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# Solid-state relay module - PLC-OPT- 24DC/110DC/3RW - 2900391

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PLC-INTERFACE for railway applications, consisting of basic terminal block with push-in 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: 12 - 140 V DC/3 A

## Why buy this product

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



## Key Commercial Data

Packing unit	10 STK
GTIN	4 046356 508964

## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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### Dimensions

Width	6.2 mm
Height	80 mm
Depth	86 mm

### Ambient conditions

Ambient temperature (operation)	$-25^\circ\text{C} \dots 70^\circ\text{C}$
Ambient temperature (storage/transport)	$-40^\circ\text{C} \dots 85^\circ\text{C}$
Degree of protection	IP20

### Input data

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	$0.7 \dots 1.25$ ( $t < 1 \text{ s} = 0.6 \dots 1.4 \times U_N$ )

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## Technical data

### Input data

Input voltage range	16.8 V DC ... 30 V DC
Switching threshold "0" signal in reference to $U_N$	< 0.4
Switching threshold "1" signal in reference to $U_N$	> 0.6
Typical input current at $U_N$	12 mA
Typical response time	400 $\mu$ s
Typical turn-off time	200 $\mu$ s
Operating voltage display	Yellow LED
Type of protection	Protection against polarity reversal
	Surge protection
Protective circuit/component	Series polarity protection diode
Surge voltage protection	> 150 V
Transmission frequency	50 Hz

### Output data

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)
Surge voltage protection	> 150 V
Voltage drop at max. limiting continuous current	< 150 mV
Output circuit	2-wire, floating
Type of protection	Protection against polarity reversal
	Surge protection
Protective circuit/component	Parallel polarity protection diode

### Connection data, input side

Connection name	Input side
Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	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

### Connection data, output side

Connection name	Output side
Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	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

### General

Test voltage input/output	2.5 kV <sub>rms</sub>
Mounting position	any

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## Technical data

### General

Assembly instructions	In rows with zero spacing
Operating mode	100% operating factor
Flammability rating according to UL 94	V0
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	IEC 60664
	EN 50178
	IEC 62103
Rated surge voltage/insulation	4 kV / basic insulation
Rated insulation voltage	160 V DC
Degree of pollution	2
Overvoltage category	III

### Standards and Regulations

Connection in acc. with standard	CUL
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	IEC 60664
	EN 50178
	IEC 62103
Rated insulation voltage	160 V DC
Rated surge voltage/insulation	4 kV / basic insulation
Degree of pollution	2
Overvoltage category	III
Flammability rating according to UL 94	V0

## Classifications

### eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371001
eCl@ss 5.1	27371001
eCl@ss 6.0	27371001
eCl@ss 7.0	27371001
eCl@ss 8.0	27371604

### ETIM

ETIM 2.0	EC001504
ETIM 3.0	EC001504
ETIM 4.0	EC000196
ETIM 5.0	EC001504

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## Classifications

### UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121542
UNSPSC 11	39121542
UNSPSC 12.01	39121542
UNSPSC 13.2	39121542

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / UL Recognized / cUL Recognized / EAC / cULus Recognized / cULus Listed

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#### Ex Approvals

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#### Approvals submitted

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### Approval details

UL Listed 

cUL Listed 

UL Recognized 

cUL Recognized 

EAC

# Solid-state relay module - PLC-OPT- 24DC/110DC/3RW - 2900391

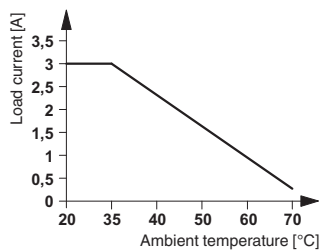
## Approvals

cULus Recognized

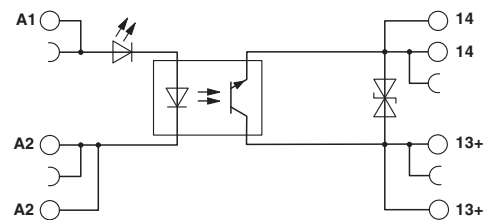
cULus Listed

## Drawings

Diagram



Circuit diagram



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Product	Code	Reference	Product link
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