

# PLC-RSC- 24DC/ 1ICT/ACT - Relay module



1078680

<https://www.phoenixcontact.com/nl/products/1078680>

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PLC-INTERFACE for high inrush currents, consisting of PLC-BSC.../1 IC/ACT basic terminal block with screw connection and pluggable miniature relay, for mounting on DIN rail NS 35/7.5, max. inrush current up to 800 A, 1 N/O contact, 24 V DC input voltage

## Product description

The relay module is particularly suitable for switching strong capacitive loads, such as LED lights. The ballasts installed in the LED lights often have extremely high switch-on peaks which cause standard relay contacts to fuse. The leading tungsten pre-contact ensures that switch-on currents of up to 800 A can be switched safely.

## Your advantages

- Direct connection of load return line thanks to actuator version
- Efficient connection to system cabling using V8 adapter
- Safe isolation between coil and contact side
- Max. inrush current of 800 A
- Functional plug-in bridges

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1078680       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DK6236        |
| Product key                          | DK6236        |
| GTIN                                 | 4055626794600 |
| Weight per piece (including packing) | 77,24 g       |
| Weight per piece (excluding packing) | 44,1 g        |
| Customs tariff number                | 85364190      |
| Country of origin                    | DE            |

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## Technical data

### Notes

|                    |                                                                                                                                                                                                                         |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation | Separating plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or FBST 500.... |
| Notes on operation | The PLC-ATP separating plate should be installed for safe isolation between adjacent modules                                                                                                                            |
| Assembly note      | The PLC-ATP separating plate is required at the start and end of every PLC terminal strip.                                                                                                                              |
| Notes on operation | The system installer must ensure the touch protection of the product (at voltages > 25 V AC/60 V DC). The product is a built-in device without protection against direct contact.                                       |

### Product properties

|                         |                           |
|-------------------------|---------------------------|
| Product family          | PLC-INTERFACE             |
| Application             | high inrush currents      |
| Operating mode          | 100% operating factor     |
| Mechanical service life | 3x 10 <sup>7</sup> cycles |

#### Insulation characteristics: Standards/regulations

|                      |                                       |
|----------------------|---------------------------------------|
| Insulation           | Safe isolation, reinforced insulation |
| Overvoltage category | III                                   |
| Pollution degree     | 3                                     |

#### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 12.09.2025 |
|------------------------------|------------|

### Electrical properties

|                                                 |                                          |
|-------------------------------------------------|------------------------------------------|
| Maximum power dissipation for nominal condition | 0.43 W                                   |
| Test voltage (Winding/contact)                  | 4 kV AC (50 Hz, 1 min., winding/contact) |

#### Standards/regulations

|                          |          |
|--------------------------|----------|
| Rated insulation voltage | 250 V AC |
| Rated surge voltage      | 6 kV     |

### Input data

#### Coil side

|                                                      |                                 |
|------------------------------------------------------|---------------------------------|
| Nominal input voltage U <sub>N</sub>                 | 24 V DC                         |
| Input voltage range                                  | 20.2 V DC ... 33.6 V DC (20 °C) |
| Nominal voltage (plugged-in electromechanical relay) | 24 V DC                         |
| Drive and function                                   | monostable                      |
| Drive (polarity)                                     | polarized                       |
| Typical input current at U <sub>N</sub>              | 18 mA                           |
| Typical response time                                | 8 ms                            |

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|                           |                                                        |
|---------------------------|--------------------------------------------------------|
| Typical release time      | 10 ms                                                  |
| Protective circuit        | Reverse polarity protection; Polarity protection diode |
|                           | Freewheeling diode; Freewheeling diode                 |
| Operating voltage display | Yellow LED                                             |

