

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



PLC logic extension logic module with 16 I/Os for plug-in connection to 8 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

RoHS

### Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 1 pc          |
| GTIN         |               |
| GTIN         | 4046356919487 |

### Technical data

#### Note

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

#### Dimensions

|        |         |
|--------|---------|
| Width  | 50 mm   |
| Height | 48.5 mm |
| Depth  | 82.5 mm |

#### Ambient conditions

|                                                |                  |
|------------------------------------------------|------------------|
| Ambient temperature (operation)                | -20 °C ... 45 °C |
| Ambient temperature (storage/transport)        | -20 °C ... 70 °C |
| Max. permissible relative humidity (operation) | 95 %             |
| Degree of protection                           | IP20             |

#### Power supply

|                                         |                             |
|-----------------------------------------|-----------------------------|
| Supply voltage                          | 24 V DC                     |
| Supply voltage range                    | 19.2 V DC ... 26.4 V DC     |
| Maximum input current at U <sub>N</sub> | 65 mA                       |
| Protective circuit                      | Reverse polarity protection |

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Technical data

#### Power supply

|                |                  |
|----------------|------------------|
|                | Surge protection |
| Status display | Green LED        |

#### Input data (digital)

|                          |                              |
|--------------------------|------------------------------|
| 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           | Yellow LED                   |

#### Input data (analog)

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

#### Input data (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    |

#### General

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| Color                 | gray                                                  |
| Mounting position     | any                                                   |
| Assembly instructions | can be plugged onto 8 x PLC-INTERFACE terminal blocks |
| Operating mode        | 100% operating factor                                 |
| Degree of protection  | IP20                                                  |

#### Connection data

|                       |                              |
|-----------------------|------------------------------|
| Connection name       | 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 |

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Technical data

#### Connection data

|                                  |                                                                                |
|----------------------------------|--------------------------------------------------------------------------------|
| Conductor cross section solid    | 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> (Ferrules without plastic sleeve) |
| Conductor cross section AWG      | 26 ... 16                                                                      |

#### Connection data 2

|                       |                                    |
|-----------------------|------------------------------------|
| Connection name       | PLC logic - bus                    |
| Connection method     | Insulation displacement connection |
| Number of connections | 1                                  |
| Number of positions   | 4                                  |

#### Standards and Regulations

|                          |                                                                  |
|--------------------------|------------------------------------------------------------------|
| Designation              | Air clearances and creepage distances between the power circuits |
| Standards/regulations    | DIN EN 50178                                                     |
| Rated insulation voltage | 50 V                                                             |
| Rated surge voltage      | 0.8 kV                                                           |
| Insulation               | Basic insulation                                                 |
| Pollution degree         | 2                                                                |
| Overvoltage category     | III                                                              |
| Conformance              | CE-compliant                                                     |

