

Part no. SPX300A1-5A4N1
Article no. 125417
Catalog No. SPX300A1-5A4N1

Delivery program

Product range			Variable frequency drives
Part group reference (e.g. DIL)			SPX
Rated operational voltage	U_e		600 V AC, 3-phase 690 V AC, 3-phase
Output voltage with V_e	U_2		600 V AC, 3-phase 690 V AC, 3-phase
Mains voltage (50/60Hz)	U_{LN}	V	525 (-15%) - 690 ($\pm 10\%$)
Rated operational current			
At 150% overload	I_e	A	325
At 110% overload	I_e	A	385
Note			Overload cycle for 60 s every 600 s
Assigned motor rating			
Note			For AC motors with internal and external ventilation with 50 Hz / 60 Hz
Note			Overload cycle for 60 s every 600 s
Note			at 690 V, 50 Hz
150 % Overload	P	kW	315
110 % Overload	P	kW	355
150 % Overload	I_M	A	316
Note			at 690 V, 60 Hz
150 % Overload	P	HP	300
110 % Overload	P	HP	400
150 % Overload	I_M	A	251
110 % Overload	I_M	A	332
Degree of Protection			IP21
Fieldbus connection (optional)			PROFIBUS-DP LonWorks CANopen® DeviceNet Modbus-TCP BACnet/IP
Fitted with			Radio interference suppression filter OLED display DC link choke
Frame size			FR10
Connection to SmartWire-DT			No

Technical data

General

Standards			Specification for general requirements: IEC/EN 61800-2 EMC requirements: IEC/EN 61800-3 Safety requirements: IEC/EN 61800-5-1
Certifications			CE, UL, cUL, c-Tick
Production quality			RoHS, ISO 9001
Climatic proofing	ρ_w	%	< 95% relative humidity, no condensation, no corrosion, no dripping water
Ambient temperature			
operation (150 % overload)	θ	°C	-10 - +50
operation (110 % overload)	θ	°C	-10 - +40
Storage	θ	°C	-40 - +70
Radio interference level			
Radio interference class (EMC)			C2, C3, depending on the motor cable length, the connected load, and ambient conditions. External radio interference suppression filters (optional) may be necessary.
Environment (EMC)			1st and 2nd environments

Mounting position			Vertical
Altitude		m	0 - 1000 m above sea level above 1000 m with 1 % performance reduction per 100 m max. 3000 m
Degree of Protection			IP21
Protection against direct contact			BGV A3 (VBG4, finger- and back-of-hand proof)

Main circuit

Supply			
Rated operational voltage	U_e		600 V AC, 3-phase 690 V AC, 3-phase
Mains voltage (50/60Hz)	U_{LN}	V	525 (-15%) - 690 ($\pm 10\%$)
System configuration			AC supply systems with earthed center point
Supply frequency	f_{LN}	Hz	50/60
Frequency range	f_{LN}	Hz	45 - 66
Power section			
Function			Frequency inverter with internal DC link and IGBT inverter
Output voltage with V_e	U_2		600 V AC, 3-phase 690 V AC, 3-phase
Output Frequency	f_2	Hz	0 - 50/60 (max. 320)
Switching frequency	f_{PWM}	kHz	1.5 adjustable 1 - 6
Operation Mode			U/f control sensorless vector control (SLV) optional: Vector control with feedback (CLV)
Frequency resolution (setpoint value)	Δf	Hz	0.01
Rated operational current			
At 150% overload	I_e	A	325
At 110% overload	I_e	A	385
Fitted with			Radio interference suppression filter OLED display DC link choke
Frame size			FR10
Motor feeder			
Note			For AC motors with internal and external ventilation with 50 Hz / 60 Hz
Note			Overload cycle for 60 s every 600 s
Note			at 690 V, 50 Hz
150 % Overload	P	kW	315
110 % Overload	P	kW	355
Note			at 690 V, 60 Hz
150 % Overload	P	HP	300
110 % Overload	P	HP	400

Control section

External control voltage	U_c	V	24 V DC (max. 250 mA)
Reference voltage	U_s	V	10 V DC (max. 10 mA)
Analog inputs			2, parameterizable, 0 - 10 V DC, 0/4 - 20 mA
Analog outputs			1, parameterizable, 0/4 - 20 mA
Digital inputs			6, parameterizable, max. 30 V DC
Digital outputs			1, parameterizable, 48 V DC/50 mA
Relay outputs			2, parameterizable, N/O, 8 A (24 V DC) / 8 A (250 V AC) / 0,4 A (125 V DC)

Assigned switching and protective elements

Motor feeder			
150 % overload (CT/ I_H , at 50 °C)			DX-LM3-450
110 % overload (VT/ I_L , at 40 °C)			DX-LM3-450
150 % overload (CT/ I_H , at 50 °C)			SIN-0390-6-0-P
110 % overload (VT/ I_L , at 40 °C)			SIN-0390-6-0-P

