

Variable frequency drive SVX 3-/3-phase 132 kW 690 V; protection type IP54; integrated EMC filter and braking transistor

Powering Business Worldwide*

 Part no.
 SVX150A2-5A4B1

 Article no.
 138514

 Catalog No.
 SVX150A2-5A4B1

Delivery program

art group reference (e.g. DIL) arted operational voltage utput voltage with V _e utput voltage with V _e voltage (500 WAC. 3-phase 680 VAC. 480 VAC	Delivery program			
aited operational voltage U _n S00 V AC, 3-phase (90 V AC, 3-phase) (90 V AC, 40 V	Product range			Variable frequency drives
utput voltage with V _e U2 680 VA.C. 3-phase 880 VA.C. 3-phase 980 VA.C. 3-phase 980 VA.C. 3-phase 880 VA.C. 3-phase 980 VA.C. 3-phase 880 VA.C. 3-phase 980 VA.C. 3-phase	Part group reference (e.g. DIL)			SVX
Note	Rated operational voltage	U _e		
Aid 150% overload Ie A 144 At 110% overload Ie A 170 Note Overload cycle for 60 s avery 600 s Overload cycle for 60 s avery 600 s Note For AC motors with internal and external ventilation with 50 Hz / 60 Hz Note Overload cycle for 60 s every 600 s Note 6690 V, 50 Hz 110 % Overload P KW 160 150 % Overload P KW 160 110 % Overload P KW 160 110 % Overload P HP 150 Noterload P HP 150 Noterload P HP 200 110 % Overload P HP 200 150 % Overload P HP 167 110 % Overload P HP 167 150 % Overload <td< td=""><td>Output voltage with $V_{\rm e}$</td><td>U₂</td><td></td><td></td></td<>	Output voltage with $V_{\rm e}$	U ₂		
At 150% overload Ie A 144 At 110% overload Ie Ap 170 Note Overload cycle for 60 s every 600 s Overload cycle for 60 s every 600 s Note For AC motors with internal and external ventilation with 50 Hz / 60 Hz Note Overload cycle for 60 s every 600 s Note 0 verload cycle for 60 s every 600 s Note 150 % Overload P RW 160 150 % Overload P RW 160 150 % Overload Im A 144 Note B RW 160 150 % Overload Im A 152 Note Im B 150 Noterload P HP 150 Noterload P HP 200 110 % Overload Im 167 167 eggree of Protection IP54 167 eggree of Protection IP54 167 eldwiss-connection (optional) Image: Contraction of the contraction of the contraction of the contraction of the contrac	Mains voltage (50/60Hz)	U_{LN}	V	525 (-15%) - 690 (±10%)
At 110% overload Io A 170 Note Overload cycle for 60 s every 600 s Assigned motor rating FM For AC motors with internal and external ventilation with 50 Hz / 60 Hz Note Overload cycle for 60 s every 600 s Overload cycle for 60 s every 600 s Note Overload cycle for 60 s every 600 s Io Note Deverload cycle for 60 s every 600 s Io 150% Overload P RW 132 110% Overload P RW 160 Note Io 162 Note Io 162 Note Io 162 Note Io 150 Note rload P HP 20 110% Overload P HP 20 110% Overload In A 157 110% Overload Io P 1954 12edus connection (optional) Io P 1954 12edus connection (optional) Io 1954 1954 12edus connection (optional)	Rated operational current			
Note Overload cycle for 60 s every 600 s Assigned motor rating For AC motors with internal and external ventilation with 50 Hz / 60 Hz Note Overload cycle for 60 s every 600 s Note overload cycle for 60 s every 600 s 150 % Overload P kW 132 150 % Overload P kW 160 150 % Overload Image: Market in the properties of the properties of the properties of the properties of Protection P HW 160 150 % Overload P HP 200 150 % Overload P HP 200 150 % Overload P HP 200 150 % Overload P HP 200 150 % Overload Image: Market in the properties of Protection PS4 HP 150 % Overload PS4 HP 150 % Overload (not properties of Protection (optional) A 167 % PS4	At 150% overload	l _e	Α	144
Note Note Note Note Note Note 150 % Overload 110 %	At 110% overload	I _e	Α	170