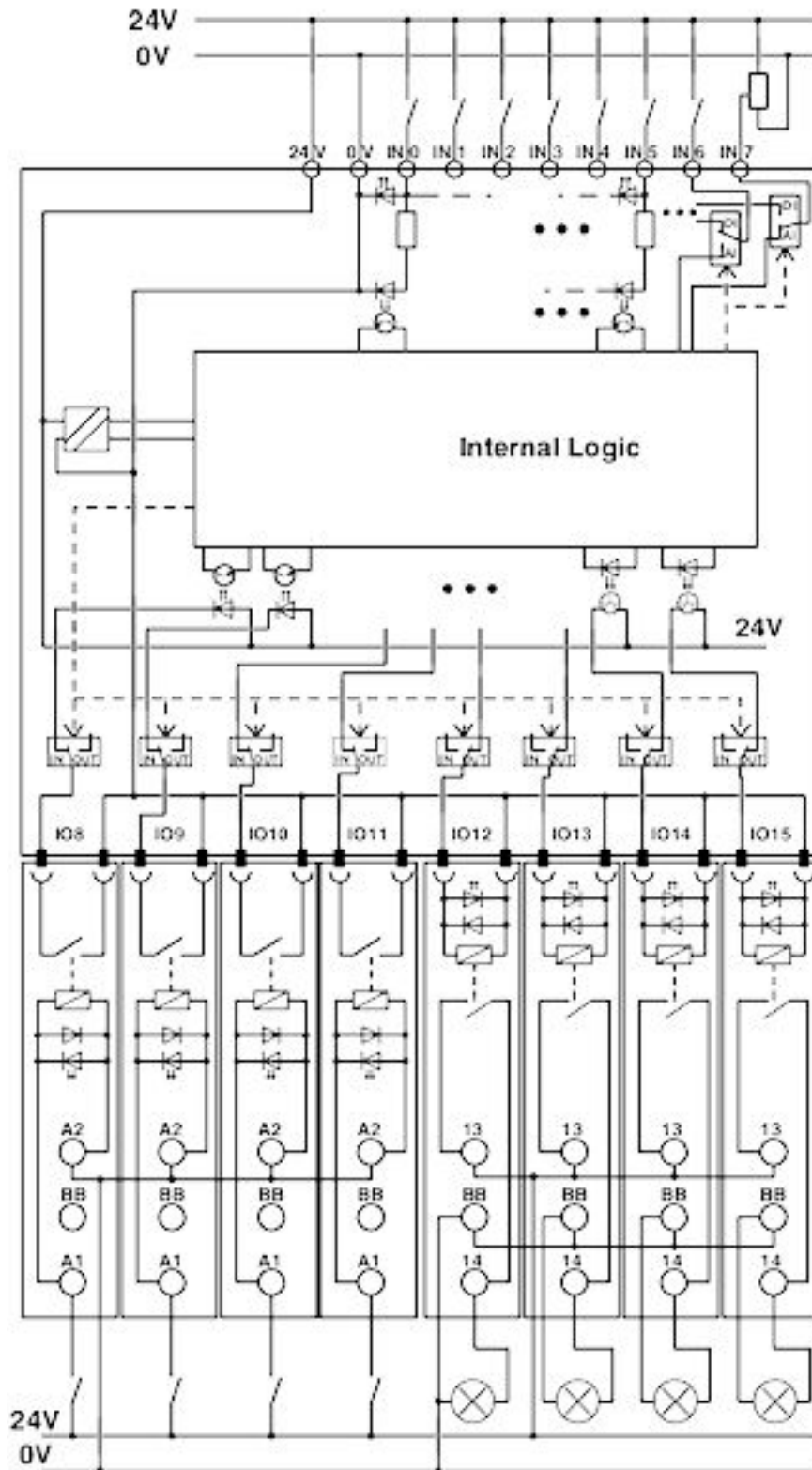
#### Environmental Product Compliance

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

### Drawings

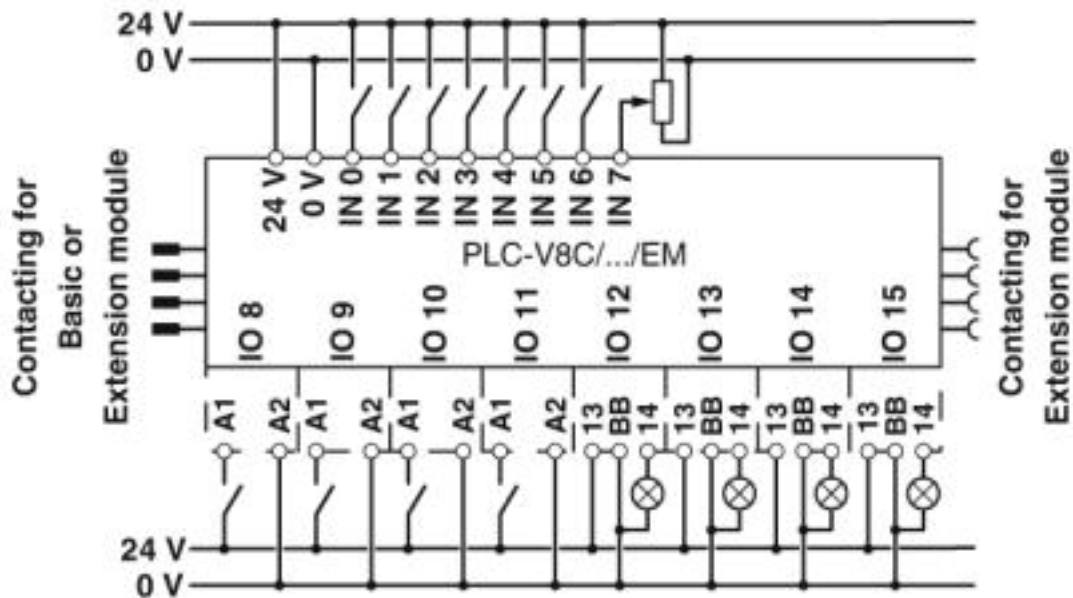
# Extension module - PLC-V8C/PT-24DC/EM - 2905137

