

# ELR 3/ 9-500 - Load relay

2941714

<https://www.phoenixcontact.com/us/products/2941714>



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Electronic load relay, for direct driving of equipment in the 3-phase network, with light indicator and protection circuit, output: 110-550 V AC/3 x 9 A

## Your advantages

- Noise and wear-free switching up to 500 V AC/9 A
- High switching frequency
- Protective circuit in input and output
- Status display

## Commercial data

Item number	2941714
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C472
Product key	DK7212
GTIN	4017918104559
Weight per piece (including packing)	737.77 g
Weight per piece (excluding packing)	731 g
Customs tariff number	85364900
Country of origin	DE

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## Technical data

### Product properties

Product type	Solid-state contactor
Operating mode	100% operating factor

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

Insulation	Basic insulation
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### Electrical properties

Number of phases	3
Switching frequency	max. 10 Hz (at $\cos \varphi = 0.5$ )
Maximum power dissipation for nominal condition	43 W
Mains type	3-phase
Test voltage (Input/output)	2.5 kV (50 Hz, 60 s)
Switching frequency	max. 10 Hz (at $\cos \varphi = 0.5$ )

### Input data

#### Control

Input name	Control input right/left
Rated actuating voltage $U_C$	24 V DC
Triggering voltage range	19.2 V DC ... 28.8 V DC
Voltage range with reference to $U_C$	0.8 ... 1.2
	0.8 ... 1.2
Rated actuating current $I_C$	16 mA
Reaction time in normal load operation	20 ms
	20 ms
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection
Status display	LED (yellow)
Transmission frequency	1 Hz (at $\cos \varphi = 0.5$ )

### Output data

#### AC output

Rated operating voltage $U_o$	500 V AC
Operating voltage range	110 V AC ... 550 V AC
Peak offstate voltage	1200 V
Mains frequency	50 Hz
	60 Hz
Load current range	150 mA ... 9 A (see to derating)
Leakage current	typ. 7 mA
Residual voltage	typ. 1.5 V
Surge current	230 A (tp = 10 ms, at 25 °C)

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Protective circuit	RC element; RC element
	Surge protection
Surge voltage protection	> 750 V

## Connection data

### Control circuits

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 10

### Load circuit

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 10

## Dimensions

Width	62 mm
Height	84 mm
Depth	110 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)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-20 °C ... 70 °C

## Standards and regulations

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

Standards/regulations	EN 50178
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### EMC regulations

Standards/regulations	EN 61000-6-2
	EN 61000-6-4

## Mounting

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Mounting type	DIN rail mounting
Assembly note	can be aligned with spacing > 20 mm
Mounting position	Vertical (horizontal DIN rail)