## Output data

### Switching

|                                               |                                                                                                                                   |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Contact switching type                        | 1 N/O contact                                                                                                                     |
| Type of switch contact                        | Single contact                                                                                                                    |
| Note regarding the switch contact             | With tungsten leading contact                                                                                                     |
| Contact material                              | AgSnO                                                                                                                             |
| Note                                          | Main contact silver tin oxide (AgSnO <sub>2</sub> ): lead contact tungsten                                                        |
| Maximum switching voltage                     | 250 V AC/DC                                                                                                                       |
| Minimum switching voltage                     | 12 V (100 mA)                                                                                                                     |
| Limiting continuous current                   | 6 A                                                                                                                               |
|                                               | 10 A (the value is permissible if both connections 13, both connections 14 and both connections BB are bridged)                   |
| Maximum inrush current                        | 165 A (20 ms)                                                                                                                     |
|                                               | 800 A (200 µs)                                                                                                                    |
| Min. switching current                        | 100 mA (12 V)                                                                                                                     |
| Interrupting rating (ohmic load) max.         | 144 W (at 24 V DC)                                                                                                                |
|                                               | 58 W (at 48 V DC)                                                                                                                 |
|                                               | 48 W (at 60 V DC)                                                                                                                 |
|                                               | 50 W (at 110 V DC)                                                                                                                |
|                                               | 80 W (at 220 V DC)                                                                                                                |
|                                               | 1500 VA (for 250 V AC)                                                                                                            |
| Interrupting rating (ohmic load) max. bridged | 240 W (for 24 V DC. The value is permissible if both connections 13, both connections 14 and both connections BB are bridged.)    |
|                                               | 2500 VA (for 250 V AC. The value is permissible if both connections 13, both connections 14 and both connections BB are bridged.) |
| Switching power min.                          | 1200 mW                                                                                                                           |
| Switching capacity                            | 2 A (at 24 V, DC13)                                                                                                               |
|                                               | 0.2 A (at 110 V, DC13)                                                                                                            |
|                                               | 0.2 A (at 250 V, DC13)                                                                                                            |
|                                               | 6 A (at 24 V, AC15)                                                                                                               |
|                                               | 6 A (at 120 V, AC15)                                                                                                              |
|                                               | 6 A (at 250 V, AC15)                                                                                                              |

## Connection data

|                               |                                              |
|-------------------------------|----------------------------------------------|
| Connection method             | Screw connection                             |
| Stripping length              | 8 mm                                         |
| Screw thread                  | M3                                           |
| Conductor cross-section rigid | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
|                               | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |

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|                                  |                                       |
|----------------------------------|---------------------------------------|
| Conductor cross-section flexible | 0.2 mm² ... 2.5 mm² (Single ferrule)  |
|                                  | 2x 0.5 mm² ... 1.5 mm² (TWIN ferrule) |
| Conductor cross-section AWG      | 26 ... 14                             |
| Tightening torque                | 0.6 Nm ... 0.8 Nm                     |

## Dimensions

|        |       |
|--------|-------|
| Width  | 14 mm |
| Height | 80 mm |
| Depth  | 94 mm |

## Material specifications

|                                                  |                 |
|--------------------------------------------------|-----------------|
| Color                                            | gray (RAL 7042) |
| Flammability rating according to UL 94 (Housing) | V0 (Housing)    |

## Environmental and real-life conditions

### Ambient conditions

|                                              |                                |
|----------------------------------------------|--------------------------------|
| Degree of protection (Relay)                 | RT II (Relay)                  |
| Degree of protection (Relay base)            | IP20 (Relay base)              |
| Degree of protection (Installation location) | ≥ IP54 (Installation location) |
| Ambient temperature (operation)              | -40 °C ... 60 °C               |
| Ambient temperature (storage/transport)      | -40 °C ... 85 °C               |
| Altitude                                     | ≤ 2000 m                       |

## Approvals

### CE

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

### UKCA

|             |                |
|-------------|----------------|
| Certificate | UKCA-compliant |
|-------------|----------------|

### Shipbuilding approval

|             |            |
|-------------|------------|
| Certificate | TAE0000196 |
|-------------|------------|

### Corrosive gas test

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

### Shipbuilding data

|             |                                                                                         |
|-------------|-----------------------------------------------------------------------------------------|
| Temperature | D                                                                                       |
| Humidity    | A                                                                                       |
| Vibration   | B/C                                                                                     |
| EMC         | B                                                                                       |
| Enclosure   | Required protection according to the Rules shall be provided upon installation on board |

## EMC data

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|                               |                                        |
|-------------------------------|----------------------------------------|
| Electromagnetic compatibility | Conformance with EMC directive         |
| Low Voltage Directive         | Conformance with Low Voltage Directive |

