Specifications

Photo is representative

Eaton 134922

Eaton DS7 Soft starter, 160 A, 200 - 480 V AC, Us= 24 V AC/DC, Frame size FS4

General specifications	
PRODUCT NAME	Eaton DS7 Soft starter
CATALOG NUMBER	134922
MODEL CODE	DS7-340SX160N0-N
EAN	4015081317370
PRODUCT LENGTH/DEPTH	178 mm
PRODUCT HEIGHT	215 mm
PRODUCT WIDTH	108 mm
PRODUCT WEIGHT	3.7 kg
CERTIFICATIONS	C-Tick CSA Class No.: 321106 CSA-C22.2 No 14-05 IEC/EN 60947-4-2 GB 14048.6 UL File No.: E251034 UkrSEPRO CSA File No.: 2511305 CSA-C22.2 No 0-M91 CE CSA CSA22.2-14 UL 508 UL
GLOBAL CATALOG	134922

Powering Business Worldwide

Product specifications

TYPE	Soft starter for three-phase loads
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.
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	Does not apply, since the

Resources

BROCHURES	eaton-softstarter-s811-ds7-brochure-br039001en-en-us.pdf
CATALOGS	Product Range Catalog Drives Engineering
DECLARATIONS OF CONFORMITY	DA-DC-00003978.pdf DA-DC-00004193.pdf
DRAWINGS	eaton-semiconductor-contactors-swd-ds7-soft-starter-dimensions.eps eaton-semiconductor-contactors-softstarter-ds7-3d-drawing-006.eps
ECAD MODEL	DA-CE-ETN.DS7-340SX160N0-N
INSTALLATION INSTRUCTIONS	IL03902005Z2021_06.pdf
MANUALS AND USER GUIDES	eaton-ds7-soft-starter-mn03901001z-en-us.pdf
MCAD MODEL	DA-CS-ds7_4_100316 DA-CD-ds7_4_100316
MULTIMEDIA	Soft starter DS7 up to 200 A

PROTECTION OF ASSEMBLIES	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 Internal bypass contacts
POLLUTION DEGREE	2
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	FS4
ALTITUDE	Max. 2000 m Above 1000 m with 1 % derating per 100 m
AMBIENT OPERATING TEMPERATURE - MAX	40 °C
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	50 HP

ASSIGNED MOTOR POWER AT 220/230 V, 60 HZ, 3-PHASE	60 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	125 HP
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	30 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
OUTPUT VOLTAGE	250 V AC (relay outputs)
NUMBER OF OUTPUTS	2 Relay Outputs (TOR, Ready)
SCREWDRIVER SIZE	PZ2, 1 x 6 mm, Terminal screw, Standard screwdriver 0.6 x 3.5 mm, Terminal screws, Control circuit cables
VOLTAGE TYPE	AC/DC
RATED OPERATIONAL VOLTAGE (UE) - MIN	230 V
RATED POWER THREE-PHASE MOTOR, INLINE, AT 230 V	45 kW
RATED POWER THREE-PHASE MOTOR, INLINE, AT 400 V	90 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
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	30 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	AC operated: 0 - 3 V, AC operated 0 - 3 V, DC 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 50 mA, Control circuit, Regulator supply 1.6 mA, Control circuit, Digital inputs, External 24 V
FUNCTIONS	Suppression of closing transients Single direction Suppression of DC components for motors Min. ramp time 1 s - fast switching (semiconductor contactor) Potential isolation between power and control sections Soft start function
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	24 V DC

VOLTAGE (UC)	24 V DC (-15 %/+10 %) 24 V AC 24 V AC (-15 %/+10 %)
SUPPLY FREQUENCY	50/60 Hz, fLN, Main circuit
TERMINAL CAPACITY (STRANDED)	2 x (0.5 - 1.0) mm^2, Control circuit cables 1 x (4 - 185) mm^2, Main cables 2 x (4 - 70) mm^2, Main cables 1 x (0.5 - 1.5) mm^2, Control circuit cables
TERMINAL CAPACITY (COPPER BAND)	10 x 16 x 0.8 mm, Main cables 2 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 CURRENT (IE) AT AC-11	1 A
RATED OPERATIONAL CURRENT (IE) AT AC-53	160 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	160 A
RATED OPERATIONAL POWER AT 220/230 V, 50 HZ	45 kW
RATED OPERATIONAL POWER AT 400 V, 50 HZ	90 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	14 Nm (> 10 mm^2) 0.4 Nm, Screw terminals, Control circuit cables 5 Nm (≤ 10 mm^2)
SHORT-CIRCUIT PROTECTION RATING	3 x 170M5008, Type „2“ coordination (additional with the fuses for coordination type „1“), Main conducting paths NZMN2-M200, Type “1” coordination, 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)	2 x (0.5 - 0.75) mm^2, Control circuit cables 1 x (0.5 - 1.5) mm^2, Control circuit cables
TERMINAL CAPACITY (SOLID)	2 x (4 - 70) mm^2, Main cables 1 x (0.5 - 2.5) mm^2, Control circuit cables 1 x (4 - 185) mm^2, Main cables 2 x (0.5 - 1.0) mm^2, Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	1 x (21 - 14), Control circuit cables 2 x (21 - 18), Control circuit cables 1 x (12 - 350 kcmil), Main cables 2 x (12 - 00), Main cables
PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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