

## ELR W3-230AC/500AC- 2I

Order No.: 2297044


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



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2297044>

"4 in 1" three-phase solid-state reversing contactor with 230 V AC input, 2 A output current and adjustable overload shutdown



Commercial data	
GTIN (EAN)	 4 046356 170574
sales group	G420
Pack	1 pcs.
Customs tariff	85371099
Catalog page information	Page 164 (IF-2009)

### Product notes

WEEE/RoHS-compliant since:  
10/29/2007



<http://www.download.phoenixcontact.com>  
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. The General Terms and Conditions of Use apply to Internet downloads.

### Technical data

#### Input data

Mains frequency	40 Hz
	100 Hz
Rated control supply voltage $U_s$	230 V AC

Rated control supply voltage range with reference to $U_s$	0.4 ... 1.1
Rated control supply current $I_s$	3.5 mA
Rated actuating voltage $U_c$	230 V AC
Rated actuating voltage range with reference to $U_c$	0.4 ... 1.1
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

**Output data, load relay**

Output name	AC output
Nominal output voltage	500 V AC
Nominal output voltage range	48 V AC ... 550 V AC
Load current	max. 2.4 A (see derating curve)
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**

Type of connection	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	12

#### General data

Width	22.5 mm
Height	99 mm
Depth	114.5 mm
Test voltage input/output	4 kV <sub>rms</sub>
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Mounting position	Vertical (horizontal DIN rail)
Assembly instructions	Can be aligned with spacing = 20 mm
Operating mode	100% operating factor
Degree of protection	IP20
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	4 kV/safe isolation
Rated insulation voltage	500 V
Pollution degree	2
Surge voltage category	III
Category in acc. with EN 954-1	3

#### Certificates / Approvals



Certification

BV, CB, CUL Listed, GL, LR, UL Listed

Certification Ex:

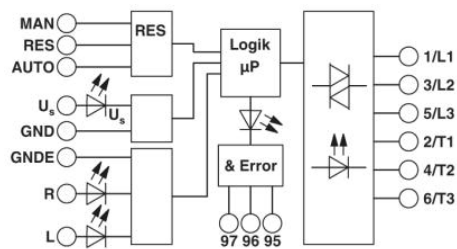
PTB

Certifications applied for:

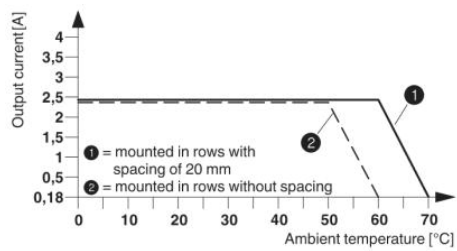
UL-EX LIS / CUL-EX LIS

## Diagrams/Drawings

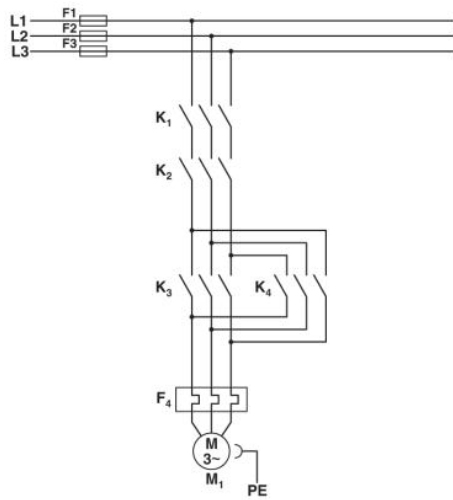
### Block diagram



### Diagram

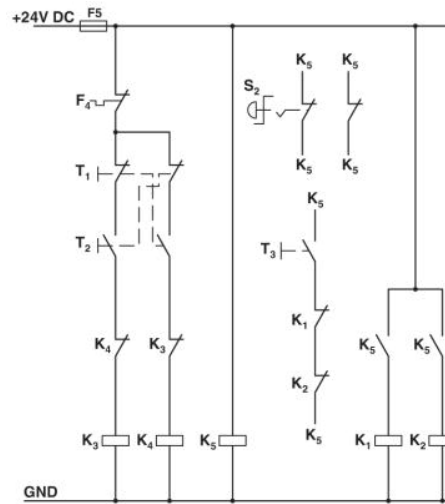


Circuit diagram



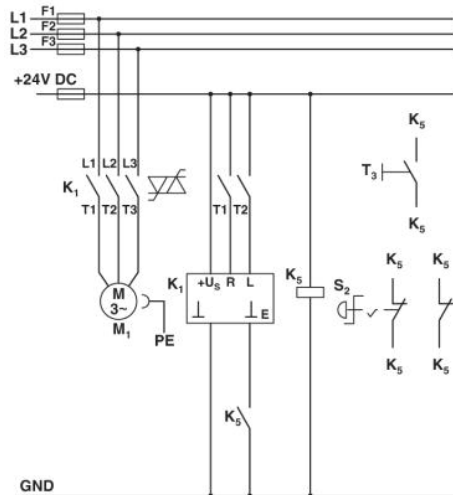
**Conventional structure**

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 for reversing contactor according to category 3  
 K1 + K2 = Emergency stop contactor  
 K3 = Left contactor  
 K4 = Right contactor  
 K5 = PSR SCP-24DC.../safety relay  
 T1 = Left, T2 = Right, 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 = Left, T2 = Right, T3 = Reset  
 S2 = Emergency stop

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