Circuit diagram



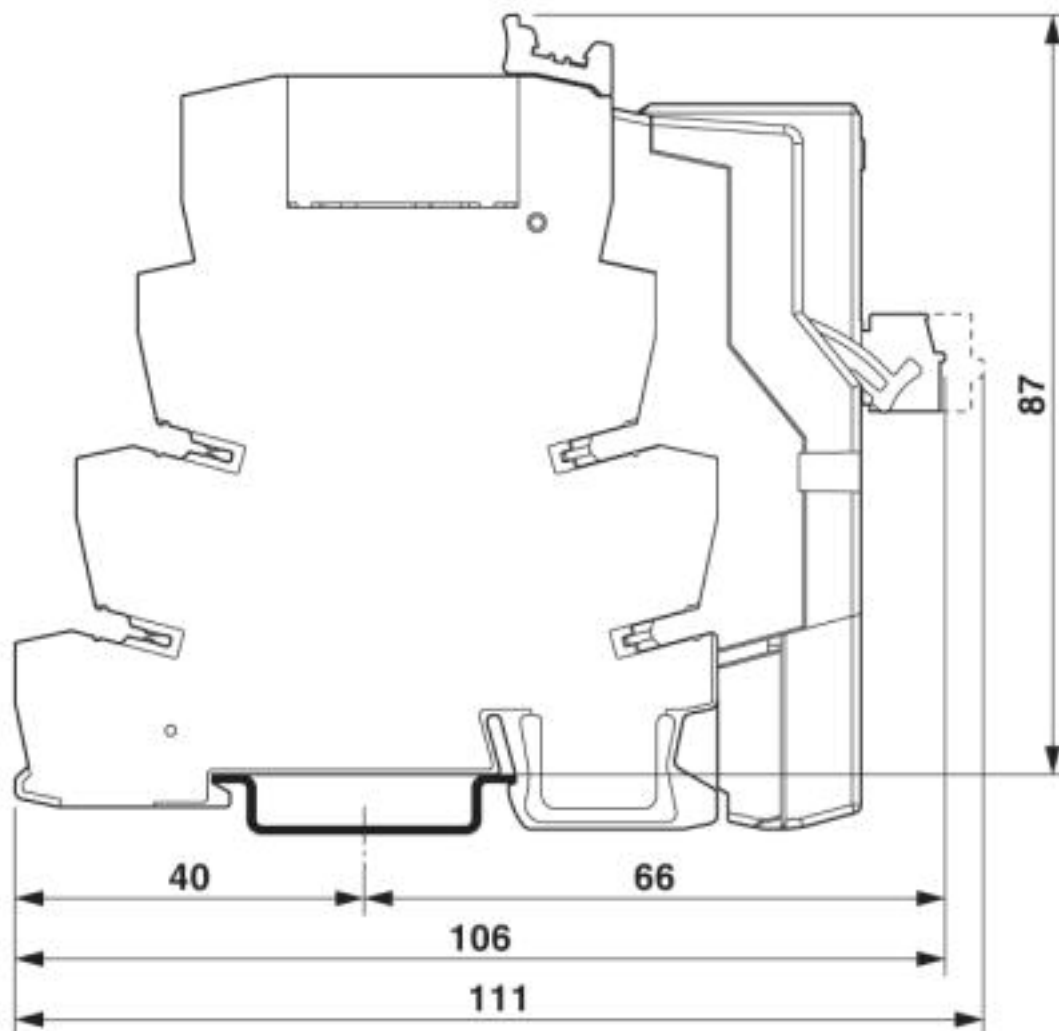
# Extension module - PLC-V8C/PT-24DC/EM - 2905137

