

# ELR W1/ 2-24DC - Reversing load relay



2963598

<https://www.phoenixcontact.com/in/products/2963598>

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Electronic reversing load relay, for driving DC motors, with light indicator and protection circuit, output: 10-30 V DC/2 A

## Commercial Data

Item number	2963598
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CK7
Product Key	CK7621
Catalog Page	Page 46 (C-5-2019)
GTIN	4017918943592
Weight per Piece (including packing)	111.2 g
Weight per Piece (excluding packing)	107 g
Customs tariff number	85371098
Country of origin	DE

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## Technical Data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

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

#### Insulation characteristics

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

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

### Electrical properties

Number of phases	1
Test voltage (Input/output)	2.5 kV <sub>rms</sub> (50 Hz, 1 min., input/output)

#### Supply

Input name	Device supply
Rated control circuit supply voltage $U_S$	24 V DC
Control supply voltage range	10 V DC ... 30 V DC
Rated control supply current $I_S$	7 mA
Protective circuit	Surge protection

### Input data

#### Control

Input name	Control input right/left
Current consumption	3 mA
Rated actuating voltage $U_C$	24 V DC
Triggering voltage range	19.2 V DC ... 28.8 V DC
Rated actuating current $I_C$	3 mA
Typical response time	200 $\mu$ s
Protective circuit	Reverse polarity protection Surge protection
Surge voltage protection	> 33 V DC
Switchover time $R_L/L_L$ (turn-on time)	80 ms

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## Output data

### DC output

Rated operating voltage $U_e$	24 V DC
Operating voltage range	10 V DC ... 30 V DC
Rated operating current (Load output)	2 A
Load current	2 A (Mounted in rows with zero spacing)
Quiescent current	approx. 7 mA (When switched off)
Protective circuit	Reverse polarity protection
	Surge protection
Surge voltage protection	> 33 V DC
Current limitation at short-circuits	15 A

## Connection data

### Control circuits

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section rigid	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
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb <sub>F</sub> -in. ... 7 lb <sub>F</sub> -in.

### Load circuit

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section rigid	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
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb <sub>F</sub> -in. ... 7 lb <sub>F</sub> -in.

## Signaling

Status display	Yellow LED
Operating voltage display	Green LED

## Dimensions

Width	12.5 mm
Height	99 mm
Depth	114.5 mm

## Environmental and real-life conditions

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## Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-20 °C ... 80 °C

## Approvals

### UKCA

Certificate	UKCA-compliant
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### UL approval

Certificate	NLDX.E228652
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## Standards and regulations

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

Standards/regulations	EN 50178
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## Mounting

Mounting type	DIN rail mounting
Assembly instructions	alignable, for spacing see derating
Mounting position	vertical (horizontal DIN rail, motor output below)

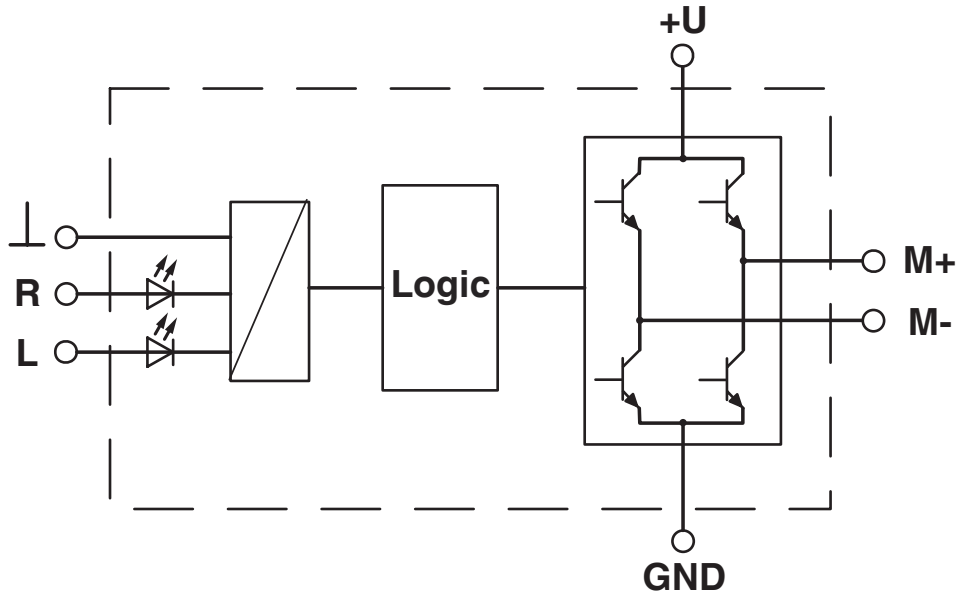
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## Drawings

