# PLC-V8C/PT-24DC/BM2 - Controller

2907446

https://www.phoenixcontact.com/ae/products/2907446

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PLC logic basic module, Generation 2, with 16 I/Os, for plug-in connection to eight digital or analog PLC-INTERFACE terminal blocks, can be extended to 48 I/Os, real-time clock, micro USB female connector, accommodates memory module and Bluetooth adapter, Push-in connection

## Commercial data

| | |
|---|---|
| Item number | 2907446 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DK2 |
| Product key | DK2611 |
| GTIN | 4055626218168 |
| Weight per piece (including packing) | 142.7 g |
| Weight per piece (excluding packing) | 136 g |
| Customs tariff number | 85371098 |
| 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. |

## Product properties

| | |
|---|---|
| Product type | Base unit |
| 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 |

Real-time clock

| | |
|---|---|
| Realtime clock | yes |
| Buffer period | 96 h (Capacitor) |
| Accuracy realtime clock | ±2 s/d |

Supply

| | |
|---|---|
| Supply voltage | 24 V DC |
| Supply voltage range | 19.2 V DC ... 26.4 V DC |
| Typical input current at $U_N$ | 40 mA |
| Maximum input current at $U_N$ | 160 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 | 2.5 mA |
| Status display | LED (yellow) |

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 mm² ... 1.5 mm² |
| Conductor cross-section flexible | 0.14 mm² ... 1.5 mm² |
| | 0.25 mm² ... 0.5 mm² (Ferrule with plastic sleeve) |
| | 0.25 mm² ... 1.5 mm² (Ferrule without plastic sleeve) |
| Conductor cross-section AWG | 26 ... 16 |

Programming connection

| | |
|---|---|
| Connection method | Micro USB type B |
| Number of connections | 1 |

INTERFACE system

| | |
|---|---|
| Connection method | Spring-cage connection |
| Stripping length | 6 mm |
| Number of connections | 1 |
| Number of positions | 3 |
| Conductor cross-section rigid | 0.14 mm² ... 0.5 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 0.5 mm² |
| Conductor cross-section AWG | 26 ... 20 |

PLC logic - bus

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

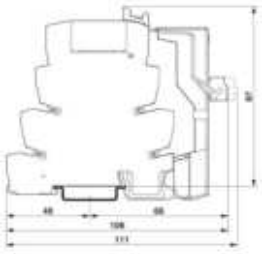
Memory

| | |
|---|---|
| Connection method | S-PORT (socket) |
| Number of connections | 1 |
| Number of positions | 12 |
| Note | For connecting the memory module |

## Signaling

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

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Width | 50 mm |
| Height | 48.5 mm |
| | 111 mm (with relay) |
| Depth | 82.5 mm |
| | 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