Connection diagram



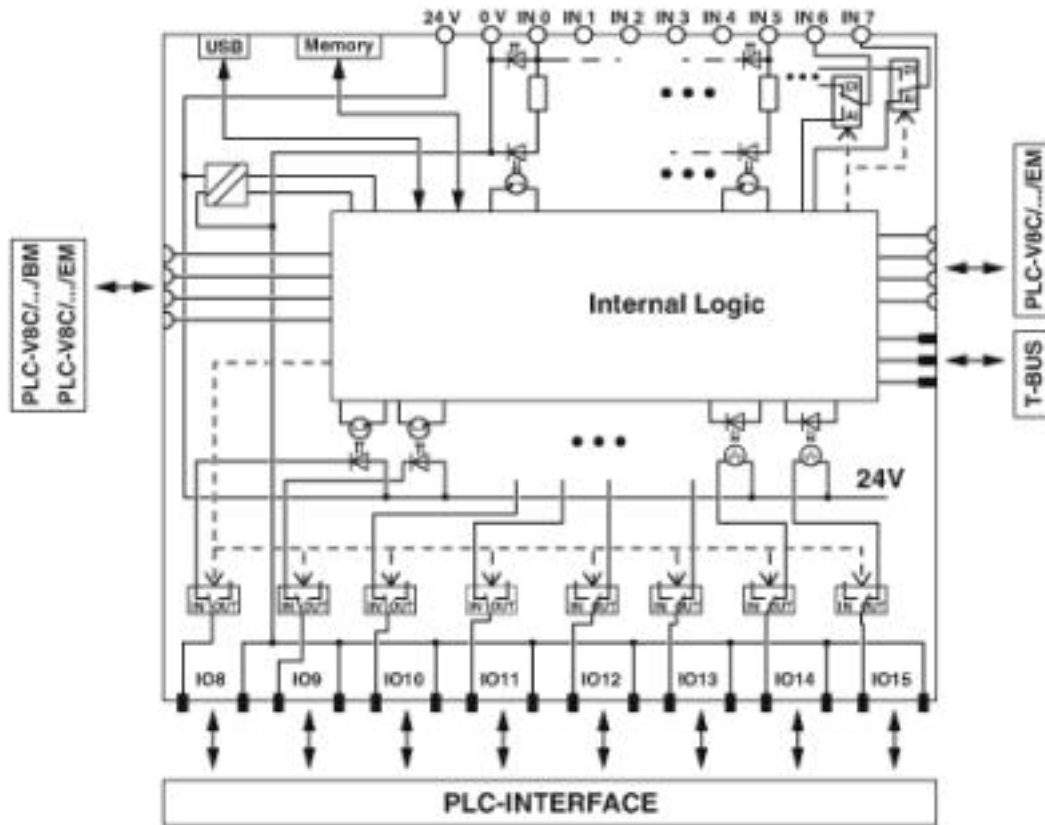
## Extension module - PLC-V8C/PT-24DC/EM - 2905137

