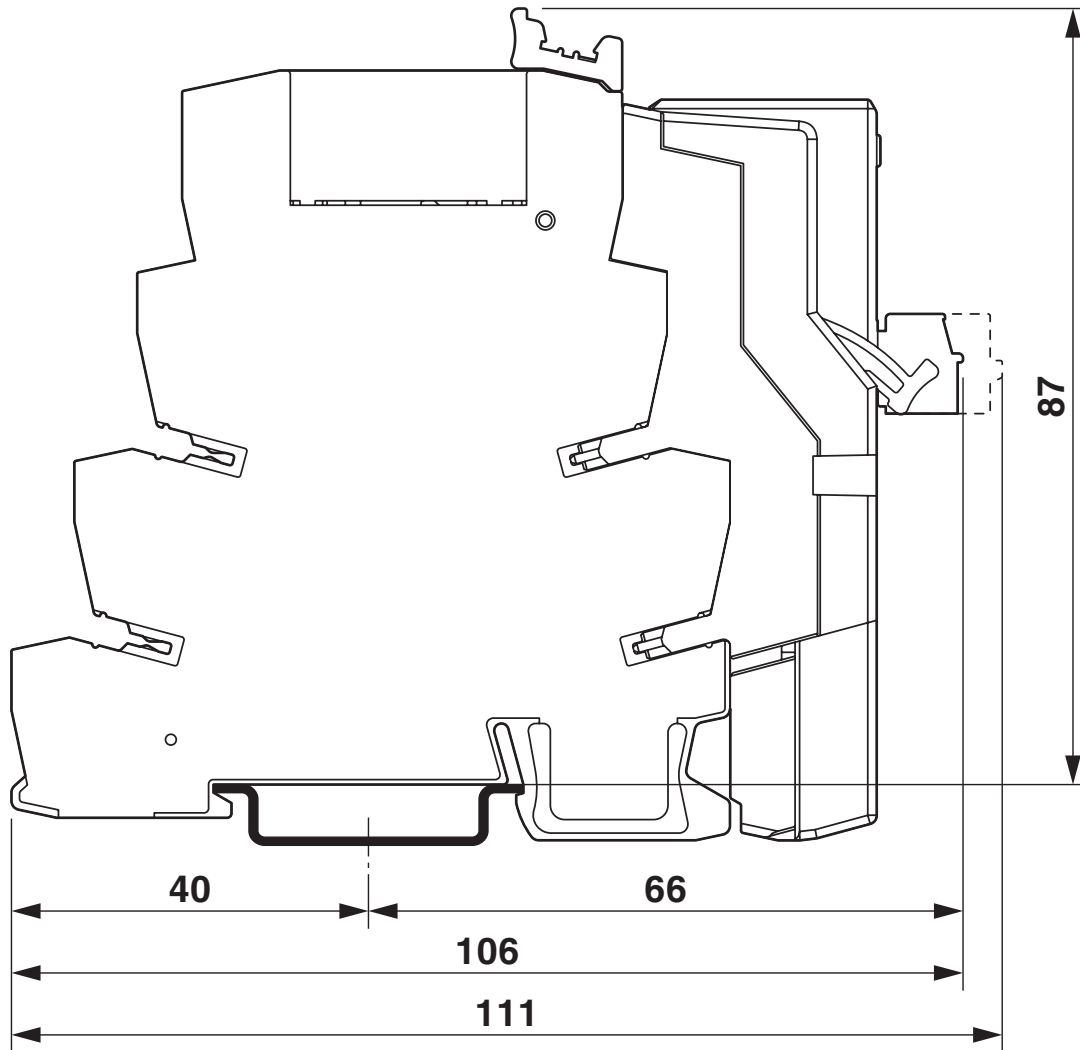
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|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

