

ELR W3- 24DC/500AC- 2I-SP - Hybrid motor starter



2901050

<https://www.phoenixcontact.com/us/products/2901050>

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Hybrid motor starter; functions: Start motor, Reverse motor, Motor protection; input: 24 V DC; output: 3~, 500 V AC, 2.4 A; Screw connection

Your advantages

- 22.5 mm wide
- Reduction in wiring
- Long service life
- Space saving
- 3-phase loop bridges
- Adjustable current for bimetal function
- Low-wear switching

Commercial data

Item number	2901050
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C470
Product key	DK7422
GTIN	4046356566230
Weight per piece (including packing)	269.8 g
Weight per piece (excluding packing)	254 g
Customs tariff number	85371098
Country of origin	DE

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Technical data

Product properties

Product type	Hybrid motor starters
Product family	CONTACTRON
Operating mode	100% operating factor

Insulation characteristics: Air clearances and creepage distances between the power circuits

Insulation	safe isolation
Overvoltage category	III
Pollution degree	2

Electrical properties

Number of phases	3
Service life electrical	3×10^7 cycles
Maximum power dissipation for nominal condition	0.72 W
Reversing frequency	≤ 2 Hz
Maximum power dissipation	3.3 W
Minimum power dissipation	1.1 W

Air clearances and creepage distances between the power circuits

Rated insulation voltage	500 V
Rated surge voltage	6 kV

Supply

Rated control circuit supply voltage U_S	24 V DC
Control supply voltage range	19.2 V DC ... 30 V DC
Rated control supply current I_S	40 mA
Protective circuit	Surge protection
	Reverse polarity protection

Input data

Control

Input name	Control input right/left
Rated actuating voltage U_C	24 V DC
Triggering voltage range	19.2 V DC ... 30 V DC
Rated actuating current I_C	5 mA (Input type 1)
Switching threshold	9.6 V ("0" signal)
	19.2 V ("1" signal)
Typical response time	< 35 ms
Typical turn-off time	< 40 ms

Output data

AC output

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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)
Trigger characteristic in acc. with IEC 60947-4-2	Class 10
Leakage current	0 mA
Residual voltage	< 0.3 V
Protective circuit	Surge protection

Acknowledge output

Note	Confirmation: floating change-over contact, signal contact
Contact switching type	1 changeover contact
Switching capacity in accordance with IEC 60947-5-1	3 A (230 V, AC15)
	2 A (24 V (DC13))

Connection data

Control circuits

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	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
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb _F -in. ... 7 lb _F -in.

Load circuit

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	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
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb _F -in. ... 7 lb _F -in.

Signaling

Status display	LED (yellow)
Operating voltage display	Green LED
Error indication	Red LED

Dimensions

Width	22.5 mm
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Height	107 mm
Depth	114 mm

Material specifications

Flammability rating according to UL 94 (Housing)	V0 (Housing)
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m

Approvals

UL approval

Certificate	NLDX.E228652
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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

Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 50178
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Standards/regulations

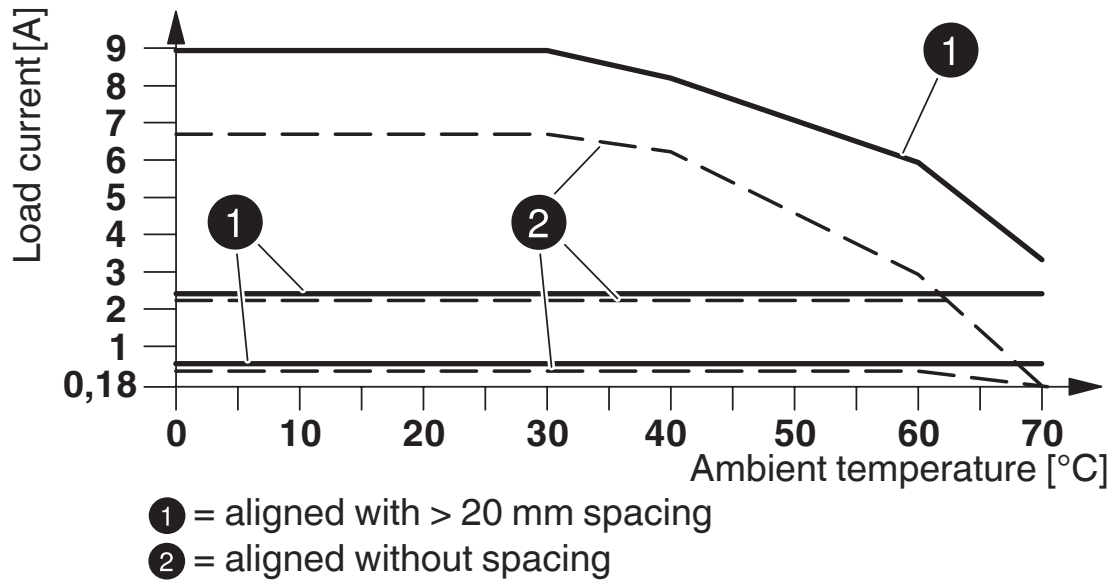
Standards/regulations	IEC 60947-4-2
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Mounting

Mounting type	DIN rail mounting
Assembly note	can be aligned with spacing: see derating
Mounting position	Vertical (horizontal DIN rail)

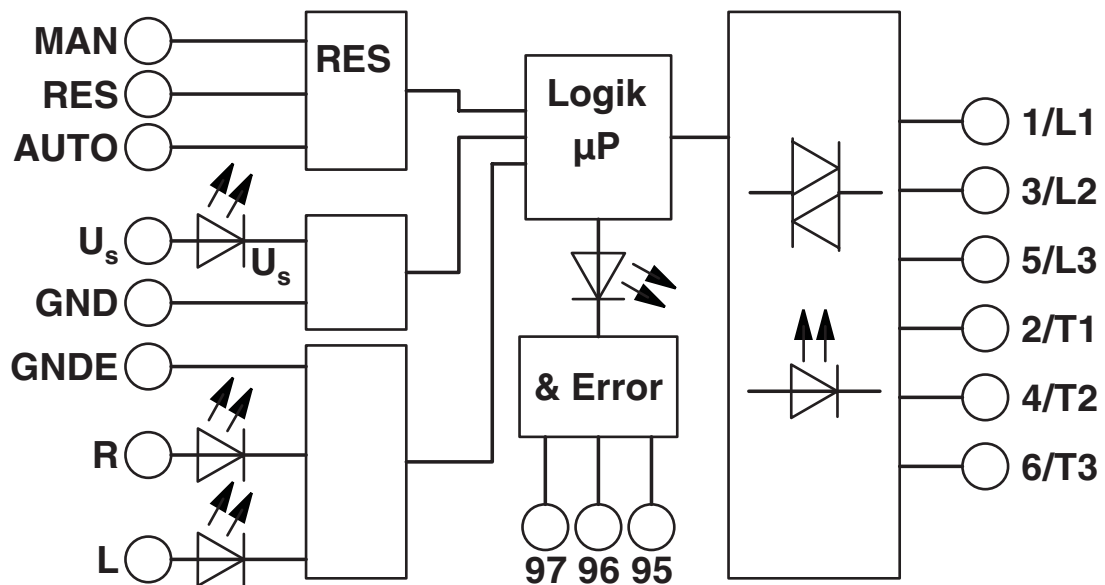
Drawings

Diagram



Derating diagram

Block diagram



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Environmental product compliance

China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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