

## Hybrid motor starter - ELR H5-I-SC- 24DC/500AC-9 - 2900576

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"3 in 1" hybrid motor starter for reversing 3~ AC motors up to 550 V AC, with 24 V DC input, 9 A output current, and adjustable overload shutdown.

### Product Features

- 22.5 mm wide
- Space saving
- Long service life
- Reduction in wiring
- Bimetal function can be set up to 9 A
- 3-phase loop bridges



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	280.0 GRM
Custom tariff number	85371099
Country of origin	Germany

### 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
Protective circuit	Protection against polarity reversal Parallel polarity protection diode
	Surge protection
Typical response time	< 35 ms
Typical turn-off time	< 40 ms

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## Technical data

### Input data

Operating voltage display	Green LED
Status display	Yellow LED
Indication	Red LED
Input name	Control input right/left
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

### 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 change-over contact, signal contact
Contact type	1 PDT
Contact material	AgSnO <sub>2</sub> , hard gold-plated
Maximum switching voltage	30 V AC 36 V DC
Minimum switching voltage	100 mV AC/DC (at 10 mA)
Min. switching current	1 mA (at 24 V)
Maximum inrush current	50 mA
Limiting continuous current	50 mA
Interrupting rating (ohmic load) max.	1.2 W (at 24 V DC)
Note	the following values are applicable if a gold layer is destroyed
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 100 mA)
Min. switching current	10 mA (at 12 V)
Limiting continuous current	6 A

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## Technical data

### Output data reply output

Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	20 W (at 48 V DC)
	18 W (at 60 V DC)
	23 W (at 110 V DC)
	40 W (at 220 V DC)
	1500 VA (for 250 V AC)
Switching capacity according to IEC 60947-5-1	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.1 A (at 220 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 230 V, AC15)

### Output data, signaling contact

Measuring via	Current transformer for line current on L1 and L3
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### 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
Operating mode	100% operating factor
Designation	Air and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Insulation	sichere Trennung
Pollution degree	2
Surge voltage category	III
Designation	Standards/regulations
Standards/regulations	EN 60947

### Dimensions

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### 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

### 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

#### UNSPSC

UNSPSC 6.01	30211915
UNSPSC 7.0901	39121514
UNSPSC 11	39121514
UNSPSC 12.01	39121514
UNSPSC 13.2	39121514

### Approvals

#### Approvals

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# Hybrid motor starter - ELR H5-I-SC- 24DC/500AC-9 - 2900576

## Approvals

Approvals

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

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Ex Approvals


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Approvals submitted

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## Approval details


UL Listed 


cUL Listed 

IECEE CB Scheme 

UL Listed 

cUL Listed 

IECEE CB Scheme 

cUL Listed 

# Hybrid motor starter - ELR H5-I-SC- 24DC/500AC-9 - 2900576

## Approvals

cULus Listed

cULus Listed

cULus Listed

## 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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### 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.

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#### 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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#### 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.

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#### 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.

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#### 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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# Hybrid motor starter - ELR H5-I-SC- 24DC/500AC-9 - 2900576

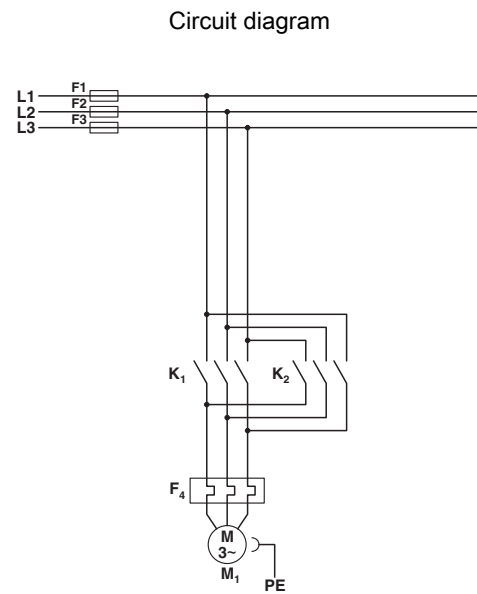
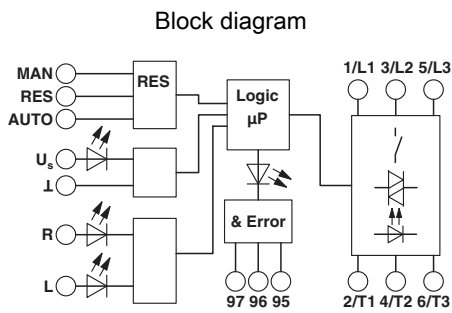
## Accessories

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.

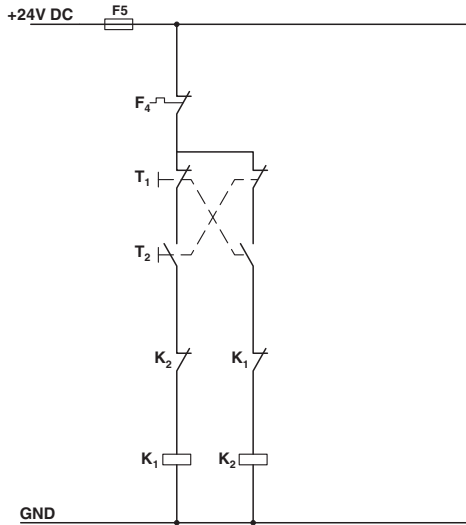
## Drawings



Conventional structure  
Main current path contactor  
K1 = Left contactor  
K2 = Right contactor  
F4 = Motor protection relay

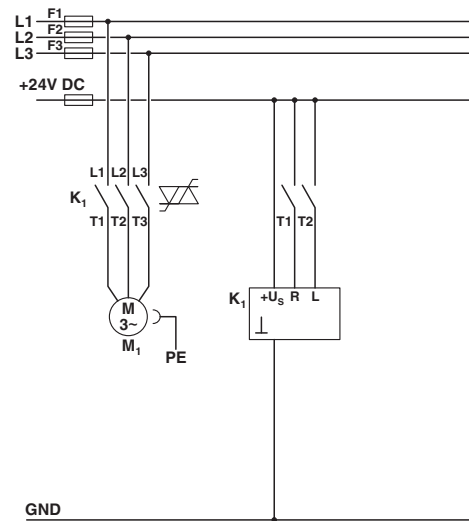
# Hybrid motor starter - ELR H5-I-SC- 24DC/500AC-9 - 2900576

Circuit diagram



Conventional structure  
 Control current path contactor  
 K1 = Left contactor  
 K2 = Right contactor  
 T1 = Left, T2 = Right  
 F4 = Motor protection relay

Circuit diagram



Structure with CONTACTRON  
 Main and control current path for '3 in 1' hybrid motor starter  
 K1 = '3 in 1' hybrid motor starter  
 T1 = Right, T2 = Left