Drawings

Dimensional drawing

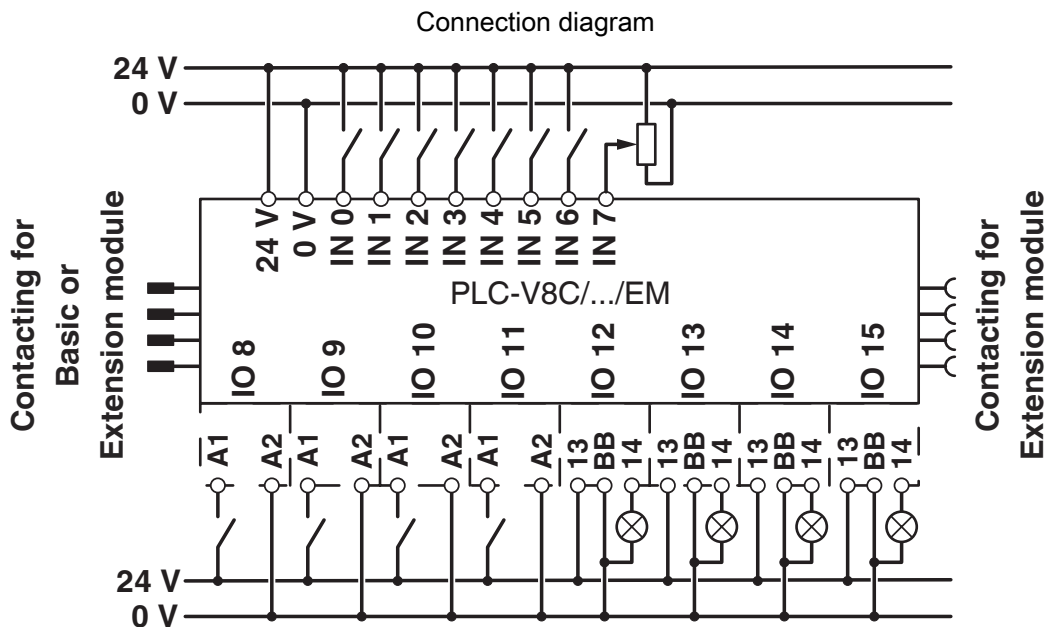


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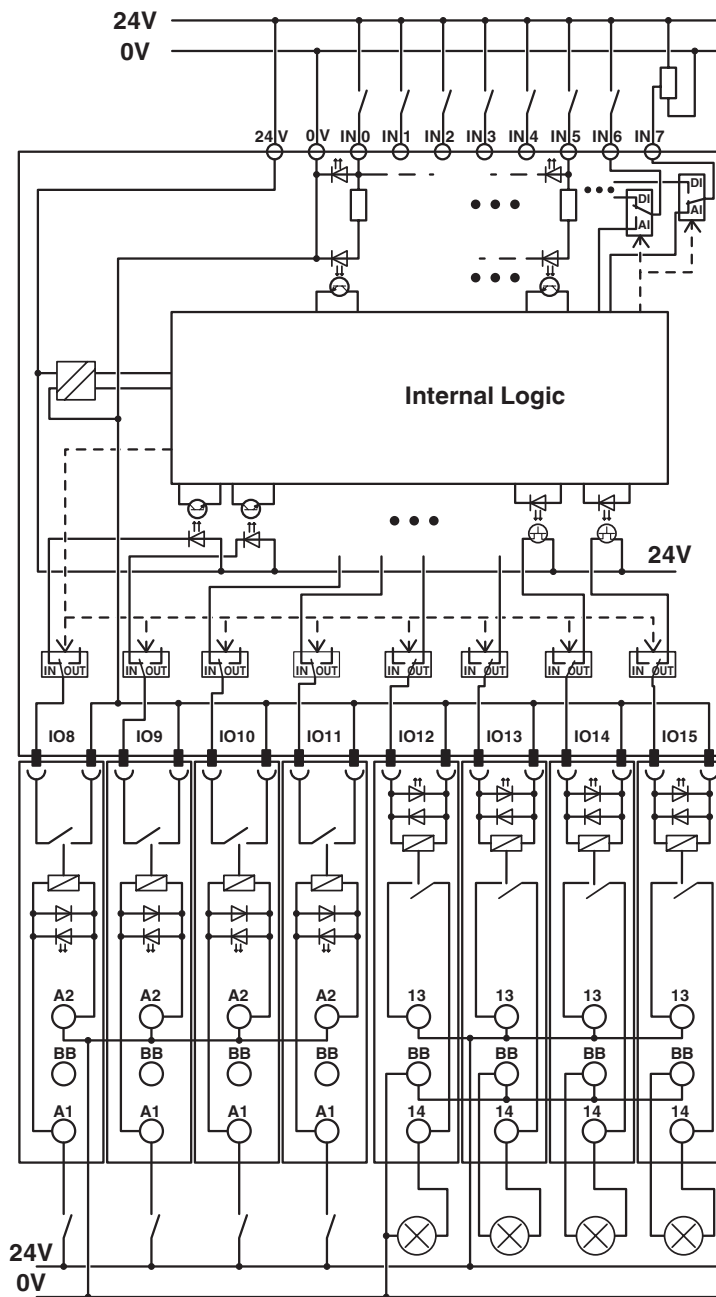
# PLC-V8C/PT-24DC/EM - Extension module



