

ELR W3- 24DC/500AC- 2I

Order No.: 2297031




<http://eshop.phoenixcontact.sk/phoenix/treeViewClick.do?UID=2297031>

"4 in 1" three-phase semiconductor reversing contactor with 24 V DC input, 2 A output current, emergency stop function, and adjustable overload shutdown.



Commercial data

EAN	 4 046356 167864
Pack	1 pcs.
Customs tariff	85371099
Gross weight in pieces	0.2827 kg
Catalog page information	Page 18 (C-7-2013)

Product notes

WEEE/RoHS-compliant since:
18.06.2007



Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation at <http://www.download.phoenixcontact.com>. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 70 °C
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Ambient temperature (storage/transport)	-40 °C ... 80 °C
Degree of protection	IP20

Input data

Input name	Device supply
Rated control supply voltage U_s	24 V DC
Voltage range with reference to U_s	0.8 ... 1.25
Rated control supply current I_s	40 mA
Rated actuating voltage U_c	24 V DC
Voltage range with reference to U_c	0.8 ... 1.25
Rated actuating current I_c	5 mA
Switching threshold "0" signal, voltage	9.6 V
Switching threshold "1" signal voltage	19.2 V
Protective circuit	Protection against polarity reversal Parallel polarity protection diode
	Surge protection
Typical response time	< 35 ms
Typical turn-off time	< 40 ms
Operating voltage display	Green LED
Status display	Yellow LED
Indication	Red LED
Input name	Control input right/left

Output data

Output name	AC output
Nominal output voltage	500 V AC
Nominal output voltage range	42 V AC ... 550 V AC
Load current	max. 2.4 A (see derating curve)
Rated operating current at AC-51	2.4 A
Rated operating current at AC-53a	2.4 A
Leakage current	0 mA
Residual voltage	< 0.3 V
Surge current	100 A (t = 10 ms)
Type of protection	Surge protection
Output name	Acknowledge output
Note	Confirmation 01: Floating PDT contact
Nominal output voltage	max. 253 V AC 0 % ... 100 % (300 V DC)

Continuous load current	2 A
Residual voltage	< 0.5 V

Output data, signaling contact

Measuring via	Current transformer for line current on L1 and L3
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Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	14

General

Test voltage input/output	4 kV _{rms}
Mounting position	Vertical (horizontal DIN rail)
Assembly instructions	Can be aligned with spacing = 20 mm
Operating mode	100% operating factor
Designation	Standards/regulations
Standards/regulations	DIN EN 50178
	EN 60947
Designation	Power station requirements
Standards/regulations	DWR 1300 / ZXX01/DD/7080.8d
Designation	Air and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated surge voltage / insulation	6 kV/safe isolation
Rated insulation voltage	500 V
Pollution degree	2
Surge voltage category	III
Category in acc. with EN 954-1	3

Certificates



Certification	cULus Listed, GL, IECEE CB Scheme
Certification Ex:	ATEX
Certifications applied for:	cUL / UL

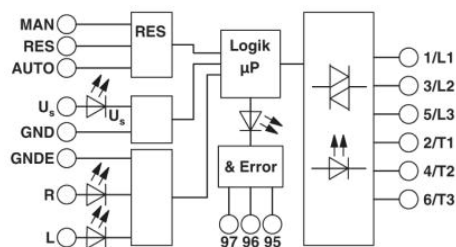
Accessories

Item	Designation	Description
Bridges		
2900746	BRIDGE- 2	3-phase loop bridge for 2 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901542	BRIDGE- 2-1M	3-phase loop bridge for 2 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 1 m long connecting cable, without ferrules.
2901543	BRIDGE- 2-3M	3-phase loop bridge for 2 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.
2900747	BRIDGE- 3	3-phase loop bridge for 3 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901655	BRIDGE- 3-1M	3-phase loop bridge for 3 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 1 m long connecting cable, without ferrules.
2901656	BRIDGE- 3-3M	3-phase loop bridge for 3 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.
2900748	BRIDGE- 4	3-phase loop bridge for 4 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901658	BRIDGE- 4-1M	3-phase loop bridge for 4 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 1 m long connecting cable, without ferrules.
2901659	BRIDGE- 4-3M	3-phase loop bridge for 4 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.
2900749	BRIDGE- 5	3-phase loop bridge for 5 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901544	BRIDGE- 5-1M	3-phase loop bridge for 5 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 1 m long connecting cable, without ferrules.
2901545	BRIDGE- 5-3M	3-phase loop bridge for 5 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules

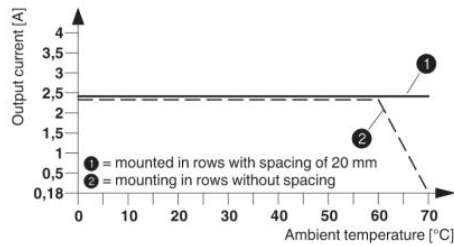
2900750	BRIDGE- 6	3-phase loop bridge for 6 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901649	BRIDGE- 6-1M	3-phase loop bridge for 6 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.
2901697	BRIDGE- 6-3M	3-phase loop bridge for 6 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.
2900751	BRIDGE- 7	3-phase loop bridge for 7 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901698	BRIDGE- 7-3M	3-phase loop bridge for 7 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.
2900752	BRIDGE- 8	3-phase loop bridge for 8 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901700	BRIDGE- 8-3M	3-phase loop bridge for 8 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.
2900753	BRIDGE- 9	3-phase loop bridge for 9 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901701	BRIDGE- 9-3M	3-phase loop bridge for 9 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.
2900754	BRIDGE-10	3-phase loop bridge for 10 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.
2901702	BRIDGE-10-3M	3-phase loop bridge for 10 modules from the CONTACTRON family with screw connection and 22.5 mm housing width, 3 m long connecting cable, and included ferrules.

Drawings

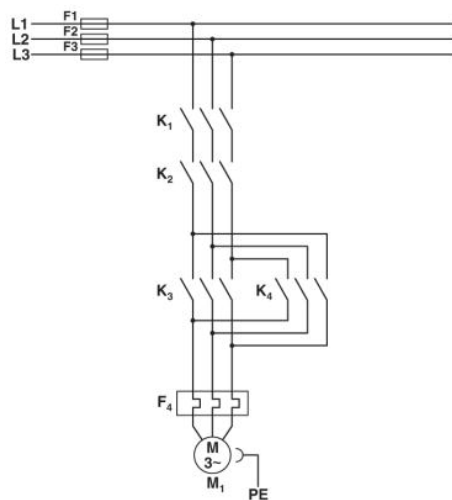
Block diagram



Diagram

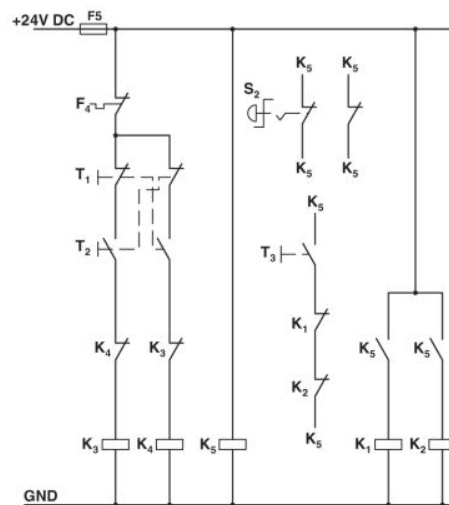


Circuit diagram



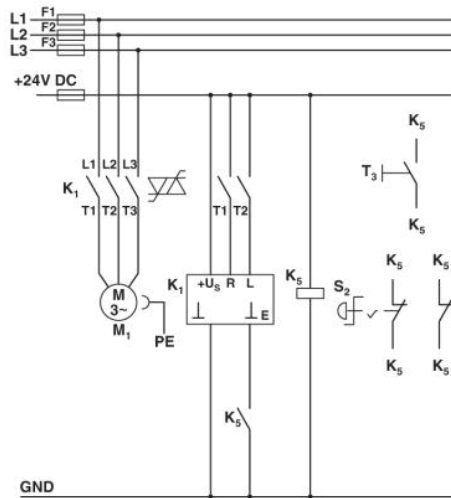
Conventional structure

Main current path for reversing contactor according to category 3
 K1 + K2 = Emergency stop contactor
 K3 = Left contactor
 K4 = Right contactor
 F4 = Motor protection relay



Conventional structure

Control current path reversing contactor according to category 3
 K1 + K2 = Emergency stop contactor
 K3 = Left contactor
 K4 = Right contactor
 K5 = PSR SCP-24DC.../Safety relay
 T1 = Right, T2 = Left, T3 = Reset
 S2 = Emergency stop
 F4 = Motor protection relay



Structure with CONTACTRON

Main and control current path for '4 in 1' hybrid motor starter with reversing function according to category 3

K1 = '4 in 1' hybrid motor starter with reversing function

K5 = PSR SCP-24DC.../Safety relay

T1 = Right, T2 = Left, T3 = Reset

S2 = Emergency stop

Address

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