

# ELR H3-I-PT- 24DC/500AC-0,6 - Hybrid motor starter



2903920

<https://www.phoenixcontact.com/us/products/2903920>

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Hybrid motor starter for starting 3~ AC motors up to 500 V AC and 0.6 A output current, with 24 V DC control voltage, adjustable overload shutdown, and push-in connection.

## Commercial data

Item number	2903920
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C470
Product key	CK7421
Catalog page	Page 35 (C-5-2019)
GTIN	4046356771436
Weight per piece (including packing)	275.1 g
Weight per piece (excluding packing)	217.7 g
Customs tariff number	85371098
Country of origin	DE

## Technical data

### Product properties

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

### Electrical properties

Number of phases	3
Motor starter type	Direct starter
Maximum power dissipation for nominal condition	0.4 W
Switching frequency	≤ 2 Hz (Load-dependent)
Maximum power dissipation	1.5 W
Minimum power dissipation	1.1 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 $I_S$	40 mA
Protective circuit	Surge protection
	Reverse polarity protection

### Insulation characteristics

Rated insulation voltage	500 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) at operating voltage ≤ 300 V AC (e. g., 230/400 V AC, 277/480 V AC)
	Basic insulation (IEC 60947-1) at operating voltage 300 V AC ... 500 V AC
Isolation characteristics between the control input and control supply voltage to auxiliary circuit	Safe isolation (IEC 60947-1) in the auxiliary circuit ≤ 300 V AC

### Input data

#### Control

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
Protective circuit	Reverse polarity protection

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## Output data

### AC output

Rated operating voltage $U_e$	500 V AC
Operating voltage range	42 V AC ... 550 V AC
Rated operating current $I_e$	0.6 A (AC-51) 0.6 A (AC-53a)
Mains frequency	50/60 Hz
Load current range	75 mA ... 600 mA (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

### Acknowledge output

Note	Confirmation: floating change-over contact, signal contact
Contact switching type	1 changeover contact
Switching capacity in accordance with IEC 60947-5-1	3 A (230 V, AC15) 2 A (24 V, DC13)

## Connection data

### Control circuits

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

### 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	Yellow LED
Operating voltage display	Green LED
Error indication	Red LED

## Dimensions

Width	22.5 mm
Height	107.5 mm
Depth	114 mm

## Material specifications

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

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m

## Approvals

### UKCA

Certificate	UKCA-compliant
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### UL approval

Certificate	NLDX.E228652
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### 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	0.6 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

## Standards and regulations

### Standards/regulations

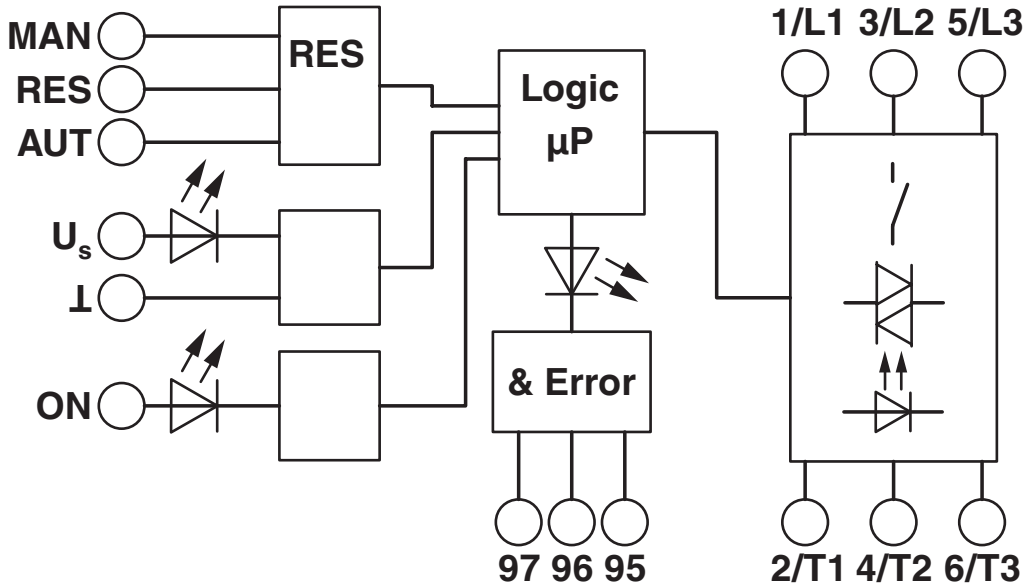
Standards/regulations	IEC 60947-1
	IEC 60947-4-2

