

# ELR H5-IES-PT/500AC-9-IOL - Hybrid motor starter



2908670

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Networkable hybrid motor starter for reversing 3~ AC motors up to 500 V AC and 9 A output current, with adjustable overload shutdown, emergency stop function up to SIL 3/PL e, and Push-in connection. Connection to IO-Link.

## Commercial data

Item number	2908670
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C478
Product key	DK7434
GTIN	4055626321257
Weight per piece (including packing)	306.22 g
Weight per piece (excluding packing)	306.2 g
Customs tariff number	85371098
Country of origin	DE

## Technical data

### Notes

Notes on operation	If this device is to be used in combination with the CrossPowerSystem power distribution board, the device mount for the 16 A fuse (order designation: EM-CPS-DA-22,5F/16A; order number: 1002668) is required in order to attach the hybrid motor starter to the power distribution board.
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### Product properties

Product type	Hybrid motor starters
Product family	CONTACTRON
Operating mode	100% operating factor

### Electrical properties

Number of phases	3
Motor starter type	Reversing starter
Switching frequency	≤ 2 Hz (Load-dependent)
Switching frequency	≤ 2 Hz (Load-dependent)
Maximum power dissipation	7 W
Minimum power dissipation	0.88 W
Coordination type	1

### Supply

Rated control circuit supply voltage $U_S$	24 V DC
Control supply voltage range	19.2 V DC ... 30 V DC
Rated control supply current $I_S$	65 mA
Protective circuit	Surge protection
	Reverse polarity protection; Parallel polarity protection diode

### Supply: IO-Link

Nominal voltage for I/O supply	24 V DC (This supply voltage is provided via the IO-Link interface of the IO-Link master.)
Current consumption	typ. 65 mA ±15 % (24 V DC)
	max. 150 mA
Protective circuit	Reverse polarity protection
	Short-circuit protection
	Overload protection

### Insulation characteristics

Rated insulation voltage	550 V
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	2
Insulation characteristics between the control input and control supply voltage, and auxiliary circuit to the main circuit	Safe isolation (IEC 60947-1)

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Isolation characteristics between the control input and control supply voltage to auxiliary circuit	Safe isolation (IEC 60947-1) in the auxiliary circuit $\leq 300$ V AC
	Safe isolation (EN 50178) in the auxiliary circuit $\leq 300$ V AC
Emergency tripping	
Operate threshold	> 60 A
Response time	< 0.5 s

## Input data

### Control

Input name	Enable input
Rated actuating voltage $U_C$	24 V DC
Triggering voltage range	19.2 V DC ... 30 V DC
Rated actuating current $I_C$	7 mA
Switching threshold	9.6 V ("0" signal)
	19.2 V ("1" signal)
Switching level	< 5 V DC (For EMERGENCY STOP)
Typical turn-off time	< 30 ms

### IO-Link

Number of ports	1
Connection method	COMBICON
Connection technology	3-conductor
Specification	V1.1.1
Reverse polarity protection	yes
Cycle Time	30 ms
Amount of process data	8 Byte (Input data)
	2 Byte (Output data)

## Output data

### AC output

Rated operating voltage $U_e$	500 V AC
Operating voltage range	42 V AC ... 550 V AC
Rated operating current $I_e$	9 A (AC-51)
	7 A (AC-53a)
Mains frequency	50/60 Hz
Load current range	1.5 A ... 9 A (see to derating)
Trigger characteristic in acc. with IEC 60947-4-2	Class 10A
Cooling time	20 min (for auto reset)
Leakage current	0 mA
Protective circuit	Surge protection; Varistor

## Connection data

### Control circuits

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

## Load circuit

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

## Signaling

Status display	LED (yellow)
Operating voltage display	Green LED
Error indication	Red LED

## Dimensions

Width	22.5 mm
Height	127 mm
Depth	114 mm

## Material specifications

Flammability rating according to UL 94 (Housing)	V0 (Housing)
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-5 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m

## Approvals

### UL approval

Certificate	NLDX.E228652
	NRNT.E172140

### Safety Integrity Level (SIL, IEC 61508)

Identification	≤ 3
Note	Safe shutdown

### Performance Level (ISO 13849)

Identification	e
Note	Safe shutdown

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## Category (ISO 13849)

