3 Phase electronic contactor (SC 3)

- Rated operational voltage up to 600VAC 50/60 Hz
- Rated operational current up to 10 ,15 and 20 A AC-1
- Control voltage from 5-24 VDC or 24-230 VAC/DC
- Compact modular design 45 or 90 mm
- LED Status indication
- Meets EN 60947-4-3 requirements
- Requires no additional components
- Built-in varistor protection
- IP-20 Protection

Item selection and technical specifications

	Load AC-1/51 Heating-element	Load AC-3 Motor	Load AC-55b Lamp	Load AC-56a Trans-former	Control voltage	Item number by 12-240VAC 50/60Hz Line Voltage	Item number by 24-480VAC 50/60Hz Line Voltage	Item number by 24-600VAC 50/60Hz Line Voltage	Module-width
	10A	10A	10A	5A	5-24 VDC	SC 3 DD 2310	SC 3 DD 4010	SC 3 DD 6010	45mm
					24-230 VAC/DC	SC 3 DA 2310	SC 3 DA 4010	SC 3 DA 6010	45mm
*	15A	10A	10A	5A	5-24 VDC		**SC 3 DD 4015** *		45mm
					24-230 VAC/DC		**SC 3 DA 4015** *		45mm
	20A	10A	10A	5A	5-24 VDC	SC 3 DD 2320	SC 3 DD 4020	SC 3 DD 6020	90mm
					24-230 VAC/DC	SC 3 DA 2320	SC 3 DA 4020	SC 3 DA 6020	90mm

Output load specification

Leakage current	1mA ACmax.	Min. operational current	10mA
Duty cycle	100%		

Control terminal specifications

SC 3 DD XXXX (DC)		SC 3 DA XXXX (AC/DC)	
Control voltage	5-24 VDC	Control voltage	24-230 VAC/DC
Pick-up voltage max.	4.25 VDC	Pick-up voltage max.	20.4 VAC/DC
Drop-out voltage min.	1.5 VDC	Drop-out voltage min.	7.2 VAC/DC
Control current voltage	15 mA@24 VDC	Control current / power max.	6mA / 1.5VA@24 VDC
Max. control voltage	32 VDC	Max. control voltage	253 VAC/DC
Response time max. (ON/OFF)	1/2 cycle	Response time max. (ON/OFF)	1 cycle

Thermal specification

Power dissipation for continuous operation PDmax	3.3 W/A
Power dissipation for intermittent operation PD	3.3 W/A x dutycycle
Cooling method	Natural convection
Mounting	Vertical +/-30^{o}
Operating temperature range EN 60947-4-3	-5^{o}C to 40^{o}C
Max. operating temperature with current derating	60^{o}C
Storage temperature EN 60947-4-3	-20^{o}C to 80^{o}C

Operation in ambient temperatures exceeding 40^{o}C is possible if the power dissipation is limited either by reducing the steady-state current or by reducing the duty-cycle as shown in the table. Max.cycle time 15min.

By 40^{o}C	By 50^{o}C	By 60^{o}C
100% load Duty-cycle 100%	80% load Duty-cycle max. 0.8	70% load Duty-cycle max. 0.65

Insulation specifications

Rated insulation voltage	Ui 660 Volt
Rated impulse withstand voltage	Uimp. 4 kVolt
Installation catagory	III

Environment

Degree of protection	IP 20	Pollution degree	3

Approval

cUL Std No. 508 **(Not approved SC3DX4015)**
UL: Use thermal overload protection as required by the National Electric Code. When protected by a non-time delay K5 or H Class fuse, rated 266% of motor FLA, this device is rated for use on a circuit capable of delivering not more than 5,000 rms. symmetrical amperes, 600 V maximum. Maximum surrounding temperature 40^{o}C.

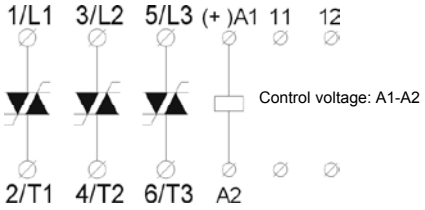
*** Not cUL approved**

3 Phase electronic contactor (SC 3)

Wiring specifications

SC 3 DX XXXX

11-12: for UP62 or other wiring purposes



Short-circuit protection by fuses

Two type of short-circuit protection can be used:

Short-circuit protection by fuses
Short-circuit protection is divided into 2 levels Type 1 or Type 2

Co-ordination Type 1: Short-circuit protects the installation

SC 3 DX XX10	Protection max. 50A gL/gG
SC 3 DX 4015	Protection max. 50A gL/gG
SC 3 DX XX20	Protection max. 50A gL/gG

Co-ordination Type 2: Short-circuit protects the installation and the semiconductors inside the motor controller

SC 3 DX XX10	Protection max. i^2t of the fuse 610 A^2S
SC 3 DX 4015	Protection max. i^2t of the fuse 610 A^2S
SC 3 DX XX20	Protection max. i^2t of the fuse 610 A^2S

Fuses from e.g. Ferraz, Siba, Bussmann can be used as short-circuit protection Type 2

More information concerning Co-ordination Type 2 see page 45

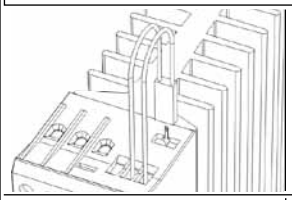
EMC

This component meets the requirements of the product standard EN 60947-4-3 and is CE marked according to this standard.
This products has been designed for class A equipment. Use of the product in domestic environments may cause radio interference, in which case the user may be required to employ additional mitigation methods.

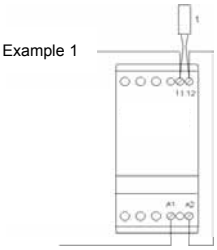
Mounting and cable wiring information

Mounting information see page 44 / Cable wiring see page 45

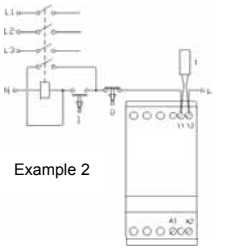
Thermal overload protection (see also page 44)



Optional thermal overload protection is possible by inserting a thermostat in a slot on the right hand side of the electronic contactor. Type number UP62



The thermostat can be connected in series with the control circuit of the electronic contactor.
When the temperature of the heatsink exceeds 90°C the electronic contactor will switch Off.
Note:
When the temperature has dropped approx. 30°C the electronic contactor will automatically be switched on again.



The thermostat is connected in series with the control circuit of the main contactor.
When the temperature of the heatsink exceeds 90°C the main contactor will switch Off.
Note: A manual reset is necessary to restart this circuit.

Utilisation Categories (EN 60947-4-3)

AC - 51	Switching of resistive loads
AC - 55a	Switching of electric discharge lamp controls
AC - 55b	Switching of incandescent lamps
AC - 56a	Switching of transformers

Dimensions (se also page 44)

Type	H	D	W
45 mm module	94 mm	124.3 mm	45 mm
90 mm module	94 mm	124.3 mm	90 mm