## Standards and regulations

### Standards/regulations

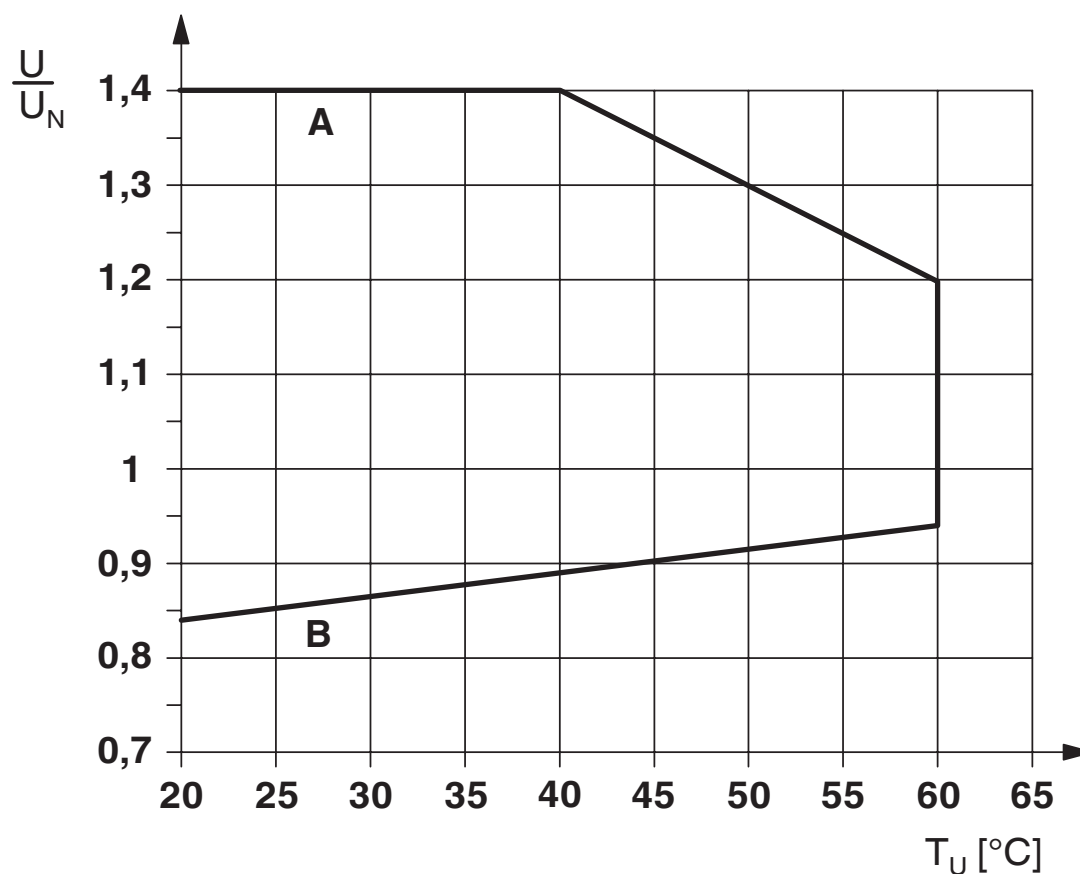
|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

