

# ELR W3/ 9-500 MM - Reversing load relay



2963543

<https://www.phoenixcontact.com/us/products/2963543>

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Electronic reversing load relay with motor management, for direct driving of equipment in the 3-phase network, output: 110-550 V AC/3 x 8 A

## Your advantages

- Optional connection to ELR-PB-GATEWAY
- Continuous status monitoring
- Special ELR-MM EX devices suitable for use in the chemical and petrochemical industries. A corresponding Ex-type examination certificate has been issued.
- Real power consumed calculated every 6.6 ms
- Freely parameterizable signaling and switching thresholds for underload/overload detection
- Display of apparent, real, and reactive power, currents, voltages, phase angle, cycle counter, and operating hours counter
- Switching of actuating/variable-speed drives, pumps, and tools with function, dirt or wear monitoring

## Commercial data

Item number	2963543
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DK7222
GTIN	4017918899691
Weight per piece (including packing)	868.5 g
Weight per piece (excluding packing)	742.72 g
Customs tariff number	85364900
Country of origin	DE

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## Technical data

### Product properties

Product type	Electronic motor manager
Operating mode	100% operating factor

### Electrical properties

Number of phases	3
Mains type	3-phase
Test voltage input/output	2.5 kV
Reversing frequency	$\leq 2.5$ Hz (at $\cos \varphi = 0.5$ )

### Supply

Input name	Device supply
Nominal supply voltage	24 V DC
Supply voltage range with reference to $U_{VN}$	0.8 ... 1.2
Quiescent current	80 mA AC
Protective circuit	Reverse polarity protection; Series polarity protection diode Surge protection
Operating voltage display	Green LED
Error indication	Red LED
Status display	LED (yellow)

### Input data

#### Control

Input name	Control input right/left
Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	0.8 ... 1.2 0.8 ... 1.2
Typical input current at $U_N$	7 mA
Reaction time in normal load operation	< 35 ms
Typical response time	< 25 ms
Typical turn-off time	< 25 ms
Reaction time in normal load operation	< 35 ms
Switch-over frequency	< 2.5 Hz (at $\cos \varphi = 0.5$ )

#### Current measurement

Basic accuracy	$\pm 2$ % (Of end value, typ. $\pm 1$ %)
Current range	0.25 A ... 8 A
Measuring via	Current transformer for any conductor current

### Output data

#### AC output

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Nominal output voltage	500 V AC
Nominal output voltage range	110 V AC ... 550 V AC
Peak offstate voltage	1500 V
Mains frequency	50 Hz 60 Hz
Load current range	150 mA ... 8 A (see to derating)
Leakage current	typ. 7 mA
Residual voltage	typ. 1.4 V
Surge current	360 A (tp = 10 ms, at 25 °C)
Max. load value	645 A <sup>2</sup> s
Protective circuit	RC element; RC element Surge protection
Surge voltage protection	> 880 V

## Acknowledging contacts O1-O4

Number of outputs	4
Nominal output voltage	$U_{VN} - 1 V$
Continuous load current	max. 50 mA

## 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

## Interfaces

### Data

Interface	RS-232
Transmission speed	4800 bit

## Dimensions

Width	62 mm
Height	94 mm

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Depth	122 mm
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## 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	DIN EN 50178
	safe isolation

### Power station requirements

Standards/regulations	DWR 1300/ZXX01/DD/7080.8d
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### EMC regulations

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

## Mounting

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

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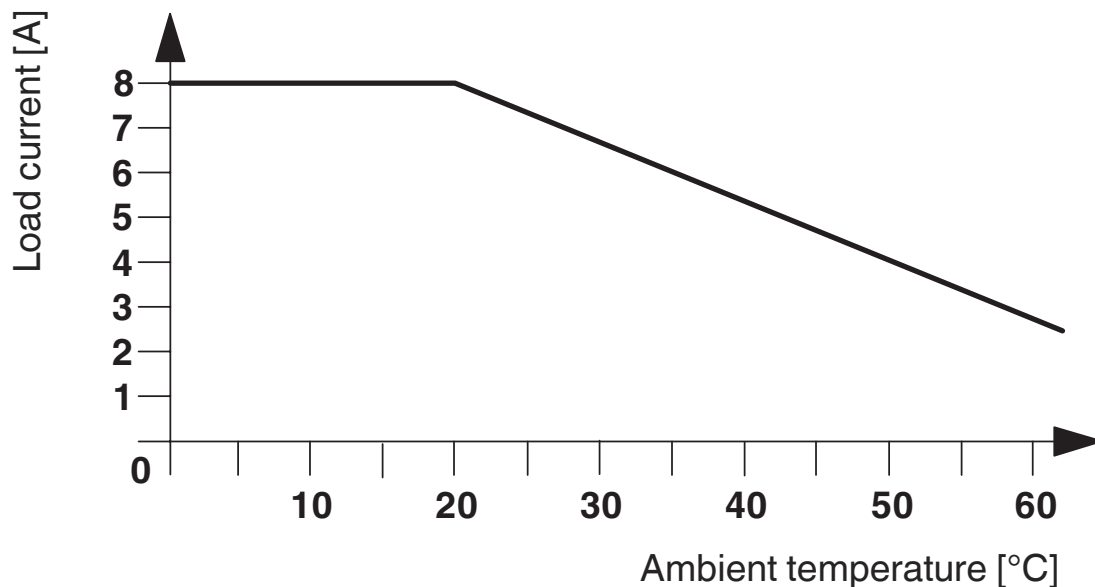


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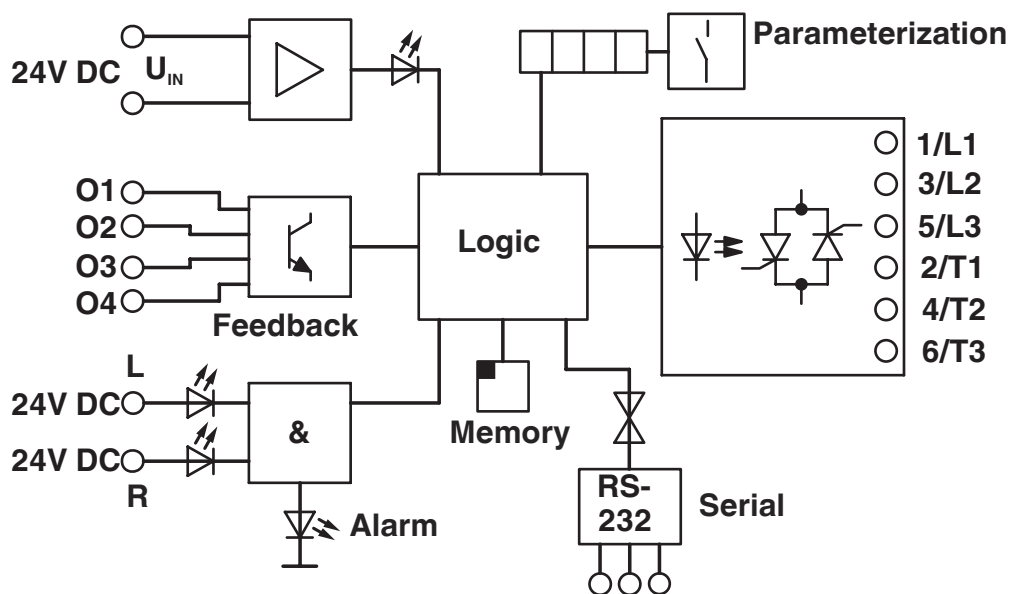
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## Drawings

Diagram



Block 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.

### EU REACH SVHC

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