

Hybrid motor starter - ELR H5-IES-SC-SWD/500AC-9 - 2903118

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Hybrid motor starter for reversing 3~ AC motors up to 550 V AC, 9 A output current, adjustable overload shutdown and safe emergency stop up to PLe/SIL 3 and SmartWire-DT™ adapter as a set.

Your advantages

- ✓ 22.5 mm wide
- ✓ Safety level according to IEC 61508-1: SIL 3, ISO 13849: PL e
- ✓ Reduction in wiring
- ✓ Long service life
- ✓ Space saving
- ✓ Adjustable current for bimetal function
- ✓ Low-wear switching



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 712804
GTIN	4046356712804
Weight per Piece (excluding packing)	380.000 g
Custom tariff number	85371098
Country of origin	Germany

Technical data

Dimensions

Width	22.5 mm
	22.5 mm
Height	165 mm

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Technical data

Dimensions

	165 mm
Depth	114 mm
	114 mm

Ambient conditions

Ambient temperature (operation)	-5 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Maximum altitude	≤ 2000 m
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	40 mA
Type of protection	Surge protection
	Reverse polarity protection

Input data

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	5 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

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	50/60 Hz
Load current range	1.5 A ... 9 A (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
Type of protection	Surge protection

Output data reply output

Output name	Acknowledge output
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Technical data

Output data reply output

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

Overspeed tripping

Operate threshold	> 45 A
Response time	< 2 s

General

Motor starter type	Reversing starter
Switching frequency	≤ 2 Hz (Load-dependent)
Mounting position	vertical (horizontal DIN rail, motor output below)
Mounting type	DIN rail mounting
Assembly instructions	alignable, for spacing see derating
Operating mode	100% operating factor
Maximum power dissipation	7 W
Minimum power dissipation	0.88 W
Operating voltage display	Green LED
Status display	Yellow LED
Indication	Red LED

Connection data

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
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 lb _f -in. ... 7 lb _f -in.

Connection data 2

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

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Technical data

Connection data 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 lb _f -in. ... 7 lb _f -in.

Insulation characteristics

Rated insulation voltage	500 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) at operating voltage ≤ 300 V AC
	Safe isolation (EN 50178) at operating voltage ≤ 300 V AC
	Basic isolation (IEC 60947-1) at operating voltage 300 ... 500 V AC
	Safe isolation (EN 50178) at operating voltage 300 ... 500 V AC
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

Standards and Regulations

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

Conformance/approvals

Designation	ATEX
Identification	# II (2) G [Ex e] [Ex d] [Ex px]
	# II (2) D [Ex t] [Ex p]
Certificate	PTB 07 ATEX 3145
Designation	UL approval
Certificate	NLDX.E228652
	NRNT.E172140
Designation	Safety Integrity Level (SIL, IEC 61508)
Identification	≤ 3
Additional text	Safe shutdown

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Technical data

Conformance/approvals

Designation	Safety Integrity Level (SIL, IEC 61508)
Identification	2
Additional text	Motor protection
Designation	Performance Level (ISO 13849)
Identification	e
Additional text	Safe shutdown
Designation	Category (ISO 13849)
Identification	≤ 3
Additional text	Safe shutdown

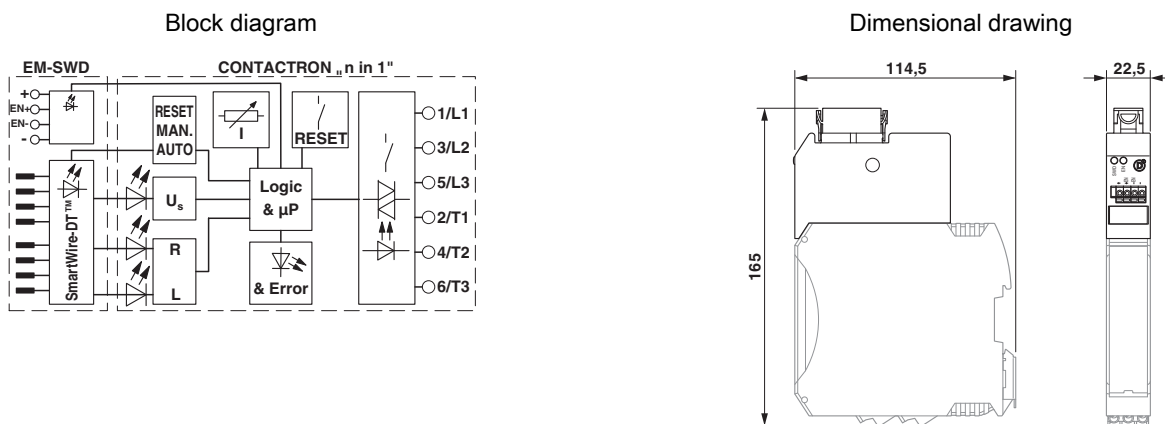
UL data

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	6.5 A (480 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

