

PLC-OSP- 96DC/110DC/ 3RW - Solid-state relay module



2982553

<https://www.phoenixcontact.com/us/products/2982553>

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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: 96 V DC, output: 12 - 140 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	2982553
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C461
Product key	DK6223
GTIN	4046356082617
Weight per piece (including packing)	34.7 g
Weight per piece (excluding packing)	32.86 g
Customs tariff number	85364900
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	0.53 W
Test voltage (Input/output)	2.5 kV _{rms} (Input/output)

Air clearances and creepage distances between the power circuits

Rated insulation voltage	160 V DC
Rated surge voltage	4 kV

Input data

Nominal input voltage U_N	96 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	67.2 V DC ... 120 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	5.5 mA
Typical response time	40 μs
Typical turn-off time	200 μs
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Series polarity protection diode Surge protection
Surge voltage protection	> 150 V
Transmission frequency	300 Hz

Output data

Contact switching type	1 N/O contact
Design of digital output	electronic
Output nominal voltage	110 V DC
Output voltage range	12 V DC ... 140 V DC ($t < 1 \text{ s} = 1.40 \times U_N$)
Limiting continuous current	3 A (see derating curve)

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Surge voltage protection	> 150 V
Voltage drop at max. limiting continuous current	< 150 mV
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection; Parallel polarity protection diode Surge protection

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)
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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
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Mounting

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

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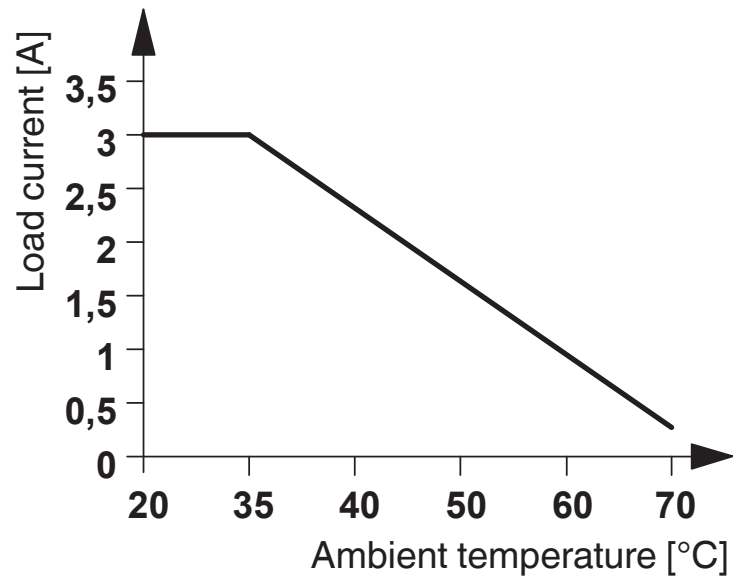


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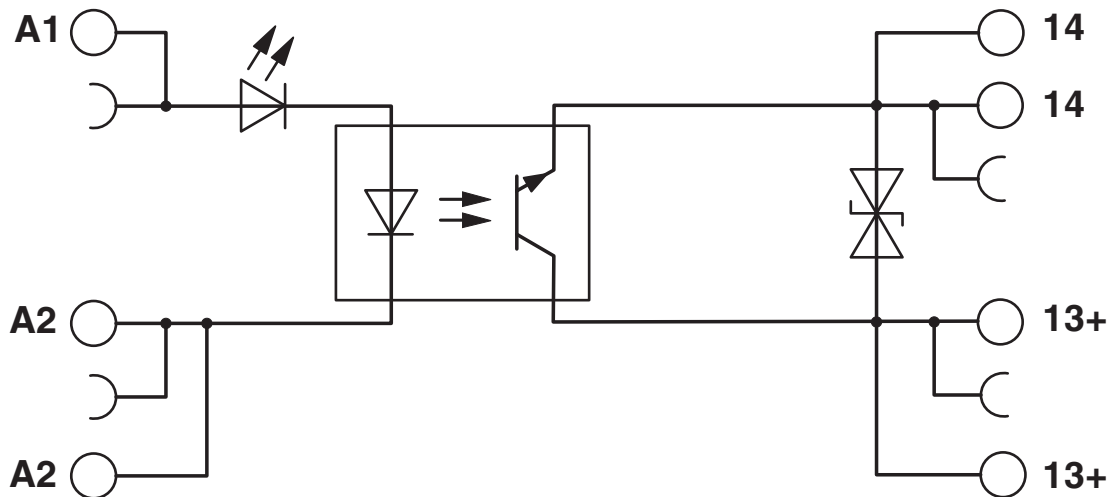
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Drawings

Diagram



Circuit diagram



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Environmental product compliance

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.
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EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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