Identification	≤ 3
Note	Safe shutdown

## UL data

SCCR	100 kA (480 V AC (fuse: 30 A class CC/30 A class J (high fault)))
	5 kA (480 V AC (fuse: 20 A RK5 (standard fault)))
FLA	7.6 A (480 V AC)
Group installation	20 A (class RK5, SCCR 5kA (480 V AC), #24 - 14 AWG max. solid and stranded)
	30 A (class CC or J, SCCR 100kA (480 V AC), #24 - 14 AWG max. solid and stranded)
Category code	NLDX / NRNT
Horsepower ratings	2 hp (208 V AC)
	2 hp (230 V AC)
	2 hp (240 V AC)
	5 hp (480 V AC)

## Standards and regulations

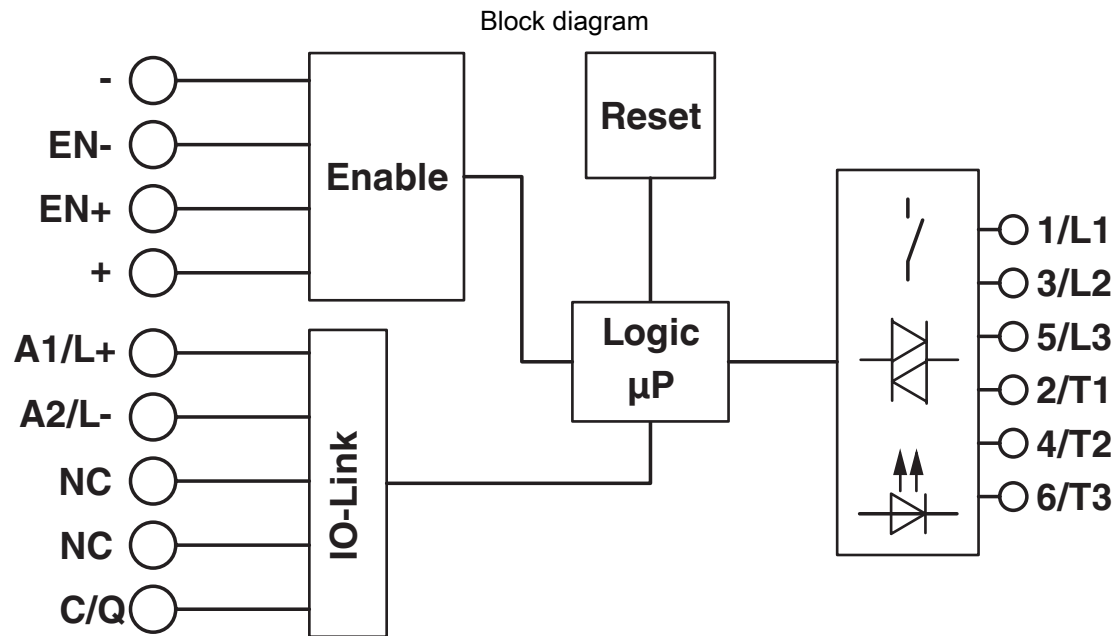
### Standards/regulations

Standards/regulations	IEC 60947-1
	EN 60947-4-2
	IEC 61508
	ISO 13849

## Mounting

Mounting type	DIN rail mounting
Assembly note	alignable, for spacing see derating
Mounting position	vertical (horizontal DIN rail, motor output below)

Drawings



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2908670>



### IECEE CB Scheme

Approval ID: CB-DE1-60807-A1



### EAC

Approval ID: RU\*C-DE.\*08.B.00520\*



### UL Listed

Approval ID: FILE E 172140



### CCC

Approval ID: 2016010304900298



### cUL Listed

Approval ID: FILE E 172140



### cUL Listed

Approval ID: E228652



### UL Listed

Approval ID: E228652



### VDE Zeichengenehmigung

Approval ID: 40054426

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## Classifications

### ECLASS

ECLASS-13.0	27370905
ECLASS-15.0	27370905
ECLASS-15.0 ASSET	27250101

### ETIM

ETIM 10.0	EC001037
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### UNSPSC

UNSPSC 21.0	25173900
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	c52f9e6d-ee2e-4709-9328-25d69c028332

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)