

## Solid-state reversing contactor - ELR W3-230AC/500AC- 9I - 2297060

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"4 in 1" three-phase semiconductor reversing contactor with 230 V AC input, 9 A output current, emergency stop function, and adjustable overload switching.

### Why buy this product

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



### Key commercial data

Packing unit	1 pc
GTIN	 4 046356 170598
Weight per Piece (excluding packing)	223.15 g
Custom tariff number	85371099
Country of origin	Germany

### Technical data

#### Input data

Input name	Device supply
Mains frequency	40 Hz
	100 Hz
Rated control supply voltage $U_S$	230 V AC
Voltage range with reference to $U_S$	0.4 ... 1.1
Rated control supply current $I_S$	4 mA
Rated actuating voltage $U_C$	230 V AC
Voltage range with reference to $U_C$	0.4 ... 1.1

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## Technical data

### Input data

Rated actuating current $I_C$	7 mA
Switching threshold "0" signal, voltage	44 V AC
Switching threshold "1" signal voltage	85 V AC
Protective circuit	Surge protection
Typical response time	< 35 ms
Typical turn-off time	< 80 ms
Operating voltage display	Green LED
Status display	Yellow LED
Indication	Red LED
Input name	Control input right/left

### Output data load 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)
Min. load current	1.5 A
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)
Protective circuit	Surge protection

### Output data reply output

Note	Confirmation 01: Floating PDT contact
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### Output data, signaling contact

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

### Connection data

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

### General

Test voltage input/output	4 kV <sub>rms</sub>
Mounting position	Vertical (horizontal DIN rail)
Assembly instructions	Can be aligned with spacing = 20 mm

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## Technical data

### General

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

### 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

### 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	27370905

#### ETIM

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

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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

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / GL / GL-SW / IEC EE CB Scheme / GL-SW / UL Listed / cUL Listed / IEC EE CB Scheme / EAC / GL / cULus Listed

#### Ex Approvals

ATEX / ATEX

#### Approvals submitted

### Approval details

UL Listed

cUL Listed

GL

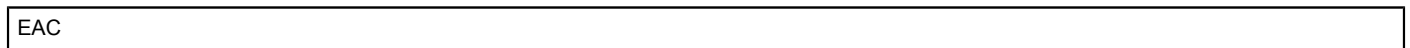
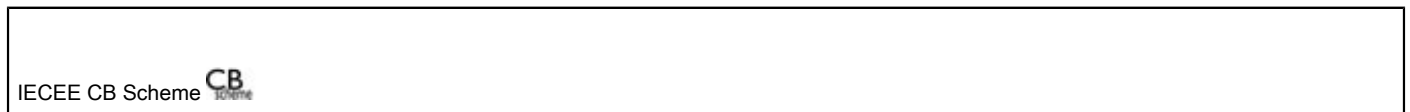
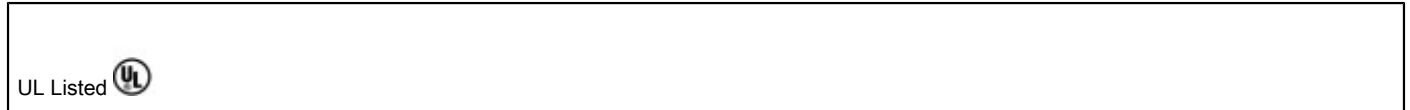
GL-SW

IECEE CB Scheme

GL-SW

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## Approvals



## Accessories

### Accessories

#### Loop bridge

Jumper - BRIDGE- 2 - 2900746



3-phase loop bridge for 2 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

Jumper - BRIDGE- 3 - 2900747



3-phase loop bridge for 3 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

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### Accessories

#### Jumper - BRIDGE- 4 - 2900748



3-phase loop bridge for 4 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

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#### Jumper - BRIDGE- 5 - 2900749



3-phase loop bridge for 5 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

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#### Jumper - BRIDGE- 6 - 2900750



3-phase loop bridge for 6 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

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#### Jumper - BRIDGE- 7 - 2900751



3-phase loop bridge for 7 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

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#### Jumper - BRIDGE- 8 - 2900752



3-phase loop bridge for 8 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

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## Solid-state reversing contactor - ELR W3-230AC/500AC- 9I - 2297060

### Accessories

#### Jumper - BRIDGE- 9 - 2900753



3-phase loop bridge for 9 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

#### Jumper - BRIDGE-10 - 2900754



3-phase loop bridge for 10 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 0.3 m, with ferrules.

