

## Hybrid motor starter - ELR H5-IES-PT-24DC/500AC-9-T - 2906060

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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, adjustable overload shutdown, higher transient voltage strength, and push-in connection.

The figure shows the ELR H5-IES-PT- 24DC/500AC-9 version

### Product Features



### 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 (According to IEC 60947-1)
Voltage range with reference to $U_s$	0.8 ... 1.25
Rated control supply current $I_s$	$\leq 40$ mA
Protective circuit	Protection against polarity reversal
	Surge protection
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

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## Technical data

### Input data

Rated actuating current $I_C$	$\leq 5$ mA
Switching level "safe off"	$< 5$ V DC
Protective circuit	Protection against polarity reversal
Typical response time	$< 35$ ms
Typical turn-off time	$< 40$ ms

### Output data load output

Rated operating voltage $U_e$	500 V AC
Operating voltage range	42 V AC ... 550 V AC
Load current	max. 9 A (see derating curve)
Min. load current	1.5 A
Trigger characteristic in acc. with IEC 60947	Class 10A
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 (at $I_e$ )
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
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)

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## Technical data

### Output data reply output

	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)

### Measuring technology and signaling contact

Measuring via	Current transformer for line current on L1 and L3
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### Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14

### General

Mounting position	Vertical (horizontal DIN rail)
Assembly instructions	Can be aligned with spacing = 20 mm
Operating mode	100% operating factor
Designation	Standards/regulations
Standards/regulations	IEC 60947-1
	EN 60947-4-2
	IEC 61508
	ISO 13849
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated surge voltage	6 kV
Insulation	Safe isolation (EN 50178) for mains voltage ≤ 500 V AC
	Safe isolation (IEC 60947-1) for mains voltage ≤ 300 V AC
	Basic insulation (IEC 60947-1) for mains voltage of 300 ... 500 V AC
Rated insulation voltage	500 V
Pollution degree	2

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## Technical data

### General

Surge voltage category	III
Safety Integrity Level according to IEC 61508	SIL 3 (safe shutdown)
	SIL 2 (motor protection)
Category acc. to EN ISO 13849	3
Performance level according to ISO 13849	e

### Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

### Ambient conditions

Ambient temperature (operation)	5 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Degree of protection	IP20

### UL data

Short-circuit current rating (SCCR)	100 kA (500 V AC (30 A CC/30 A J (high fault) fuse))
	5 kA (500 V AC (20 A RK5 (standard fault) fuse))

## Classifications

### eCl@ss

eCl@ss 5.1	27371601
eCl@ss 6.0	27371601

### ETIM

ETIM 5.0	EC001037
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## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

#### ATEX

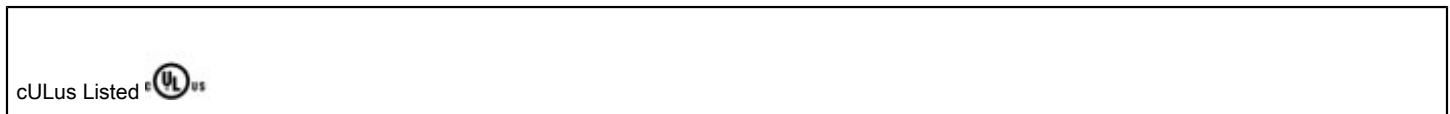
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## Approvals

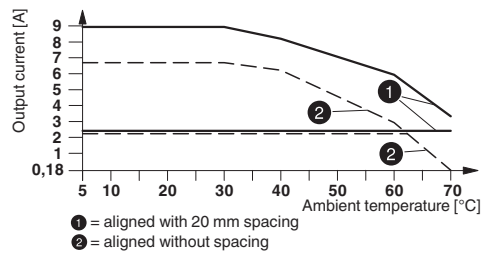
Approvals submitted

### Approval details



## Drawings

Diagram



Derating curve