

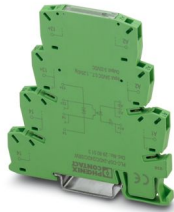
# PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



2980513

<https://www.phoenixcontact.com/us/products/2980513>

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PLC-INTERFACE for railway applications, consisting of basic terminal block with spring-cage connection and integrated miniature solid-state relay, range:  $0.7 \times U_N$  to  $1.25 \times U_N$ , temperature range:  $-25^\circ\text{C}$  to  $+70^\circ\text{C}$ , 1 N/O contact, input: 24 V DC, output: 3 - 33 V DC/3 A

## Your advantages

- Shock resistance in accordance with DIN 50155 (requirements in accordance with EN 61373)
- Temperature range:  $-25^\circ\text{C}$  ...  $+70^\circ\text{C}$
- Input voltage range of  $0.7 - 1.25 \times U_N$

## Commercial data

Item number	2980513
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C461
Product key	DK6223
GTIN	4046356103947
Weight per piece (including packing)	29.83 g
Weight per piece (excluding packing)	27.99 g
Customs tariff number	85364190
Country of origin	DE

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## Technical data

### Product properties

Product type	Solid-state relay module
Product family	PLC-INTERFACE
Application	Railway applications
Operating mode	100% operating factor

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

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

Data management status

Date of last data management	01.04.2026
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### Electrical properties

Maximum power dissipation for nominal condition	0.2 W
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Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V
Rated surge voltage	4 kV

### Input data

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	0.7 ... 1.25 ( $t < 1 \text{ s} = 0.6 \dots 1.4 \times U_N$ )
Input voltage range	16.8 V DC ... 30 V DC
Switching threshold "0" signal in reference to $U_N$	$\leq 0.3$
Switching threshold "1" signal in reference to $U_N$	$\geq 0.6$
Typical input current at $U_N$	8.5 mA
Typical response time	40 $\mu\text{s}$
Typical turn-off time	200 $\mu\text{s}$
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Polarity protection diode
Transmission frequency	300 Hz

### Output data

Contact switching type	1 N/O contact
Design of digital output	electronic
Output nominal voltage	24 V DC
Output voltage range	3 V DC ... 33 V DC ( $t < 1 \text{ s} = 1.40 \times U_N$ )
Limiting continuous current	3 A (see derating curve)
Surge voltage protection	> 33 V DC
Voltage drop at max. limiting continuous current	< 200 mV
Output circuit	2-conductor, floating

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Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection; Suppressor diode

## Connection data

### Input side

Connection method	Spring-cage connection
Stripping length	8 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>
Conductor cross-section AWG	26 ... 14

### Output side

Connection method	Spring-cage connection
Stripping length	8 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>
Conductor cross-section AWG	26 ... 14

## Dimensions

Width	6.2 mm
Height	80 mm
Depth	86 mm

## Material specifications

Color	green (RAL 6021)
Flammability rating according to UL 94 (Housing)	V0 (Housing)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Standards and regulations

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

Standards/regulations	IEC 60664
	EN 50178

## Mounting

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

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## Drawings

Diagram



- ① In rows with zero spacing
- ② in rows with > 20 mm spacing

The figure shows the load current as function of the ambient temperature range PLC-OSP-.../24DC/3RW. Duty cycle: 100% operating factor

Circuit diagram



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