



Eaton 129590

Eaton SPX Variable frequency drive, 600 V AC, 3-phase, 22 kW, IP54, Radio interference suppression filter, Brake chopper, OLED display, FR6

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PRODUCT NAME	Eaton SPX variable frequency drive
CATALOG NUMBER	129590
PRODUCT LENGTH/DEPTH	558 mm
PRODUCT HEIGHT	237 mm
PRODUCT WIDTH	195 mm
PRODUCT WEIGHT	18.5 kg

UL 508C
RoHS, ISO 9001
Specification for general requirements: IEC/EN 61800-2
DNV
IEC/EN 61800-3
UL
UL File No.: E134360
CE
Safety: EN 61800-5-1: 2003

CERTIFICATIONS

RCM
CSA-C22.2 No. 14
IEC/EN61800-5
CSA Class No.: 3211-06
UL Category Control No.: NMMS, NMMS2, NMMS7, NMMS8
Certified by UL for use in Canada
CUL
IEC/EN61800-3
UL report applies to both US and Canada

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:	OLED display Internal DC link IGBT inverter Brake chopper Radio interference suppression filter DC link choke
CLIMATIC PROOFING	< 95 % relative humidity, no condensation, no corrosion, no dripping water
CONNECTION TO SMARTWIRE-DT	No
OPERATING MODE	U/f control Optional: Vector control with feedback (CLV) Sensorless vector control (SLV)
FRAME SIZE	FR6
ALTITUDE	Above 1000 m with 1 % performance reduction per 100 m Max. 3000 m Max. 1000 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
MOUNTING POSITION	Vertical
PROTECTION	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
HEAT DISSIPATION DETAILS	Operation (with 150 % overload)
RATED OPERATIONAL POWER AT 690 V, 50 HZ	22 kW
RATED OPERATIONAL POWER AT 690 V, 50 HZ, 110% OVERLOAD	30 kW
RESOLUTION	0.01 Hz (Frequency resolution, setpoint value)
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
VOLTAGE RATING - MAX	690 VAC
COMMUNICATION INTERFACE	CANopen®, optional PROFIBUS-DP Modbus-TCP, optional BACnet/IP, optional LonWorks, optional DeviceNet, 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 690 V, 50 HZ, 110% OVERLOAD	32 A
ASSIGNED MOTOR CURRENT IM AT 690 V, 50 HZ, 150% OVERLOAD	23.8 A
ASSIGNED MOTOR CURRENT IM AT 690 V, 60	28 A

HZ, 110% OVERLOAD	
ASSIGNED MOTOR CURRENT IM AT 690 V, 60 HZ, 150% OVERLOAD	23 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 690 V, 60 HZ	25 HP
ASSIGNED MOTOR POWER AT 690 V, 60 HZ, 110% OVERLOAD	30 HP
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	550 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
OUTPUT VOLTAGE (U2)	600 V AC, 3-phase 690 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	690 V
MAINS VOLTAGE - MIN	525 V
NUMBER OF OUTPUTS (ANALOG)	1
OUTPUT FREQUENCY - MAX	320 Hz

OUTPUT FREQUENCY - MIN	0 Hz
SUITABLE FOR	Branch circuits, (UL/CSA)
SWITCHING FREQUENCY	1.5 kHz, 1 - 6 kHz adjustable, fPWM, Power section, Main circuit
RATED OPERATIONAL VOLTAGE	600 V AC, 3-phase 690 V AC, 3-phase
RATED FREQUENCY - MAX	66 Hz
RATED FREQUENCY - MIN	45 Hz
RATED OPERATIONAL CURRENT (IE) AT 110% OVERLOAD	34 A
RATED OPERATIONAL CURRENT (IE) AT 150% OVERLOAD	27 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	27 A