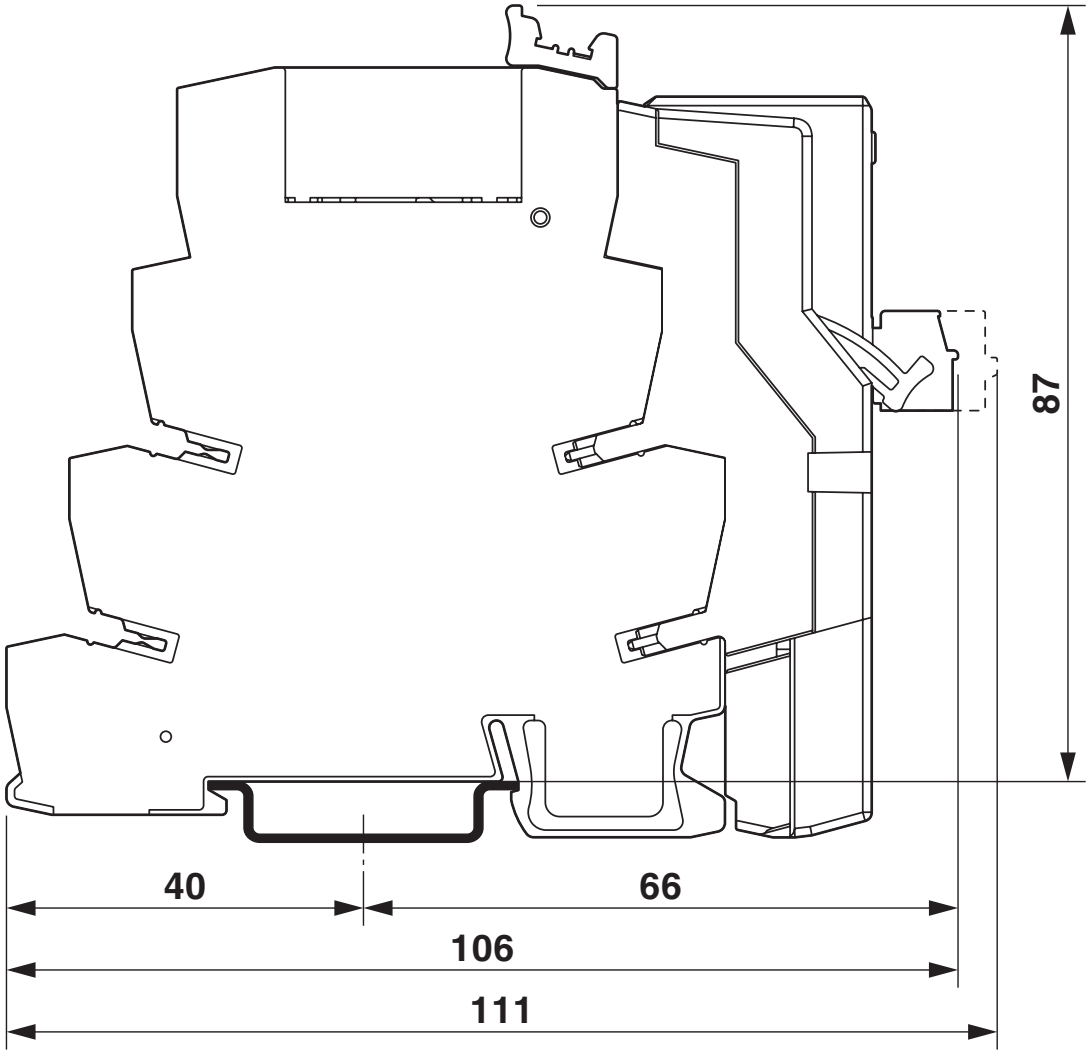
| | |
|---|---|
| Standards/regulations | EN IEC 60664-1 |

