

Specifications



Eaton 134948

Eaton DS7 Soft starter, 16 A, 200 - 480 V AC, 24 V DC, Frame size: FS2, Communication Interfaces: SmartWire-DT

General specifications

PRODUCT NAME Eaton DS7 Soft starter

CATALOG NUMBER 134948

MODEL CODE DS7-34DSX016N0-D

EAN 4015081317639

PRODUCT LENGTH/DEPTH 126 mm

PRODUCT HEIGHT 150 mm

PRODUCT WIDTH 45 mm

PRODUCT WEIGHT 0.4 kg

CERTIFICATIONS C-Tick
IEC/EN 60947-4-2
CSA-C22.2 No 14-05
GB 14048.6
CSA
UL
CE
UL 508
UkrSEPRO
CSA22.2-14
CSA-C22.2 No 0-M91

GLOBAL CATALOG 134948

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-softstarter-ds7-dimensions.eps eaton-semiconductor-contactors-softstarter-ds7-3d-drawing-004.eps
ECAD MODEL	DA-CE-ETN.DS7-34DSX016N0-D
INSTALLATION INSTRUCTIONS	IL03902004Z2021_06.pdf
INSTALLATION VIDEOS	Soft starter DS7 up to 32 A
MANUALS AND USER GUIDES	MN05006002Z_EN eaton-ds7-soft-starter-mn03901001z-en-us.pdf
MCAD MODEL	DA-CD-ds7 2 darwin 100309 DA-CS-ds7 2 darwin 100309
SALES NOTES	eaton-rmq-chemical-resistance-flyer-fl047011en-en-us.pdf

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 contacts Internal bypass
POLLUTION DEGREE	2
CLASS	Other
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-3
CONNECTION TO SMARTWIRE-DT	Yes
FRAME SIZE	FS2
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	5 HP

ASSIGNED MOTOR POWER AT 220/230 V, 60 HZ, 3-PHASE	5 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	10 HP
EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID	0.8 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 5.5 mm/1 x 6 mm, Terminal screws, Control circuit cables
VOLTAGE TYPE	DC
RATED OPERATIONAL VOLTAGE (UE) - MIN	230 V
RATED POWER THREE- PHASE MOTOR, INLINE, AT 230 V	4 kW
RATED POWER THREE- PHASE MOTOR, INLINE, AT 400 V	7.5 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
STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT PVS	0.8 W
VOLTAGE RATING - MAX	480 V
APPLICATION	1-phase motors: No 3-phase motors:

- Yes
- Soft starting of three-phase asynchronous motors

PRODUCT CATEGORY	SmartWire-DT slave
PROTECTION	Finger and back-of-hand proof, Protection against direct contact
MOUNTING POSITION	Vertical
DROP-OUT VOLTAGE	0 - 3 V, DC operated
OVERVOLTAGE CATEGORY	II
DEGREE OF PROTECTION	NEMA 1 IP20
CURRENT CONSUMPTION	1.6 mA, Control circuit, Digital inputs, External 24 V 50 mA, Control circuit, Regulator supply
CURRENT LIMITATION	(0 - 8) x I _e , Soft start function
FUNCTIONS	Suppression of DC components for motors Soft start function Potential isolation between power and control sections Single direction Min. ramp time 1 s - fast switching (semiconductor contactor) Current limitation, with PKE Suppression of closing transients
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
RADIO INTERFERENCE CLASS	Class B (EN 55011)
FAULT MEMORY	8 Faults
PICK-UP TIME	250 ms at DC
INTERFACES	SmartWire-DT (built-in)

RATED CONTROL VOLTAGE (UC)	24 V DC (-15 %/+10 %) or via SmartWire-DT 24 V DC
SUPPLY FREQUENCY	50/60 Hz, fLN, Main circuit
TERMINAL CAPACITY (STRANDED)	1 x 16 mm ² , Main cables
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	0 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	16 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	16 A
RATED OPERATIONAL POWER AT 220/230 V, 50 HZ	4 kW
RATED OPERATIONAL POWER AT 400 V, 50 HZ	7.5 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	1.2 Nm, Screw terminals, Control circuit cables 3.2 Nm
SHORT-CIRCUIT PROTECTION RATING	3 x 170M1364, Type „2“ coordination (additional with the fuses for

	coordination type „1“), Main conducting paths PKM0-16 (+ CL-PKZ0), Type “1” coordination, Main conducting paths
START VOLTAGE	Max. 100 %, Soft start function, Start voltage = turn-off voltage Min. 30 %, Soft start function, Start voltage = turn-off voltage
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.5 - 0.75) mm ² , Control circuit cables 2 x (0.75 - 10) mm ² , Main cables 1 x (0.5 - 1.5) mm ² , Control circuit cables 1 x (0.75 - 16) mm ² , Main cables
TERMINAL CAPACITY (SOLID)	1 x (0.5 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 16) mm ² , Main cables 2 x (0.75 - 10) mm ² , Main cables 2 x (0.5 - 1.0) mm ² , Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14, Control circuit cables 18 - 6, Main cables

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE: