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Worldwide English



Powering Business Worldwide

DS7-340SX004N0-N - Soft starter, 4 A, 200 - 480 V AC, U_s = 24 V AC/DC, Frame size FS1



134847 DS7-340SX004N0-N

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134847 DS7-340SX004N0-N

Soft starter, 4 A, 200 - 480 V AC, U_s = 24 V AC/DC, Frame size FS1

Alternate Catalog Nb.

DS7-340SX004N0-N

EL-Nummer (Norway)

4134260

Soft starter, Description: With internal bypass contacts, Function: Soft starters for three-phase loads, Mains supply voltage (50/60 Hz): U_{LN} = 200 - 480 V AC, Supply voltage: U_s = 24 V AC/DC, Control voltage: U_C = 24 V AC, 24 V DC, Assigned motor rating (Standard connection, In-Line) at 400 V, 50 Hz: P = 1.5 kW, at 460 V, 60 Hz: P = 2 HP, Rated operational current AC-53: I_e = 4 A, Rated operational voltage: U_e = 200 V, 230 V, 400 V, 480 V, Connection to SmartWire-DT: no, Frame size: FS1, Standards: IEC/EN 60947-4-2, UL 508, CSA22.2-14

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Delivery program

Description

With internal bypass contacts

Function

Soft starters for three-phase loads

Mains supply voltage (50/60 Hz) [U_{LN}]

200 - 480 V AC

Supply voltage [U_s]

24 V AC/DC

Control voltage [U_C]

24 V AC

24 V DC

Assigned motor rating (Standard connection, In-Line)

at 400 V, 50 Hz [P]

1.5 kW

at 460 V, 60 Hz [P]

2 HP

Rated operational current

AC-53 [I_e]

4 A

Rated operational voltage [U_e]

200 V

230 V

400 V

480 V
Connection to SmartWire-DT
no
Frame size
FS1

Technical data

General
Standards
IEC/EN 60947-4-2
UL 508
CSA 22.2-14
Approvals
CE
Approvals
UL
CSA
C-Tick
UkrSEPRO
Climatic proofing
Damp heat, constant, to IEC 60068-2-3
Damp heat, cyclic, to IEC 60068-2-10
Ambient temperature Operation [9]
-5 - +40
up to 60 at 2% derating per Kelvin temperature rise °C
Ambient temperature Storage [9]
-25 - +60 °C
Altitude
0 - 1000 m, above that 1 % derating per 100 m, up to 2000 m
Mounting position
Vertical
Degree of protection Degree of Protection
IP20
Protection against direct contact
Finger- and back-of-hand proof
Overvoltage category/pollution degree
II/2
Shock resistance
8 g/11 ms
Vibration resistance to EN 60721-3-2
2M2
Radio interference level (IEC/EN 55011)
B
Static heat dissipation, non-current-dependent [P_{vs}]
0.2 W
Weight
0.35 kg
Main conducting paths
Rated operating voltage [U_b]
200 - 480 V AC
Supply frequency [f_{LN}]
50/60 Hz
Rated operational current [I_b] AC-53 [I_b]
4 A
Assigned motor rating (Standard connection, In-Line) at 230 V, 50 Hz [P]
0.75 kW
Assigned motor rating (Standard connection, In-Line) at 400 V, 50 Hz [P]
1.5 kW
Assigned motor rating (Standard connection, In-Line) at 200 V, 60 Hz [P]
0.75 HP
Assigned motor rating (Standard connection, In-Line) at 230 V, 60 Hz [P]
1 HP
Assigned motor rating (Standard connection, In-Line) at 460 V, 60 Hz [P]
2 HP
Overload cycle to IEC/EN 60947-4-2 AC-53a
4 A: AC-53a: 3 - 5: 75 - 10
Overload cycle to IEC/EN 60947-4-2 Internal bypass contacts

□

Short-circuit ratingType "1" coordination
 PKMD-4 (+ CL-PKZ0)
 Short-circuit ratingType „2“ coordination (additional with the fuses for coordination type „1“)

3 x 170M1359
 Fuse base (number x part no.)
 3 x 170H1007
 Terminal capacities
 Cable lengthsSolid
 1 x (0.75 - 4)
 2 x (0.75 - 2.5) mm²
 Cable lengthsFlexible with ferrule
 1 x (0.75 - 2.5)
 2 x (0.75 - 2.5) mm²
 Cable lengthsSolid or stranded
 18 - 10 AWG
 Cable lengthsTightening torque
 1.2 Nm
 Cable lengthsScrew driver (PZ: Pozidriv)
 PZ2; 1 x 6 mm mm
 Control cablesSolid
 1 x (0.75 - 4)
 2 x (0.75 - 2.5) mm²
 Control cablesFlexible with ferrule
 1 x (0.75 - 2.5)
 2 x (0.75 - 2.5) mm²
 Control cablesSolid or stranded
 18 - 10 AWG
 Control cablesTightening torque
 1.2 Nm
 Control cablesScrew driver
 0,8 x 5,5