Environmental Product Compliance

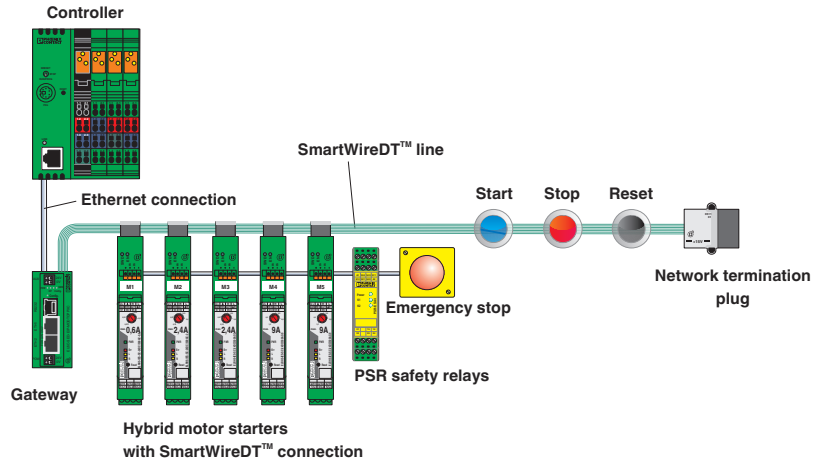
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

