

Variable frequency drive, 400 V AC, 3-phase, 900 kW, IP00, OLED display, FR14



Part no. **SPXH12A0-4A2N1**
125486

General specifications		
Product name		Eaton SPX variable frequency drive
Part no.		SPXH12A0-4A2N1
EAN		4015081230921
Product Length/Depth		105.5 millimetre
Product height		56.6 millimetre
Product width		141.6 millimetre
Product weight		872 kilogram
Certifications		IEC/EN61800-5 UL File No.: E134360 UL Category Control No.: NMMS, NMMS2, NMMS7, NMMS8 CSA-C22.2 No. 14 RCM IEC/EN61800-3 Safety: EN 61800-5-1: 2003 UL report applies to both US and Canada RoHS, ISO 9001 UL 508C Certified by UL for use in Canada CE CSA Class No.: 3211-06 CUL UL Specification for general requirements: IEC/EN 61800-2 IEC/EN 61800-3 DNV
Product Tradename		SPX
Product Type		Variable frequency drive
Product Sub Type		None
Catalog Notes		Assigned motor rating: For AC motors with internal and external ventilation with 50 Hz / 60 Hz Assigned motor rating: Overload cycle for 60 s every 600 s
General information		
Degree of protection		IP00 NEMA Other
Electromagnetic compatibility		1st and 2nd environments (according to EN 61800-3)
Fitted with:		IGBT inverter Internal DC link PC connection OLED display Control unit
Frame size		FR14
Functions		4-quadrant operation possible
Mounting position		Vertical
Product Category		Variable frequency drives
Protection		Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
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.
Suitable for		Branch circuits, (UL/CSA)
Climatic environmental conditions		
Altitude		Above 1000 m with 1 % performance reduction per 100 m Max. 1000 m Max. 3000 m
Ambient operating temperature - min		-10 °C
Ambient operating temperature - max		40 °C
Ambient operating temperature at 150% overload - min		-10 °C
Ambient operating temperature at 150% overload - max		40 °C
Ambient storage temperature - min		-40 °C

Ambient storage temperature - max		70 °C
Climatic proofing		< 95 % relative humidity, no condensation, no corrosion, no dripping water
Main circuit		
Mains voltage - min		380 V
Mains voltage - max		500 V
Operating mode		Sensorless vector control (SLV) U/f control Optional: Vector control with feedback (CLV)
Output frequency - min		0 Hz
Output frequency - max		320 Hz
Output voltage (U2)		400 V AC, 3-phase 480 V AC, 3-phase 500 V AC, 3-phase
Rated control supply voltage		10 V DC (Us, max. 10 mA)
Rated frequency - min		45 Hz
Rated frequency - max		66 Hz
Rated operational current (Ie) at 110% overload		1770 A
Rated operational current (Ie) at 150% overload		1600 A
Rated operational power at 380/400 V, 50 Hz, 3-phase		900 kW
Rated operational power at 380/400 V, 50 Hz, 3-phase, 110% overload		1000 kW
Rated operational voltage		500 V AC, 3-phase 480 V AC, 3-phase 400 V AC, 3-phase
Resolution		0.01 Hz (Frequency resolution, setpoint value)
Supply frequency		50/60 Hz
Switching frequency		3.6 kHz, 1 - 6 kHz adjustable, fPWM, Power section, Main circuit
System configuration type		AC supply systems with earthed center point
Voltage rating - max		480 V AC
Motor rating		
Assigned motor power at 460/480 V, 60 Hz, 3-phase		1200 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase, 110 % overload		1600 HP
Control circuit		
Number of inputs (analog)		2
Number of inputs (digital)		6
Number of outputs (analog)		1
Number of outputs (digital)		1
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 voltage (Uc)		24 V DC (external, max. 250 mA)
Communication		
Communication interface		CANopen®, optional Modbus-TCP, optional PROFIBUS-DP LonWorks, optional BACnet/IP, optional DeviceNet, optional BACnet MS/TP, optional EtherCAT, optional Ethernet IP, optional Modbus-RTU, optional PROFINET, optional
Connection to SmartWire-DT		No
Protocol		CAN DeviceNet PROFIBUS TCP/IP Data-Highway LON Other bus systems
Design verification		
Equipment heat dissipation, current-dependent Pvid		22500 W
Heat dissipation capacity Pdis		0 W
Heat dissipation per pole, current-dependent Pvid		0 W
Rated operational current for specified heat dissipation (In)		1600 A

Static heat dissipation, non-current-dependent Pvs			0 W
Heat dissipation details			Operation (with 150 % overload)
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.
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.
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.