## Mounting

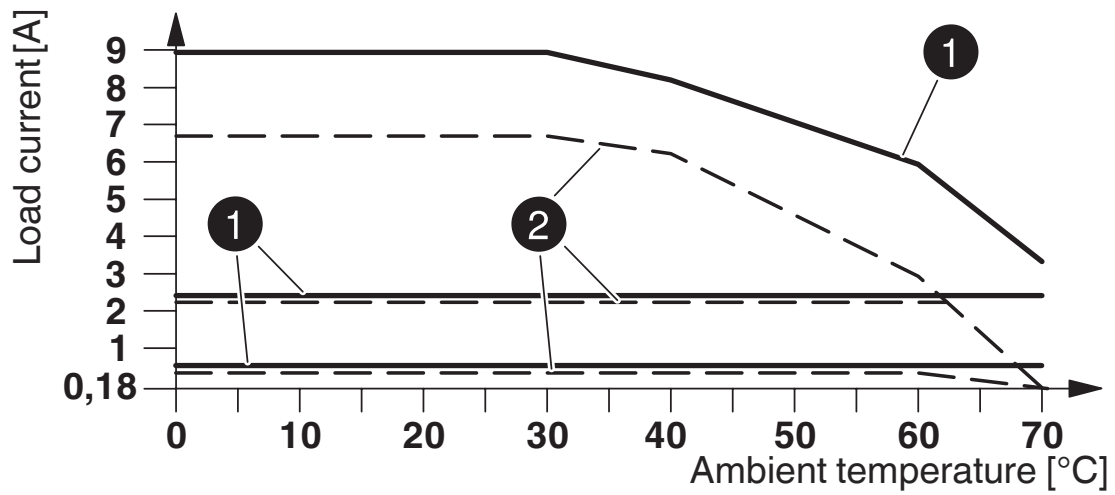
Mounting type	DIN rail mounting
Assembly note	alignable, for spacing see derating
Mounting position	vertical (horizontal DIN rail, motor output below)

Drawings

Block diagram



Diagram



- ① = aligned with > 20 mm spacing
- ② = aligned without spacing

Derating diagram

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2903920>



**IECEE CB Scheme**

Approval ID: DE1-55728



**EAC**

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



**UL Listed**

Approval ID: FILE E 323771



**CCC**

Approval ID: 2016010304871315



**cUL Listed**

Approval ID: FILE E 323771



**cUL Listed**

Approval ID: FILE E 228652



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## Classifications

### ECLASS

ECLASS-11.0	27370905
ECLASS-12.0	27370905
ECLASS-13.0	27370905

### ETIM

ETIM 9.0	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	828fb937-38d9-42e4-88bf-eb49fb58bbf1



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## Accessories

### BRIDGE-PT 1 - Bridge

1161777

<https://www.phoenixcontact.com/us/products/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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### BRIDGE-PT 2 - Bridge

2904490

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 3 - Bridge

2904491

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 4 - Bridge

2904492

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 5 - Bridge

2904493

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 6 - Bridge

2904494

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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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## BRIDGE-PT 7 - Bridge

2904495

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 8 - Bridge

2904496

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 9 - Bridge

2904497

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 10 - Bridge

2904498

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT 1-1M - Bridge

1161778

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT-2-1M - Bridge

1049407

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT-3-1M - Bridge

1049408

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT-4-1M - Bridge

1049409

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT-5-1M - Bridge

1049413

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT-2-2M/0,3M - Bridge

1107649

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT-3-2M/0,3M - Bridge

1107650

<https://www.phoenixcontact.com/us/products/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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## BRIDGE-PT-4-2M/0,3M - Bridge

1107644

<https://www.phoenixcontact.com/us/products/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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## US-EMLP (15X5) - Plastic label

0828790

<https://www.phoenixcontact.com/us/products/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

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

0819301

<https://www.phoenixcontact.com/us/products/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

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## EM-CPS-225 - Power distribution board

1002634

<https://www.phoenixcontact.com/us/products/1002634>



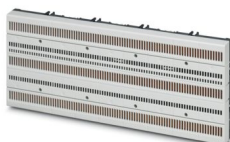
Modular power distribution board with CrossLink<sup>®</sup> interface, 125 A, 3-pos., touch-proof and protection against polarity reversal, width: 225 mm

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## EM-CPS-405 - Power distribution board

1002635

<https://www.phoenixcontact.com/us/products/1002635>



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

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

1002633

<https://www.phoenixcontact.com/us/products/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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## EM-CPS-DA-22,5F/16A - Adapter

1002668

<https://www.phoenixcontact.com/us/products/1002668>



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

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