## Mounting

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

## Drawings

Diagram

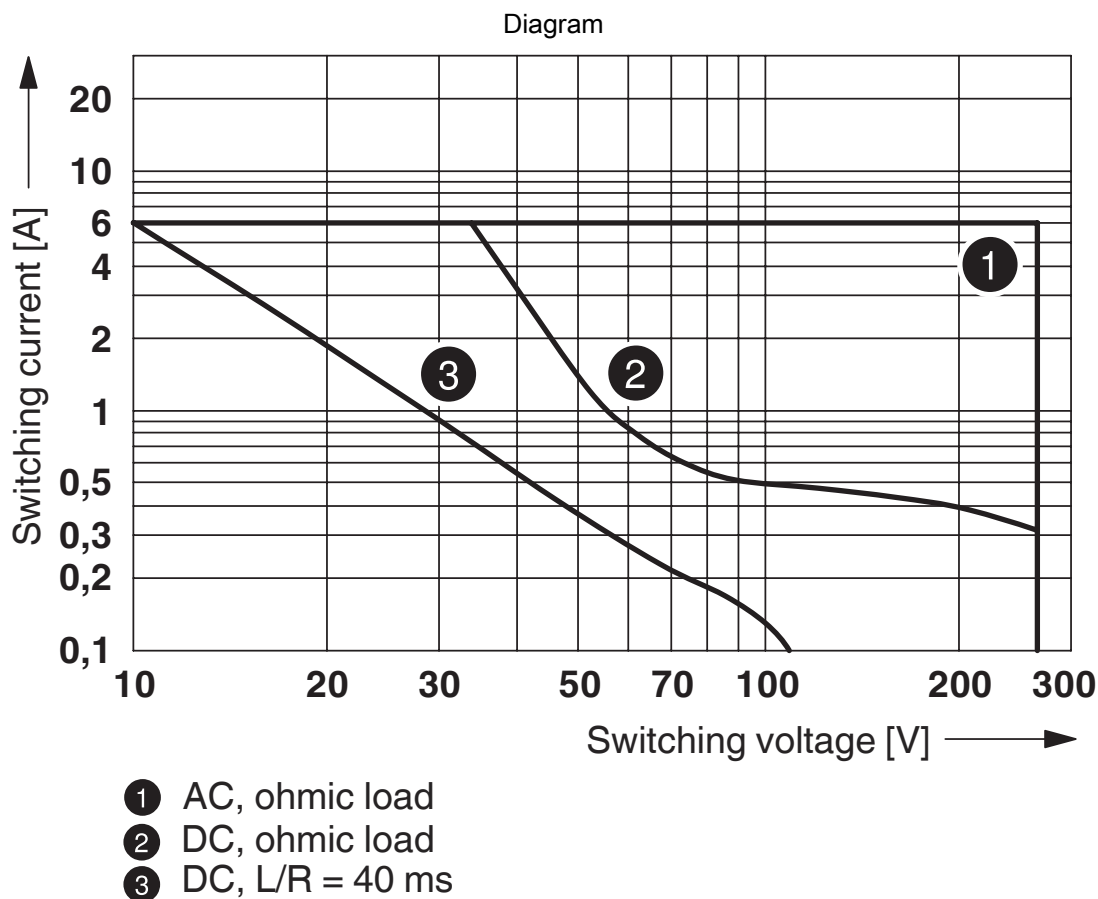


### Curve A

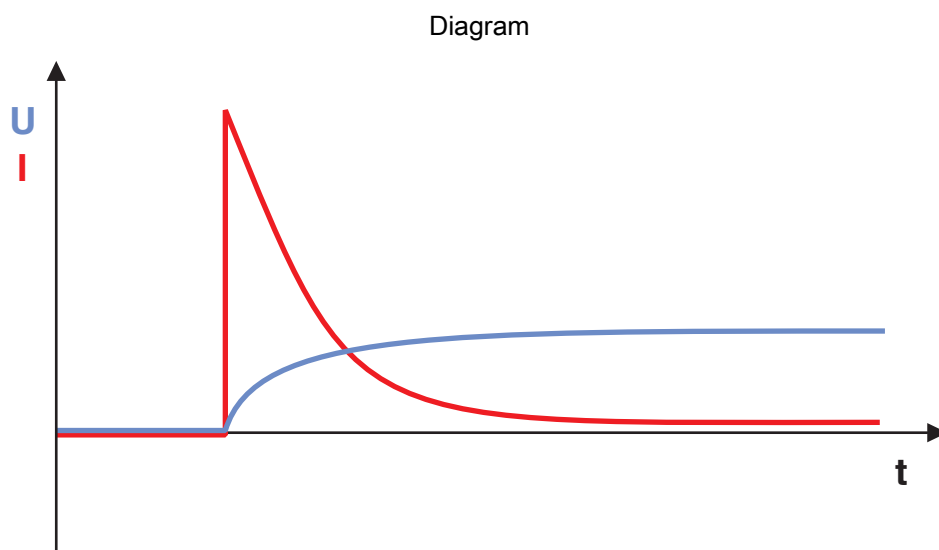
Maximum permissible continuous voltage  $U_{\max}$  with limiting continuous current on the contact side (see relevant technical data)

### Curve B

Minimum permissible operate voltage  $U_{\text{op}}$  after pre-excitation (see relevant technical data)



