Solid-state reversing contactor - ELR W3- 24DC/500AC- 9I - 2297057

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"4 in 1" three-phase semiconductor reversing contactor with 24 V DC input, 9 A output current, emergency stop function, and adjustable overload switching.

Product Features

- 22.5 mm wide
- Safety level according to IEC 61508-1: SIL 3, ISO 13849: PL e
- Space saving
- Long service life
- Reduction in wiring
- Bimetal function can be set up to 9 A
- 3-phase loop bridges

Key commercial data

Packing unit	1 1
Weight per Piece (excluding packing)	300.0 GRM
Custom tariff number	85371099
Country of origin	Germany

Technical data

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

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

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Technical data

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. 9 A (see derating curve)
Rated operating current at AC-51	9 A
Rated operating current at AC-53a	6.5 A
Leakage current	0 mA
Residual voltage	< 0.5 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)
Residual voltage	< 0.5 V

Output data, signaling contact

Measuring via	Current transformer for line current on L1 and L3
Current range	1 A ... 45 A

Connection data

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Technical data

Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.14 mm²
Conductor cross section stranded max.	2.5 mm²
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
Name	Standards/regulations
Standards/regulations	DIN EN 50178
	EN 60947
Name	Power station requirements
Standards/regulations	DWR 1300 / ZXX01/DD/7080.8d
Name	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

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
eCl@ss 8.0	27371601

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Classifications

ETIM

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

UNSPSC

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

Approvals

Approvals

Approvals

UL Listed / cUL Listed / LR / GL / BV / GL-SW / IECEE CB Scheme / UL Listed / cUL Listed / IECEE CB Scheme / GL / cULus Listed

Ex Approvals

ATEX

Approvals submitted

Approval details

UL Listed

cUL Listed

LR

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Approvals

GL

BV

GL-SW

IECEE CB Scheme

UL Listed

cUL Listed

IECEE CB Scheme

GL

cULus Listed

Accessories

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Bridges

Jumper - BRIDGE- 2 - 2900746

3-phase loop bridge for 2 modules of the CONTACTRON family with 22.5 mm housing width.

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Accessories

Jumper - BRIDGE- 3 - 2900747

3-phase loop bridge for 3 modules of the CONTACTRON family with 22.5 mm housing width.

Jumper - BRIDGE- 4 - 2900748

3-phase loop bridge for 4 modules of the CONTACTRON family with 22.5 mm housing width.

Jumper - BRIDGE- 5 - 2900749

3-phase loop bridge for 5 modules of the CONTACTRON family with 22.5 mm housing width.

Jumper - BRIDGE- 6 - 2900750

3-phase loop bridge for 6 modules of the CONTACTRON family with 22.5 mm housing width.

Jumper - BRIDGE- 7 - 2900751

3-phase loop bridge for 7 modules of the CONTACTRON family with 22.5 mm housing width.

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Jumper - BRIDGE- 8 - 2900752

3-phase loop bridge for 8 modules of the CONTACTRON family with 22.5 mm housing width.

Jumper - BRIDGE- 9 - 2900753

3-phase loop bridge for 9 modules of the CONTACTRON family with 22.5 mm housing width.

Jumper - BRIDGE-10 - 2900754

3-phase loop bridge for 10 modules of the CONTACTRON family with 22.5 mm housing width.

Jumper - BRIDGE- 2-3M - 2901543

3-phase loop bridge for 2 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules

Jumper - BRIDGE- 3-3M - 2901656

3-phase loop bridge for 3 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules.

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Accessories

Jumper - BRIDGE- 4-3M - 2901659

3-phase loop bridge for 4 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules.

Jumper - BRIDGE- 5-3M - 2901545

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

Jumper - BRIDGE- 6-3M - 2901697

3-phase loop bridge for 6 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules

Jumper - BRIDGE- 7-3M - 2901698

3-phase loop bridge for 7 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules

Jumper - BRIDGE- 8-3M - 2901700

3-phase loop bridge for 8 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules

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Jumper - BRIDGE- 9-3M - 2901701

3-phase loop bridge for 9 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules

Jumper - BRIDGE-10-3M - 2901702

3-phase loop bridge for 10 modules in the CONTACTRON family with 22.5 mm housing width, 3 m long connecting cable, and provided ferrules

Jumper - BRIDGE- 2-1M - 2901542

3-phase loop bridge for 2 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.

