

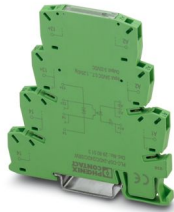
PLC-OSP- 24DC/ 24DC/ 3RW - Solid-state relay module



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°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°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	15.09.2025
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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	≤ 0.3
Switching threshold "1" signal in reference to U_N	≥ 0.6
Typical input current at U_N	8.5 mA
Typical response time	40 μs
Typical turn-off time	200 μs
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 ² ... 2.5 mm ²
Conductor cross-section flexible	0.14 mm ² ... 2.5 mm ²
Conductor cross-section AWG	26 ... 14

Output side

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross-section rigid	0.14 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.14 mm ² ... 2.5 mm ²
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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