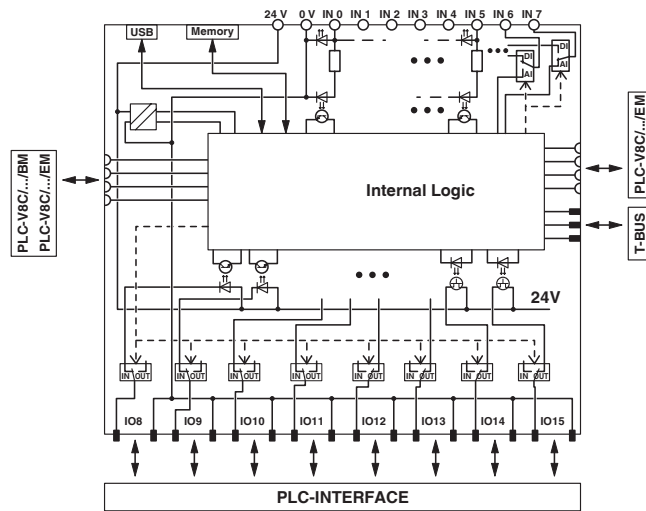
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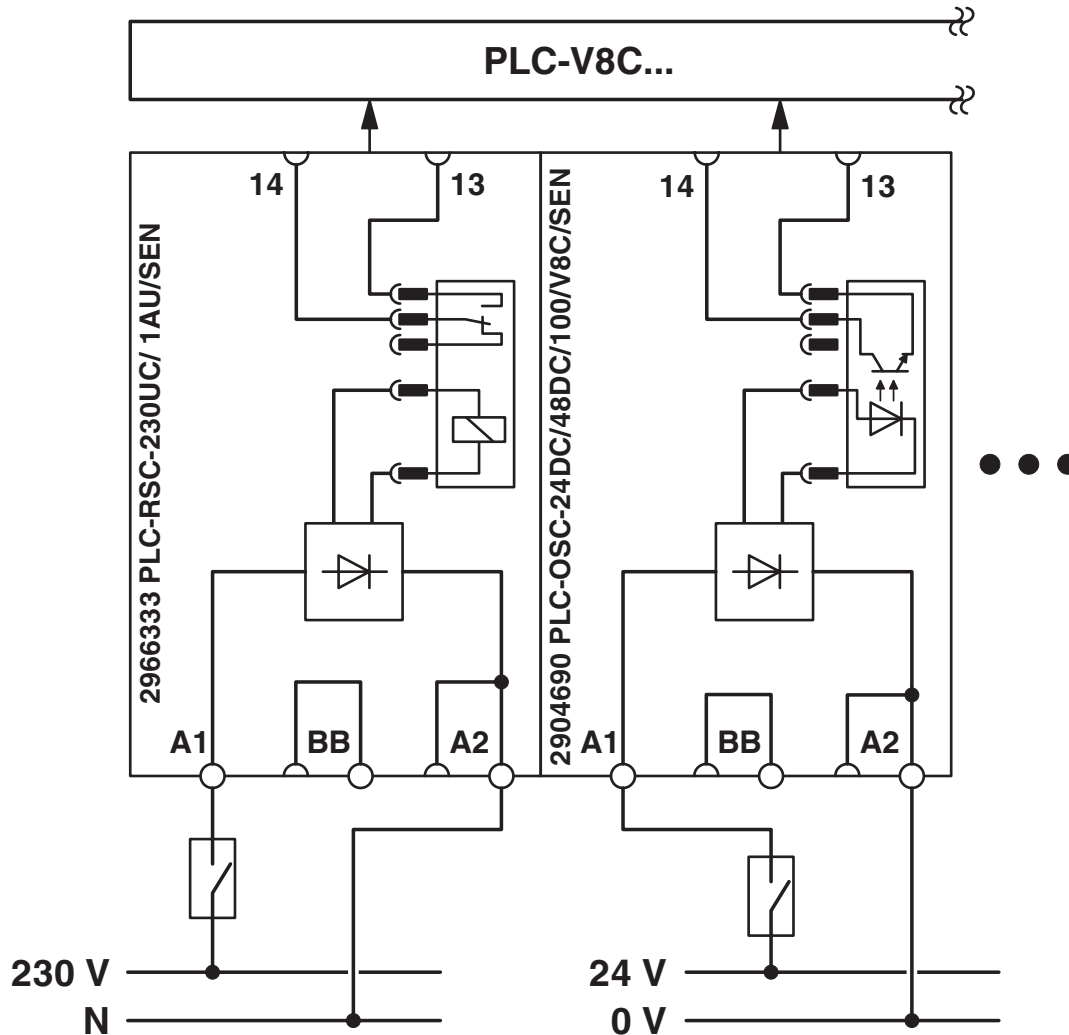
Circuit diagram



