

Select your language

- [German](#)
- [English](#)
- [Spanish](#)
- [French](#)
- [Dutch](#)
- [Italian](#)
- [Polish](#)
- [Czech](#)
- [Russian](#)
- [Norwegian Bokmål](#)

Worldwide English



DS7-340SX007N0-L - Soft starter, 7 A, 200 - 480 V AC, 24 V AC/DC, Frame size FS1, Ambient temperature Operation -40 - +40 °C



171741 DS7-340SX007N0-L

[Overview](#) [Specifications](#) [Resources](#)



171741 DS7-340SX007N0-L

Soft starter, 7 A, 200 - 480 V AC, 24 V AC/DC, Frame size FS1, Ambient temperature Operation -40 - +40 °C

Alternate Catalog No.

DS7-340SX007N0-L

EL-Nummer (Norway)

4110405

Soft starter, Description: With internal bypass contacts, Function: Soft starters for three-phase loads, Mains supply voltage (50/60 Hz): ULN= 200 - 480 V AC, Supply voltage: Us= 24 V AC/DC, Control voltage: UC= 24 V AC, 24 V DC, Assigned motor rating (Standard connection, In-Line) at 400 V, 50 Hz: P= 3 kW, at 460 V, 60 Hz: P= 5 HP, Rated operational current AC-53: Ie= 7 A, Rated operational voltage: Ue= 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

• [Delivery program](#)

• [Technical data](#)

• [Design verification as per IEC/EN 61439](#)

• [Technical data ETIM 7.0](#)

• [Approvals](#)

• [Dimensions](#)

Delivery program

Description

With internal bypass contacts

Function

Soft starters for three-phase loads

Mains supply voltage (50/60 Hz) [ULN]

200 - 480 V AC

Supply voltage [Us]

24 V AC/DC

Control voltage [UC]

24 V AC

24 V DC

Assigned motor rating (Standard connection, In-Line)

at 400 V, 50 Hz [P]

3 kW

at 460 V, 60 Hz [P]

5 HP

Rated operational current

AC-53 [Ie]

7 A

Rated operational voltage [Ue]

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

Cold to EN 60068-2-1

Ambient temperature Operation [9]

-40 - +40

up to 60 at 2% derating per Kelvin temperature rise °C

Ambient temperature Storage [9]

-40 - +60 °C

Altitude

0 - 1000 m, above that 1 % derating per 100 m, up to 2000 mm

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}]

0.35 W

Weight

0.44 kg

Main conducting paths

Rated operating voltage [U_e]

200 - 480 V AC

Supply frequency [f_{LN}]

50/60 Hz

Rated operational current [I_e] AC-53 [I_e]

7 A

Assigned motor rating (Standard connection, In-Line) at 230 V, 50 Hz [P]

1.5 kW

Assigned motor rating (Standard connection, In-Line) at 400 V, 50 Hz [P]

3 kW

Assigned motor rating (Standard connection, In-Line) at 200 V, 60 Hz [P]

2 HP

Assigned motor rating (Standard connection, In-Line) at 230 V, 60 Hz [P]

2 HP

Assigned motor rating (Standard connection, In-Line) at 460 V, 60 Hz [P]

5 HP

Overload cycle to IEC/EN 60947-4-2 AC-53a

7 A: AC-53a: 3 - 5: 75 - 10

Overload cycle to IEC/EN 60947-4-2 Internal bypass contacts

□

Short-circuit rating Type "1" coordination

PKMD-10 (+ CL-PKZ0)
 Short-circuit rating Type „2“ coordination (additional with the fuses for coordination type „1“)
 3 x 170M1361
 Fuse base (number x part no.)
 3 x 170H1007
 Terminal capacities
 Cable lengths Solid
 1 x (0.75 - 4)
 2 x (0.75 - 2.5) mm²
 Cable lengths Flexible with ferrule
 1 x (0.75 - 2.5)
 2 x (0.75 - 2.5) mm²
 Cable lengths Solid or stranded
 18 - 10 AWG
 Cable lengths Tightening torque
 1.2 Nm
 Cable lengths Screw driver (PZ: Pozidriv)
 PZ2; 1 x 6 mm mm
 Control cables Solid
 1 x (0.75 - 4)
 2 x (0.75 - 2.5) mm²
 Control cables Flexible with ferrule
 1 x (0.75 - 2.5)
 2 x (0.75 - 2.5) mm²
 Control cables Solid or stranded
 18 - 10 AWG
 Control cables Tightening torque
 1.2 Nm
 Control cables Screw driver
 0,8 x 5,5

 1 x 6 mm
 Control circuit
 Digital inputs Control voltage DC-operated
 24 V DC +10 %/- 15 % V DC
 Digital inputs Current consumption 24 V External 24 V
 1.6 mA
 Digital inputs Pick-up voltage DC-operated
 17.3 - 27 V DC
 Digital inputs Pick-up voltage AC operated
 17.3 - 27 V AC
 Digital inputs Drop-out voltage [x U_s] DC operated
 0 - 3 V DC
 Digital inputs Drop-out voltage [x U_s] AC operated
 0 - 3 V AC
 Digital inputs Pick-up time DC operated
 250 ms
 Digital inputs Pick-up time AC operated
 250 ms
 Digital inputs Drop-out time DC operated
 350 ms
 Regulator supply Voltage [U_s]
 24 V AC/DC +10 %/- 15 % V
 Regulator supply Current consumption [I_s]
 50 mA
 Regulator supply Notes
 External supply voltage
 Relay outputs Number
 1 (TOR)
 Relay outputs Voltage range
 = U_s V AC
 Relay outputs AC-11 current range
 1 A, AC-11 A
 Soft start function
 Ramp times Acceleration Ramp time, max.
 30 s
 Ramp times Deceleration
 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
☐

Design verification as per IEC/EN 61439

Technical data for design verification
 Rated operational current for specified heat dissipation [I_n]
 7 A
 Heat dissipation per pole, current-dependent [P_{id}]
 0 W
 Equipment heat dissipation, current-dependent [P_{id}]
 0.35 W
 Static heat dissipation, non-current-dependent [P_s]
 0.35 W
 Heat dissipation capacity [P_{diss}]
 0 W
 Operating ambient temperature min.
 -40 °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 properties 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.4 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 (ec1@ss10.0.1-27-37-09-07 [ACC00011])

Rated operation current I_e at 40 °C T_u

7 A

Rated operating voltage U_e

230 - 460 V

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

1.5 kW

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

3 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

UL File No.

E251034

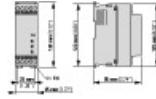
CSA File No.

2511305

CSA Class No.

321106
Suitable for
Branch circuits
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.DS7-340SX007N0-L](#)
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

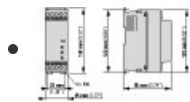
3D drawing



[8250DRW-43](#)

Line drawing
DS7 soft starters

Dimensions single product



8250DIM-7

Line drawing

Dimension drawing DS7 without SWD – 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

(PDF)

Download-Center

- [Download-Center \(this item\)](#)
Eaton EMEA Download-Center - download data for this item
- [Download-Center](#)
Eaton EMEA Download-Center



[Generate data sheet in PDF format](#)



[Generate data sheet in Excel format](#)



[Write a comment](#)

[Imprint](#) [Privacy Policy](#) [Legal Disclaimer](#) [Terms and Conditions](#)

© 2021 by Eaton Industries GmbH

