## Contactor 3RT6023-1AN20

URL:https://www.sxplc.com/index.php?route=product/product&product\_id=6815

## **Product data sheet**

Comprehensive Technical Data
Contactor Construction Size S0
Product extension Auxiliary switch Yes
Power Loss [W] at Current Measurement
● At AC 0.4 W per electrode in thermal operation
● No load current share Typical 1.97 W
Lost power calculation type Electrode-related Orthogonal
Insulation voltage Measured value 690 V
Degree of contamination 3
Insulation voltage Measured value 690 V Pollution level 3 Power against shock voltage Measured value

Maximum permissible voltage for safe isolation Between coil and main contacts in accordance with EN 60947-1
60947-1
400 V
Shock resistance ● At square wave impact 7,5g / 5g at AC
7,5g / 5 ms, 4,7g / 10 ms at ● AC
Shock resistance at sinusoidal shock
11,8g/5 ms, 7,4g/10 ms at AC
Mechanical user life (changeover cycle)
● Typical 10,000,000 for contactors
Typical 10,000,000 for contactors with auxiliary switching block
RoHS Directive (Date) 05/01/2012
Environmental conditions
Installation Height Height above water Maximum 2 000 m
Ambient temperature

-25 +60 °C during operation +60 °C
During storage -55 +80 °C +80 °C ● During storage -55 +80 °C
Main Circuit
Number of poles Used for main circuit 3
Number of Normally Open Contacts Used for Main Contacts 3
Number of Normally Closed Contacts Used for Main Contact 0
Operating Voltage
Measured value at AC-3 Maximum 690 V
● Measured value at AC-3e Maximum 690 V
Working current
● Up to 690 V at AC-1
- Measured value at 40 °C ambient temperature 40 A
- Measured value at 60 °C ambient temperature 35 A
• At AC-3
- 9 A measured at 400 V

- 9 A measured value at 690 V
Measured value at 690 V 9 A at 400 V ● At AC-3e
- Measured value at 400 V 9 A at 690 V
- Measured value at 690 V 9 A
Connectable wire cross-section in the main circuit ● Maximum permissible value at 60 °C
● Maximum permissible value 10 mm² at 60 °C
● Maximum permissible value 10 mm² at 40 °C
Operating current Approx. 200000 operating cycles AC-4
● Measured value at 400 V 4.1 A
● 3.3 A measured value at 690 V
Rated power
● At AC-1
- Measured value at 230 V 13.3 kW
- Measured value at 60 °C at 230 V 13.3 kW
- Measured value at 60 °C at 400 V 23 kW

- Measured value at 60 °C at 690 V 40 kW
Measured value at 60 °C at 690 V
- ● Measured value at 230 V 2.2 kW
- Measured value at 400 V 4 kW
- Measured value at 690 V 7.5 kW
Measured value at 690 V 7.5 kW at AC-3e
- AC-3e Measured value at 230 V 2.2 kW Measured value at 400 V 4 kW
- Measured value at 400 V 4 kW Measured value at 690 V 7.5 kW
- Measured value at 690 V 7.5 kW
Measured value at 690 V 7.5 kW Rated power Approx. 200,000 operating cycles AC-4
● Measured value at 400 V 2 kW
Measured value at 400 V 2 kW Measured value at 690 V 2.5 kW
No-load frequency
5,000 1/h at ● AC
Switching frequency

Maximum 1 000 1/h at AC-1 ● Maximum 1 000 1/h at AC-3
Maximum value at AC-1 1 000 1/h ● Maximum value at AC-3 1 000 1/h
Maximum 1 000 1/h at AC-3e ● Maximum 1 000 1/h at AC-4
● AC-4 Maximum 300 1/h
Control circuit/control
Control circuit/control voltage type AC for control feed voltage
When controlling the feed voltage AC
● Measured value at 50 Hz 220 V
● Measured value 220 V at 60 Hz
Measured value of control feed voltage for working area elements AC for solenoid coils
● At 50 Hz 0.8 0.8 1.1 at 50 Hz
0.85 at 60 Hz 1.1 at 60 Hz 1.1
Starting apparent power AC with solenoid coil
68 VA at 50 Hz
67 VA at 60 Hz

● 0.72 at 50 Hz
0.74 at 60 Hz
Stopping apparent power AC of solenoid coil
● 7.9 VA at 50 Hz
● 6.5 VA at 60 Hz
Induced power factor Stopping power for coil
● 0.25 at 50 Hz
0.28 at 60 Hz
Auxiliary Circuit
Number of normally closed contacts 1 for auxiliary contacts without delayed changeover
Number of Normally Open Contacts 1 with no delayed changeover using auxiliary contacts
Maximum value 10 A at operating current AC-12
Maximum value at operating current AC-12 10 A at operating current AC-15
● 10 A measured value at 230 V

Induced power factor Starting power for the coil

● 3 A measured value at 400 V
● Measured value 1 A at 690 V Operating current DC-12
Measured value 1 A at 690 V Working current DC-12
Measured value at 24 V 6 A Measured value at 110 V
● Measured value at 110 V 3 A
Measured value at 220 V 1 A Working current DC-13
Measured value 1 A at 220 V Working current DC-13
Measured value at 24 V 6 A ● Measured value at 110 V
Measured value 6 A at 24 V ● Measured value 1 A at 110 V
● Measured value at 220 V 0.3 A
Contact reliability 1 misconnection per 100 million transitions of the auxiliary contact (17 V, 1 mA)
UL/CSA rating data
Output mechanical power [hp] Measured value at 460/480 V for three-phase AC motors 5 hp
Protects against damage to the switching device caused by a short circuit.
Fuse Specifications

- Required for Mating Type 1 gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 63 A
- gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 25 A is required for Mating Type 2.
Short-circuit protection with auxiliary switch Required Fuse gL/gG: 10 A
Mounting/Fixing/Profile Size
Mounting position Rotatable +/-180° for vertical mounting, tiltable +/- 22.5° for vertical mounting.
Fastening type Screw and snap fastening on 35 mm mounting rail in accordance with DIN EN 50022
Side-by-side assembly Yes
Height 85 mm
Width 45 mm
Depth 97 mm
Spacing to be observed 0 mm lateral ground for single row mounting
Connector/ terminal
Electrical Connection Specifications
● For main circuits Screw connections

Short-circuit protection for main circuits

• For auxiliary and control circuits Screw connection

Type of connectable wire cross-section Used for main contact ● Single or multi-core wire

● Single-core or multi-core 2x (1 ... 2.5 mm²), 2.5 mm² (1 ... 2.5 mm²) 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)

For fine wires with cable ends  $2x (1 ... 2.5 \text{ mm}^2)$ ,  $2x (2.5 ... 10 \text{ mm}^2) 2x (1 ... 2.5 \text{ mm}^2)$ ,  $2x (2.5 ... 6 \text{ mm}^2)$ ,  $1x 10 \text{ mm}^2$ )  $6 \text{ mm}^2$ ),  $1x 10 \text{ mm}^2$   $\bullet$  Fine-core cables with cable ends

Connectable wire cross-section types

For auxiliary contacts

- Single or multi-core wire 2x (0.5 ... 1.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm². 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x (0.75 ... 2.5 mm²)
- for fine wires with cable ends 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2.5 mm²)

Auxiliary contact at AWG conductor 2x (20 ... 16), 2x (18 ... 16), 2x (18 ... 18) 2x (20 ... 16), 2x (18 ... 14) ● For AWG conductors 2x (20 ... 16), 2x (18 ... 14)