Dimensional drawing



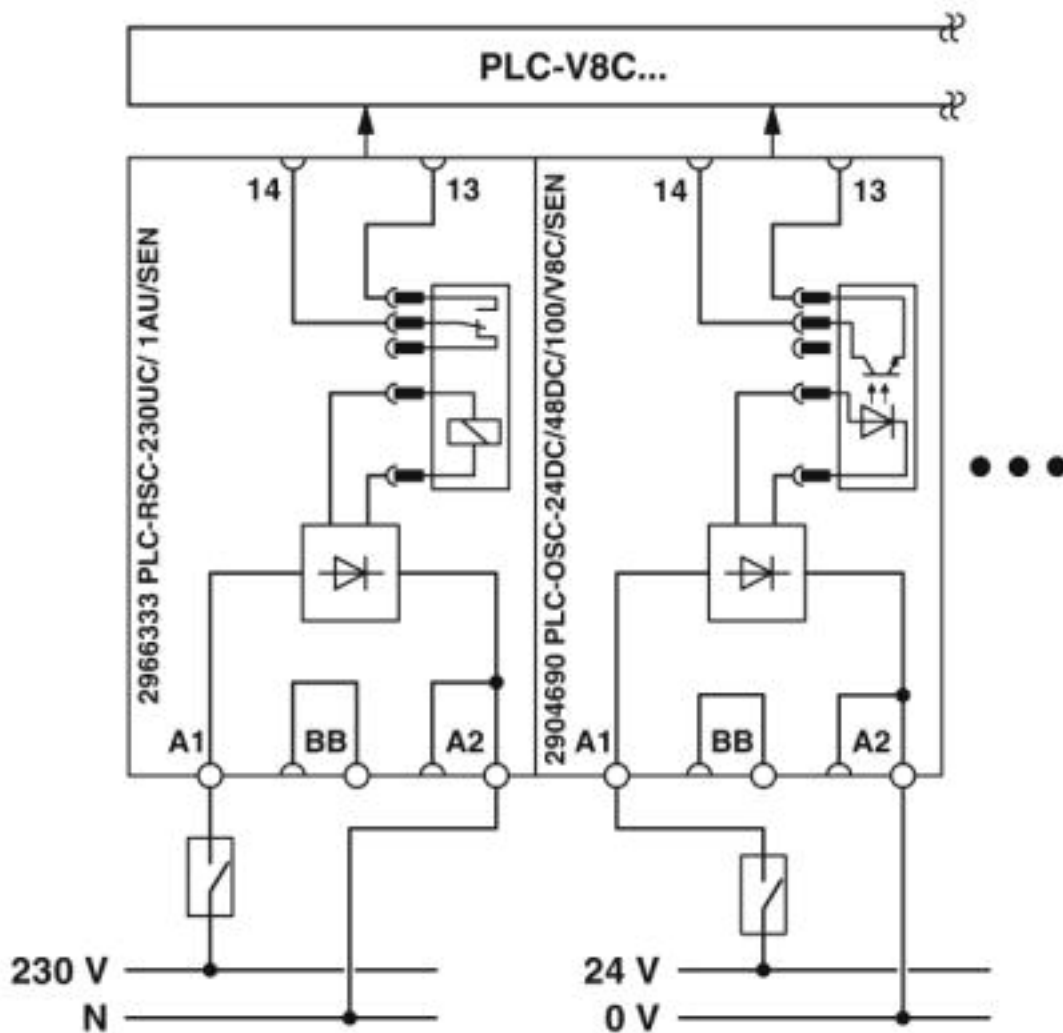
# Extension module - PLC-V8C/PT-24DC/EM - 2905137

