Specifications

Photo is representative

Eaton 134919

Eaton DS7 Soft starter, 81 A, 200 - 480 V AC, Us= 24 V AC/DC, Frame size FS3

General specifications	
PRODUCT NAME	Eaton DS7 Soft starter
CATALOG NUMBER	134919
MODEL CODE	DS7-340SX081N0-N
EAN	4015081317349
PRODUCT LENGTH/DEPTH	139 mm
PRODUCT HEIGHT	175 mm
PRODUCT WIDTH	93 mm
PRODUCT WEIGHT	1.8 kg
WARRANTY	Eaton Selling Policy 25-000, one (1) year from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.
COMPLIANCES	CE Marked C-Tick Compliant
CERTIFICATIONS	UL Listed IEC 60947-4-2 EN 60947-4-2 CSA Certified CE UL 508 C-Tick CSA22.2-14 CSA File No.: 2511305 GB 14048.6 CSA Class No.: 321106 UkrSEPRO UL File No.: E251034 CSA-C22.2 No 0-M91 CSA UL IEC/EN 60947-4-2 CSA-C22.2 No 14-05
GLOBAL CATALOG	134919

Powering Business Worldwide

Product specifications

BYPASS	Internal
CONTROL VOLTAGE	24 Vac/Vdc
HORSEPOWER	60 hp
PHASE	Three-phase mains supply voltage
TYPE	Soft starter for three-phase loads
VOLTAGE RATING	480 V
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.
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.

Resources

BROCHURES	eaton-softstarter-s811-ds7-brochure-br039001en-en-us.pdf
CATALOGS	Product Range Catalog Drives Engineering Solid-State Motor Control, Reduced Voltage Motor Starters, Volume 6, Tab 1
DECLARATIONS OF CONFORMITY	DA-DC-00003978.pdf DA-DC-00004193.pdf
DRAWINGS	eaton-semiconductor-contactors-softstarter-ds7-dimensions-002.eps eaton-semiconductor-contactors-softstarter-ds7-3d-drawing-005.eps
ECAD MODEL	ETN.DS7-340SX081N0-N
INSTALLATION INSTRUCTIONS	IL03902005Z2021_06.pdf
MANUALS AND USER GUIDES	eaton-ds7-soft-starter-mn03901001z-en-us.pdf
MCAD MODEL	eaton-low-voltage-soft-starters-drawings-ds7-3-100316.dwg eaton-low-voltage-soft-starters-3d-models-ds7-3-100316.stp
MULTIMEDIA	Soft starter DS7 up to 200 A
SPECIFICATIONS AND DATASHEETS	Eaton Specification Sheet - DS7-340SX081N0-N

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.
FITTED WITH:	Internal bypass contacts Internal bypass
FUSE SIZE	300 A class RK5 max
POLLUTION DEGREE	2
CIRCUIT BREAKER TYPE	HKD3300
CLASS	Other
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-3 Damp heat, cyclic, to IEC 60068-2-30
CONNECTION TO SMARTWIRE-DT	No
FRAME SIZE	3 4 FS3
ALTITUDE	Above 1000 m with 1 % derating per 100 m Max. 2000 m
AMBIENT OPERATING	40 °C

TEMPERATURE - MAX	
AMBIENT OPERATING TEMPERATURE - MIN	-5 °C
AMBIENT STORAGE TEMPERATURE - MAX	60 °C
AMBIENT STORAGE TEMPERATURE - MIN	-25 °C
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	25 HP
ASSIGNED MOTOR POWER AT 220/230 V, 60 HZ, 3-PHASE	30 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	60 HP
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	18 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
MAINS VOLTAGE - MAX	480 V
MAINS VOLTAGE - MIN	200 V
ENVIRONMENTAL RATING	IP20
SERIES	Generation 7
OUTPUT VOLTAGE	250 V AC (relay outputs)
NUMBER OF OUTPUTS	2 Relay Outputs (TOR, Ready)
SCREWDRIVER SIZE	0.6 x 3.5 mm, Terminal screws, Control circuit cables PZ2, 1 x 6 mm, Terminal screw, Standard screwdriver
VOLTAGE TYPE	AC/DC
RATED OPERATIONAL VOLTAGE (UE) - MIN	230 V
RATED POWER THREE-PHASE MOTOR, INLINE, AT 230 V	22 kW
RATED POWER THREE-PHASE MOTOR, INLINE, AT 400 V	45 kW
RATED POWER THREE-	0 kW