## Mounting

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

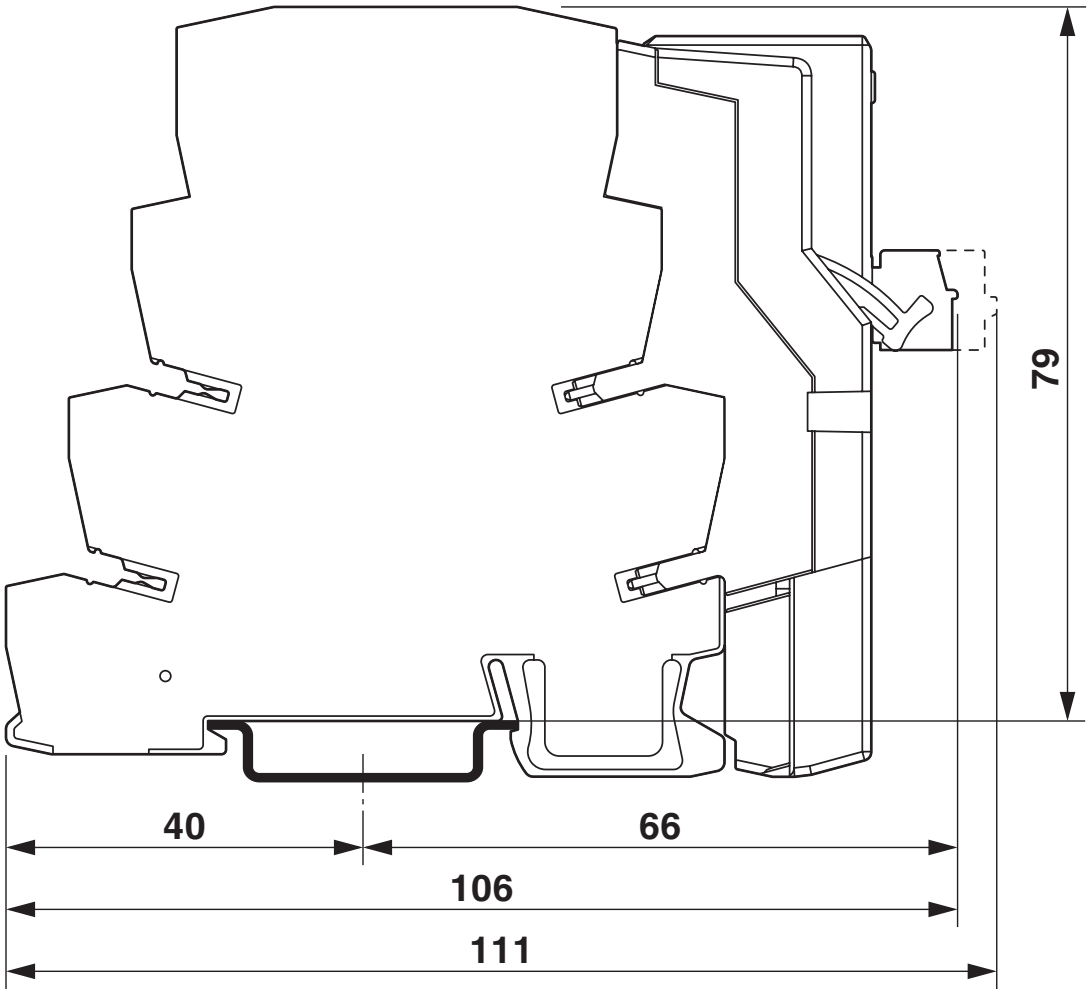
## Drawings

Dimensional drawing



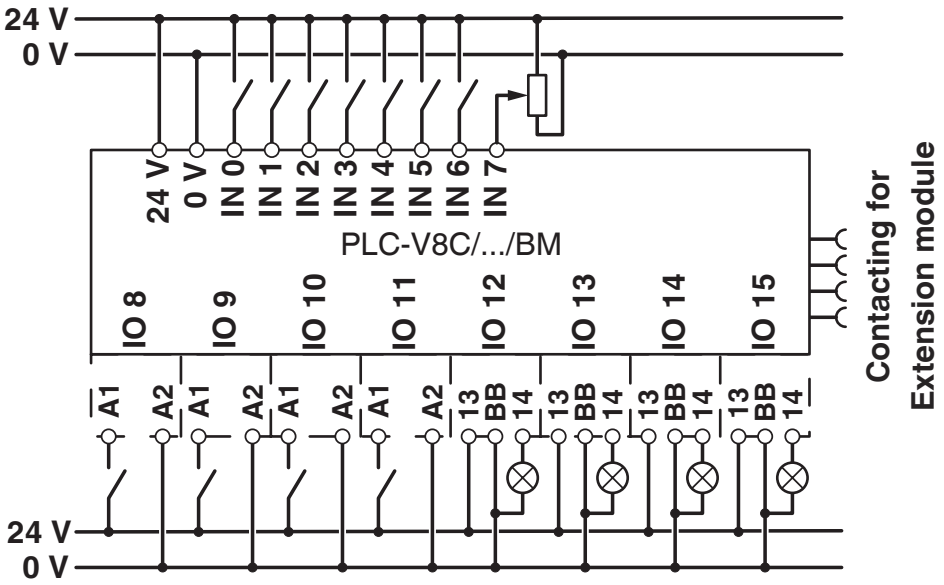