Jumper - BRIDGE- 3-1M - 2901655

3-phase loop bridge for 3 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.

Jumper - BRIDGE- 4-1M - 2901658

3-phase loop bridge for 4 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.

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Accessories

Jumper - BRIDGE- 5-1M - 2901544

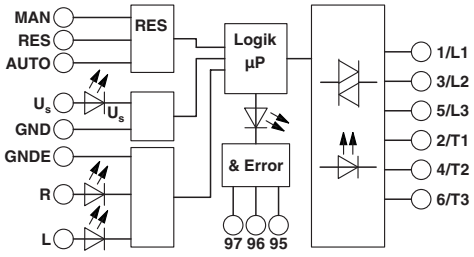
3-phase loop bridge for 5 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.

Jumper - BRIDGE- 6-1M - 2901649

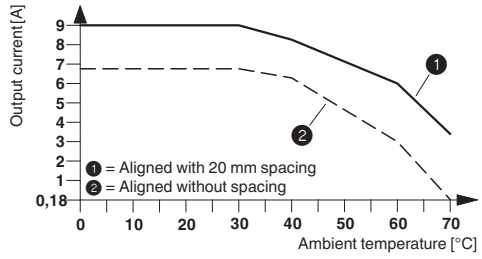
3-phase loop bridge for 6 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.

Drawings

Block diagram



Diagram



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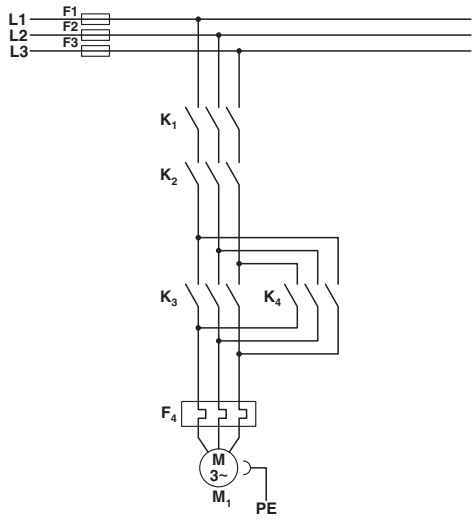
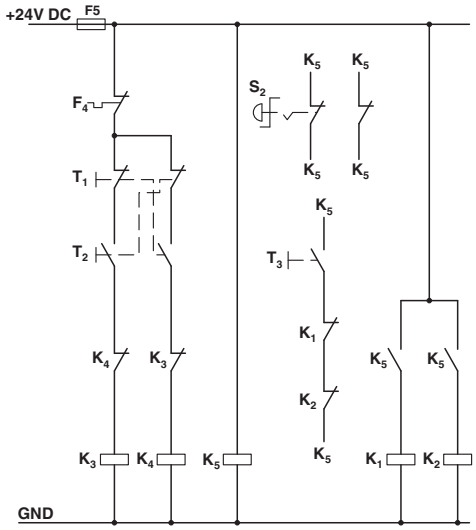
Circuit diagram



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

Circuit diagram



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

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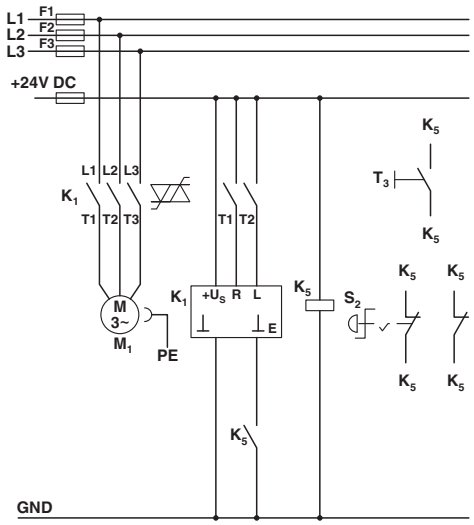
Circuit diagram



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