

ELR H5-I-PT- 24DC/500AC-9-P - Hybrid motor starter



2909560

<https://www.phoenixcontact.com/us/products/2909560>

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Hybrid motor starter as an alternative to a conventional reversing contactor. Reverses 3~ AC motors up to 9 A and offers motor protection. Possible supply and relay extension via DIN rail connector.

Product description

The modular 3-phase hybrid motor starter with reversing function and current monitoring provides the following functions: - Forward running - Reverse running - Motor overload protection Additional advantages are provided by using the DIN rail connector adapter (Item No. 2203861): - Power can also be supplied via the DIN rail connector by a system power supply (e. g., QUINT4-SYS...) or via the PCB connector IMC 1,5/ 5-ST-3,81, Item No. 1857919 - Optional relay module (e. g., EM-2RSC/21AU-R/L-P, Item No. 2908701) provides additional status information Thanks to the internal interlocking circuit and load wiring, wiring expense is reduced to a minimum.

Commercial data

Item number	2909560
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C470
Product key	DK7484
GTIN	4055626406602
Weight per piece (including packing)	260 g
Weight per piece (excluding packing)	306 g
Customs tariff number	85371098
Country of origin	DE

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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	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	60 mA
Protective circuit	Surge protection Reverse polarity protection; Parallel polarity protection diode

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)
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

Emergency tripping

Operate threshold	> 60 A
Response time	< 0.5 s

Input data

Control

Input name	Control input right/left
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)

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Typical turn-off time	< 30 ms
Protective circuit	Reverse polarity protection

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
Trigger characteristic in acc. with IEC 60947-4-2	Class 10 (≤ 3 A)
	Class 10A (> 3 A)
Cooling time	20 min (for auto reset)
Leakage current	0 mA
Protective circuit	Surge protection; Varistor

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	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 ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 14

Load circuit

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
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
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Height	107.5 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)	-25 °C ... 70 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m

Approvals

UL approval

Certificate	NLDX.E228652
	NRNT.E172140

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)
Ambient temperature (operation)	-25 °C ... 55 °C

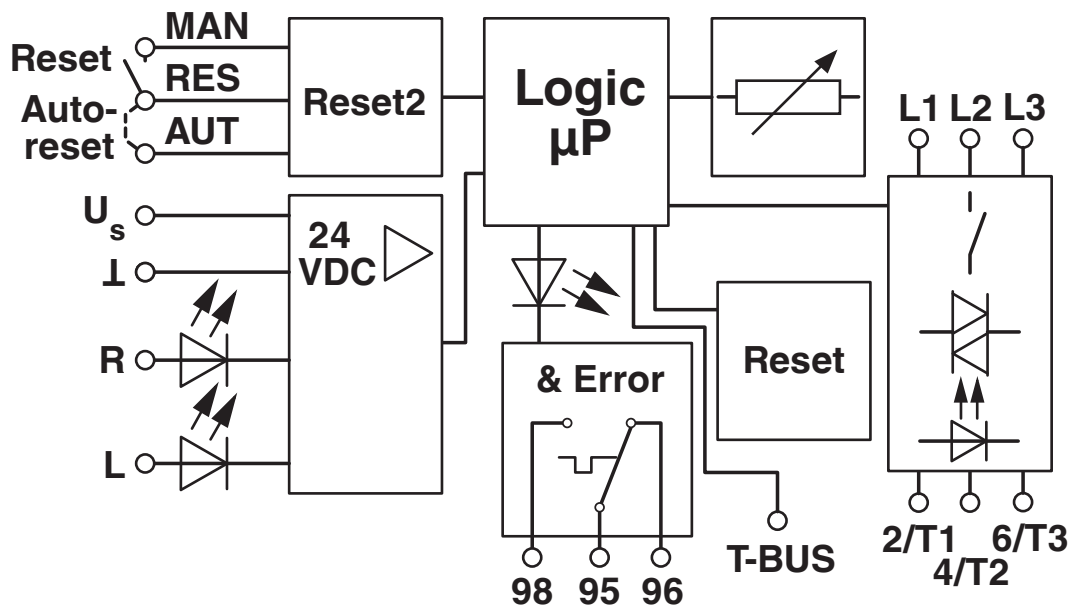
Standards and regulations

Standards/regulations

Standards/regulations	EN 60947-1
	EN 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)



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Approvals

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IECEE CB Scheme

Approval ID: CB-DE1-60807-A1



EAC

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



DNV GL

Approval ID: TAA00002HK



UL Listed

Approval ID: FILE E 172140



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

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	b1b3cd68-1843-4b11-be55-777a92e5c2c4

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