

Specifications

Photo is representative

Eaton 134953

Eaton DS7 Soft starter, 55 A, 200 - 480 V AC, 24 V DC, Frame size: FS3, Communication Interfaces: SmartWire-DT

General specifications

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| PRODUCT NAME | Eaton DS7 Soft starter |
| CATALOG NUMBER | 134953 |
| MODEL CODE | DS7-34DSX055N0-D |
| EAN | 4015081317684 |
| PRODUCT LENGTH/DEPTH | 156 mm |
| PRODUCT HEIGHT | 175 mm |
| PRODUCT WIDTH | 93 mm |
| PRODUCT WEIGHT | 1.8 kg |
| CERTIFICATIONS | CE GB 14048.6 UL IEC/EN 60947-4-2 CSA CSA22.2-14 UkrSEPRO UL 508 C-Tick CSA-C22.2 No 14-05 CSA-C22.2 No 0-M91 |
| GLOBAL CATALOG | 134953 |

Product specifications

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| 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

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| 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-004.eps eaton-semiconductor-contactors-softstarter-ds7-3d-drawing-008.eps |
| ECAD MODEL | DA-CE-ETN.DS7-34DSX055N0-D |
| INSTALLATION INSTRUCTIONS | IL03902005Z2021_06.pdf |
| MANUALS AND USER GUIDES | MN05006002Z_EN eaton-ds7-soft-starter-mn03901001z-en-us.pdf |
| MCAD MODEL | DA-CS-ds7_3_darwin_100316 DA-CD-ds7_3_darwin_100316 |
| MULTIMEDIA | Soft starter DS7 up to 200 A |
| SALES NOTES | eaton-rmq-chemical-resistance-flyer-fl047011en-en-us.pdf |

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| 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, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-3 |
| CONNECTION TO SMARTWIRE-DT | Yes |
| FRAME SIZE | FS3 |
| ALTITUDE | Above 1000 m with 1 % derating per 100 m Max. 2000 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 | 15 HP |

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| ASSIGNED MOTOR POWER AT 220/230 V, 60 HZ, 3-PHASE | 20 HP |
| ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE | 40 HP |
| EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID | 10 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 | DC |
| RATED OPERATIONAL VOLTAGE (UE) - MIN | 230 V |
| RATED POWER THREE- PHASE MOTOR, INLINE, AT 230 V | 15 kW |
| RATED POWER THREE- PHASE MOTOR, INLINE, AT 400 V | 30 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 | 10 W |
| VOLTAGE RATING - MAX | 480 V |
| APPLICATION | <ul style="list-style-type: none"> 1-phase motors: No 3-phase motors: |

- Yes
- Soft starting of three-phase asynchronous motors

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| 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 | 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 |
| CURRENT LIMITATION | (0 - 8) x I _e , Soft start function |
| FUNCTIONS | Suppression of closing transients Current limitation, with PKE Min. ramp time 1 s - fast switching (semiconductor contactor) 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 |
| RADIO INTERFERENCE CLASS | Class B (EN 55011) |

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| 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) | 2 x (0.5 - 1.0) mm ² , Control circuit cables 1 x (25 - 70) mm ² , Main cables 2 x (6 - 25) mm ² , Main cables 1 x (0.5 - 1.5) mm ² , Control circuit cables |
| 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 | 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 | 55 A |
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 55 A |
| RATED OPERATIONAL POWER AT 220/230 V, 50 HZ | 15 kW |
| RATED OPERATIONAL POWER AT 400 V, 50 HZ | 30 kW |

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| 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 ($\leq 10 \text{ mm}^2$) 0.4 Nm, Screw terminals, Control circuit cables 9 Nm ($> 10 \text{ mm}^2$) |
| SHORT-CIRCUIT PROTECTION RATING | NZMN1-M63/PKZM4-57, Type "1" coordination, Main conducting paths 3 x 170M3013, Type „2“ coordination (additional with the fuses for coordination type „1“), 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) | 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) | 2 x (0.5 - 1.0) mm ² , Control circuit cables 1 x (25 - 70) mm ² , Main cables 2 x (6 - 25) mm ² , Main cables 1 x (0.5 - 2.5) mm ² , Control circuit cables |
| TERMINAL CAPACITY (SOLID/STRANDED AWG) | 1 x (21 - 14), Control circuit cables 1 x (12 - 2/0), Main cables 2 x (21 - 18), Control circuit cables |

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| PROJECT NAME: |
| PROJECT NUMBER: |
| PREPARED BY: |
| DATE: |



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