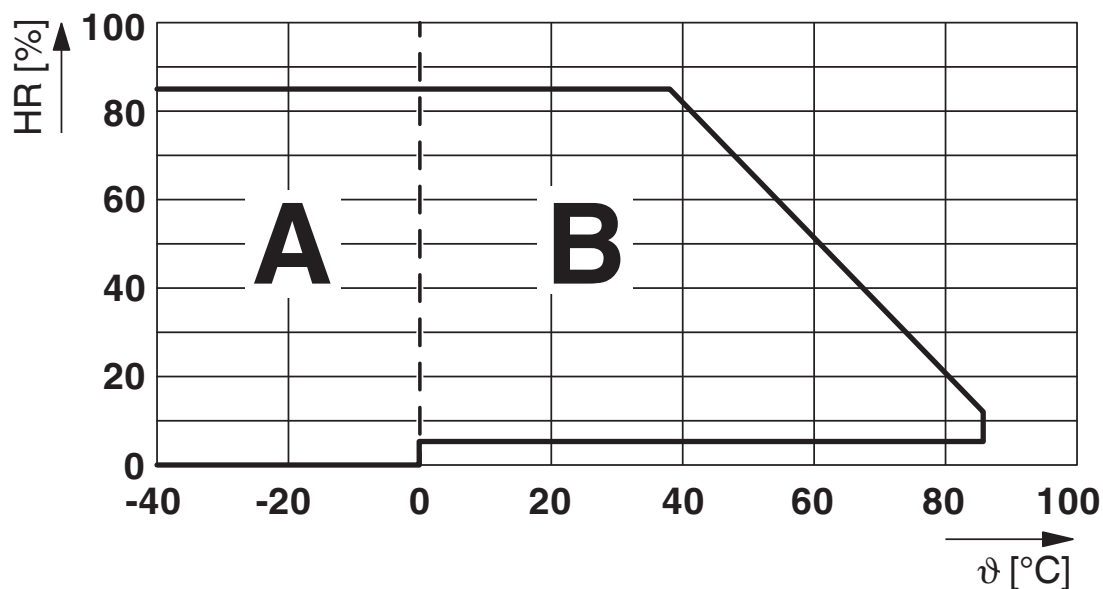
Interrupting rating



Basic behavior of capacitive loads:

- Very high inrush current
- Voltage increases with an e-function

Diagram



Permissible humidity for operation and storage.

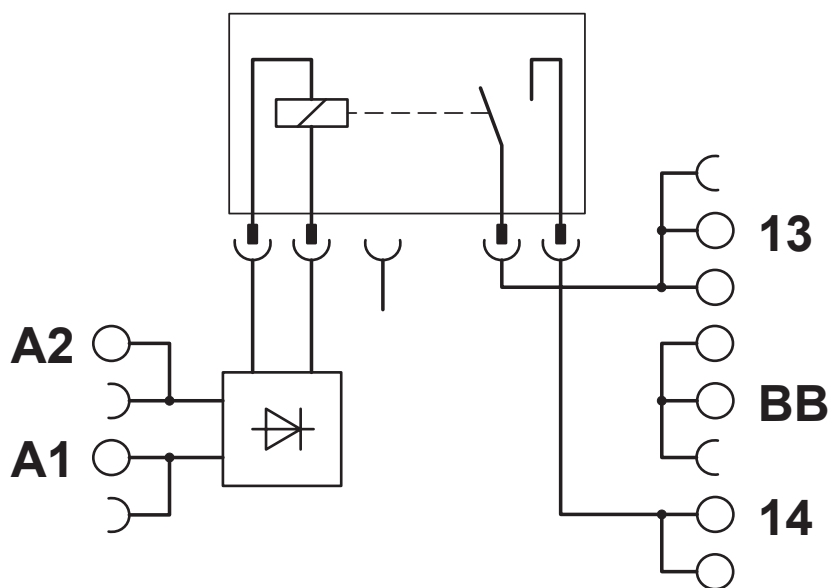
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures  $\leq 0^\circ\text{C}$  must be prevented

Area B: Condensation at ambient temperatures  $> 0^\circ\text{C}$  must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature  $\leq 25^\circ\text{C}$ .

Circuit diagram





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## Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/nl/products/1078680>



**DNV GL**

Approval ID: TAE0000196



**cULus Listed**

Approval ID: E140324

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001437 |
|-----------|----------|

### 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.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
|                                     | Lead(CAS: 7439-92-1)                        |
| SCIP                                | 528a99a5-5e3b-423c-9a23-7789f254a9c7        |

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