

Hybrid motor starter - ELR W3-230AC/500AC- 2I - 2297044

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"4 in 1" three-phase semiconductor reversing contactor with 230 V AC input, 2 A output current, emergency stop function, and adjustable overload shutdown.


The figure shows 2297031 ELR W3-24DC/500AC-2I

Why buy this product

- ✓ 22.5 mm wide
- ✓ Safety level according to IEC 61508-1: SIL 3, ISO 13849: PL e
- ✓ Long service life
- ✓ Space saving
- ✓ Reduction in wiring
- ✓ 3-phase loop bridges
- ✓ Adjustable current for bimetal function
- ✓ Low-wear switching



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 170574
GTIN	4046356170574
Weight per Piece (excluding packing)	283.100 g
Custom tariff number	85371098
Country of origin	Germany

Technical data

Device supply

Rated control circuit supply voltage U_s	230 V AC
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Technical data

Device supply

Control supply voltage range	92 V AC ... 253 V AC
Rated control supply current I_S	4 mA
Mains frequency	40/100 Hz
Type of protection	Surge protection

Input data

Input name	Control input right/left
Rated actuating voltage U_C	230 V AC
Triggering voltage range	92 V AC ... 253 V AC
Rated actuating current I_C	7 mA
Switching threshold	44 V AC ("0" signal)
	85 V AC ("1" signal)
Typical response time	< 35 ms
Typical turn-off time	< 80 ms

Output data load output

Output name	AC output
Rated operating voltage U_e	500 V AC
Operating voltage range	42 V AC ... 550 V AC
Rated operating current I_e	2.4 A (AC-51)
	2.4 A (AC-53a)
Mains frequency	50/60 Hz
Load current range	180 mA ... 2.4 A (see to derating)
Leakage current	0 mA
Residual voltage	< 0.3 V
Surge current	100 A (t = 10 ms)
Type of protection	Surge protection

Output data reply output

Output name	Acknowledge output
Note	Confirmation 01: Floating PDT contact
Contact type	1 PDT
Switching capacity according to IEC 60947-5-1	3 A (230 V, AC15)
	2 A (24 V, DC13)

General

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

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Technical data

General

Operating mode	100% operating factor
Operating voltage display	Green LED
Status display	Yellow LED
Indication	Red LED

Connection data, input side

Connection name	Control circuits
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

Connection data, output side

Connection name	Load circuit
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

Ambient conditions

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

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

UL data

SCCR	100 kA (480 V AC (fuse: 30 A class CC/30 A class J (high fault)))
	5 kA (480 V AC (fuse: 20 A RK5 (standard fault)))

Standards and Regulations

Designation	Standards/regulations
Standards/regulations	DIN EN 50178
	EN 60947

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Standards and Regulations

Designation	Power station requirements
Standards/regulations	DWR 1300 / ZXX01/DD/7080.8d
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated insulation voltage	500 V
Rated surge voltage	6 kV
Insulation	safe isolation
Degree of pollution	2
Overvoltage category	III
ATEX	# II (2) G
	# II (2) D

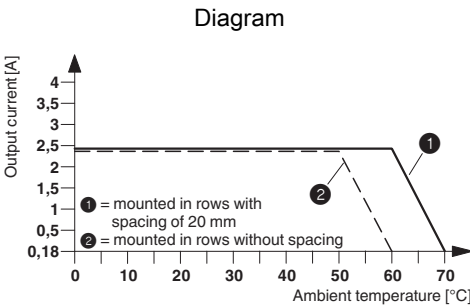
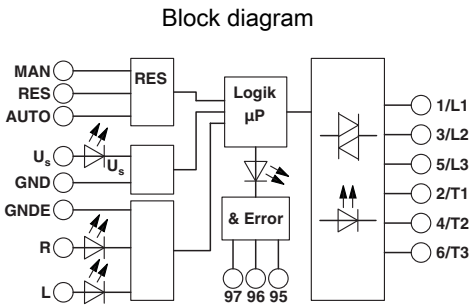
Approvals/conformities

ATEX	# II (2) G
	# II (2) D
EU-type examination certificate	PTB 07 ATEX 3145
UL certificate	NLDX.E228652

