

ELR W3/ 9-400 S - Power electronics



2963569

<https://www.phoenixcontact.com/us/products/2963569>

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Electronic reversing load relay, with integrated soft starter, 3 x 8 A load current



Your advantages

- Parameterization is performed directly on the device via the display and keyboard
- Drive can be controlled locally via keyboard
- Start up time
- Friction time
- Torque start
- Stop time
- Torque stop
- Braking torque

Commercial data

Item number	2963569
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C472
Product key	CK7222
Catalog page	Page 44 (C-5-2019)
GTIN	4017918922498
Weight per piece (including packing)	789.5 g
Weight per piece (excluding packing)	663.72 g
Customs tariff number	85364900
Country of origin	DE

Technical data

Product properties

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

Electrical properties

Number of phases	3
Mains type	3-phase
Test voltage (Input/output)	2.5 kV (50 Hz, 60 s)

Input data

Control

Input name	Control input right/left
Nominal supply voltage	24 V DC
Supply voltage range with reference to U_{VN}	0.8 ... 1.2
Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	0.8 ... 1.2
	0.8 ... 1.2
Quiescent current	85 mA
Typical input current at U_N	5 mA
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	5 mA
Switch-on delay max.	< 35 ms
Switch-off delay max.	< 25 ms
Protective circuit	Reverse polarity protection; Series polarity protection diode
	Surge protection
Operating voltage display	Green LED
Error indication	Red LED
Status display	Yellow LED
Switch-over frequency	< 2.5 Hz (at $\cos \varphi = 0.5$)

Output data

AC output

Rated operating voltage U_e	400 V AC
Operating voltage range	110 V AC ... 433 V AC
Maximum switching voltage	440 V AC (L1/T1)
	440 V AC (L2/T2)
	440 V AC (L3/T3)

Peak offstate voltage	1000 V
Mains frequency	50 Hz 60 Hz
Continuous load current	8 A (see derating curve)
Load current range	150 mA ... 8 A (at 20 °C Tu, see derating)
Leakage current	5 mA (IL1, in switched-off state) 3 mA (IL2, in switched-off state) 3 mA (IL3, in switched-off state)
Residual voltage	typ. 1.5 V (For IL)
Surge current	230 A (tp = 10 ms, at 25 °C)
Max. load value	265 A ² s
Protective circuit	RC element; RC element Surge protection
Surge voltage protection	> 690 V

Connection data

Control circuits

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

Signaling

Status display	Yellow LED
Operating voltage display	Green LED
Error indication	Red LED

Dimensions

Width	62.5 mm
Height	84.1 mm
Depth	120 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

Standards/regulations	DIN EN 50178
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Standards/regulations

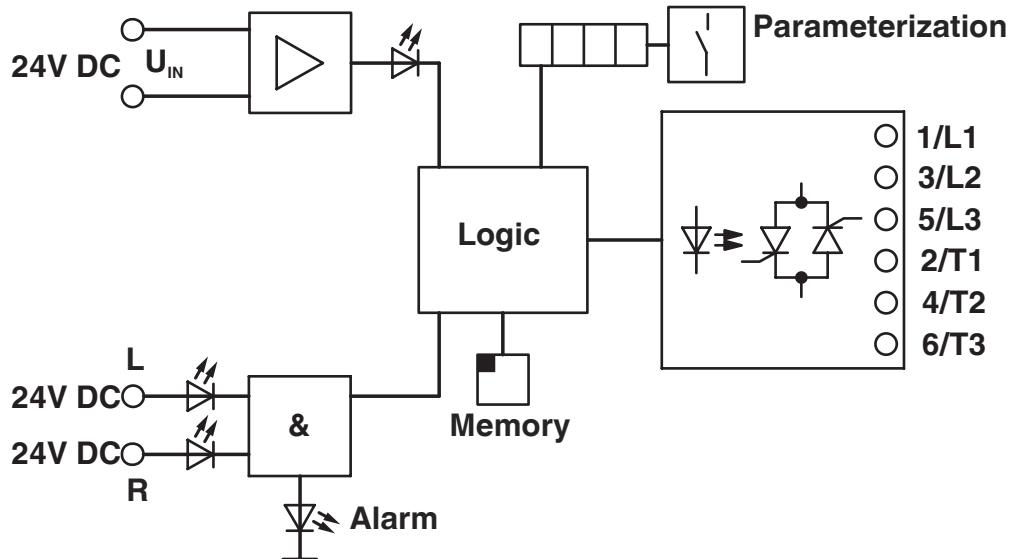
Standards/regulations	EN 61000-6-2
	EN 61000-6-4

