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Powering Business Worldwide

SVX030A1-4A1B1 - Variable frequency drive, 400 V AC, 3-phase, 46 A, IP21, Radio interference suppression filter, Brake chopper, OLED display, FR6



125693 SVX030A1-4A1B1

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## 125693 SVX030A1-4A1B1

Variable frequency drive, 400 V AC, 3-phase, 46 A, IP21, Radio interference suppression filter, Brake chopper, OLED display, FR6

Alternate Catalog No.

SVX030A1-4A1B1

EL-Nummer (Norway)

4132591

Variable frequency drive, Part group reference (e.g. DIL): SVX, Rated operational voltage:  $U_e = 400$  V AC, 3-phase, 480 V AC, 3-phase, 500 V AC, 3-phase, Output voltage with  $V_e$ :  $U_2 = 400$  V AC, 3-phase, 480 V AC, 3-phase, 500 V AC, 3-phase, Mains voltage (50/60Hz): ULN = 380 (-15%) - 500 (+10%) V, Rated operational current At 150% overload:  $I_e = 46$  A, Rated operational current At 110% overload:  $I_e = 61$  A, 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, Overload cycle for 60 s every 600 s, at 400 V, 50 Hz, Assigned motor rating 150 % Overload: P= 22 kW, 110 % Overload: P= 30 kW, 150 % Overload: IM = 41 A, 110 % Overload: IM= 55 A, Assigned motor rating Note: at 440 - 480 V, 60 Hz, Assigned motor rating 150 % Overload: P= 30 HP, 110 % Overload: P= 40 HP, Assigned motor rating 150 % Overload: IM= 40 A, 110 % Overload: IM= 52 A, Degree of Protection: IP21, Fieldbus connection (optional): PROFIBUS-DP, LonWorks, CANopen®, DeviceNet, Modbus-TCP, BACnet/IP, Fitted with: Radio interference suppression filter, Brake chopper, OLED display, DC link choke, Frame size: FR6, Standards: Specification for general requirements: IEC/EN 61800-2, EMC requirements: IEC/EN 61800-3, Safety requirements: IEC/EN 61800-5-1

- Delivery program
- Technical data
- Design verification as per IEC/EN 61439
- Approvals
- Dimensions

### Delivery program

Product range

Variable frequency drives

Part group reference (e.g. DIL)

SVX

Rated operational voltage [ $U_e$ ]

400 V AC, 3-phase

480 V AC, 3-phase

500 V AC, 3-phase

Output voltage with  $V_e$  [ $U_2$ ]

400 V AC, 3-phase

480 V AC, 3-phase

500 V AC, 3-phase

Mains voltage (50/60Hz) [ $U_{LN}$ ]

380 (-15%) - 500 (+10%) V

Rated operational current [ $I_e$ ]

At 150% overload [ $I_e$ ]

46 A

At 110% overload [ $I_e$ ]

61 A  
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 400 V, 50 Hz  
150 % Overload [P]  
22 kW  
110 % Overload [P]  
30 kW  
150 % Overload [I<sub>M</sub>]  
41 A  
110 % Overload [I<sub>M</sub>]  
55 A  
Note  
at 440 - 480 V, 60 Hz  
150 % Overload [P]  
30 HP  
110 % Overload [P]  
40 HP  
150 % Overload [I<sub>M</sub>]  
40 A  
110 % Overload [I<sub>M</sub>]  
52 A  
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  
Brake chopper  
OLED display  
Frame size  
FR6  
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 [ρ<sub>w</sub>]  
< 95% relative humidity, no condensation, no corrosion, no dripping water %  
Ambient temperatureOperating ambient temperature min.  
-10 °C  
Ambient temperatureOperating ambient temperature max.  
+50 °C  
Ambient temperatureoperation (110 % overload) [9]  
-10 - +40 °C