Environmental Product Compliance

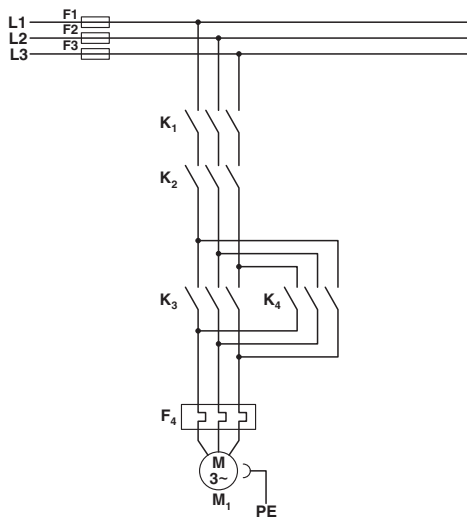
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings



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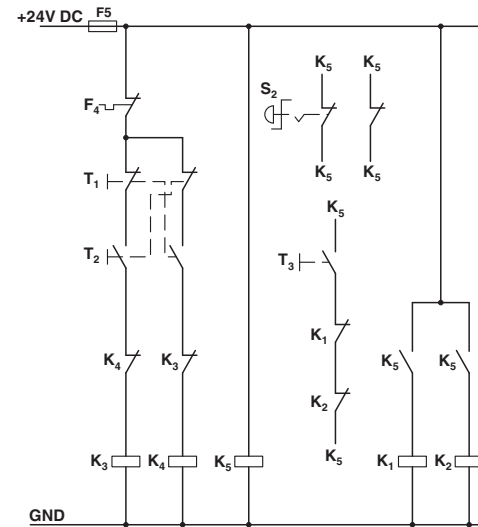
Circuit diagram



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

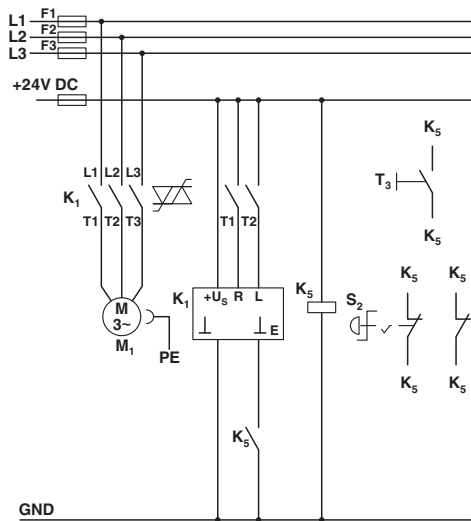


Conventional structure
Control current path reversing contactor according to category 3

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

Classifications

eCl@ss

eCl@ss 5.0	27024002
eCl@ss 5.1	27024002
eCl@ss 6.0	27024002
eCl@ss 7.0	27024002
eCl@ss 8.0	27024002
eCl@ss 9.0	27024002

ETIM

ETIM 2.0	EC001037
ETIM 3.0	EC001037
ETIM 4.0	EC001037
ETIM 5.0	EC001037
ETIM 6.0	EC001037

UNSPSC

UNSPSC 6.01	30211915
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Classifications

UNSPSC

UNSPSC 7.0901	39121514
UNSPSC 11	39121514
UNSPSC 12.01	39121514
UNSPSC 13.2	25173902

Approvals

Approvals

Approvals

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

Ex Approvals

ATEX


Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 323771
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 323771
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GL		http://exchange.dnv.com/tari/	54757-08 HH
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GL-SW			54757-08 HH
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IECEE CB Scheme		http://www.iecee.org/	DE1-55728
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Approvals

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 228652
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 228652
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EAC		EAC-Zulassung
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EAC		RU C- DE.A*30.B.01082
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CCC-s	www.china-certification.com	2016010304871315
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GL		http://www.gl-group.com/newbuilding/approvals/index.html
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cULus Listed		
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Accessories

Accessories

Bridge

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.

Cover

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Accessories

Covering hood - BRIDGE COVER - 2906240



The BRIDGE COVER covering hood is used to cover unused plugs on the CONTACTRON bridge that may subsequently be used to extend the system. The hood can be used with the screw and Push-in version of the bridge.

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.

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.

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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Accessories

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.

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.

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.

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.

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Accessories

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- 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.

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.

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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Accessories

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.

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.

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.

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.

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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Accessories

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.

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.

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.
