

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

### Product Features

- 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



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	868.5 g
Custom tariff number	85364900
Country of origin	Germany

### Technical data

#### Dimensions

Width	62 mm
Height	94 mm
Depth	122 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
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## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-20 °C ... 70 °C
Degree of protection	IP20

### Input data

Input name	Device supply
Nominal supply voltage	24 V DC
Quiescent current	80 mA AC
Protective circuit	Reverse polarity protection Series polarity protection diode
	Surge protection
Operating voltage display	Green LED
Status display	Yellow LED
Indication	Red LED
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
Typical input current at $U_N$	7 mA
Reaction time in normal load operation	< 35 ms
Switch-over frequency	< 2.5 Hz (At $\cos \phi = 0.5$ )
Typical response time	< 25 ms
Typical turn-off time	< 25 ms

### Output data

Output name	AC output
Nominal output voltage	500 V AC
Nominal output voltage range	110 V AC ... 550 V AC
Periodic peak reverse voltage	1500 V
Mains frequency	50 Hz
	60 Hz
Leakage current	typ. 7 mA
Residual voltage	typ. 1.4 V
Surge current	360 A ( $t_p = 10$ ms, at 25 °C)
Max. load value	645 A <sup>2</sup> s
Type of protection	RC element
Protective circuit/component	RC element
Type of protection	Surge protection
Surge voltage protection	> 880 V
Output name	Acknowledging contacts O1-O4
Number of outputs	4

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## Technical data

### Output data

Nominal output voltage	$U_{VN} - 1 \text{ V}$
Continuous load current	max. 50 mA

### Measuring technology and signaling contact

Designation	Current measurement
Measuring via	Current transformer for any conductor current
Current range	0.25 A ... 8 A
Display	4-pos.
Basic accuracy	$\pm 2 \%$ (Of end value, typ. $\pm 1\%$ )
Resolution (current)	1 mA
Designation	Voltage measurement/phase-to-neutral voltage
Voltage range	0 V ... 350 V
Display	4-pos.
Basic accuracy	$\pm 2 \%$ (Of end value, typ. $< \pm 0.5 \%$ )
Resolution (voltage)	0.1 V
Designation	Power measurement
Power range	0.1 kW ... 8 kW
Display	4-pos.
Basic accuracy	$\pm 2 \%$ (of final value)
Resolution (power)	1 W
Measuring rate	1 measured value per period
Trigger criterion	Gliding average over 3 periods

### Data interface

Interface	RS-232
Transmission speed	4800

### Connection data, control circuit

Connection name	Control circuits
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	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

### General

Test voltage input/output	2.5 kV
Mounting position	Vertical (horizontal DIN rail)

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## Technical data

### General

Assembly instructions	Can be aligned with > 20 mm spacing
Operating mode	100% operating factor
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
	Safe isolation
Designation	Power station requirements
Standards/regulations	DWR 1300 / ZXX01/DD/7080.8d
Designation	EMC regulations
Standards/regulations	EN 61000-6-2
	EN 61000-6-4
Reversing frequency	≤ 2.5 Hz (At cos φ = 0.5)

### Standards and Regulations

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	EN 61000-6-4

## Classifications

### eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371601
eCl@ss 5.1	27371601
eCl@ss 6.0	27371601
eCl@ss 7.0	27371601

### ETIM

ETIM 2.0	EC000066
ETIM 3.0	EC000066
ETIM 4.0	EC000066
ETIM 5.0	EC001437

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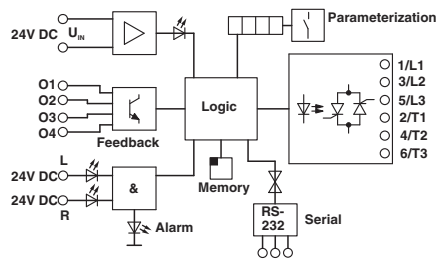
## Classifications

### UNSPSC

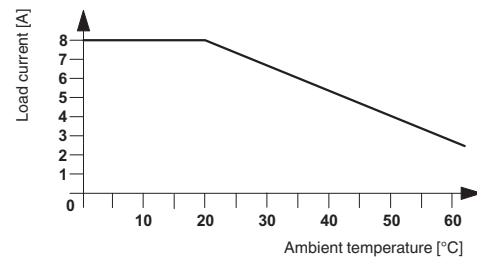
UNSPSC 6.01	30211915
UNSPSC 7.0901	39121514
UNSPSC 11	39121514
UNSPSC 12.01	39121514
UNSPSC 13.2	39121514

## Drawings

Block diagram



Diagram



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