

# Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Hybrid motor starter for starting 3~ AC motors up to 500 V AC and 9 A output current, with 24 V DC control voltage, adjustable overload shutdown, and push-in connection.



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356771672
Weight per Piece (excluding packing)	217.700 g
Custom tariff number	85371098
Country of origin	Germany

## Technical data

### Dimensions

Width	22.5 mm
Height	107.5 mm
Depth	114 mm

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 70 °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 $U_s$	24 V DC
Control supply voltage range	19.2 V DC ... 30 V DC
Rated control supply current $I_s$	40 mA
Type of protection	Surge protection
	Reverse polarity protection

# Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

## Technical data

### Input data

Input name	Control input
Rated actuating voltage $U_c$	24 V DC
Triggering voltage range	19.2 V DC ... 30 V DC
Rated actuating current $I_c$	5 mA (Input type 1)
Switching threshold	9.6 V ("0" signal)
	19.2 V ("1" signal)
Typical turn-off time	< 30 ms
Type of protection	Reverse polarity protection

### 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)
	6.5 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

### Output data reply output

Output name	Acknowledge output
Note	Confirmation: floating change-over contact, signal contact
Contact type	1 PDT
Switching capacity according to IEC 60947-5-1	3 A (230 V, AC15)
	2 A (24 V, DC13)

### Overspeed tripping

Operate threshold	> 45 A
Response time	2 s

### General

Motor starter type	Direct 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	14.6 W
Minimum power dissipation	1.1 W
Operating voltage display	Green LED

# Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

## Technical data

### General

Status display	Yellow LED
Indication	Red LED

### 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	500 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) at operating voltage ≤ 300 V AC (e.g., 230/400 V AC, 277/480 V AC)
	Safe isolation (EN 50178) at operating voltage ≤ 300 V A (e.g., 230/400 V AC, 277/480 V AC)
	Basic isolation (IEC 60947-1) at operating voltage 300 ... 500 V AC
	Safe isolation (EN 50178) at operating voltage 300 ... 500 V AC
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
	IEC 60947-4-2
	IEC 61508
	ISO 13849

### Conformance/approvals

# Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

## Technical data

### Conformance/approvals

Designation	UL approval
Certificate	NLDX.E228652

### UL data

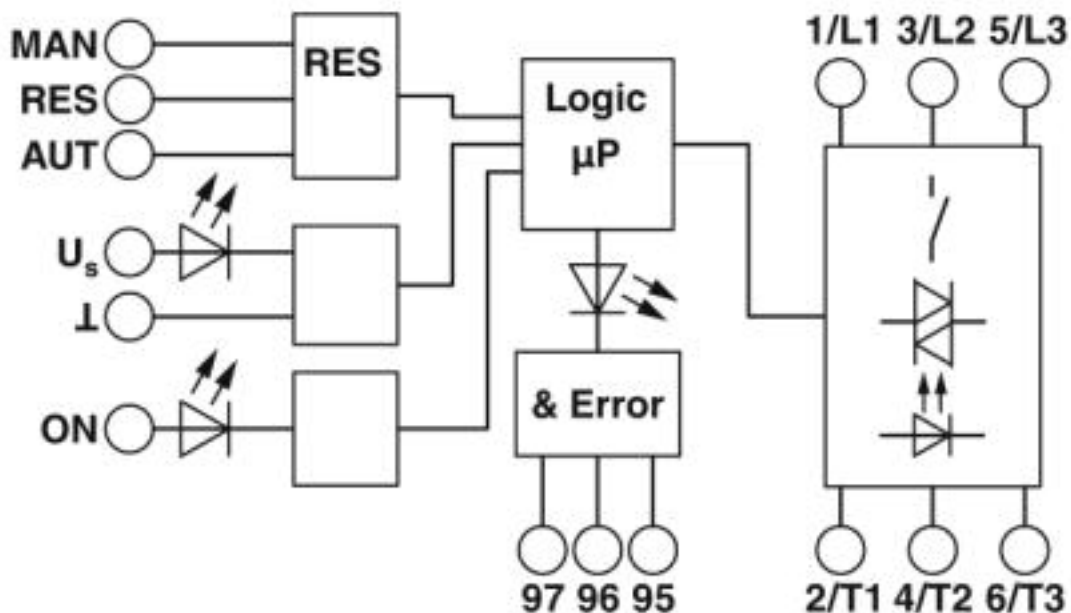
SCCR	100 kA (500 V AC (fuse: 30 A class CC/30 A class J (high fault)))
	5 kA (500 V AC (fuse: 20 A RK5 (standard fault)))
FLA	6.5 A (500 V AC)
Group installation	20 A (class RK5, SCCR 5kA, #24 - 14 AWG max. solid and stranded)
	30 A (class CC or J, SCCR 100kA, #24 - 14 AWG max, solid and stranded)
Category code	NLDX / NRNT

