

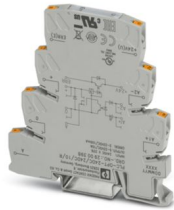
# PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module



2900398

<https://www.phoenixcontact.com/us/products/2900398>

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 documentation. Our general terms of use for downloads are valid.



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

## Your advantages

- Resistant to vibrations and shocks
- Wear-free switching with no contact bounce
- Protective circuit in input and output
- Status indicator
- DC voltage outputs up to 24 V DC/10 A
- Option of bridging adjacent modules

## Commercial data

Item number	2900398
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C461
Product key	CK6233
Catalog page	Page 409 (C-5-2019)
GTIN	4046356506960
Weight per piece (including packing)	32.48 g
Weight per piece (excluding packing)	32.4 g
Customs tariff number	85364190
Country of origin	DE

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



2900398

<https://www.phoenixcontact.com/us/products/2900398>

## Technical data

### Notes

General	The PLC-ATP partition plate must be installed for voltages greater than 250 V (L1, L2, L3) between identical terminal blocks on adjacent modules.
General	The PLC-ATP separating plate should be installed for safe isolation between adjacent modules
General	Do not connect adjacent channels to SELV/ PELV and voltages dangerous to the touch.
General	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.
General	At least one functional insulation against adjacent modules is complied with in the support rail direction. If the application has higher requirements on the insulation (basic or reinforced insulation), then these must be realized through suitable measures (e. g., partition plates).
General	Do not use to separate SELV / PELV circuits from other circuits, because safe isolation is not guaranteed.

### Product properties

Product type	Solid-state relay module
Product family	PLC-INTERFACE
Application	With integrated solid-state relay
Operating mode	100% operating factor

### Insulation characteristics

Insulation	Basic insulation
------------	------------------

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

Insulation	Basic insulation
Overvoltage category	II
Pollution degree	2

### Electrical properties

Maximum power dissipation for nominal condition	0.07 W
---	--------

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

Rated insulation voltage	50 V DC
Rated surge voltage	0.5 kV

### Input data

Rated actuating voltage $U_C$	24 V DC
Rated actuating current $I_C$	3.5 mA
Switching threshold "0" signal in reference to $U_N$	< 0.4
Switching threshold "1" signal in reference to $U_N$	> 0.8
Typical response time	100 $\mu$ s

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



2900398

<https://www.phoenixcontact.com/us/products/2900398>

Typical turn-off time	500 $\mu$ s
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Polarity protection diode Surge protection
Surge voltage protection	> 33 V
Transmission frequency	100 Hz

## Output data

Designation	DC voltage output
Contact switching type	1 N/O contact
Design of digital output	electronic
Contact connection type	Power contact
Output voltage range	8 V DC ... 33 V DC
Limiting continuous current	10 A (see derating curve)
Quiescent current	5.2 mA
Voltage drop at max. limiting continuous current	< 50 mV
Output circuit	3-conductor, ground-referenced
Protective circuit	Inverse diode Surge protection
Designation	Alarm output
Output voltage range	3 V DC ... 33 V DC
Limiting continuous current	100 mA
Surge voltage protection	> 33 V
Voltage drop at max. limiting continuous current	< 1.2 V
Output circuit	2-conductor, floating
Error indication	Red LED
Protective circuit	Reverse polarity protection; Polarity protection diode Surge protection; Suppressor diode

## 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> 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule) 2x 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule)
Conductor cross section AWG	26 ... 14

## Dimensions

Width	6.2 mm
Height	80 mm
Depth	95 mm

## Material specifications

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



2900398

<https://www.phoenixcontact.com/us/products/2900398>

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

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Degree of protection (Installation location)	IP54 (Installation location)
Ambient temperature (operation)	-25 °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