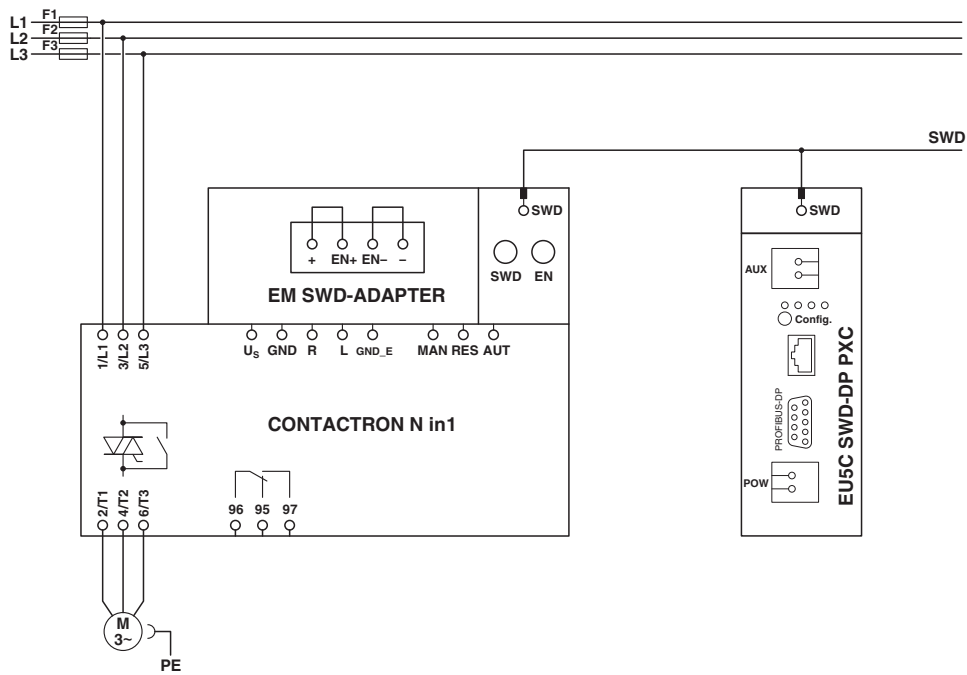


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Application drawing



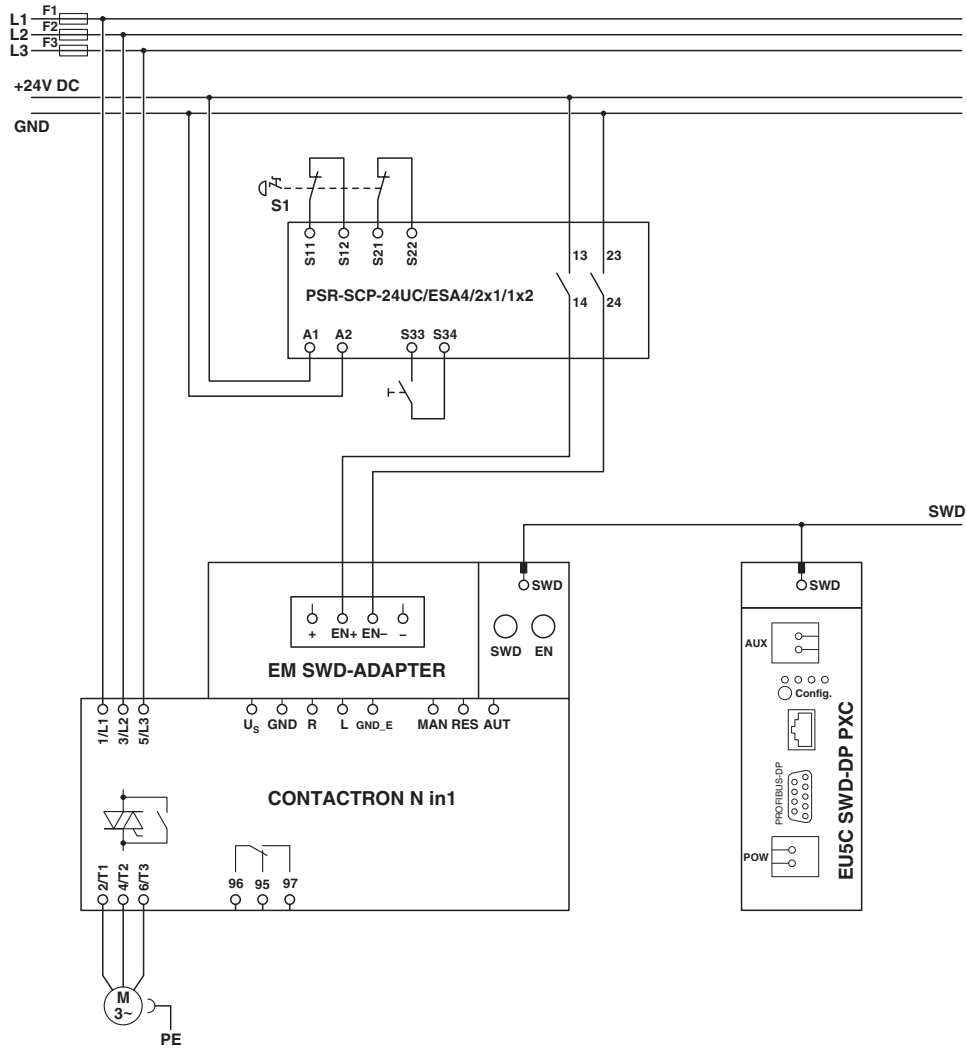
Circuit diagram



Wiring example without EMERGENCY STOP

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Circuit diagram



EMERGENCY STOP wiring example (two-channel)

Classifications

eCl@ss

eCl@ss 10.0.1	27370905
eCl@ss 11.0	27370905
eCl@ss 4.0	27021100
eCl@ss 4.1	27021100
eCl@ss 5.0	27024000
eCl@ss 5.1	27024000

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Classifications

eCl@ss

eCl@ss 6.0	27024000
eCl@ss 7.0	27024002
eCl@ss 9.0	27370905

ETIM

ETIM 2.0	EC001037
ETIM 3.0	EC001037
ETIM 4.0	EC001037
ETIM 6.0	EC001037
ETIM 7.0	EC001037

UNSPSC

UNSPSC 6.01	30211915
UNSPSC 7.0901	39121514
UNSPSC 11	39121514
UNSPSC 12.01	39121514
UNSPSC 13.2	25173902
UNSPSC 18.0	25173902
UNSPSC 19.0	25173902
UNSPSC 20.0	25173902
UNSPSC 21.0	25173902

Approvals

Approvals

Approvals

CCC / EAC

Ex Approvals

Approval details

CCC		2016010304900298
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Approvals

EAC



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DE.*08.B.00520*