

ELR H51-IES-24DC500AC-3-IOL - Hybrid motor starter



1151617

<https://www.phoenixcontact.com/us/products/1151617>

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 documentation. Our general terms of use for downloads are valid.



Hybrid motor starter; functions: start motor, reverse motor, motor protection, emergency stop, network capable, short-circuit protection; input: 24 V DC; output: 3~, 500 V AC, 3 A; connection method: screw and Push-in connection; connection to the IO-Link system

Commercial data

Item number	1151617
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C470
Product key	DK7456
GTIN	4063151150037
Weight per piece (including packing)	487.1 g
Weight per piece (excluding packing)	331 g
Customs tariff number	85371098
Country of origin	DE

1151617

<https://www.phoenixcontact.com/us/products/1151617>

Technical data

Product properties

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

Insulation characteristics: Standards/regulations

Pollution degree	2
------------------	---

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	4.1 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	65 mA
Protective circuit	Surge protection Reverse polarity protection; Parallel polarity protection diode

Supply: IO-Link

Nominal voltage for I/O supply	24 V DC (This supply voltage is provided via the IO-Link interface of the IO-Link master.)
Current consumption	typ. 65 mA ± 15 % (24 V DC) max. 150 mA
Protective circuit	Reverse polarity protection Short-circuit protection Overload protection

Insulation characteristics

Rated insulation voltage	550 V
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	2
Insulation characteristics between control input voltage and control supply voltage to main circuit	Safe isolation (IEC 60947-1)

Emergency tripping

Operate threshold	> 33 A
Response time	< 0.5 s

Input data

Control

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

IO-Link

Number of ports	1
Connection method	COMBICON
Connection technology	3-conductor
Specification	V1.1.1
Reverse polarity protection	yes
Cycle Time	30 ms
Amount of process data	8 Byte (Input data)
	2 Byte (Output data)

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	3 A (AC-51)
	3 A (AC-53a)
Mains frequency	50/60 Hz
Load current range	180 mA ... 3 A (see to derating)
Trigger characteristic in acc. with IEC 60947-4-2	Class 10
Cooling time	20 min (for auto reset)
Leakage current	0 mA
Protective circuit	Surge protection; Varistor

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

1151617

<https://www.phoenixcontact.com/us/products/1151617>

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
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
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb _f -in. ... 7 lb _f -in.

Signaling

Status display	LED (yellow)
Operating voltage display	Green LED
Error indication	Red LED

Dimensions

Width	22.5 mm
Height	160 mm
Depth	114.5 mm

Material specifications

Flammability rating according to UL 94 (Housing)	V0 (Housing)
--	--------------

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-5 °C ... 60 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m

Approvals

UKCA

Certificate	UKCA-compliant
-------------	----------------

UL approval

Certificate	NLDX.E228652
	NRNT.E172140

Safety Integrity Level (SIL, IEC 61508)

Identification	≤ 3
Note	Safe shutdown

Performance Level (ISO 13849)

Identification	e
Note	Safe shutdown

1151617

<https://www.phoenixcontact.com/us/products/1151617>

Category (ISO 13849)

Identification	≤ 3
Note	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	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

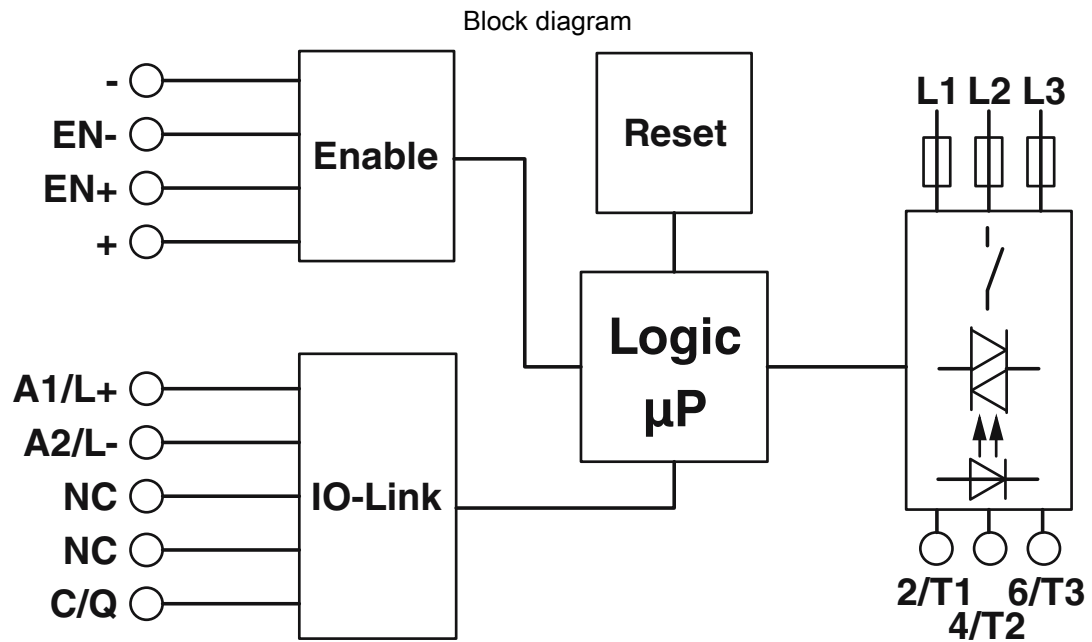
Standards/regulations

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

Mounting

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

Drawings



1151617

<https://www.phoenixcontact.com/us/products/1151617>

Classifications

ECLASS

ECLASS-13.0	27370905
ECLASS-15.0	27370905

ETIM

ETIM 9.0	EC001037
----------	----------

UNSPSC

UNSPSC 21.0	25173900
-------------	----------

1151617

<https://www.phoenixcontact.com/us/products/1151617>

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	6daae9b6-93a2-4416-912d-27e75b05c314

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
 586 Fulling Mill Road
 Middletown, PA 17057, United States
 (+717) 944-1300
info@phoenixcon.com