Block diagram

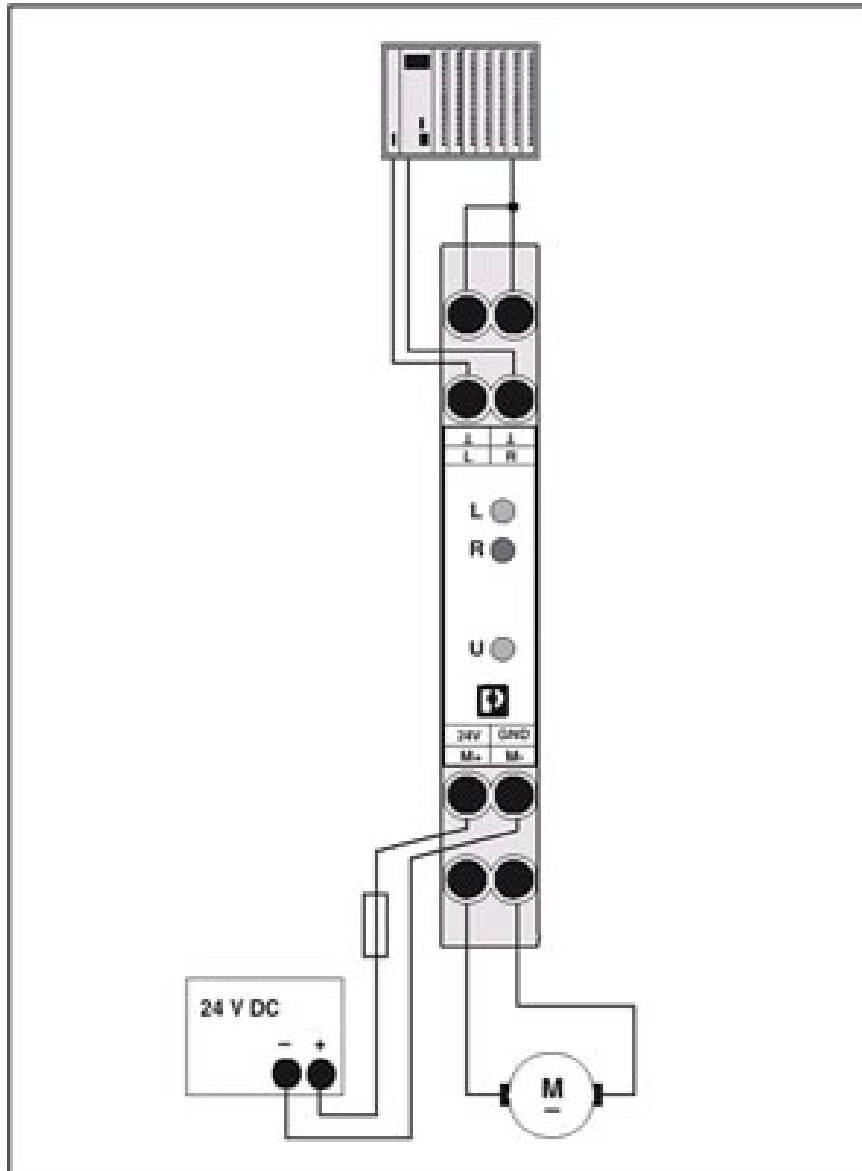


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Application drawing



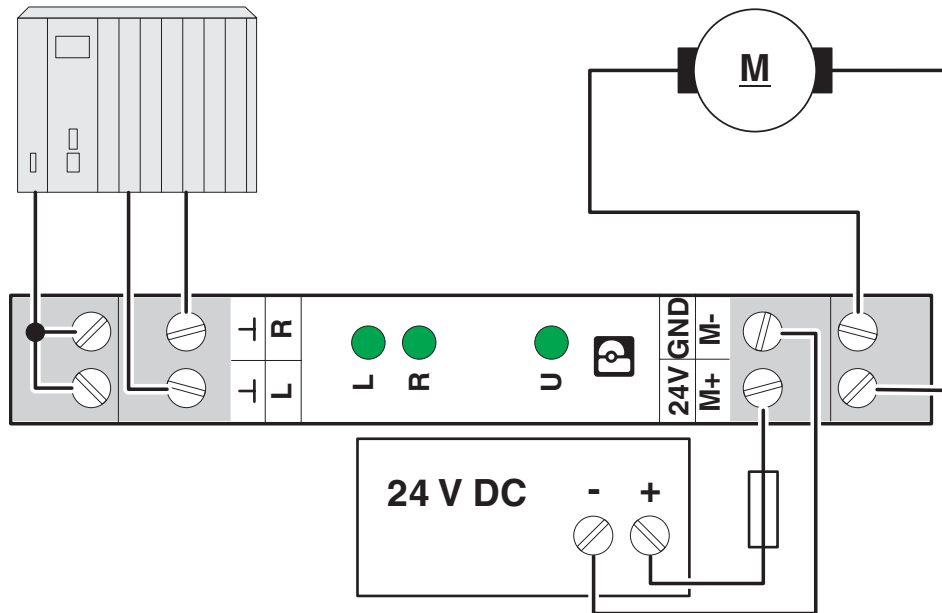
Example application

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Connection diagram



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## Approvals



**EAC**

Approval ID: TR\_TS\_D\_00573\_c



**UL Listed**

Approval ID: FILE E 228652



**cUL Listed**

Approval ID: FILE E 228652



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## Classifications

### ECLASS

ECLASS-11.0	27371018
ECLASS-13.0	27371018
ECLASS-12.0	27371018

### ETIM

ETIM 8.0	EC002055
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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