Ambient temperatureStorage [9]  
 -40 - +70 °C  
 Radio interference levelRadio 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.  
 Radio interference levelEnvironment (EMC)  
 1st and 2nd environments as per EN 61800-3  
 Mounting position  
 Vertical  
 Altitude  
 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  
 SupplyRated operational voltage [ $U_e$ ]  
 400 V AC, 3-phase  
 480 V AC, 3-phase  
 500 V AC, 3-phase  
 SupplyMains voltage (50/60Hz) [ $U_{LN}$ ]  
 380 (-15%) - 500 (+10%) V  
 SupplySystem configuration  
 AC supply systems with earthed center point  
 SupplySupply frequency [ $f_{LN}$ ]  
 50/60 Hz  
 SupplyFrequency range [ $f_{LN}$ ]  
 45-66 ( $\pm 0\%$ ) Hz  
 Power sectionFunction  
 Variable frequency drive with internal DC link and IGBT inverter  
 Power sectionOutput voltage with  $V_e$  [ $U_2$ ]  
 400 V AC, 3-phase  
 480 V AC, 3-phase  
 500 V AC, 3-phase  
 Power sectionOutput Frequency [ $f_2$ ]  
 0 - 50/60 (max. 320) Hz  
 Power sectionSwitching frequency [ $f_{PWM}$ ]  
 10  
 adjustable 1 - 16 kHz  
 Power sectionOperation Mode  
 U/f control  
 sensorless vector control (SLV)  
 Power sectionFrequency resolution (setpoint value) [ $\Delta f$ ]  
 0.01 Hz  
 Power sectionRated operational currentAt 150% overload [ $I_e$ ]  
 46 A  
 Power sectionRated operational currentAt 110% overload [ $I_e$ ]  
 61 A  
 Power sectionFitted with  
 Radio interference suppression filter  
 Brake chopper  
 OLED display  
 Power sectionFrame size  
 FR6  
 Motor feederNote  
 For AC motors with internal and external ventilation with 50 Hz / 60 Hz  
 Motor feederNote  
 Overload cycle for 60 s every 600 s  
 Motor feederNote  
 at 400 V, 50 Hz  
 Motor feeder150 % Overload [P]  
 22 kW  
 Motor feeder110 % Overload [P]  
 30 kW  
 Motor feederNote  
 at 440 - 480 V, 60 Hz  
 Motor feeder150 % Overload [P]

30 HP  
 Motor feeder 110 % Overload [P]  
 40 HP  
 Control section  
 External control voltage [U<sub>c</sub>]  
 24 V DC (max. 250 mA) V  
 Reference voltage [U<sub>s</sub>]  
 10 V DC (max. 10 mA) V  
 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  
 Power Wiring Main choke 150 % overload (CT/I<sub>H</sub>, at 50 °C)  
 DX-LN3-080  
 Motor feeder motor choke 150 % overload (CT/I<sub>H</sub>, at 50 °C)  
 DX-LM3-050  
 Motor feeder motor choke 110 % overload (VT/I<sub>L</sub>, at 40 °C)  
 DX-LM3-063  
 Motor feeder Sine filter 150 % overload (CT/I<sub>H</sub>, at 50 °C)  
 DX-SIN3-048  
 Motor feeder Sine filter 110 % overload (VT/I<sub>L</sub>, at 40 °C)  
 DX-SIN3-061

## Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I<sub>r</sub>]

46 A

Heat dissipation per pole, current-dependent [P<sub>vid</sub>]

0 W

Equipment heat dissipation, current-dependent [P<sub>vid</sub>]

550 W

Static heat dissipation, non-current-dependent [P<sub>vs</sub>]

0 W

Heat dissipation capacity [P<sub>diss</sub>]

0 W

Operating ambient temperature min.

-10 °C

Operating ambient temperature max.

+50 °C

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 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2 Strength of materials and parts 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 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 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 Insulation properties 10.9.3 Impulse withstand voltage  
Is the panel builder's responsibility.
- 10.9 Insulation properties 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

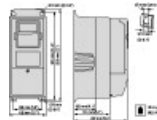
Max. Voltage Rating

3~ 480 V AC IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey)

Degree of Protection

IEC: IP21

## Dimensions



## Additional product information

- [Documentation](#)  
(Web)

## Product photo

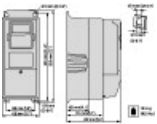


8230PIC-284

Photo

SVX, SPX variable frequency drive: size 6

# Dimensions single product

-   
8230DIM-113  
Line drawing

## Manual

- [9000X Variable Frequency Drives, Applications \(MN04004001Z\\_DE\)](#)  
Asset  
(PDF, 08/2010, de)

## Instruction Leaflet

- [9000X Variable Frequency Drives \(IL04020008Z\)](#)  
Asset  
(PDF, 05/2018, multilingual)

## Declaration of Conformity

### EU

- [Variable frequency drive SVX, SPX \(DA-DC-00003693\)](#)  
Asset  
(PDF)

### UK

- [Variable frequency drive SVX, SPX \(DA-DC-00003956\)](#)  
Asset  
(PDF)

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