

## Hybrid motor starter - ELR H51-IESSC-24DC500AC-9 - 2902745

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Short-circuit-proof "4 in 1" hybrid motor starter for reversing 3~ AC motors up to 550 V AC, with 24 V DC input, 9 A output current, emergency stop function, and adjustable overload shutdown. Can only be used with EM-RD or EM-RI adapter.



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	400.0 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
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

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### Technical data

#### 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
Min. load current	1.5 A
Leakage current	0 mA
Residual voltage	< 0.6 V
Surge current	100 A (t = 10 ms)
Protective circuit	Surge protection Varistor

#### 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
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)

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## Technical data

### 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
Safety integrity level according to IEC 61508-1	SIL 3 (safe shutdown)
	SIL 2 (motor protection)
Category as per ISO 13849-1	3
Performance Level as per ISO 13849-1	e
Category in acc. with EN 954-1	3

### Dimensions

Width	22.5 mm
Height	160 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

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## Classifications

### eCl@ss

eCl@ss 4.0	27142001
eCl@ss 4.1	27142001
eCl@ss 5.0	27142001
eCl@ss 5.1	27371601
eCl@ss 6.0	27371601
eCl@ss 7.0	27371601
eCl@ss 8.0	27371601

### ETIM

ETIM 3.0	EC000035
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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#### Approvals

UL Listed / cUL Listed / IECCE CB Scheme / cULus Listed

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#### Ex Approvals

#### ATEX

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#### Approvals submitted

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#### Approval details

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## Approvals

UL Listed

cUL Listed

IECEE CB Scheme

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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## Hybrid motor starter - ELR H51-IESSC-24DC500AC-9 - 2902745

### 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 H51-IESSC-24DC500AC-9 - 2902745

## 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

Block diagram

