

# ELR W3/ 9-400 - Reversing load relay



2964173

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Electronic reversing load relay, for direct driving of equipment in the 3-phase network, with light indicator and protection circuit, output: 110-440 V AC/3 x 9 A

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## Your advantages

- High switching frequency
- Noise and wear-free switching up to 500 V AC/9 A
- Protective circuit in input and output
- LEDs for forward and reverse running, operating voltage, and impermissible control

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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
Maximum power dissipation for nominal condition	13.5 W
Mains type	3-phase
Test voltage (Input/output)	2.5 kV (50 Hz, 60 s)
Reversing frequency	≤ 10 Hz (at $\cos \varphi = 0.5$ )

### Input data

#### Control

Input name	Control input right/left
Quiescent current	40 mA
Rated actuating voltage $U_C$	24 V DC
Triggering voltage range	19.2 V DC ... 30 V DC
Voltage range with reference to $U_C$	0.8 ... 1.25
	0.8 ... 1.25
Rated actuating current $I_C$	7.5 mA
Reaction time in normal load operation	50 ms
	50 ms
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection
Operating voltage display	Green LED
Error indication	Red LED
Status display	LED (yellow)
Switch-over frequency	< 10 Hz (at $\cos \varphi > 0.5$ )
Switchover time $R_L/L_L$ (turn-on time)	20 ms

### Output data

#### AC output

Rated operating voltage $U_e$	400 V AC
Operating voltage range	110 V AC ... 440 V AC
Peak offstate voltage	1000 V
Mains frequency	50 Hz
	60 Hz
Load current	9 A (see derating curve)

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Load current range	150 mA
Leakage current	typ. 7 mA
Residual voltage	typ. 1.5 V
Surge current	230 A (tp = 10 ms, at 25 °C)
Max. load value	265 A <sup>2</sup> s
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

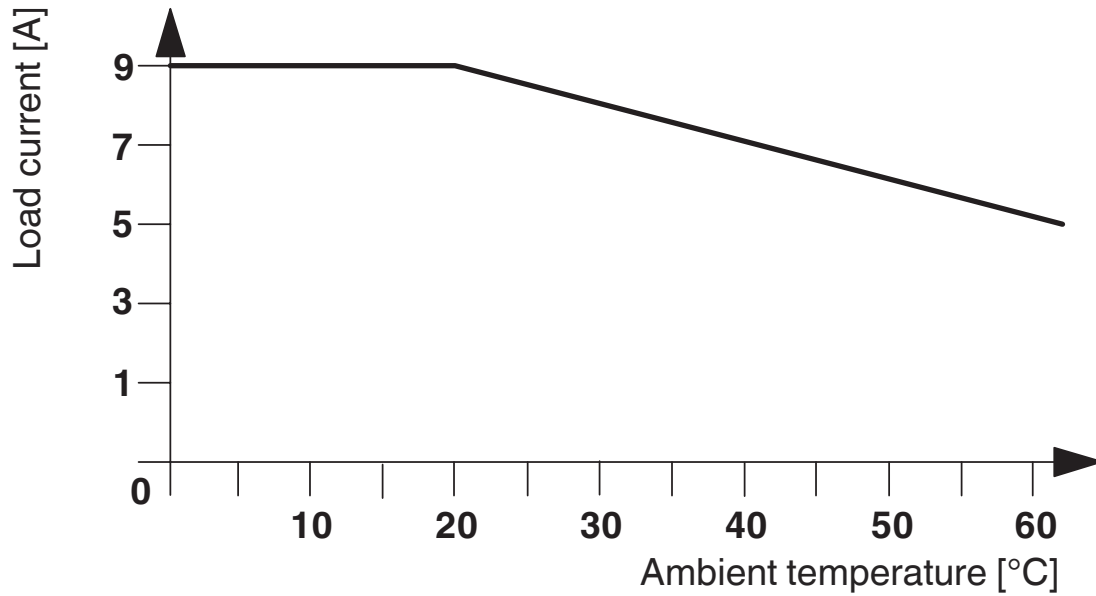
Standards/regulations	EN 61000-6-2
	EN 61000-6-4