### DNV GL 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

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

## 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 instructions	in rows with zero spacing
Mounting position	any

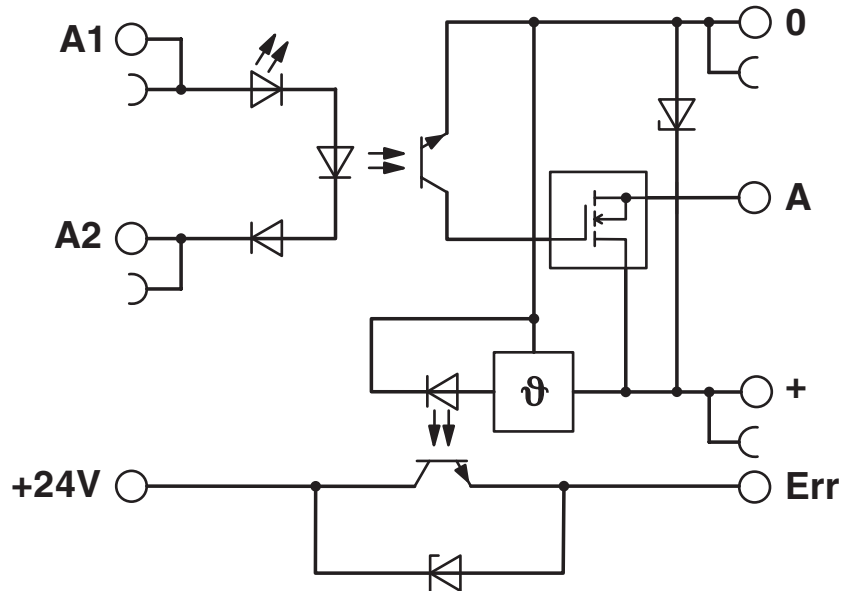
# PLC-OPT- 24DC/ 24DC/10/R - Solid-state relay module

2900398

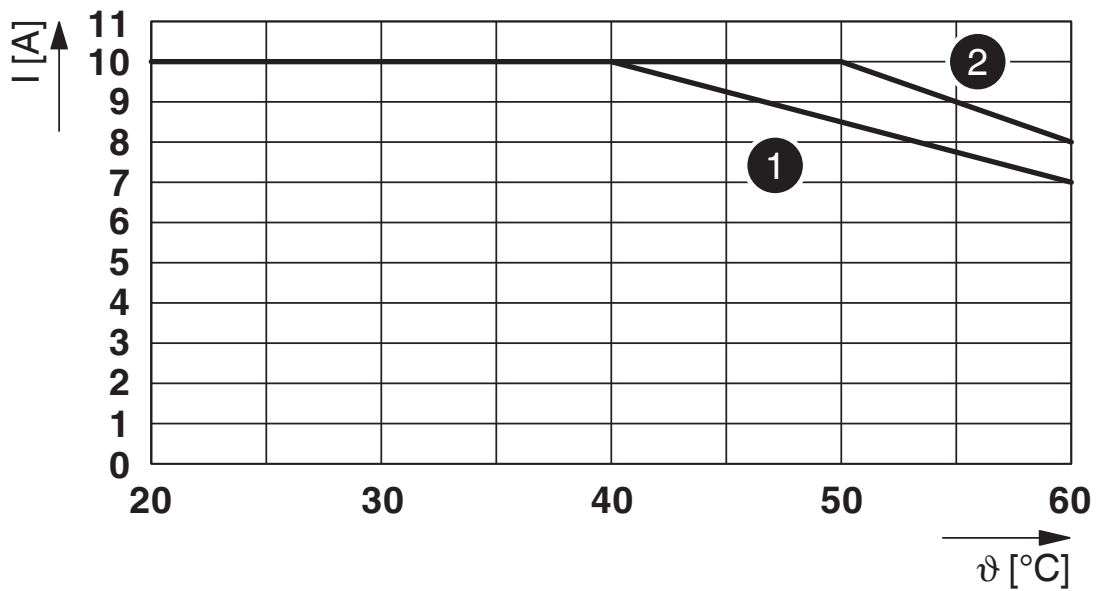
<https://www.phoenixcontact.com/us/products/2900398>

## Drawings

Circuit diagram



Diagram



Limiting continuous current

- 1) Aligned without spacing
- 2) Aligned with >6 mm spacing

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



2900398

<https://www.phoenixcontact.com/us/products/2900398>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2900398>



**cUL Recognized**  
Approval ID: FILE E 238705



**UL Recognized**  
Approval ID: FILE E 238705



**EAC**  
Approval ID: TR\_TS\_D\_00573\_c



**UL Listed**  
Approval ID: FILE E 172140



**cUL Listed**  
Approval ID: FILE E 172140



**DNV GL**  
Approval ID: TAE0000196



**cULus Listed**  
Approval ID: E140324

**cULus Recognized**

**cULus Listed**

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



2900398

<https://www.phoenixcontact.com/us/products/2900398>

## Classifications

### ECLASS

ECLASS-11.0	27371604
ECLASS-12.0	27371604
ECLASS-13.0	27371604

### ETIM

ETIM 9.0	EC001504
----------	----------

### UNSPSC

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

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



2900398

<https://www.phoenixcontact.com/us/products/2900398>

## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

Phoenix Contact 2024 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)