PLC logic with relay

Dimensional drawing

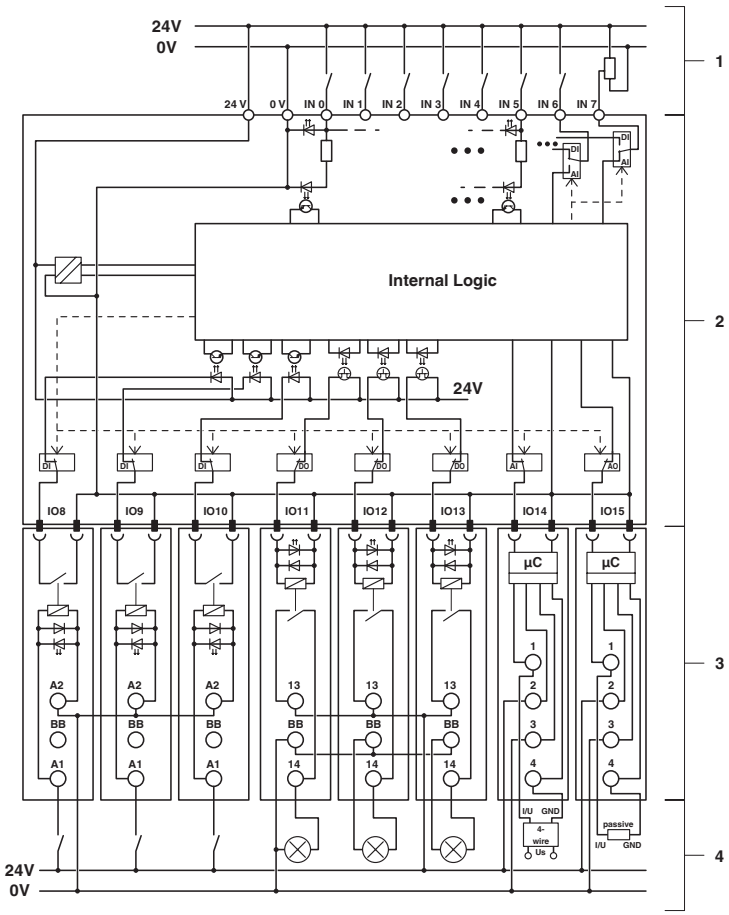



PLC logic with analogue terminals

Connection diagram

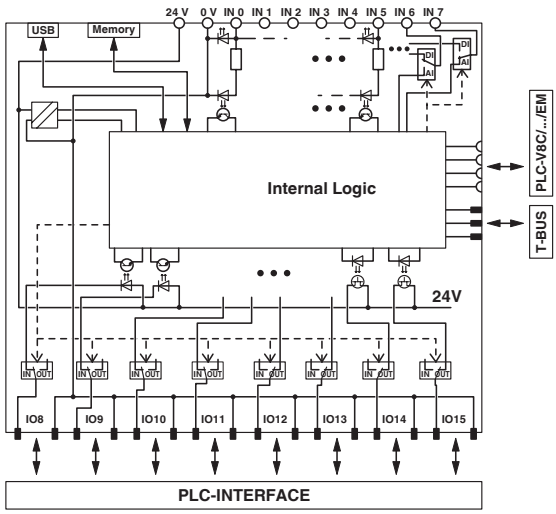


