## **DATASHEET - SVX125A1-5A4N1**



Variable frequency drive, 600 V AC, 3-phase, 125 A, IP21, Radio interference suppression filter, OLED display, FR9

Powering Business Worldwide

SVX125A1-5A4N1 Part no. Catalog No. 125771

Alternate Catalog SVX125A1-5A4N1

Delivery program			
Product range			Variable frequency drives
Part group reference (e.g. DIL)			SVX
Rated operational voltage	U <sub>e</sub>		600 V AC, 3-phase 690 V AC, 3-phase
Output voltage with $V_{\rm e}$	U <sub>2</sub>		600 V AC, 3-phase 690 V AC, 3-phase
Mains voltage (50/60Hz)	$U_{LN}$	V	525 (-15%) - 690 (±10%)
Rated operational current			
At 150% overload	l <sub>e</sub>	Α	125
At 110% overload	l <sub>e</sub>	Α	144
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	110
110 % Overload	P	kW	132
150 % Overload	$I_{M}$	Α	114
110 % Overload	I <sub>M</sub>	Α	134
Note			at 690 V, 60 Hz
150 % Overload	P	HP	125
110 % Overload	P	HP	150
150 % Overload	I <sub>M</sub>	Α	109
110 % Overload	I <sub>M</sub>	Α	125
Degree of Protection			IP21
Fieldbus connection (optional)			PROFIBUS-DP PROFINET EtherCAT EtherNet/IP LonWorks CANopen® DeviceNet Modbus-TCP Modbus-RTU BACnet MS/TP
Fitted with			Radio interference suppression filter OLED display
Frame size			FR9
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, RCM
Approvals			DNV
Production quality			RoHS, ISO 9001
Climatic proofing	$\rho_{\text{W}}$	%	$<\!95\%$ relative humidity, no condensation, no corrosion, no dripping water

Ambient temperature			
Operating ambient temperature min.		°C	-10
Operating ambient temperature max.		°C	+ 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 as per EN 61800-3
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 <sub>e</sub>		600 V AC, 3-phase 690 V AC, 3-phase
Mains voltage (50/60Hz)	$U_{LN}$	V	525 (-15%) - 690 (±10%)
System configuration			AC supply systems with earthed center point
Supply frequency	$f_{\text{LN}}$	Hz	50/60
Frequency range	$f_{LN}$	Hz	45–66 (± 0%)
Power section			
Function			Variable frequency drive with internal DC link and IGBT inverter
Output voltage with $V_{\rm e}$	$U_2$		600 V AC, 3-phase 690 V AC, 3-phase
Output Frequency	f <sub>2</sub>	Hz	0 - 50/60 (max. 320)
Switching frequency	f <sub>PWM</sub>	kHz	1.5 adjustable 1 - 6
Operation Mode			U/f control sensorless vector control (SLV)
Frequency resolution (setpoint value)	Δf	Hz	0.01
Rated operational current			
At 150% overload	I <sub>e</sub>	Α	125
At 110% overload	I <sub>e</sub>	Α	144
Fitted with			Radio interference suppression filter OLED display
Frame size			FR9
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	110
110 % Overload	P	kW	132
Note			at 690 V, 60 Hz
150 % Overload	P	HP	125
110 % Overload	P	HP	150
Control section			
External control voltage	U <sub>c</sub>	V	24 V DC (max. 250 mA)
Reference voltage	Us	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  Assigned switching and protective elements			2, parameterizable, N/O, 8 A (24 V DC) / 8 A (250 V AC) / 0,4 A (125 V DC)
Power Wiring			

Main choke	
150 % overload (CT/I <sub>H</sub> , at 50 °C)	DX-LN3-160
Motor feeder	
motor choke	
150 % overload (CT/I <sub>H</sub> , at 50 °C)	DX-LM3-150
110 % overload (VT/I <sub>L</sub> , at 40 °C)	DX-LM3-150
Sine filter	
150 % overload (CT/I <sub>H</sub> , at 50 °C)	SIN-0185-6-0-P
110 % overload (VT/I $_{\rm L}$ , at 40 °C)	SIN-0185-6-0-P

# Design verification as per IEC/EN 61439

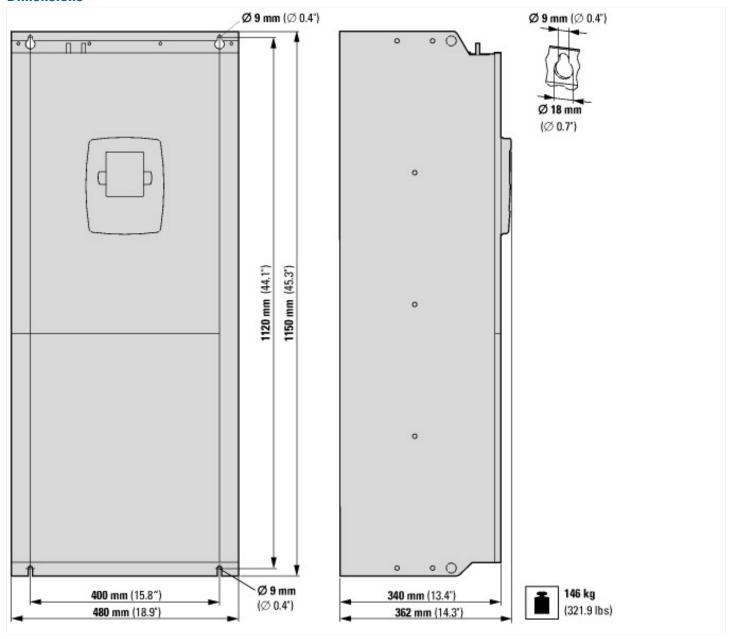
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10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  The panel builder is responsibility.  The panel builder is responsible for the temperature rise provide heat dissipation data for the devices.  Is the panel builder's responsibility. The specifications fo observed.  10.12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications fo	ectric strength	Is the panel builder's responsibility.
10.10 Temperature rise  The panel builder is responsible for the temperature rise provide heat dissipation data for the devices.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications fo observed.  10.12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications fo	oltage	Is the panel builder's responsibility.
provide heat dissipation data for the devices.  10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications fo observed.  10.12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications fo	es made of insulating material	Is the panel builder's responsibility.
observed.  10.12 Electromagnetic compatibility Is the panel builder's responsibility. The specifications fo		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
		Is the panel builder's responsibility. The specifications for the switchgear must observed.
uusulved.	tibility	Is the panel builder's responsibility. The specifications for the switchgear must observed.
10.13 Mechanical function  The device meets the requirements, provided the information leaflet (IL) is observed.		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## Approvals

Approvato	
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**



# Assets (links)

**Declaration of CE Conformity** 

00002807

**Instruction Leaflets** 

IL04020008Z2018\_05

## **Additional product information (links)**

IL04020008Z Frequency inverter 9000X	
IL04020008Z Frequency inverter 9000X	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04020008Z2018_05.pdf
Documentation	http://www.eaton.eu/Europe/Electrical/ProductsServices/AutomationControl/SwitchingProtectingDrivingMotors/9000X/SVX9000/index.htm#tabs-4