Circuit diagram



# Extension module - PLC-V8C/PT-24DC/EM - 2905137

Circuit diagram

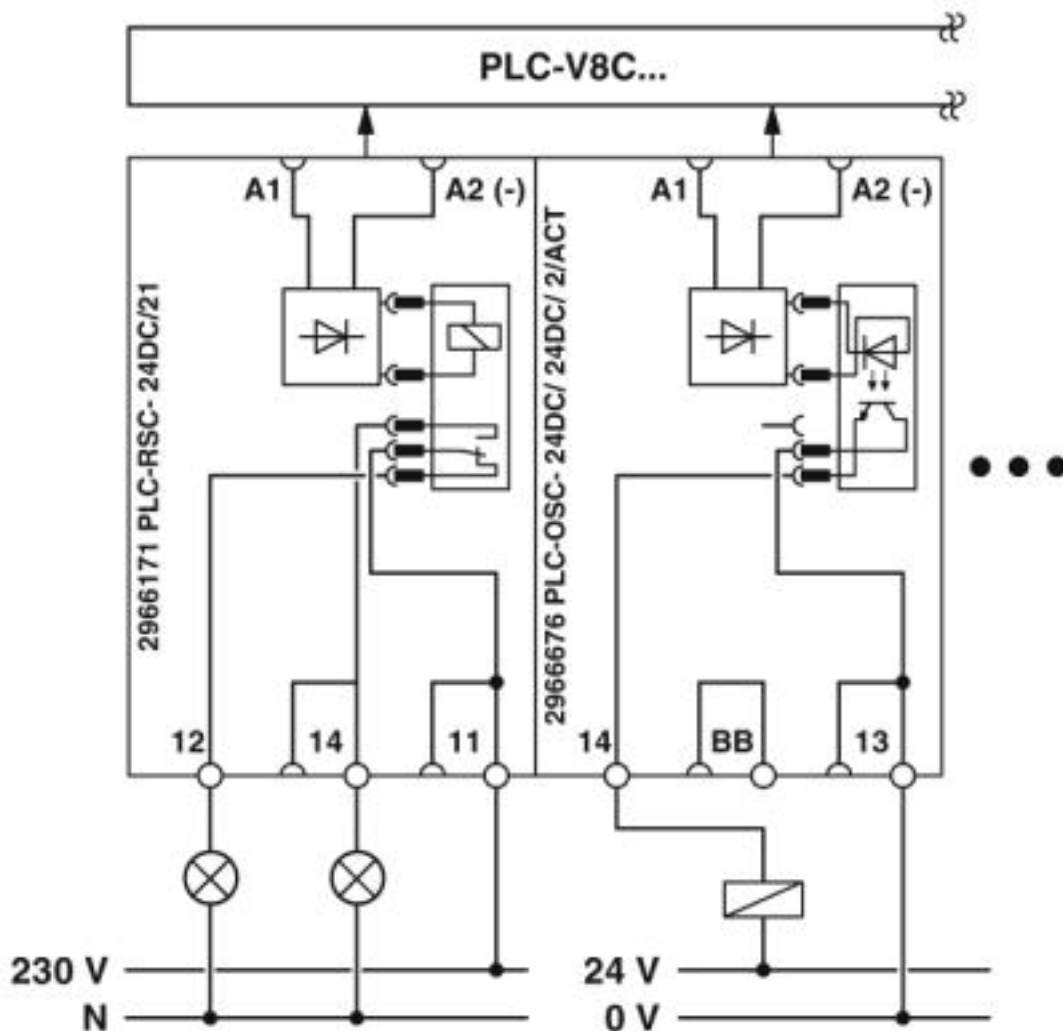


Basic circuit diagram: inputs via PLC-INTERFACE with the example of one input terminal block with relay (230 V AC) and one input terminal block with solid-state relay (24 V DC).



# Extension module - PLC-V8C/PT-24DC/EM - 2905137

Circuit diagram



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

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27242216 |
| eCl@ss 4.0    | 27242216 |
| eCl@ss 4.1    | 27242216 |
| eCl@ss 5.0    | 27242700 |
| eCl@ss 5.1    | 27242700 |
| eCl@ss 6.0    | 27242200 |
| eCl@ss 7.0    | 27242216 |
| eCl@ss 8.0    | 27242216 |
| eCl@ss 9.0    | 27242216 |

# Extension module - PLC-V8C/PT-24DC/EM - 2905137

## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001417 |
| ETIM 3.0 | EC001417 |
| ETIM 4.0 | EC001417 |
| ETIM 5.0 | EC001417 |
| ETIM 6.0 | EC001417 |
| ETIM 7.0 | EC001417 |

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 39122329 |
| UNSPSC 18.0 | 39122329 |
| UNSPSC 19.0 | 39122329 |
| UNSPSC 20.0 | 39122329 |
| UNSPSC 21.0 | 39122329 |

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

### 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 |
|-----------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|            |  |                                                                                                                                                       |               |
|------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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*DE.*08.B.01517/19 |
|-----|--|----------------------|

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Approvals

cULus Listed



### Accessories

#### Accessories

##### Labeled terminal marker

Zack Marker strip, flat - ZBF 19,7 CUS - 0825021



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 19.7 mm, lettering field size: 5.15 x 19.7 mm, Number of individual labels: 5

### Relay Module

Relay Module - PLC-RPT- 24DC/21 - 2900299



PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with push-in technology and plug-in miniature relay with power contact, for mounting on NS 35/7,5 DIN rails, 1 PDT, input voltage: 24 V DC

Relay Module - PLC-RPT- 24DC/21AU - 2900306



PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with push-in connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 24 V DC

Relay Module - PLC-RPT- 24DC/ 1/ACT - 2900312



PLC-INTERFACE for output functions, consisting of PLC-BPT.../ACT basic terminal block with push-in connection and plug-in miniature relay with power contact, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 24 V DC

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

#### Switch - PLC-RPT- 24UC/ 1/S/H - 2900328



PLC-INTERFACE with switch (operation by hand) and integrated power contact relay for the "Manual, Zero and Automatic" functions, with push-in connection, for mounting on DIN rail NS 35/7.5, one N/O contact, input voltage 24 V AC/DC

---

#### Relay Module - PLC-RSC- 24DC/21 - 2966171



PLC relay, consisting of base terminal block PLC-BSC.../21 with screw connection and pluggable miniature relay with power contact, for assembly on DIN rail NS 35/7.5, 1 PDT, input voltage 24 V DC