Note For AC motors with internal and external ventilation with 50 Hz / 60 Hz Note 0verload cycle for 60 s every 600 s 150 % Overload P kW 132 110 % Overload P kW 160 150 % Overload I _M A 134 110 % Overload I _M A 162 Note at 680 V, 60 Hz at 680 V, 60 Hz 150 % Overload P HP 150 110 % Overload P HP 200 150 % Overload I _M A 157 110 % Overload I _M A 167 120 % CANopen® Devices Net Noverload Note Net Noverload Note Net Noverload 10 % Overload I _M A 167 10 % Overload I _M A <t< td=""><td>Note</td><td></td><td></td><td>Overload cycle for 60 s every 600 s</td></t<>	Note			Overload cycle for 60 s every 600 s
Note Verload cycle for 60 s every 600 s 150 % Overload P kW 132 110 % Overload P kW 166 150 % Overload Image: March 100 % Overload Image: March 100 % Overload A 144 Note Image: March 100 % Overload P HP 150 10 % Overload P HP 150 10 % Overload Image: March 100 % Overload Image: March 100 % Overload A 125 110 % Overload Image: March 100 % Overl	Assigned motor rating			
Note at 690 V, 50 Hz 150 % Overload P kW 132 110 % Overload P kW 160 150 % Overload I _M A 134 110 % Overload I _M A 162 Note at 690 V, 60 Hz at 690 V, 60 Hz 110 % Overload P HP 150 110 % Overload P HP 200 150 % Overload I _M A 167 egree of Protection IPS4 HF 167 eighbus connection (optional) IVS4 PROFIBUS-DP LonWorks CAlopen® DeviceNet Modus-TCP BACNet/IP PROFIBUS-DP BACNet/IP etted with IVS6 Radio interference suppression filter OF BACNet/IP Brake chopper OF BACNet/IP etted with CALCELL Gisplay OF Clink choke IVS6 FR9	Note			For AC motors with internal and external ventilation with 50 Hz / 60 Hz $$
150 % Overload	Note			Overload cycle for 60 s every 600 s
110 % Overload	Note			at 690 V, 50 Hz
150 % Overload IM A 134 110 % Overload IM A 162 Note at 690 V, 60 Hz 150 % Overload P HP 150 110 % Overload P HP 200 150 % Overload IM A 125 110 % Overload IM A 167 egree of Protection IP54 regree of Protection (optional) PROFIBUS-DP Lon/Works CANopen® Device/Net Modbus-TCP BACnet/IP PROFIBUS-DP Lon/Works CANOpen® Device/Net Modbus-TCP BACnet/IP itted with Brake chopper OLED display DC link choke PROFIBUS-DP COLED display DC link choke PROFIBUS-DP CO	150 % Overload	P	kW	132
Note Note 150 % Overload P	110 % Overload	Р	kW	160
Note 150 % Overload 10 % Overload 110 % Overloa	150 % Overload	I _M	Α	134
150 % Overload P HP 200 150 % Overload P HP 200 150 % Overload IM A 155 110 % Overload IM A 167 110 % Overload IM A 1	110 % Overload	I _M	Α	162
110 % Overload 1M A 125 110 % Overload 1M A 167 110 % Overload 1M A 167 110 % Overload 1M A 167 PROFIBUS-DP LonWorks CANopen® DeviceNet Modbus-TCP BACnet/IP 11ted with 11ted wi	Note			at 690 V, 60 Hz
150 % Overload IM A 167 1994 199	150 % Overload	Р	HP	150
110 % Overload Image: Protection segree of Protection (optional) Image: Protection segree of Protection (optional) Image: Profibus-DP Lon/Works CANopen® DeviceNet Modbus-TCP BACnet/IP Intel with Radio interference suppression filter Brake chopper OLED display DC link choke PR9 TR9 TR9	110 % Overload	Р	HP	200
regree of Protection IP54 PROFIBUS-DP LonWorks CANopen® DeviceNet Modbus-TCP BACnet/IP Radio interference suppression filter Brake chopper OLED display DC link choke FR9	150 % Overload	IM	Α	125
PROFIBUS-DP LonWorks CANopen® DeviceNet Modbus-TCP BACnet/IP Radio interference suppression filter Brake chopper OLED display DC link choke FR9	110 % Overload	I _M	Α	167
LonWorks CANopen® DeviceNet Modbus-TCP BACnet/IP Radio interference suppression filter Brake chopper OLED display DC link choke FR9	Degree of Protection			IP54
Brake chopper OLED display DC link choke FR9	Fieldbus connection (optional)			LonWorks CANopen® DeviceNet Modbus-TCP
	Fitted with			Brake chopper OLED display
onnection to SmartWire-DT No	Frame size			FR9
	Connection to SmartWire-DT			No