1 x 6 mm
 Control circuit
 Digital inputsControl voltageDC-operated
 24 V DC +10 %/- 15 % V DC
 Digital inputsControl voltageAC operated
 24 V AC +10 %/- 15 % V AC
 Digital inputsCurrent consumption 24 VExternal 24 V
 1.6 mA
 Digital inputsPick-up voltageDC-operated
 17.3 - 27 V DC
 Digital inputsPick-up voltageAC operated
 17.3 - 27 V AC
 Digital inputsDrop-out voltage [x U_s]DC operated
 0 - 3 V DC
 Digital inputsDrop-out voltage [x U_s]AC operated
 0 - 3 V AC
 Digital inputsPick-up timeDC operated
 250 ms
 Digital inputsPick-up timeAC operated
 250 ms
 Digital inputsDrop-out timeDC operated
 350 ms
 Regulator supplyVoltage [U_s]
 24 V AC/DC +10 %/- 15 % V
 Regulator supplyCurrent consumption [I_e]
 50 mA
 Regulator supplyNotes
 External supply voltage
 Relay outputsNumber
 1 (TOR)
 Relay outputsVoltage range
 = U_s V AC
 Relay outputsAC-11 current range
 1 A, AC-11 A
 Soft start function
 Ramp timesAcceleration
 1 - 30 s

Ramp timesDeceleration

0 - 30 s

Start voltage (= turn-off voltage)

30100 %

Start pedestal

30 - 100 %

Fields of applicationFields of application

Soft starting of three-phase asynchronous motors

Fields of application1-phase motors

●

Fields of application3-phase motors

□

Functions

Fast switching (semiconductor contactor)

- (minimum ramp time 1s)

Soft start function

□

Reversing starter

External solution required

Suppression of closing transients

□

Suppression of DC components for motors

□

Potential isolation between power and control sections

□

Notes

Rated impulse withstand voltage:

- 1.2 μ s/50 μ s (rise time/fall time of the pulse to IEC/EN 60947-2 or -3)
- Applies for control circuit/power section/enclosure

Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_n]

4 A

Heat dissipation per pole, current-dependent [P_{id}]

0 W

Equipment heat dissipation, current-dependent [P_{id}]

0.2 W

Static heat dissipation, non-current-dependent [P_s]

0.2 W

Heat dissipation capacity [P_{diss}]

0 W

Operating ambient temperature min.

-5 °C

Operating ambient temperature max.

+40 °C

IEC/EN 61439 design verification

10.2 Strength of materials and parts10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2 Strength of materials and parts10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2 Strength of materials and parts10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2 Strength of materials and parts10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects

Meets the product standard's requirements.

10.2 Strength of materials and parts10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2 Strength of materials and parts10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts10.2.7 Inscriptions

Meets the product standard's requirements.

10.3 Degree of protection of ASSEMBLIES

Does not apply, since the entire switchgear needs to be evaluated.

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

10.8 Connections for external conductors

Is the panel builder's responsibility.

10.9 Insulation properties10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9 Insulation properties10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Soft starter (EC000640)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Semiconductor motor controller or soft starter (ecl@ss10.0.1-27-37-09-07 [ACC000011])

Rated operation current I_e at 40 °C T_u

4 A

Rated operating voltage U_e

230 - 460 V

Rated power three-phase motor, inline, at 230 V

0.75 kW

Rated power three-phase motor, inline, at 400 V

1.5 kW

Rated power three-phase motor, inside delta, at 230 V

0 kW

Rated power three-phase motor, inside delta, at 400 V

0 kW

Function

Single direction

Internal bypass

Yes

With display

No

Torque control

No

Rated surrounding temperature without derating

40 °C

Rated control supply voltage U_s at AC 50Hz

24 - 24 V

Rated control supply voltage U_s at AC 60Hz

24 - 24 V

Rated control supply voltage U_s at DC

24 - 24 V

Voltage type for actuating

AC/DC

Integrated motor overload protection

No

Release class

Other

Degree of protection (IP)

IP20

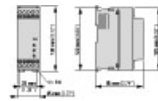
Degree of protection (NEMA)

1

Approvals

Product Standards
IEC/EN 60947-4-2; GB 14048.6; UL 508; CSA-C22.2 No 0-M91; CSA-C22.2 No 14-05 CE marking
UL File No.
E251034
CSA File No.
2511305
CSA Class No.
321106
Specially designed for North America
No
Suitable for
Branch circuits
Current Limiting Circuit-Breaker
No
Max. Voltage Rating
480 V
Degree of Protection
IP20; UL/CSA Type 1

Dimensions



CAD data

- [Product-specific CAD data](#)
(Web)
- [3D Preview](#)
(Web)

DWG files

- [DA-CD-ds7_1_100202](#)
File
(Web)

edz files

- [DA-CE-ETN.DS7-340SX004N0-N](#)
File
(Web)

Step files

- [DA-CS-ds7_1_100202](#)
File
(Web)

Additional product information

- [CA04020001Z_EN-INT Product range catalog: Efficient Engineering for starting and controlling motors.](#)
(PDF)

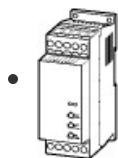
Product photo



8250PIC-41

Photo
DS7 soft starters

3D drawing

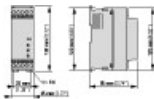


[8250DRV-43](#)

Line drawing

DS7 soft starters

Dimensions single product



[8250DIM-7](#)

Line drawing

Dimension drawing DS7 without SVD— Size 1 (up to 12 A)

Instruction Leaflet

- [Soft starter DS7: size 1 \(IL03902003Z\)](#)

Asset

former AWA8250-2542

(PDF, 06/2021, multilingual)

Manual

- [DS7 Soft Starters \(MN03901001Z_DE\)](#)

Asset

(PDF, 09/2016, de)

- [DS7 Soft Starters \(MN03901001Z_EN\)](#)

Asset

(PDF, 09/2016, en)

- [DS7 Soft Starter \(MN03901001Z_IT\)](#)

Asset

(PDF, 09/2016, it)

Declaration of Conformity

EU

- [Soft starter \(DA-DC-00003978\)](#)

Asset

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