1 Phase electronic contactor (for domestic applications)

- Electronic contactor for use in domestic applications
- Rated operational voltage up to 480VAC 50/60 Hz
- Rated operational current up to 30 or 50A AC-1
- Control voltage from 24-230 VAC/DC
- Compact modular design 45 or 90 mm
- Meets EN50081-1 / EN50082-2 requirements
- 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 110-230VAC 50/60Hz Line Voltage	Item number by 400VAC 50/60Hz Line Voltage		Module-width
30A	15A			24-230 VAC/DC	SC 1 DA 2330 L	SC 1 DA 4030 L		45mm
50A	15A			24-230 VAC/DC	SC 1 DA 2350 L			90mm

Output load specification

Min. operational current	10 mA	Filter capacitor / 110-230 VAC	1uF
Leakage current	1 mA AC max.	Filter capacitor current / 110-230 VAC	85/105 mA
		Filter capacitor / 400 VAC	0.68uF
		Filter capacitor current / 400 VAC	100/120 mA
Load power by 30A/110-120VAC	3.3kW	Load power by 50A/230VAC	11.5kW
Load power by 50A/110-120VAC	5.5kW	Load power by 30A/400VAC	12kW
Load power by 30A/230VAC	6.9kW		

Control terminal specifications

Control voltage	24-230 VAC/DC	Control current / power max.	6 mA / 2.5VA@24 VDC
Pick-up voltage max.	20.4 VAC/DC	Max. control voltage	253 VAC/DC
Drop-out voltage min.	7.2 VAC/DC	Response time max.	1 cycle

Thermal specification

Power dissipation for continuous operation PDmax	1.2 W/A
Power dissipation for intermittent operation PD	1.2 W/A x dutycycle
Cooling method	Natural convection
Mounting	Vertical +/-30^{o}
Operating temperature range EN 60947-4-2	-5C^{o} to 40^{o}C
Storage temperature EN 60947-4-2	-20C^{o} to 80^{o}C
Max. operating temperature with current derating	60^{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

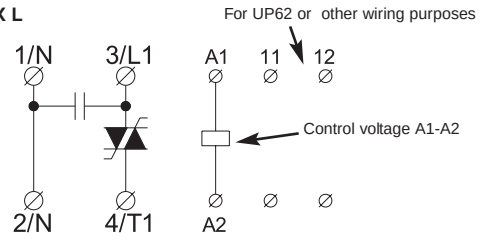
*This products has been designed for class B equipment. Meets EN50081-1 / EN50082-2 requirements. (use of the product in domestic environments)

*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°C.

1 Phase electronic contactor (for domestic applications)

Wiring specifications

SC 1 DA XXXX L



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

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

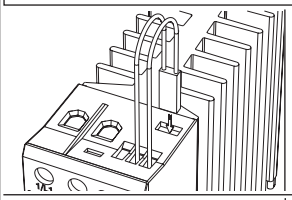
Short-circuit protection by fuses

Type 1: SC 1 DX 2330 L	Protection max. 50A gL/gG
Type 1: SC 1 DX 2350 L / 4030 L	Protection max. 50A gL/gG
Type 2: SC 1 DX XX30	Protection max. I2t of the fuse 1800 A2S
Type 2: SC 1 DX XX50	Protection max. I2t of the fuse 1800 A2S

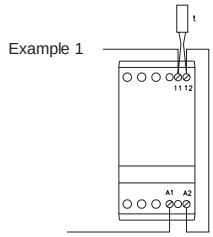
Fuses from e.g. Ferraz, Siba, Bussmann can be used as short-circuit protection Type 2

More information concerning Co-ordination Type 2 see page 37

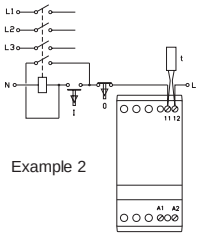
Thermal overload protection (see also page 36)



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.

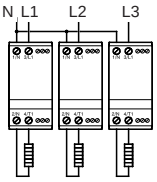
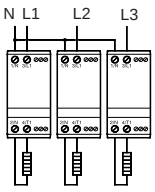


The thermostat is connected in series with the control circuit of the main contactor.
When the temperature of the heatsink exceeds 90°C the main contactor will switch Off.
A manual reset is necessary to restart this circuit.

Mounting and cable wiring information

Mounting information see page 36 / Cable wiring see page 37

Applications hints SC 1 DA L

1-Phase 230 VAC	1-Phase 400 VAC	3-Phase with Neutral 230 VAC	3-Phase with Neutral 400 VAC
SC 1 DA 2330 L = 6.9 kW Max SC 1 DA 2350 L = 11.5 kW Max	SC 1 DA 4030 L = 12 kW Max	3 x SC 1 DA 2330 L = 20.7 kW Max 3 x SC 1 DA 2350 L = 34.5 kW Max	3 x SC 1 DA 4030 L = 36 kW Max
			

EMC

This component meets the requirements of the product standard EN 60947-4-3 / EN50081-1, EN50082-2 and is CE marked according to this standard.

Dimensions (se also page 36)

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