Mounting

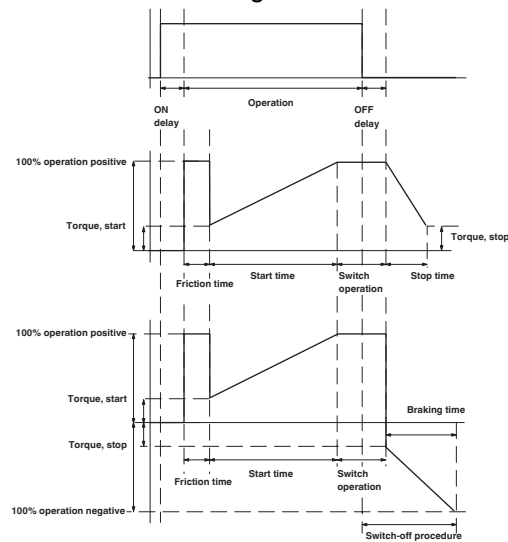
Mounting type	DIN rail mounting
Assembly note	Can be aligned with > 20 mm spacing
Mounting position	Vertical (horizontal DIN rail)

Drawings

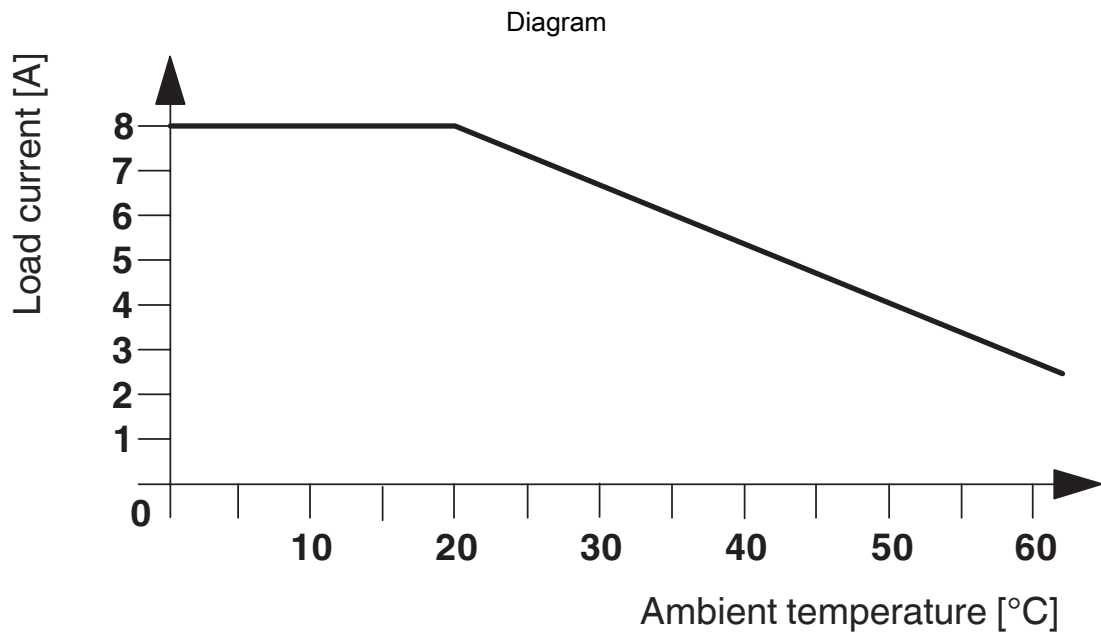
Block diagram



Diagram



Controlling the reversing load relay and operating a three-phase current load



Load current as a function of the ambient temperature
Operating time: 100% operating factor

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Classifications

ECLASS

ECLASS-11.0	27371014
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UNSPSC

UNSPSC 21.0	39122333
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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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