

# ELR H51-IES-24DC500AC-3-IFS - Hybrid motor starter



1151618

<https://www.phoenixcontact.com/us/products/1151618>

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 Interface system

## Commercial data

Item number	1151618
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C470
Product key	DK7456
GTIN	4063151149079
Weight per piece (including packing)	380 g
Weight per piece (excluding packing)	350 g
Customs tariff number	85371098
Country of origin	DE

1151618

<https://www.phoenixcontact.com/us/products/1151618>

## 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)
Maximum power dissipation for nominal condition	2.5 W
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 $I_S$	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 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
------------	--------------

1151618

<https://www.phoenixcontact.com/us/products/1151618>

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
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
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 $I_e$	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 <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	Screw connection
Stripping length	8 mm
Screw thread	M3
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
Tightening torque	0.5 Nm ... 0.6 Nm
	5 lb <sub>F</sub> -in. ... 7 lb <sub>F</sub> -in.

1151618

<https://www.phoenixcontact.com/us/products/1151618>

## 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

### Category (ISO 13849)

Identification	≤ 3
Note	Safe shutdown

### 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

### 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)

# ELR H51-IES-24DC500AC-3-IFS - Hybrid motor starter



1151618

<https://www.phoenixcontact.com/us/products/1151618>

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)

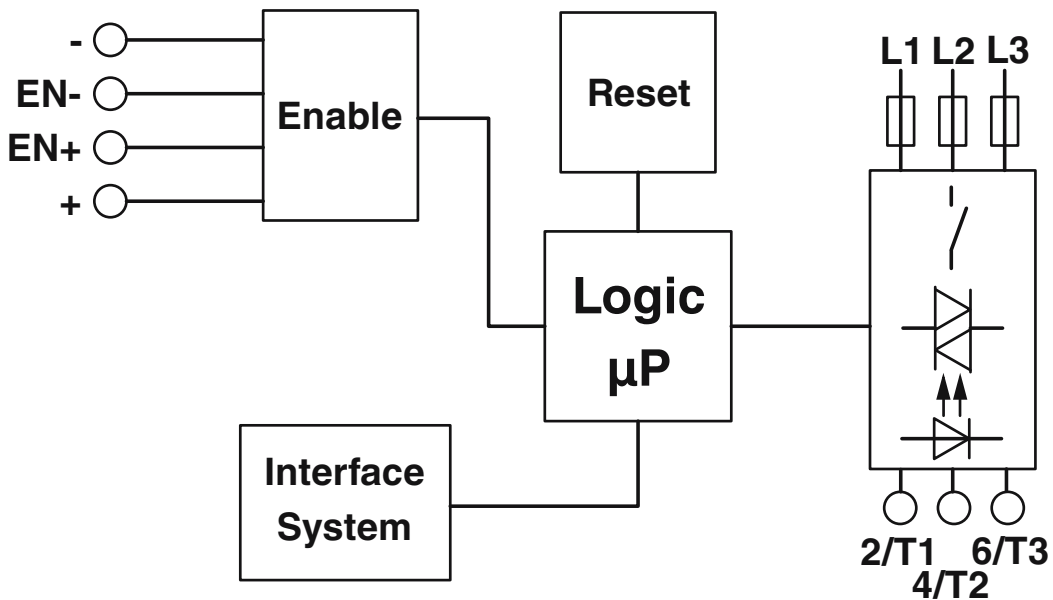
Drawings

Diagram



Derating diagram

Block diagram



1151618

<https://www.phoenixcontact.com/us/products/1151618>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1151618>



**UL Listed**

Approval ID: FILE E 172140



**cUL Listed**

Approval ID: FILE E 172140



**cUL Listed**

Approval ID: E228652



**UL Listed**

Approval ID: E228652

1151618

<https://www.phoenixcontact.com/us/products/1151618>

## Classifications

### ECLASS

ECLASS-13.0	27370905
ECLASS-15.0	27370905

### ETIM

ETIM 10.0	EC001037
-----------	----------

### UNSPSC

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

1151618

<https://www.phoenixcontact.com/us/products/1151618>

## 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	d819ae02-79a0-4dc0-b2d2-b41f08574493

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](mailto:info@phoenixcon.com)