### Environmental Product Compliance

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

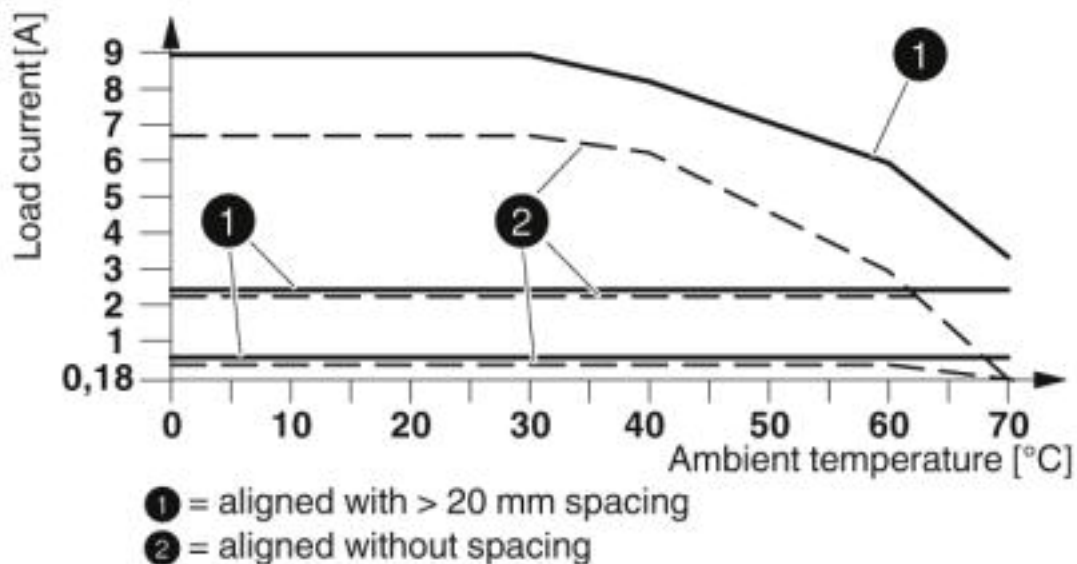
## Drawings

Block diagram



# Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

Diagram



Derating diagram

## Classifications

eCl@ss

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
UNSPSC 12.01	39121514

# Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

## Classifications

### UNSPSC

UNSPSC 13.2	25173902
UNSPSC 18.0	25173902
UNSPSC 19.0	25173902
UNSPSC 20.0	25173902
UNSPSC 21.0	25173902

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / UL Listed / IECCEB Scheme / cUL Listed / CCC / EAC


#### Ex Approvals

### Approval details

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
-----------	---	---	---------------

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
------------	---	---	---------------

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 323771
-----------	---	---	---------------

IECCEB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-55728
---------------	---	---	-----------

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 323771
------------	---	---	---------------

CCC			2016010304871315
-----	---	--	------------------

# Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

## Approvals

EAC		RU C- DE.A*30.B.01082
-----	---	--------------------------

## Accessories

### Accessories

#### Adapter

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



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

#### Assembly adapter

Power distribution board - EM-CPS-225 - 1002634



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

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

#### Cover

## Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

### Accessories

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.

---

### Device marking

Plastic label - US-EMLP (15X5) - 0828790



Plastic label, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Plastic label - UC-EMLP (15X5) - 0819301



Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

---

### Loop bridge

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, with ferrules included.

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, with ferrules included.



## Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

### 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, with ferrules included.

---

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, with ferrules included.

---

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, with ferrules included.

---

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, with ferrules included.

---

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, with ferrules included.

---

## Hybrid motor starter - ELR H3-I-PT- 24DC/500AC-9 - 2903924

### 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, with ferrules included.

---

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, with ferrules included.

---

---