

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



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626321257

## Technical data

### Note

Type of note	Notes on operation
Note	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.

### Dimensions

Width	22.5 mm
Height	127 mm
Depth	114 mm

### Ambient conditions

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

### Device supply

Rated control circuit supply voltage U <sub>s</sub>	24 V DC
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## Technical data

### Device supply

Control supply voltage range	19.2 V DC ... 30 V DC
Rated control supply current $I_s$	65 mA
Type of protection	Surge protection
	Reverse polarity protection

### Input data

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

### Output data load output

Output name	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
Type of protection	Surge protection

### Overspeed tripping

Operate threshold	> 60 A
Response time	< 0.5 s

### General

Motor starter type	Reversing starter
Switching frequency	$\leq 2$ Hz (Load-dependent)
Mounting position	vertical (horizontal DIN rail, motor output below)
Mounting type	DIN rail mounting
Assembly instructions	alignable, for spacing see derating
Operating mode	100% operating factor
Maximum power dissipation	7 W
Minimum power dissipation	0.88 W
Operating voltage display	Green LED
Status display	Yellow LED

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## Technical data

### General

Indication	Red LED
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### Connection data

Connection name	Control circuits
Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section solid	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

### Connection data 2

Connection name	Load circuit
Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section solid	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

### Insulation characteristics

Rated insulation voltage	550 V
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	2
Designation	Insulation characteristics between the control input and control supply voltage, and auxiliary circuit to the main circuit
Insulation	Safe isolation (IEC 60947-1)
Designation	Isolation characteristics between the control input and control supply voltage to auxiliary circuit
Insulation	Safe isolation (IEC 60947-1) in the auxiliary circuit ≤ 300 V AC
	Safe isolation (EN 50178) in the auxiliary circuit ≤ 300 V AC

### Standards and Regulations

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

### Conformance/approvals

Designation	UL approval
Certificate	NLDX.E228652
	NRNT.E172140
Designation	Safety Integrity Level (SIL, IEC 61508)
Identification	≤ 3

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## Technical data

### Conformance/approvals

Additional text	Safe shutdown
Designation	Performance Level (ISO 13849)
Identification	e
Additional text	Safe shutdown
Designation	Category (ISO 13849)
Identification	≤ 3
Additional text	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)

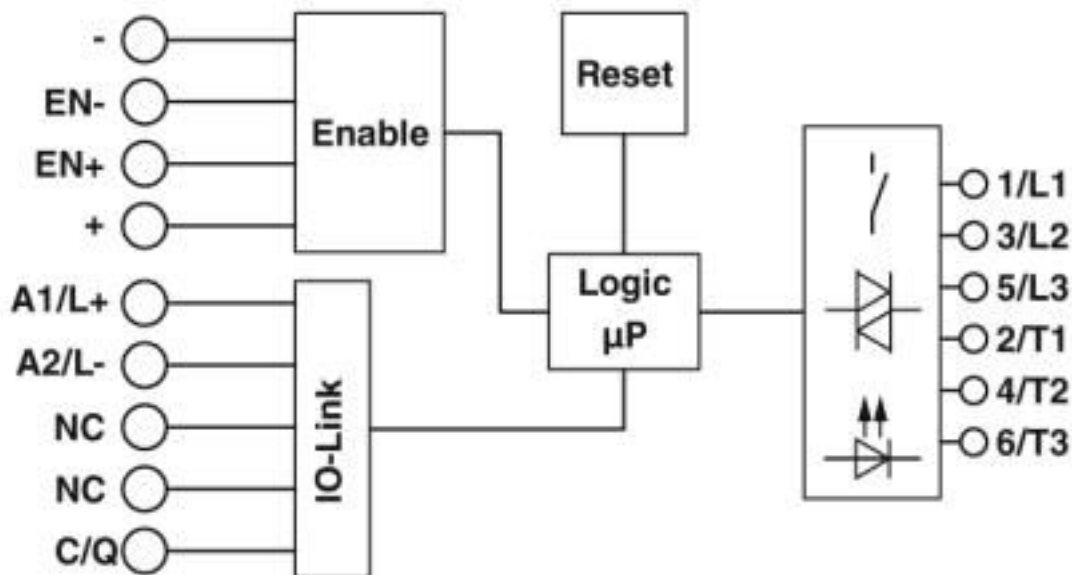
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

# Hybrid motor starter - ELR H5-IES-PT/500AC-9-IOL - 2908670

Block diagram



## Classifications

eCl@ss

eCl@ss 10.0.1	27370905
eCl@ss 11.0	27370905
eCl@ss 4.0	27021100
eCl@ss 4.1	27021100
eCl@ss 5.0	27024000
eCl@ss 5.1	27024000
eCl@ss 6.0	27024000
eCl@ss 7.0	27024002
eCl@ss 8.0	27024002
eCl@ss 9.0	27370905