## Circuit diagram

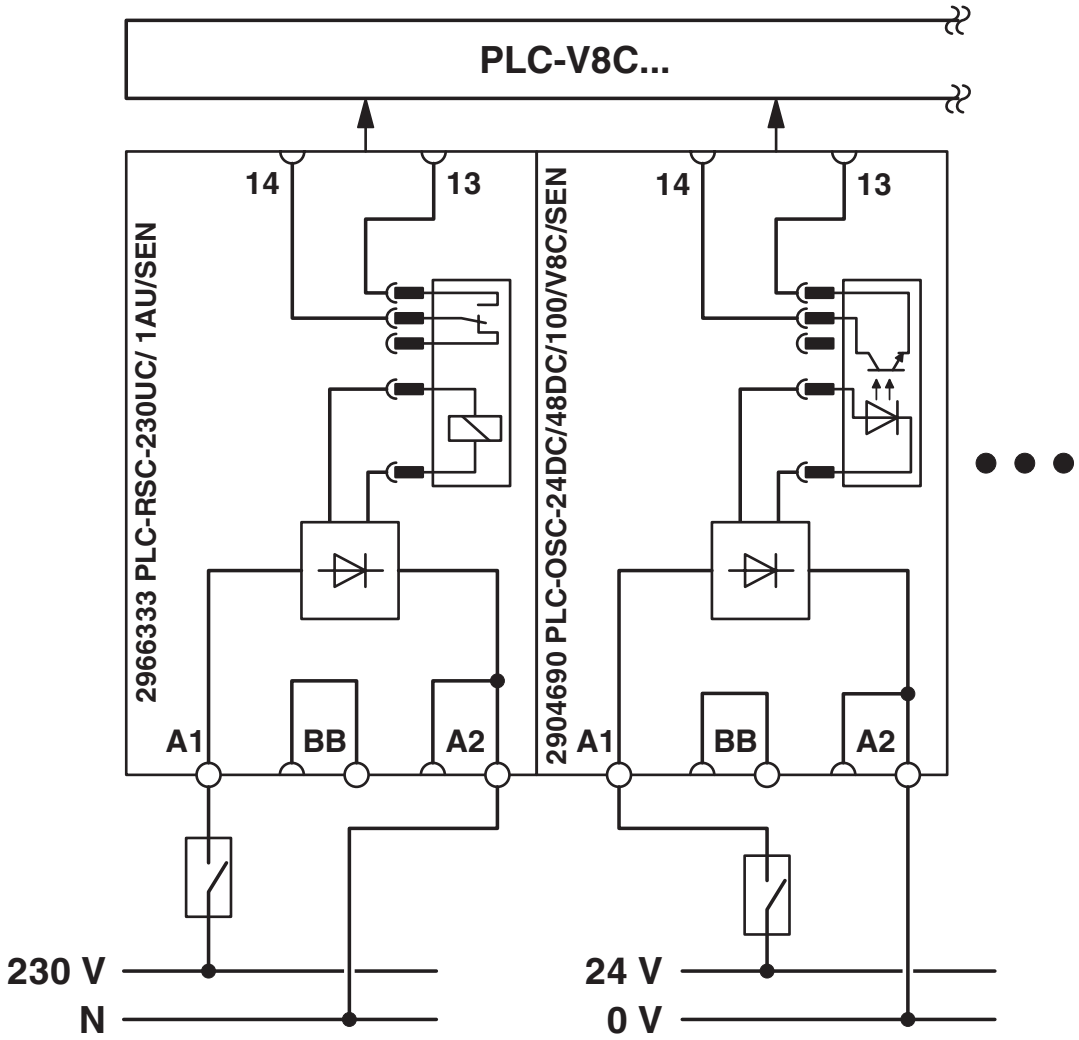



1 Field connection via COMBICON connector
2 PLC –V8C/…
3 PLC-INTERFACE terminal blocks
4 Field connection via PLC-INTERFACE terminal blocks