---

#### Relay Module - PLC-RSC- 24DC/21AU - 2966265



PLC-INTERFACE, consisting of PLC-BSC.../21 basic terminal block with screw connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 24 V DC

---

#### Switch - PLC-RSC- 24UC/ 1/S/H - 2982236



PLC-INTERFACE with switch (operation by hand) for the "Manual, Zero, and Automatic" functions, with screw connection and integrated power contact relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 24 V AC/DC

---

#### Relay Module - PLC-RPT- 24DC/ 1AU/SEN - 2900313



PLC-INTERFACE for input functions, consisting of PLC-BPT.../SEN basic terminal block with push-in connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 24 V DC

---

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

#### Relay Module - PLC-RPT-120UC/ 1AU/SEN - 2900314



PLC-INTERFACE for input functions, consisting of PLC-BPT.../SEN basic terminal block with push-in connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 120 V AC/110 V DC

---

#### Relay Module - PLC-RPT-230UC/ 1AU/SEN - 2900315



PLC-INTERFACE for input functions, consisting of PLC-BPT.../SEN basic terminal block with push-in connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 230 V AC/220 V DC

---

#### Relay Module - PLC-RSC- 24DC/ 1AU/SEN - 2966317



PLC-INTERFACE for input functions, consisting of PLC-BSC.../SEN basic terminal block with screw connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 24 V DC

---

#### Relay Module - PLC-RSC-120UC/ 1AU/SEN - 2966320



PLC-INTERFACE for input functions, consisting of PLC-BSC.../SEN basic terminal block with screw connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 120 V AC/110 V DC

---

#### Relay Module - PLC-RSC-230UC/ 1AU/SEN - 2966333



PLC-INTERFACE for input functions, consisting of PLC-BSC.../SEN basic terminal block with screw connection and plug-in miniature relay with multi-layer gold contact, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input voltage 230 V AC/220 V DC

---

### Relay socket

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

Relay base - PLC-BSC- 5DC/ 1/SEN - 2980267



6.2 mm PLC basic terminal block for output functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with load return line connection (BB), 1 N/O contact, input voltage 5 V DC

---

Relay base - PLC-BPT- 24DC/21 - 2900445



6.2 mm PLC basic terminal block with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 24 V DC

---

Relay base - PLC-BPT- 24DC/ 1/SEN - 2900262



6.2 mm PLC basic terminal block for input functions with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 24 V DC

---

Relay base - PLC-BSC- 24DC/21 - 2966016



6.2 mm PLC basic terminal block with screw connection, without relays or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 24 V DC

---

Relay base - PLC-BSC- 24DC/ 1/SEN - 2966061



6.2 mm PLC basic terminal block for input functions with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with sensor supply voltage distribution (BB), 1 N/O contact, input voltage 24 V DC

---

### Screwdriver tools

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

Screwdriver - SZS 0,4X2,5 VDE - 1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

---

### Solid-state relay module

Solid-state relay module - PLC-OPT- 24DC/ 48DC/100 - 2900352



PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with push-in connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 48 V DC/100 mA

---

Solid-state relay module - PLC-OPT- 24DC/ 24DC/2 - 2900364



PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with push-in connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/3 A

---

Solid-state relay module - PLC-OPT- 24DC/230AC/1 - 2900369



PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with push-in connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 24 - 253 V AC/0.75 A

---

Solid-state relay module - PLC-OPT- 24DC/ 24DC/2/ACT - 2900376



PLC-INTERFACE for output functions, consisting of PLC-BPT.../ACT basic terminal block with push-in connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/3 A

---

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

#### Solid-state relay module - PLC-OPT- 24DC/300DC/1 - 2900383



PLC-INTERFACE, integrated solid-state relay, with push-in connection, for mounting on NS 35/7,5 DIN rails, input: 24 V DC, output: 12 - 300 V DC/1 A

---

#### Solid-state relay module - PLC-OPT- 24DC/ 24DC/10/R - 2900398



PLC-INTERFACE with confirmation contact, consisting of basic terminal block with push-in connection and integrated miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/10 A

