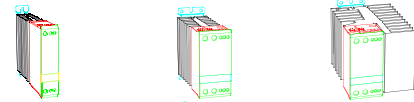


# 1 Phase AC Semiconductor Contactor



- \* Rated operational voltage up to 600VAC 50/60 Hz
- \* Rated operational current up to 15/30/50A AC-1
- \* Compact modular design 22.5, 45 or 90 mm
- \* Control voltage range:  
5-24 V DC or 24-230 V AC/DC
- \* LED Status indication
- \* IP-20 Protection
- \* Meets IEC 947-4-3 / EN 60947-4-3 requirements
- \* Requires no additional components
- \* Built-in varistor protection



## Product Description and Item Selection

1 Phase semiconductor contactor designed to switch various industrial loads, e.g. heating elements, motors and lamps in 1 or 3 Ph applications. Unique electronic and thermal design ensures high switching capacity and long lifetime. Zero Voltage turn-On reduces RFI	Line Voltage	Control Voltage	Item No 15A	Item No 30A	Item No 50A
	24 - 240 VAC 50/60 Hz	5 - 24 V DC	SC 1 DD 2315	SC 1 DD 2330	SC 1 DD 2350
	24 - 240 VAC 50/60 Hz	24 - 230 V AC/DC	SC 1 DA 2315	SC 1 DA 2330	SC 1 DA 2350
	24 - 480 VAC 50/60 Hz	5 - 24 V DC	SC 1 DD 4015	SC 1 DD 4030	SC 1 DD 4050
	24 - 480 VAC 50/60 Hz	24 - 230 V AC/DC	SC 1 DA 4015	SC 1 DA 4030	SC 1 DA 4050
	48 - 600 VAC 50/60 Hz	5 - 24 V DC	SC 1 DD 6015	SC 1 DD 6030	SC 1 DD 6050
	48 - 600 VAC 50/60 Hz	24 - 230 V AC/DC	SC 1 DA 6015	SC 1 DA 6030	SC 1 DA 6050

Output Specifications	SC1DX/15A	SC1DX/30A	SC1DX/50A
Heat load control Operational current AC-51 / AC-1	15 A max.	30 A max.	50 A max.
Motor load control Operational current AC-3	15 A max.	30 A max.	50 A max.
Motor load type SC 1 DX 6015 Operational current AC-3	10 A max.		
Lamp load (incandescent lamp) Operational current AC-55b	15 A max.	30 A max.	50 A max.
Transformer load Operational current AC-56a	15 A max.	15 A max.	15 A max.
Leakage current	1 mA AC max.	1 mA AC max.	1 mA AC max.
Minimum operational current	10 mA AC	10 mA AC	10 mA AC
Duty cycle	Continuous operation		

Current Derating	Amb. Temperature	SC1DX/15A	SC1DX/30A	SC1DX/50A
<b>Current derating in high temperature applications</b> For operation in ambient temperatures exceeding 40°C at the AC-1 Load the current must be derated as shown in the table	40°C	15.0 A	30.0 A	50.0 A
	50°C	12.5 A	25.0 A	40.0 A
	60°C	10.0 A	20.0 A	30.0 A

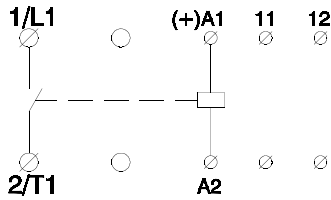
The manufacturer of the cabinets can normally provide the necessary data for the cabinet and guidelines for calculating the max. acceptable internal power dissipation.

Control Specifications	SC1 DD XXXX	SC1 DA XXXX
Control Voltage range	5 - 24 V DC	24 - 230 V AC/DC
Pick-up voltage max.	4.25 V DC	20.4 V AC/DC
Drop out voltage min.	1.5 V DC	7.2 V AC/DC
Control current / power max.	15 mA @ 4 V DC	1.5VA/6mA @ 24 V DC
Max. control voltage	32 V DC	253 V AC/DC
Response time max.	1/2 cycle	1 cycle

Specifications are subject to change without notice

# 1 Phase AC Semiconductor Contactor

## Wiring Diagram

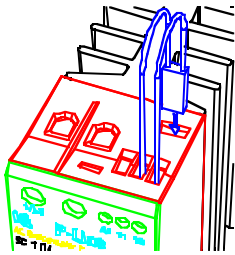


Main terminal 1/L1-2/T1  
Control terminals A1-A2  
Terminal 11 and 12 have no connection with the internal circuit, but are intended for connection to the optional thermal overload protection. See application information page 49

## Thermal Specifications

Power dissipation for continuous operation PD <sub>max</sub> .	1.2 W/A
Power dissipation for intermittent operation PD	1.2 W/ A dutycycle
Cooling method.	Natural convection
Mounting	Vertical +/-30°
Operating temperature range IEC 158-2	-5°C° to 40°C
Storage temperature IEC 158-2	-20°C° to 80°C
Max. operating temperature with AC-1 current derating according to table	60°C

## Thermal Overload Protection



Optional thermal overload protection is possible by inserting a thermostat in the slot on the right hand side of the Soft starter.  
Type number UP62-100

See application hints for further details page 49

## Insulation Specifications

Rated insulation voltage	U <sub>i</sub> 660 V
Rated impulse withstand voltage	U <sub>imp</sub> 4 kV
Installation category	III

## EMC

This component meets the requirements of the product standard IEC 158-2/HD419.2-S1 / IEC 947-4-3 / EN 60947-4-3 and is CE marked according to this standard.

## Short-circuit co-ordination According to IEC 947-4-3

See page 49

Contactor Type	Co-ordination Type 1 Max fuse / Operating Class	Co-ordination Type 2	
		Ferraz	Siemens
SC1DX 2315 / 4015 / 6015	50 A gL / gG	660 RB 10-30	5SD4 50 500 V Max.
SC1DX 2330 / 4030 / 6030	50 A gL / gG	660 RB 10-30	5SD4 60 500 V Max.
SC1DX 2350 / 4050 / 6050	50 A gL / gG	6.621CPURGA 22x58/50	5SD4 60 500 V Max.

## Environment

Degree of protection / Pollution degree IP 20 / 3

## Cable Wiring Information

See page 57

## Approvals

CAN/CSA-C22.2 / UL Std No. 508

## Dimension and Mounting Instruction

See page 57

## Applications Information

See page 49

## Overload Protection

See page 49

\* This product 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.