# DATASHEET - SVX050A1-2A1N1

**SVX FreqD 37 kW 230 V IP21**

| | |
|---|---|
| **Part no.** | **SVX050A1-2A1N1** |
| **Catalog No.** | **125725** |
| **Alternate Catalog No.** | **SVX050A1-2A1N1** |
| **EL-Nummer (Norway)** | **4132531** |

## Delivery program

| | | | |
|---|---|---|---|
| Product range | | | Variable frequency drives |
| Part group reference (e.g. DIL) | | | SVX |
| Rated operational voltage | $U_e$ | | 230 V AC, 3-phase<br>240 V AC, 3-phase |
| Output voltage with $V_e$ | $U_2$ | | 230 V AC, 3-phase<br>240 V AC, 3-phase |
| Mains voltage (50/60Hz) | $U_{LN}$ | V | 208 (-15%) - 240 (+10%) |
| **Rated operational current** | | | |
| At 150% overload | $I_e$ | A | 140 |
| At 110% overload | $I_e$ | A | 170 |
| **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 230 V, 50 Hz |
| 150 % Overload | P | kW | 37 |
| 110 % Overload | P | kW | 45 |
| 150 % Overload | $I_M$ | A | 117 |
| 110 % Overload | $I_M$ | A | 141 |
| Note | | | at 230 V, 60 Hz |
| 150 % Overload | P | HP | 50 |
| 110 % Overload | P | HP | 60 |
| 150 % Overload | $I_M$ | A | 130 |
| 110 % Overload | $I_M$ | A | 154 |
| Degree of Protection | | | IP21 |
| Fieldbus connection (optional) | | | PROFIBUS-DP<br>PROFINET<br>EtherCAT<br>EtherNet/IP<br>LonWorks<br>CANopen®<br>DeviceNet<br>Modbus-TCP<br>Modbus-RTU<br>BACnet MS/TP |
| Fitted with | | | Radio interference suppression filter<br>OLED display |
| Frame size | | | FR8 |
| Connection to SmartWire-DT | | | no |

## Technical data

### General

| | | | |
|---|---|---|---|
| Standards | | | General requirements: IEC/EN 61800-2<br>EMV requirements: IEC/EN 61800-3<br>Safety requirements: IEC/EN 61800-5-1 |
| Certifications | | | CE, UL, cUL, RCM |
| Approvals | | | DNV |
| Production quality | | | RoHS, ISO 9001 |
| Climatic proofing | $\rho_w$ | % | < 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<br>above 1000 m with 1 % performance reduction per 100 m<br>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 | $U_e$ | | 230 V AC, 3-phase<br>240 V AC, 3-phase |
| Mains voltage (50/60Hz) | $U_{LN}$ | V | 208 (-15%) - 240 (+10%) |
| System configuration | | | AC supply systems with earthed center point |
| Supply frequency | $f_{LN}$ | 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 $V_e$ | $U_2$ | | 230 V AC, 3-phase<br>240 V AC, 3-phase |
| Output Frequency | $f_2$ | Hz | 0 - 50/60 (max. 320) |
| Switching frequency | $f_{PWM}$ | kHz | 3.6<br>adjustable 1 - 10 |
| Operation Mode | | | U/f control<br>sensorless vector control (SLV) |
| Frequency resolution (setpoint value) | Δf | Hz | 0.01 |
| Rated operational current | | | |
| At 150% overload | $I_e$ | A | 140 |
| At 110% overload | $I_e$ | A | 170 |
| Fitted with | | | Radio interference suppression filter<br>OLED display |
| Frame size | | | FR8 |
| 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 230 V, 50 Hz |
| 150 % Overload | P | kW | 37 |
| 110 % Overload | P | kW | 45 |
| Note | | | at 230 V, 60 Hz |
| 150 % Overload | P | HP | 50 |
| 110 % Overload | P | HP | 60 |

## 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 | | | |
| motor choke | | | |
| 150 % overload (CT/$I_H$, at 50 °C) | | | DX-LM3-150 |

| | | | |
|---|---|---|---|
| 110 % overload (VT/$I_L$, at 40 °C) | | | DX-LM3-180 |
| Sine filter | | | |
| 150 % overload (CT/$I_H$, at 50 °C) | | | DX-SIN3-150 |
| 110 % overload (VT/$I_L$, at 40 °C) | | | DX-SIN3-180 |

## Design verification as per IEC/EN 61439

| | | | |
|---|---|---|---|
| Technical data for design verification | | | |
| Operating ambient temperature min. | | °C | -10 |
| Operating ambient temperature max. | | °C | 50 |

## Assets (links)

### Declaration of CE Conformity

00002807

## Additional product information (links)

| | |
|---|---|
| **IL04020008Z Frequency inverter 9000X** | |
| IL04020008Z Frequency inverter 9000X | ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04020008Z2018_05.pdf |