Technical data

General

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	8	°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			IP54
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}	٧	525 (-15%) - 690 (±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
	-2		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)
Frequency resolution (setpoint value)	Δf	Hz	0.01
Rated operational current			
At 150% overload	I _e	Α	144
At 110% overload	I _e	Α	170
Frame size			Radio interference suppression filter Brake chopper OLED display DC link choke
Frame size			FR9
Motor feeder			For AO makes with internal and external contiletion with FO Us (CO Us
Note			For AC motors with internal and external ventilation with 50 Hz / 60 Hz
Note			Overload cycle for 60 s every 600 s
Note	D	134/	at 690 V, 50 Hz
150 % Overload	P P	kW	132
110 % Overload	r	kW	160
Note	D	LID	at 690 V, 60 Hz
150 % Overload	Р	HP	150
110 % Overload	Р	HP	200
External control voltage	U _c	٧	24 V DC (max. 250 mA)
Reference voltage	Us	V	10 V DC (max. 10 mA)
Analog inputs	~5		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)
			-, paramotorizatio, 140, 0 A (27 V DO) / 0 A (200 V AU) / 0,4 A (120 V DO)
Assigned switching and protective elements			
Assigned switching and protective elements Power Wiring			
			DX-LN3-200

150 % overload (CT/I _H , at 50 °C)	DX-LM3-150
110 % overload (VT/I $_{\rm L}$, at 40 °C)	DX-LM3-180
150 % overload (CT/I _H , at 50 °C)	SIN-0185-6-0-P
110 % overload (VT/I $_{\rm L}$, at 40 °C)	SIN-0185-6-0-P

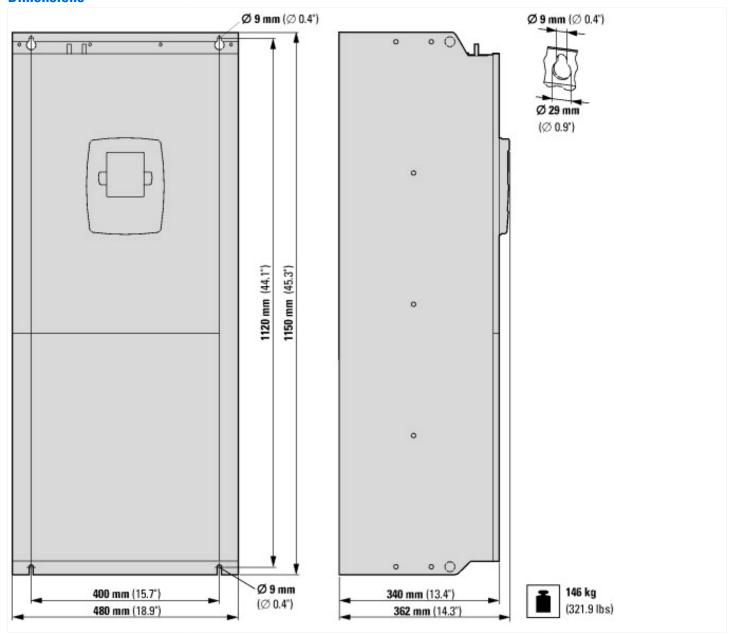
Design verification as per IEC/EN 61439

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Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	245
Equipment heat dissipation, current-dependent	P _{vid}	W	3300
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

UL 508C; CSA-C22.2 No. 14; IEC/EN61800-3; IEC/EN61800-5; CE marking
E134360
NMMS, NMMS2, NMMS7. NMMS8
UL report applies to both US and Canada
3211-06
UL listed, certified by UL for use in Canada
No
Branch circuits
3~ 690 V AC IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey)
IEC: IP54

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 starten und steuern	http://www.eaton.eu/DE/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_1095238_de.pdf			