# imall

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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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, adjustable overload shutdown, and push-in connection.

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

#### **Product Features**

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#### 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 Us	24 V DC (According to IEC 60947-1)
Voltage range with reference to U <sub>s</sub>	0.8 1.25
Rated control supply current Is	$\leq$ 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
Typical input current at $U_N$	$\leq$ 5 mA
Rated control supply current Is	$\leq$ 40 mA (According to IEC 60947-1)

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# Technical data

#### Input data

Rated actuating voltage U <sub>c</sub>	24 V DC
Voltage range with reference to U <sub>c</sub>	0.8 1.25
Rated actuating current I <sub>c</sub>	$\leq$ 5 mA
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 <sub>e</sub>	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
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 <sub>e</sub> )
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)



# 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

Test voltage input/output	4 kV <sub>rms</sub>
Mounting position	Vertical (horizontal DIN rail)
Assembly instructions	can be aligned with spacing: see derating
Operating mode	100% operating factor
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Insulation	Safe isolation (EN 50178) for mains voltage $\leq$ 500 V AC
	Safe isolation (IEC 60947-1) for mains voltage $\leq$ 300 V AC
	Basic insulation (IEC 60947-1) for mains voltage of 300 500 V AC
Pollution degree	2
Surge voltage category	III
Designation	Standards/regulations
Standards/regulations	IEC 60947-1
	EN 60947-4-2

Dimensions



# 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

#### 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 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	27370905

### ETIM

ETIM 3.0	EC000066
ETIM 4.0	EC000066
ETIM 5.0	EC001037

#### UNSPSC

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

# Approvals

#### Approvals



# Approvals

Approvals

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

Ex Approvals

Approvals submitted

Approval details

UL Listed 🖲

cUL Listed 🛞

IECEE CB Scheme

UL Listed 🛞

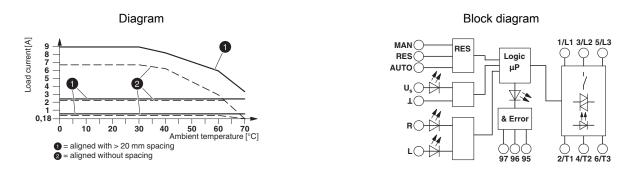
cUL Listed 🚇

cULus Listed

Drawings

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Derating diagram

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