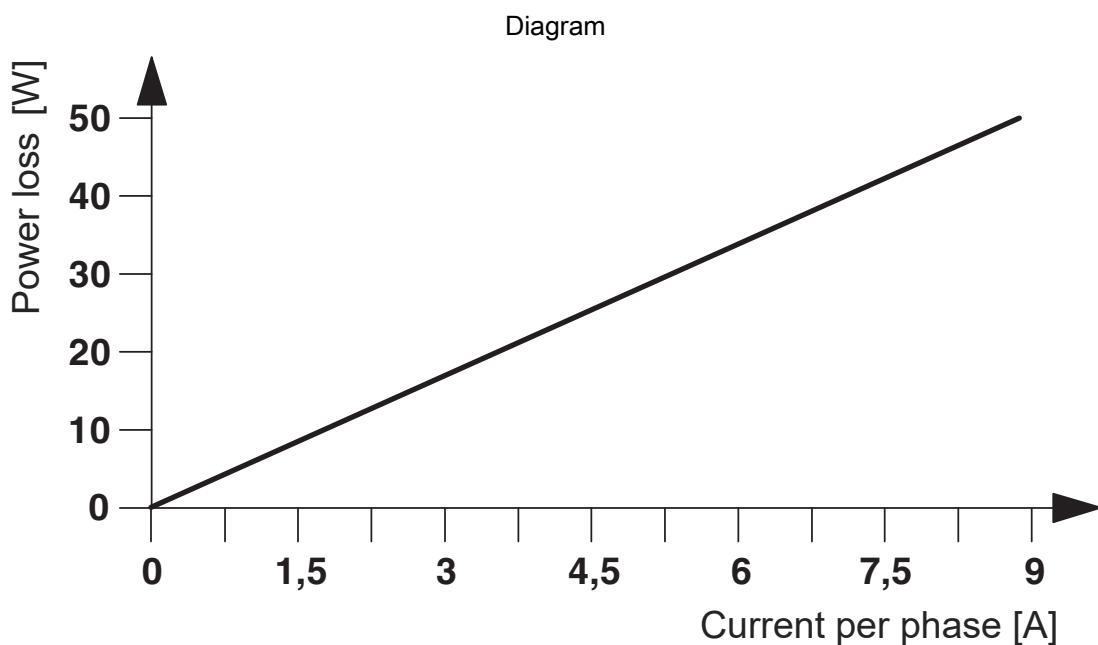
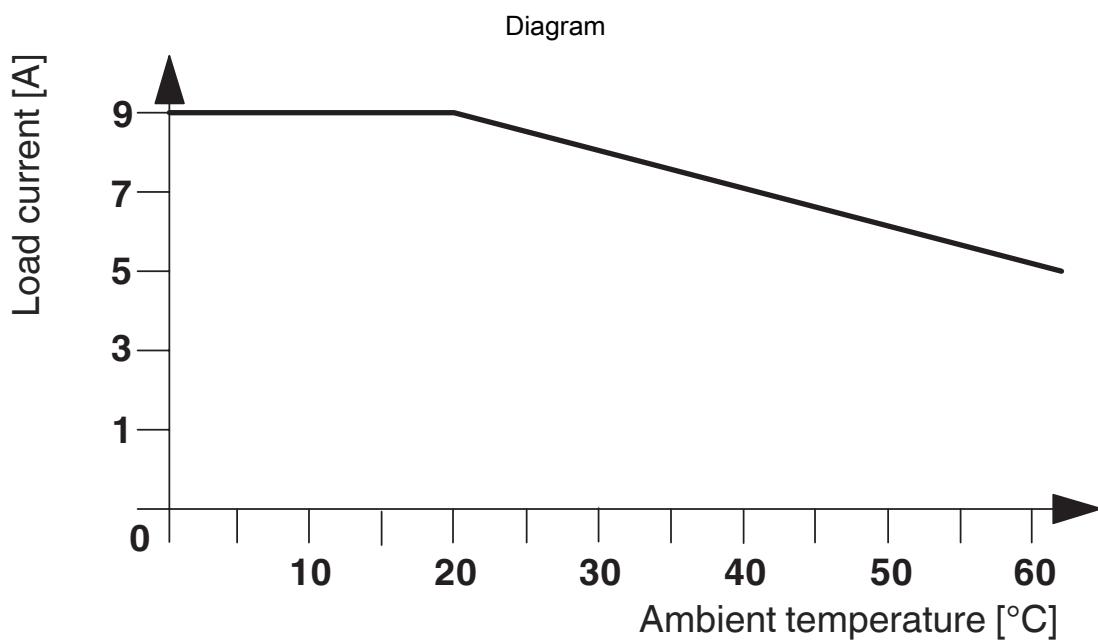
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## Drawings



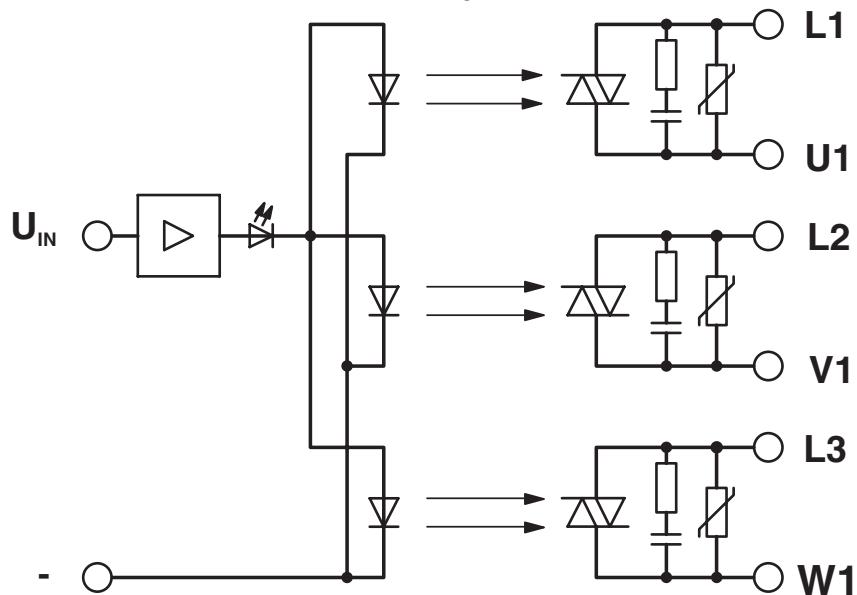
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Block diagram



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## Classifications

### UNSPSC

UNSPSC 21.0

39122333

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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### 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.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Hexahydromethylphthalic anhydride(CAS: n/a)
	Lead(CAS: 7439-92-1)
SCIP	59dc1f4a-919f-48e0-b287-4c46764def6e

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