

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)




"2 in 1" hybrid motor starter for starting 3~ AC motors up to 550 V AC, with 24 V DC input, 9 A output current, and emergency stop function.

Why buy this product

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



Key commercial data

Packing unit	1 pc
GTIN	 4 046356 527767
Weight per Piece (excluding packing)	204.54 g
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

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

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. 250 V AC
Continuous load current	6 A

Output data, signaling contact

Measuring via	Current transformer for line current on L1 and L3
---------------	---

Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.14 mm ²

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Technical data

Connection data

Conductor cross section stranded max.	2.5 mm ²
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
Safety integrity level according to IEC 61508-1	SIL 3 (safe shutdown)
Category as per ISO 13849-1	3
Performance Level as per ISO 13849-1	e
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

ETIM

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

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

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 / IECEE CB Scheme / UL Listed / cUL Listed / IECEE CB Scheme / cULus Listed

Ex Approvals

ATEX

Approvals submitted

Approval details

UL Listed

cUL Listed

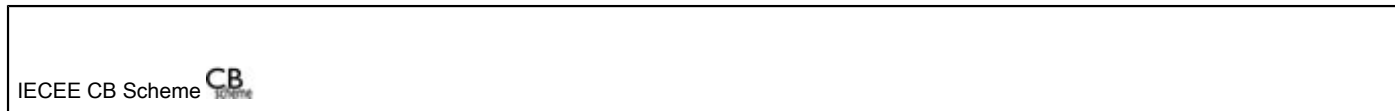
IECEE CB Scheme

UL Listed

cUL Listed

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Approvals



Accessories

Accessories

Loop bridge

Jumper - BRIDGE- 2 - 2900746



3-phase loop bridge for 2 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Jumper - BRIDGE- 3 - 2900747



3-phase loop bridge for 3 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Jumper - BRIDGE- 4 - 2900748



3-phase loop bridge for 4 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Jumper - BRIDGE- 5 - 2900749



3-phase loop bridge for 5 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Accessories

Jumper - BRIDGE- 6 - 2900750



3-phase loop bridge for 6 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Jumper - BRIDGE- 7 - 2900751



3-phase loop bridge for 7 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Jumper - BRIDGE- 8 - 2900752



3-phase loop bridge for 8 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Jumper - BRIDGE- 9 - 2900753



3-phase loop bridge for 9 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Jumper - BRIDGE-10 - 2900754



3-phase loop bridge for 10 modules from the CONTACTRON family with screw connection and 22.5 mm housing width.

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Accessories

Jumper - BRIDGE- 2-3M - 2901543



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

Jumper - BRIDGE- 3-3M - 2901656



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

Jumper - BRIDGE- 4-3M - 2901659



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

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Accessories

Jumper - BRIDGE- 7-3M - 2901698



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

Jumper - BRIDGE- 8-3M - 2901700



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

Jumper - BRIDGE- 9-3M - 2901701



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

Jumper - BRIDGE-10-3M - 2901702



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

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.

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Accessories

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.

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

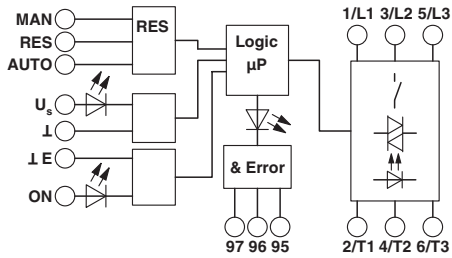


3-phase loop bridge for 6 modules in the CONTACTRON family with 1 m long connecting cable without ferrules, 22.5 mm housing width.

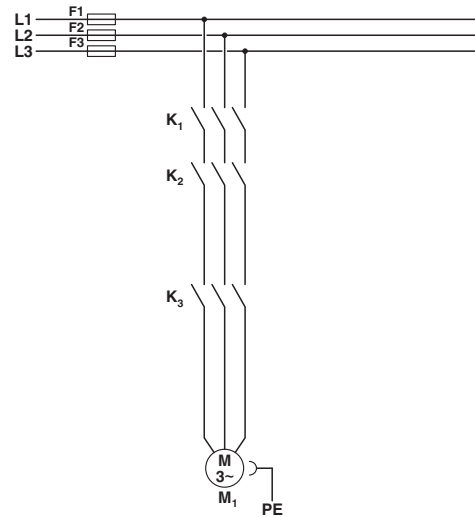
Drawings

Hybrid motor starter - ELR H3-ES-SC- 24DC/500AC-9 - 2900554

Block diagram



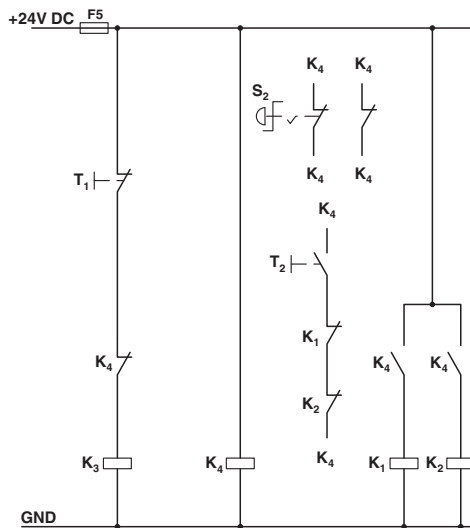
Circuit diagram



Conventional structure
Main current path for contactor according to category 3

K1 + K2 = Emergency stop contactor
K3 = Right contactor

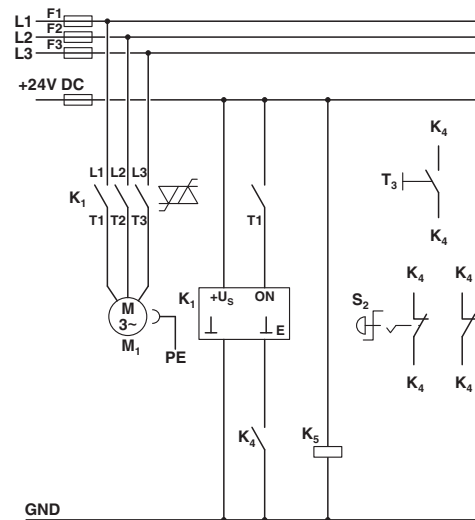
Circuit diagram



Conventional structure
Control current path for contactor according to category 3

K1 + K2 = Emergency stop contactor
K3 = Right contactor
K4 = PSR SCP-24DC.../safety relay
T1 = Right, T3 = Reset
S2 = Emergency stop

Circuit diagram



Structure with CONTACTRON
Main and control current path for '2 in 1' hybrid motor starter according to category 3

K1 = '2 in 1' hybrid motor starter
K4 = PSR SCP-24DC.../safety relay
T1 = Right, T3 = Reset
S2 = Emergency stop