---

#### Solid-state relay module - PLC-OPT- 24DC/ 48DC/500/W - 2900378



PLC-INTERFACE with electronic PDT contact, consisting of PLC-BPT.../21 basic terminal block with push-in connection and integrated miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input: 24 V DC, output: 3 - 48 V DC/500 mA

---

#### Solid-state relay module - PLC-OPT- 24DC/TTL - 2900363



PLC-INTERFACE for TTL signal, consisting of PLC-O.../TTL basic terminal block with push-in connection and integrated solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: TTL (5 V DC)

---

#### Solid-state relay module - PLC-OSC- 24DC/ 48DC/100 - 2966728



PLC-INTERFACE, consisting of PLC-BSC.../21 basic terminal block with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 48 V DC/100 mA

---



## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

Solid-state relay module - PLC-OSC- 24DC/ 24DC/ 2 - 2966634



PLC-INTERFACE, consisting of PLC-BSC.../21 basic terminal block with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/3 A

---

Solid-state relay module - PLC-OSC- 24DC/230AC/ 1 - 2967840



PLC-INTERFACE, consisting of PLC-BSC.../21 basic terminal block with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 24 - 253 V AC/0.75 A

---

Solid-state relay module - PLC-OSC- 24DC/ 24DC/ 2/ACT - 2966676



PLC-INTERFACE for output functions, consisting of PLC-BSC.../ACT basic terminal block with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/3 A

---

Solid-state relay module - PLC-OSC- 24DC/230AC/ 1/ACT - 2967947



PLC-INTERFACE for output functions, consisting of PLC-BSC.../ACT basic terminal block with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 24 ... 253 V AC/0.75 A

---

Solid-state relay module - PLC-OSC- 24DC/300DC/ 1 - 2980678



PLC-INTERFACE, integrated solid-state relay, with screw connection, for mounting on NS 35/7,5 DIN rails, input: 24 V DC, output: 12 - 300 V DC/1 A

---

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

Solid-state relay module - PLC-OSC- 24DC/ 24DC/ 10/R - 2982702



PLC-INTERFACE with checkback contact, consisting of basic terminal block with screw connection and integrated miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 ... 33 V DC/10 A

---

Solid-state relay module - PLC-OSC- 24DC/ 48DC/500/W - 2980636



PLC electronic PDT, integrated optocoupler, with screw connection, for mounting on DIN rail NS 35/7.5, input: 24 V DC, output: 3 - 48 V DC/500 mA

---

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



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)

---

Solid-state relay module - PLC-OPT-24DC/48DC/100/V8C/SEN - 2904693



PLC-INTERFACE for input functions with PLC logic, with push-in connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 48 V DC/100 mA

---

Solid-state relay module - PLC-OPT-120UC/48DC/100/V8C/SEN - 2904694



PLC-INTERFACE for input functions with PLC logic, with push-in connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 120 V AC/110 V DC, output: 3 - 48 V DC/100 mA

---

## Extension module - PLC-V8C/PT-24DC/EM - 2905137

### Accessories

Solid-state relay module - PLC-OPT-230UC/48DC/100/V8C/SEN - 2904695



PLC-INTERFACE for input functions with PLC logic, with push-in connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 230 V AC/220 V DC, output: 3 - 48 V DC/100 mA

Solid-state relay module - PLC-OSC- 24DC/48DC/100/V8C/SEN - 2904690



PLC-INTERFACE for input functions with PLC logic, with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 24 V DC, output: 3 - 48 V DC/100 mA

Solid-state relay module - PLC-OSC-120UC/48DC/100/V8C/SEN - 2904691



PLC-INTERFACE for input functions with PLC logic, with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 120 V AC/110 V DC, output: 3 - 48 V DC/100 mA

Solid-state relay module - PLC-OSC-230UC/48DC/100/V8C/SEN - 2904692



PLC-INTERFACE for input functions with PLC logic, with screw connection and plug-in miniature solid-state relay, for mounting on DIN rail NS 35/7,5, 1 N/O contact, input: 230 V AC/220 V DC, output: 3 - 48 V DC/100 mA

### Terminal marking

Zack marker strips off the roll, flat - ZBF 19,7:UNBEDRUCKT - 0810627



Zack marker strips off the roll, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 19.7 mm, lettering field size: 19.7 x 5.2 mm, Number of individual labels: 5

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>