## ETIM

ETIM 2.0	EC001037
ETIM 3.0	EC001037
ETIM 4.0	EC001037
ETIM 5.0	EC001037
ETIM 6.0	EC001037
ETIM 7.0	EC001037

## UNSPSC

UNSPSC 6.01	30211915
UNSPSC 7.0901	39121514
UNSPSC 11	39121514

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## Classifications

### UNSPSC

UNSPSC 12.01	39121514
UNSPSC 13.2	25173902
UNSPSC 18.0	25173902
UNSPSC 19.0	25173902
UNSPSC 20.0	25173902
UNSPSC 21.0	25173902

## Approvals


### Approvals

#### Approvals

IECEE CB Scheme / UL Listed / cUL Listed / UL Listed / IECEE CB Scheme / cUL Listed / CCC / EAC

#### Ex Approvals


### Approval details

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60164
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 228652
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 228652
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60807
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## Approvals

cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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CCC			2016010304900298
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EAC			RU*C- DE.*08.B.00520*
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## Accessories

### Accessories

#### Adapter

Adapter - EM-CPS-DA-22,5F/16A - 1002668



Device adapter with fuse holder for 16 A fuse (10x38/Class CC), CrossLink<sup>®</sup> interface and fixed DIN rail

#### Assembly adapter

Power distribution board - EM-CPS-225 - 1002634



Modular power distribution board with CrossLink<sup>®</sup> interface, 125 A, 3-pos., touch-proof and protection against polarity reversal, width: 225 mm

Power distribution board - EM-CPS-405 - 1002635



Modular power distribution board with CrossLink<sup>®</sup> interface, 125 A, 3-pos., touch-proof and protection against polarity reversal, width: 405 mm

# Hybrid motor starter - ELR H5-IES-PT/500AC-9-IOL - 2908670

## Accessories

Connection module - EM-CPS-TB3/63A - 1002633



Connection module with integrated spring-loaded terminals for cables from 1.5 to 16 mm<sup>2</sup>, 3-pos., maximum 63 A

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## Cover

Covering hood - BRIDGE COVER - 2906240



The BRIDGE COVER covering hood is used to cover unused plugs on the CONTACTRON bridge that may subsequently be used to extend the system. The hood can be used with the screw and Push-in version of the bridge.

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## Loop bridge

Jumper - BRIDGE-PT 1 - 1161777



3-phase loop bridge for 1 CONTACTRON module, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 2 - 2904490



3-phase loop bridge for 2 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 3 - 2904491



3-phase loop bridge for 3 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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### Accessories

Jumper - BRIDGE-PT 4 - 2904492



3-phase loop bridge for 4 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 5 - 2904493



3-phase loop bridge for 5 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 6 - 2904494



3-phase loop bridge for 6 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 7 - 2904495



3-phase loop bridge for 7 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 8 - 2904496



3-phase loop bridge for 8 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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## Hybrid motor starter - ELR H5-IES-PT/500AC-9-IOL - 2908670

### Accessories

Jumper - BRIDGE-PT 9 - 2904497



3-phase loop bridge for 9 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 10 - 2904498



3-phase loop bridge for 10 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 3 m

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Jumper - BRIDGE-PT 1-1M - 1161778



3-phase loop bridge for 1 CONTACTRON module, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m

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Jumper - BRIDGE-PT-2-1M - 1049407



3-phase loop bridge for 2 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m

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Jumper - BRIDGE-PT-3-1M - 1049408



3-phase loop bridge for 3 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m

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## Hybrid motor starter - ELR H5-IES-PT/500AC-9-IOL - 2908670

### Accessories

Jumper - BRIDGE-PT-4-1M - 1049409



3-phase loop bridge for 4 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m

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Jumper - BRIDGE-PT-5-1M - 1049413



3-phase loop bridge for 5 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, connecting cable: 1 m

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Jumper - BRIDGE-PT-2-2M/0,3M - 1107649



3-phase loop bridge for 2 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, cable length between the modules: 0.3 m, connecting cable: 2 m

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Jumper - BRIDGE-PT-3-2M/0,3M - 1107650



3-phase loop bridge for 3 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, cable length between the modules: 0.3 m, connecting cable: 2 m

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Jumper - BRIDGE-PT-4-2M/0,3M - 1107644



3-phase loop bridge for 4 CONTACTRON modules, with Push-in connection and 22.5 mm housing width, cable length between the modules: 0.3 m, connecting cable: 2 m

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