

Soft starter, 7 A, 200 - 480 V AC, Us= 24 V AC/DC, Frame size FS1



Part no. DS7-340SX007N0-N
134849
EL Number 4134261
(Norway)

Product name	Eaton DS7 Soft starter
Part no.	DS7-340SX007N0-N
EAN	4015081316946
Product Length/Depth	94 millimetre
Product height	130 millimetre
Product width	45 millimetre
Product weight	0.35 kilogram
Compliances	Contact Manufacturer
Certifications	CE UL File No.: E251034 UL 508 CSA UkrSEPRO UL CSA-C22.2 No 14-05 CSA22.2-14 GB 14048.6 CSA Class No.: 321106 C-Tick CSA-C22.2 No 0-M91 IEC/EN 60947-4-2 CSA File No.: 2511305
Product Tradename	DS7
Product Type	Soft starter
Product Sub Type	None
Catalog Notes	Ambient Operating Temperature up to 60 at 2% derating per Kelvin temperature rise External Reversing starter solution required Regulator supply: External supply voltage
Fitted with:	Internal bypass contacts Internal bypass
Functions	Suppression of closing transients Potential isolation between power and control sections Single direction Min. ramp time 1 s - fast switching (semiconductor contactor) Soft start function Suppression of DC components for motors
Class	Other
Connection to SmartWire-DT	No
Degree of protection	NEMA 1 IP20
Frame size	FS1
Mains voltage - min	200 V
Mains voltage - max	480 V
Overvoltage category	II
Pollution degree	2
Radio interference class	Class B (EN 55011)
Suitable for	Branch circuits, (UL/CSA)
Type	Soft starter for three-phase loads
Voltage type	AC/DC
Mounting position	Vertical
Shock resistance	8 g, 11 ms, Mechanical
Vibration resistance	2M2 to EN 60721-3-2

Altitude		Max. 2000 m Above 1000 m with 1 % derating per 100 m
Ambient operating temperature - min		-5 °C
Ambient operating temperature - max		40 °C
Ambient storage temperature - min		-25 °C
Ambient storage temperature - max		60 °C
Climatic proofing		Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-3
Overload cycle		AC-53a: 3 - 5: 75 - 10
Rated operational current (Ie) at AC-53		7 A
Rated operational voltage (Ue) - min		230 V
Rated operational voltage (Ue) - max		480 V
Short-circuit protection rating		3 x 170M1361, Type „2“ coordination (additional with the fuses for coordination type „1“), Main conducting paths PKM0-10 (+ CL-PKZ0), Type “1” coordination, Main conducting paths
Supply frequency		50/60 Hz, fLN, Main circuit
Voltage rating - max		480 V
Assigned motor power at 200/208 V, 60 Hz, 3-phase		2 HP
Assigned motor power at 220/230 V, 60 Hz, 3-phase		2 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase		5 HP
Rated operational power at 220/230 V, 50 Hz		1.5 kW
Rated operational power at 400 V, 50 Hz		3 kW
Terminal capacity (flexible with ferrule)		2 x (0.75 - 2.5) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 2.5) mm ² , Main cables
Terminal capacity (solid)		1 x (0.75 - 4) mm ² , Control circuit cables 1 x (0.75 - 4) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Control circuit cables
Terminal capacity (solid/stranded AWG)		18 - 10, Control circuit cables 18 - 10, Main cables
Screwdriver size		0.6 x 5.5 mm/1 x 6 mm, Terminal screws, Control circuit cables PZ2, 1 x 6 mm, Terminal screw, Standard screwdriver
Tightening torque		1.2 Nm 1.2 Nm, Screw terminals, Control circuit cables
Current consumption		50 mA, Control circuit, Regulator supply 1.6 mA, Control circuit, Digital inputs, External 24 V
Drop-out time		350 ms, Control circuit, Digital Inputs, DC operated
Drop-out voltage		AC operated: 0 - 3 V, AC operated 0 - 3 V, DC operated
Pick-up time		250 ms at AC 250 ms at DC
Pick-up voltage		17.3 - 27 V AC 17.3 - 27 V DC
Rated control supply voltage (Us) at AC, 50 Hz - min		24 V
Rated control supply voltage (Us) at AC, 50 Hz - max		24 V
Rated control supply voltage (Us) at AC, 60 Hz - min		24 V
Rated control supply voltage (Us) at AC, 60 Hz - max		24 V
Rated control supply voltage (Us) at DC - min		24 V
Rated control supply voltage (Us) at DC - max		24 V
Number of outputs		1 Relay Output (TOR)
Output voltage		24 V AC/DC
Protection		Finger and back-of-hand proof, Protection against direct contact
Rated control voltage (Uc)		24 V AC 24 V DC 24 V AC (-15 %/+10 %) 24 V DC (-15 %/+10 %)

Rated operational current (Ie) at AC-11	1 A
Application	1-phase motors: No 3-phase motors: Yes Soft starting of three-phase asynchronous motors
Delay time	0 - 30 s, Soft start function, Ramp times
Ramp/run-up time	1 - 30 s
Start voltage	Min. 30 %, Soft start function, Start voltage = turn-off voltage Max. 100 %, Soft start function, Start voltage = turn-off voltage
Equipment heat dissipation, current-dependent Pvid	0.35 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	0 W
Rated operational current for specified heat dissipation (In)	7 A
Static heat dissipation, non-current-dependent Pvs	0.35 W
10.2.2 Corrosion resistance	Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures	Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat	Meets the product standard's requirements.
10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects	Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation	Meets the product standard's requirements.
10.2.5 Lifting	Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact	Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 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.
10.9.2 Power-frequency electric strength	Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
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 8.0

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 [ACO300011])	
Rated operation current Ie at 40 °C Tu	A 7
Rated operating voltage Ue	V 230 - 480
Rated power three-phase motor, inline, at 230 V	kW 1.5
Rated power three-phase motor, inline, at 400 V	kW 3
Rated power three-phase motor, inside delta, at 230 V	kW 0
Rated power three-phase motor, inside delta, at 400 V	kW 0
Function	Single direction
Internal bypass	Yes
With display	No
Torque control	No
Rated surrounding temperature without derating	°C 40
Rated control supply voltage Us at AC 50HZ	V 24 - 24
Rated control supply voltage Us at AC 60HZ	V 24 - 24

Rated control supply voltage Us at DC	V	24 - 24
Voltage type for actuating		AC/DC
Integrated motor overload protection		No
Release class		Other
Degree of protection (IP)		IP20
Degree of protection (NEMA)		1