Circuit diagram

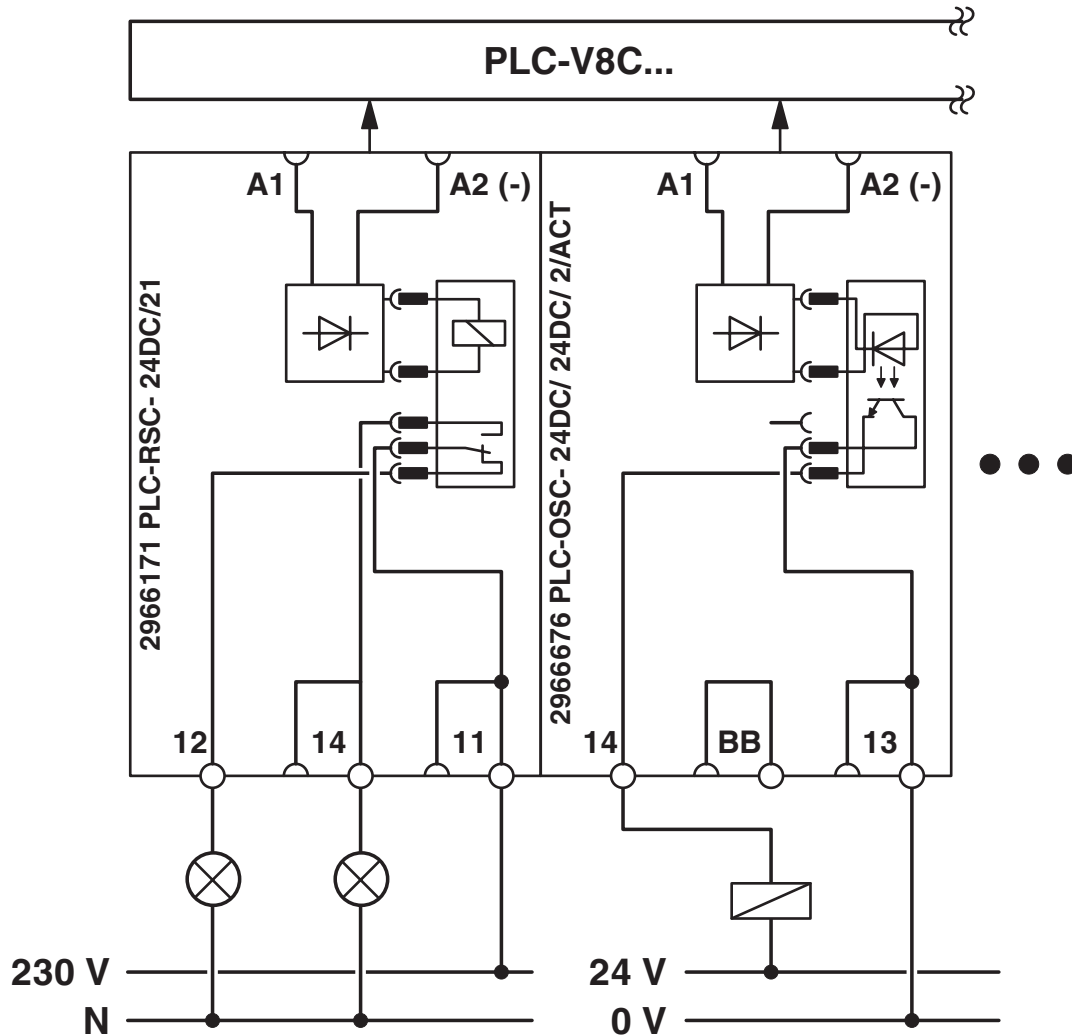


Circuit diagram



Basic circuit diagram: inputs via PLC-INTERFACE with the example of one input terminal block with relay (230 V AC) and one input terminal block with solid-state relay (24 V DC).

Circuit diagram



Basic circuit diagram: outputs via PLC-INTERFACE with the example of an output terminal block with relay, 1 changeover contact, and an output terminal block with solid-state relay.

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2905137>



**EAC**

Approval ID: RU\*DE.\*08.B.01517/19



**UL Listed**

Approval ID: FILE E 172140



**cUL Listed**

Approval ID: FILE E 172140



**cUL Listed**

Approval ID: E199827



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27242216 |
| ECLASS-15.0 | 27242216 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001417 |
|-----------|----------|

### 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                                | 53b8947d-f1d5-457b-bfc3-67f7fddbbeba |

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