## Circuit diagram

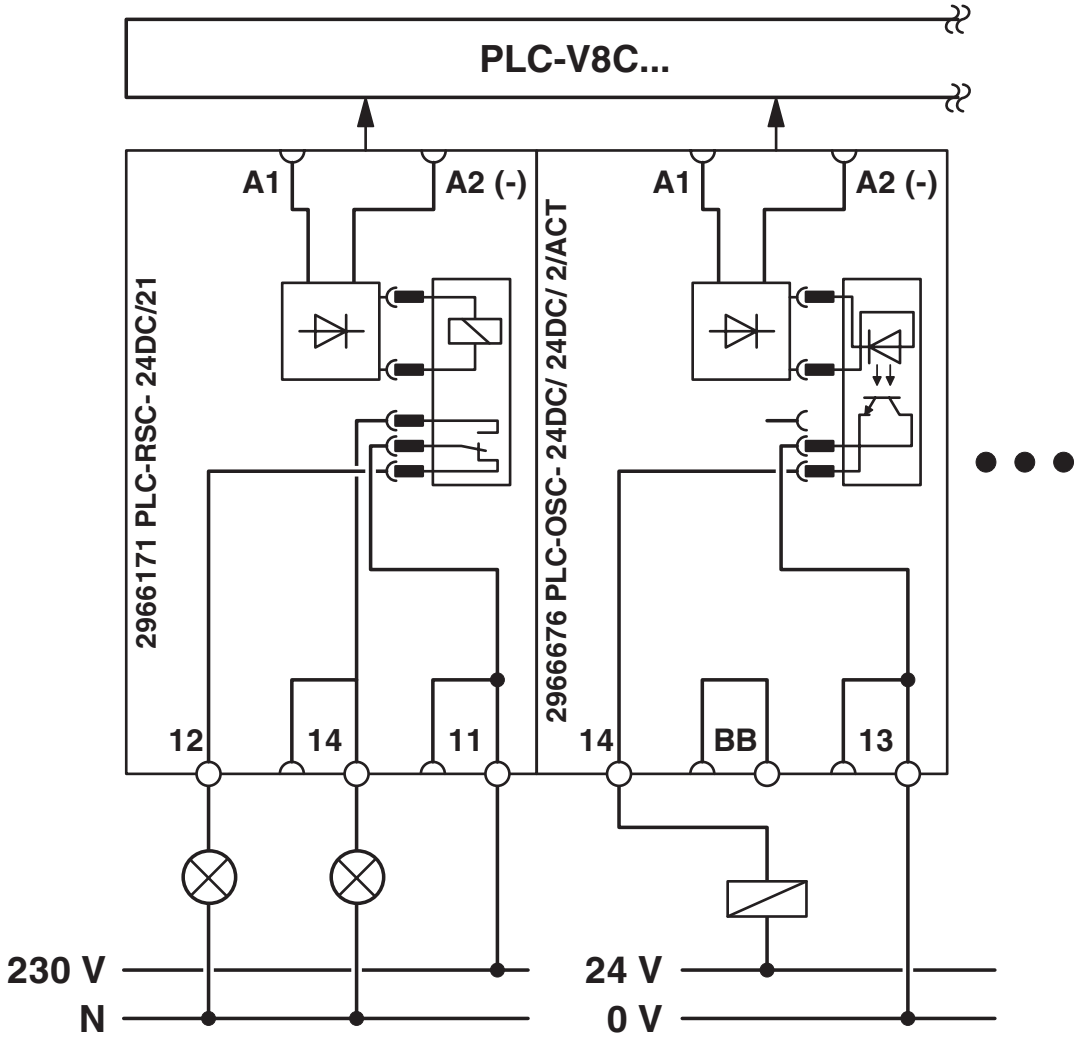


Circuit diagram




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.

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/ae/products/2907446

**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

**UL Listed**
Approval ID: E199827

## Classifications

### ECLASS

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

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC001417 |

### UNSPSC

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

## 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 | e3dd21b2-ae91-4c2c-ac2c-ed9029b5dbf3 |

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