## Mounting

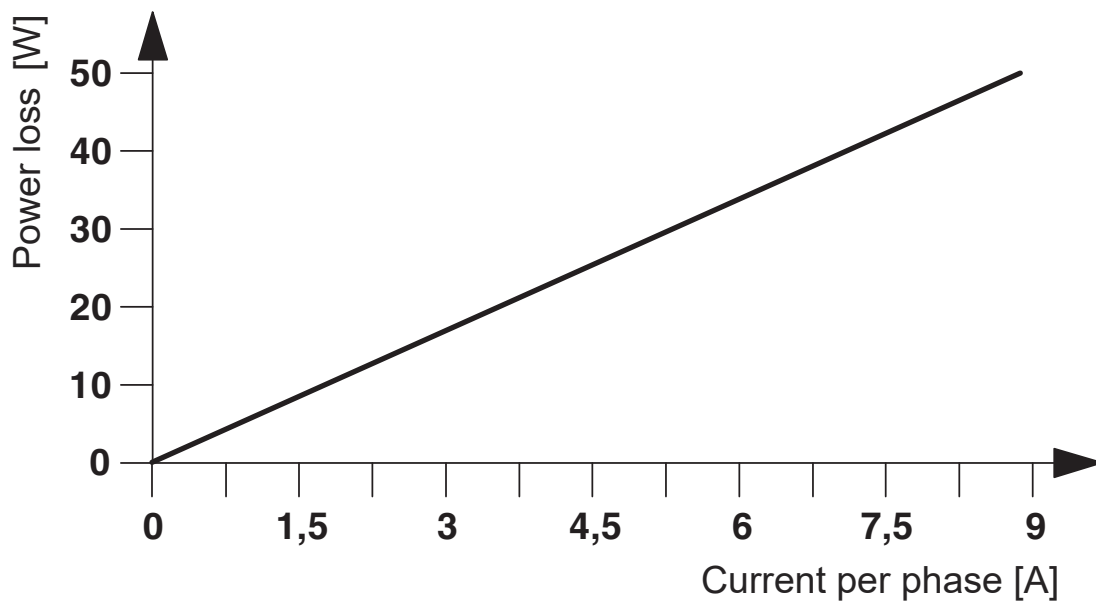
Mounting type	DIN rail mounting
Assembly note	can be aligned with spacing > 20 mm
Mounting position	Vertical (horizontal DIN rail)

## Drawings

Diagram



Diagram

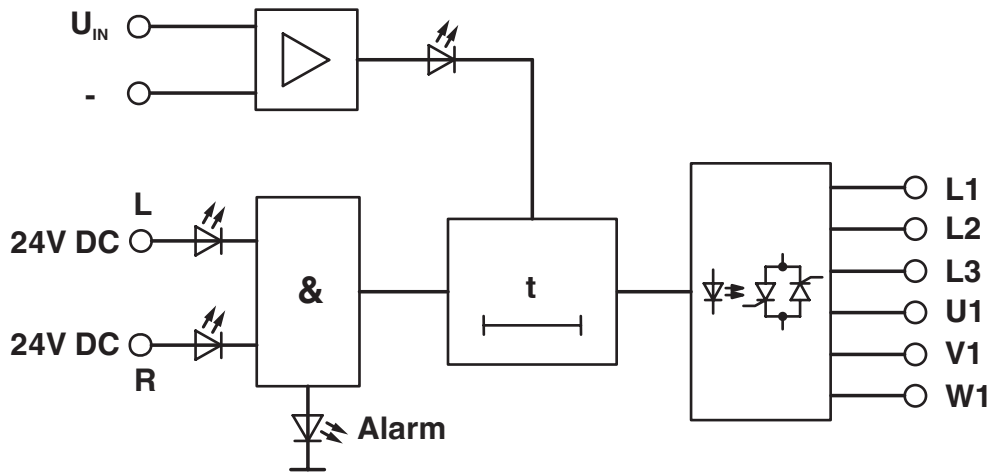


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Block diagram



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## Classifications

### ETIM

ETIM 8.0	EC002055
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### UNSPSC

UNSPSC 21.0	39122300
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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.)	Lead(CAS: 7439-92-1)
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