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Hybrid motor starter - ELR H5-IES-SC/500AC-3-IFS - 2905152

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Networkable hybrid motor starter for reversing 3~ AC motors up to 500 V AC, and 3 A output current, with adjustable overload shutdown, emergency stop function up to SIL 3/PL e, and screw connection, DIN rail connector provided.

Figure shows the 9 A version with push-in connection

Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 920339

Technical data

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-5 °C ... 60 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
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	60 mA
Protective circuit	Protection against polarity reversal Parallel polarity protection diode
	Surge protection

Input data

Input name	Enable input
Note	The enable input is compatible with signals with blanking (semiconductor output signals with test pulse with max. 3 ms duration), unblanking pulses of max. 4 ms are tolerated without adversely affecting the safety function.
Rated actuating voltage U_c	24 V DC

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Technical data

Input data

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)
Protective circuit	Protection against polarity reversal
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
Mains frequency	50 Hz 60 Hz
Load current range	180 mA ... 3 A (see to derating)
Trigger characteristic in acc. with IEC 60947	Class 10
Cooling time	20 min. (for auto reset)
Rated operating current at AC-51	3 A
Rated operating current at AC-53a	3 A
Leakage current	0 mA
Protective circuit	Surge protection Varistor

Overspeed tripping

Operate threshold	> 33 A
Response time	< 0.5 s

General

Switching frequency	≤ 2 Hz (Load-dependent)
Mounting position	vertical (horizontal DIN rail, motor output below)
Assembly instructions	alignable, for spacing see derating
Operating mode	100% operating factor
Maximum power dissipation	4.1 W
Minimum power dissipation	0.88 W
Operating voltage display	Green LED
Status display	Yellow LED
Indication	Red LED

Connection data, input side

Connection name	Control circuits
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²

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Connection data, input side

Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14
Torque	0.5 Nm ... 0.6 Nm (5-7 lbs-in)

Connection data, output side

Connection name	Load circuit
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	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
Torque	0.5 Nm ... 0.6 Nm (5-7 lbs-in)

Standards/regulations

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

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

Approvals/conformities

Safety Integrity Level according to IEC 61508	SIL 3 (safe shutdown)
	SIL 2 (motor protection)
Category acc. to EN ISO 13849	3 (Safe shutdown)
Performance level according to ISO 13849	e (Safe shutdown)
ATEX	# II (2) G [Ex e] [Ex d] [Ex px]
	# II (2) D [Ex t] [Ex p]
EU type-examination certificate	PTB 15 ATEX 3000

UL data

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Technical data

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	3 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	0.5 hp (120 V AC / 208 V AC)
	1.5 hp (277 V AC / 480 V AC)

Standards and Regulations

Designation	Standards/regulations
Standards/regulations	IEC 60947-1
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	ISO 13849
ATEX	# II (2) G [Ex e] [Ex d] [Ex px]
	# II (2) D [Ex t] [Ex p]

Classifications

eCl@ss

eCl@ss 5.1	27371601
eCl@ss 6.0	27371601
eCl@ss 8.0	27370905

ETIM

ETIM 5.0	EC002055
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Approvals

Approvals

Approvals

UL Listed / UL Listed / cUL Listed / cUL Listed / cULus Listed

Ex Approvals

Approvals submitted

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Approvals

Approval details

UL Listed

UL Listed

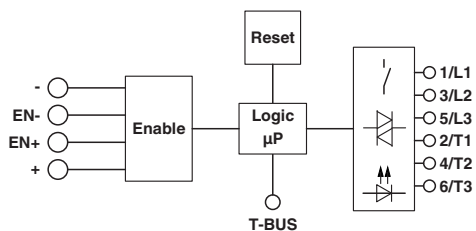
cUL Listed

cUL Listed

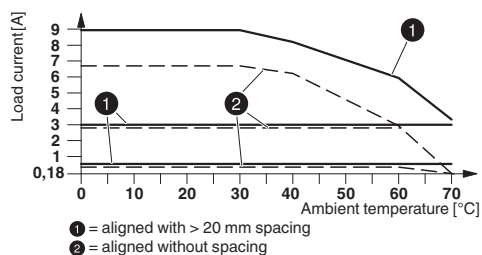
cULus Listed

Drawings

Block diagram



Diagram



Derating diagram

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PHOENIX CONTACT GmbH & Co. KG
Flachmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>



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Product	Code	Reference	Product link
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