Design verification as per IEC/EN 61439

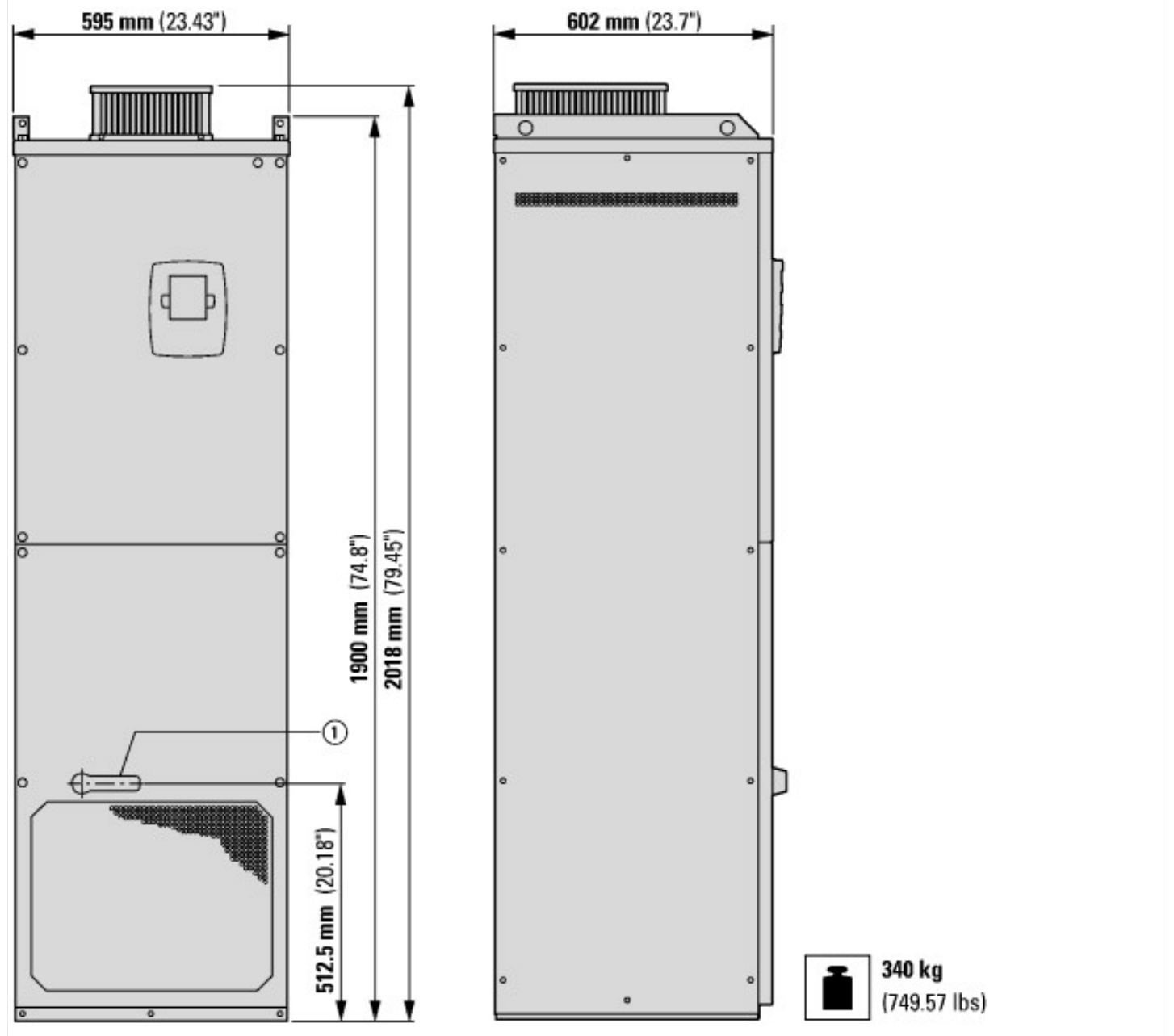
Technical data for design verification			
Equipment heat dissipation, current-dependent	P_{vid}	W	7875

IEC/EN 61439 design verification		
10.2 Strength of materials and parts		
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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.
10.5 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 Insulation properties		
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.

Approvals

Product Standards		UL 508C; CSA-C22.2 No. 14; IEC/EN61800-3; IEC/EN61800-5; CE marking
UL File No.		E134360
UL Category Control No.		NMMS, NMMS2, NMMS7, NMMS8
CSA File No.		UL report applies to both US and Canada
CSA Class No.		3211-06
North America Certification		UL listed, certified by UL for use in Canada
Specially designed for North America		No
Suitable for		Branch circuits
Max. Voltage Rating		3- 690 V AC IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey)
Degree of Protection		IEC: IP21

Dimensions



Additional product information (links)

IL04020008Z Instructions for 9000X frequency inverter: SVX, SPX

IL04020008Z Instructions for 9000X frequency inverter: SVX, SPX ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04020008Z2012_08.pdf

MN04001004 Operating Manual for 9000X Variable Frequency Drives

MN04001004 Bedienhandbuch
Frequenzumrichter 9000X - Deutsch ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04001004Z_DE.pdf

MN04004001 Application manual 9000X variable frequency drives

MN04004001 Applikationshandbuch
Frequenzumrichter 9000X - Deutsch ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04004001Z_DE.pdf

CA04020001Z-DE Sortimentskatalog:
Antriebstechnik effizient gestalten, Motoren
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