PHASE MOTOR, INSIDE DELTA, AT 230 V	
RATED POWER THREE-PHASE MOTOR, INSIDE DELTA, AT 400 V	0 kW
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	18 W
VOLTAGE RATING - MAX	480 V
APPLICATION	• 1-phase motors: No • 3-phase motors: Yes • Soft starting of three-phase asynchronous motors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact
MOUNTING POSITION	Vertical
DROP-OUT VOLTAGE	0 - 3 V, DC operated AC operated: 0 - 3 V, AC operated
OVERVOLTAGE CATEGORY	II
DEGREE OF PROTECTION	IP20 NEMA 1
CURRENT CONSUMPTION	0,6 A/50 ms, Control circuit, Regulator supply at peak performance (close bypass) at 24 V DC 1.6 mA, Control circuit, Digital inputs, External 24 V 50 mA, Control circuit, Regulator supply
FUNCTIONS	Min. ramp time 1 s - fast switching (semiconductor contactor) Suppression of closing transients Soft start function Suppression of DC components for motors Potential isolation between power and control sections Single direction

DELAY TIME	0 - 30 s, Soft start function, Ramp times
OVERLOAD CYCLE	AC-53a: 3 - 5: 75 - 10
DROP-OUT TIME	350 ms, Control circuit, Digital Inputs, DC operated
PICK-UP VOLTAGE	17.3 - 27 V DC 17.3 - 27 V AC
RADIO INTERFERENCE CLASS	Class B (EN 55011)
PICK-UP TIME	250 ms at DC 250 ms at AC
RATED CONTROL VOLTAGE (UC)	24 V DC (-15 %/+10 %) 24 V AC (-15 %/+10 %) 24 V AC 24 V DC
SUPPLY FREQUENCY	50/60 Hz, fLN, Main circuit
TERMINAL CAPACITY (STRANDED)	1 x (25 - 70) mm^2, Main cables 2 x (0.5 - 1.0) mm^2, Control circuit cables 1 x (0.5 - 1.5) mm^2, Control circuit cables 2 x (6 - 25) mm^2, Main cables
RATED OPERATIONAL CURRENT	81 A
TERMINAL CAPACITY (COPPER BAND)	2 x 9 x 0.8 mm, Main cables 9 x 9 x 0.8 mm, Main cables
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	24 V
RATED OPERATIONAL	1 A

CURRENT (IE) AT AC-11	
RATED OPERATIONAL CURRENT (IE) AT AC-53	81 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	81 A
RATED OPERATIONAL POWER AT 220/230 V, 50 HZ	22 kW
RATED OPERATIONAL POWER AT 400 V, 50 HZ	45 kW
RATED OPERATIONAL VOLTAGE (UE) - MAX	480 V
VIBRATION RESISTANCE	2M2 to EN 60721-3-2
RAMP/RUN-UP TIME	1 - 30 s
SHOCK RESISTANCE	8 g, 11 ms, Mechanical
SUITABLE FOR	Branch circuits, (UL/CSA)
TIGHTENING TORQUE	6 Nm (≤ 10 mm^2) 0.4 Nm, Screw terminals, Control circuit cables 9 Nm (> 10 mm^2)
SHORT-CIRCUIT PROTECTION RATING	NZMN1-M100, Type “1” coordination, Main conducting paths 3 x 170M4008, Type „2“ coordination (additional with the fuses for coordination type „1“), Main conducting paths
START VOLTAGE	Min. 30 %, Soft start function, Start voltage = turn-off voltage Max. 100 %, Soft start function, Start voltage = turn-off voltage
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (0.5 - 1.5) mm^2, Control circuit cables 2 x (0.5 - 0.75) mm^2, Control circuit cables
TERMINAL CAPACITY (SOLID)	1 x (0.5 - 2.5) mm^2, Control circuit cables 2 x (6 - 25) mm^2, Main cables 2 x (0.5 - 1.0) mm^2, Control circuit cables 1 x (25 - 70) mm^2, Main cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	2 x (21 - 18), Control circuit cables 1 x (21 - 14), Control circuit

	cables 1 x (12 - 2/0), Main cables

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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