#### Jumper - BRIDGE- 2-3M - 2901543



3-phase loop bridge for 2 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

#### Jumper - BRIDGE- 3-3M - 2901656



3-phase loop bridge for 3 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

#### Jumper - BRIDGE- 4-3M - 2901659



3-phase loop bridge for 4 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

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### Accessories

Jumper - BRIDGE- 5-3M - 2901545



3-phase loop bridge for 5 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

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Jumper - BRIDGE- 6-3M - 2901697



3-phase loop bridge for 6 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

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Jumper - BRIDGE- 7-3M - 2901698



3-phase loop bridge for 7 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

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Jumper - BRIDGE- 8-3M - 2901700



3-phase loop bridge for 8 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

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Jumper - BRIDGE- 9-3M - 2901701



3-phase loop bridge for 9 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

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## Solid-state reversing contactor - ELR W3-230AC/500AC- 9I - 2297060

### Accessories

Jumper - BRIDGE-10-3M - 2901702



3-phase loop bridge for 10 CONTACTRON modules, with screw connection and 22.5 mm housing width, connecting cable: 3 m, with ferrules included.

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Jumper - BRIDGE- 2-1M - 2901542



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.

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Jumper - BRIDGE- 3-1M - 2901655



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.

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Jumper - BRIDGE- 4-1M - 2901658



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.

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Jumper - BRIDGE- 5-1M - 2901544



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.

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## Accessories

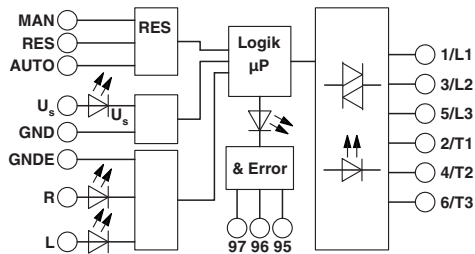
Jumper - BRIDGE- 6-1M - 2901649



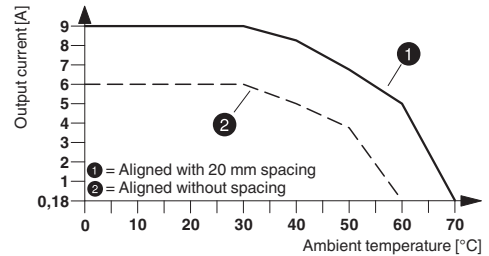
3-phase loop bridge for 6 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.

## Drawings

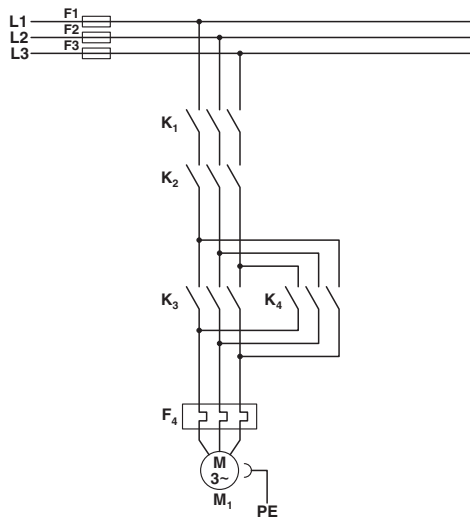
Block diagram



Diagram



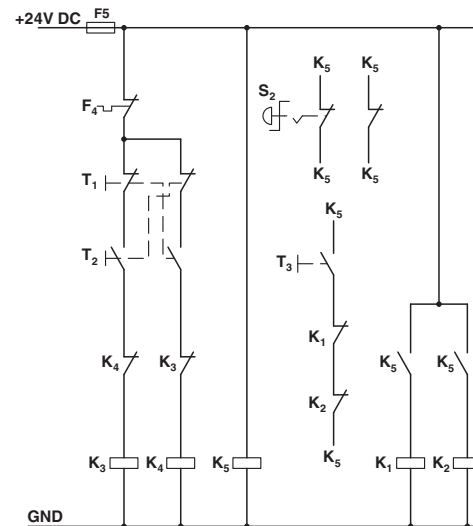
Circuit diagram



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

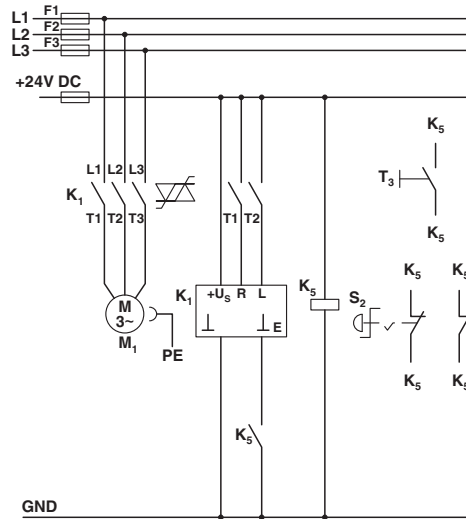


Conventional structure  
Control current path reversing contactor according to category 3

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