Eaton 138616

Eaton SPX Variable frequency drive, 400 V AC, 3-phase, 132 kW, IP54, Radio interference suppression filter, Brake chopper, OLED display, FR9

PRODUCT NAME	Eaton SPX variable frequency drive
CATALOG NUMBER	138616
PRODUCT LENGTH/DEPTH	362 mm
PRODUCT HEIGHT	1150 mm
PRODUCT WIDTH	480 mm
PRODUCT WEIGHT	146 kg
CERTIFICATIONS	RCM UL File No.: E134360 Specification for general requirements: IEC/EN 61800-2 CUL RoHS, ISO 9001 IEC/EN61800-5 Safety: EN 61800-5-1: 2003 UL CE CSA-C22.2 No. 14 DNV IEC/EN61800-3 IEC/EN 61800-3 UL 508C UL Category Control No.: NMMS, NMMS2, NMMS7. NMMS8 UL report applies to both US and Canada Certified by UL for use in Canada CSA Class No.: 3211-06

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PRODUCT CATEGORY	Variable frequency drives
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 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.

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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:	Radio interference suppression filter OLED display IGBT inverter Brake chopper DC link choke Internal DC link
CLIMATIC PROOFING	< 95 % relative humidity, no condensation, no corrosion, no dripping water
CONNECTION TO SMARTWIRE-DT	No
OPERATING MODE	U/f control Sensorless vector control (SLV) Optional: Vector control with feedback (CLV)
FRAME SIZE	FR9
ALTITUDE	Above 1000 m with 1 % performance reduction per 100 m Max. 1000 m Max. 3000 m
APPLICATION IN DOMESTIC AND COMMERCIAL AREA PERMITTED	No
APPLICATION IN INDUSTRIAL AREA PERMITTED	No
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING	-10 °C

TEMPERATURE - MIN	
AMBIENT OPERATING TEMPERATURE AT 150% OVERLOAD - MAX	50 °C
AMBIENT OPERATING TEMPERATURE AT 150% OVERLOAD - MIN	-10 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
ASSIGNED MOTOR CURRENT IM AT 400 V, 50 HZ, 110% OVERLOAD	279 A
ASSIGNED MOTOR CURRENT IM AT 400 V, 50 HZ, 150% OVERLOAD	231 A
MOUNTING POSITION	Vertical
PROTECTION	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
HEAT DISSIPATION DETAILS	Operation (with 150 % overload)
RESOLUTION	0.01 Hz (Frequency resolution, setpoint value)
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
VOLTAGE RATING - MAX	480 VAC
COMMUNICATION INTERFACE	PROFIBUS-DP DeviceNet, optional CANopen®, optional BACnet/IP, optional LonWorks, optional Modbus-TCP, optional BACnet MS/TP, optional EtherCAT, optional Ethernet IP, optional Modbus-RTU, optional PROFINET, optional
CONVERTER TYPE	Other
DEGREE OF PROTECTION	IP54 NEMA Other
ASSIGNED MOTOR CURRENT IM AT 440 - 480 V, 60 HZ, 150% OVERLOAD	240 A
ASSIGNED MOTOR CURRENT IM AT 440/480 V, 60 HZ, 110% OVERLOAD	302 A

SYSTEM CONFIGURATION TYPE	AC supply systems with earthed center point
ELECTROMAGNETIC COMPATIBILITY	1st and 2nd environments (according to EN 61800-3)
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ	200 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 110% OVERLOAD	250 HP
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	3300 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
OUTPUT VOLTAGE (U2)	400 V AC, 3-phase 500 V AC, 3-phase 480 V AC, 3-phase
NUMBER OF INPUTS (ANALOG)	2 (parameterizable, 0 - 10 V DC, 0/4 - 20 mA)
NUMBER OF INPUTS (DIGITAL)	6 (parameterizable, max. 30 V DC)
RADIO INTERFERENCE CLASS	C2, C3: depending on the motor cable length, the connected load, and ambient conditions. External radio interference suppression filters (optional) may be necessary.
NUMBER OF OUTPUTS (DIGITAL)	1 (parameterizable, 48 V DC/50 mA)
NUMBER OF RELAY OUTPUTS	2 (parameterizable, N/O, 8 A (24 V DC) / 8 A (250 V AC) / 0,4 A (125 V DC))
RATED CONTROL SUPPLY VOLTAGE	10 V DC (Us, max. 10 mA)
RATED CONTROL VOLTAGE (UC)	24 V DC (external, max. 250 mA)
SUPPLY FREQUENCY	50/60 Hz
MAINS VOLTAGE - MAX	500 V
MAINS VOLTAGE - MIN	380 V
NUMBER OF OUTPUTS (ANALOG)	1
OUTPUT FREQUENCY - MAX	320 Hz
OUTPUT FREQUENCY - MIN	0 Hz

SUITABLE FOR	Branch circuits, (UL/CSA)
SWITCHING FREQUENCY	3.6 kHz, 1 - 10 kHz adjustable, fPWM, Power section, Main circuit
RATED OPERATIONAL VOLTAGE	400 V AC, 3-phase 500 V AC, 3-phase 480 V AC, 3-phase
RATED FREQUENCY - MAX	66 Hz
RATED FREQUENCY - MIN	45 Hz
RATED OPERATIONAL CURRENT (IE) AT 110% OVERLOAD	300 A
RATED OPERATIONAL CURRENT (IE) AT 150% OVERLOAD	245 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	245 A
RATED OPERATIONAL POWER AT 380/400 V, 50 HZ	132 kW
RATED OPERATIONAL POWER AT 380/400 V, 50 HZ, 110% OVERLOAD	160 kW

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