## **3 Phase AC Semiconductor Contactor**



**Product Description and Item Selection** 

- \* Rated operational voltage up to 600VAC 50/60 Hz
- \* Rated operational current up to: 3 x 10 or 3 x 20 A AC-1
- \* Compact modular design 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



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3 Phase semiconductor contactor designed to switch various industrial loads, e.g. heating elements, motors and lamps in 3 phase 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. 10 A	Item No. 20 A
	24 - 240 VAC 50/60 Hz	5 - 24 V DC	SC 3 DD 2310	SC 3 DD 2320
	24 - 240 VAC 50/60 Hz	24 - 230 V AC/DC	SC 3 DA 2310	SC 3 DA 2320
	24 - 480 VAC 50/60 Hz	5 - 24 V DC	SC 3 DD 4010	SC 3 DD 4020
	24 - 480 VAC 50/60 Hz	24 - 230 V AC/DC	SC 3 DA 4010	SC 3 DA 4020
	48 - 600 VAC 50/60 Hz	5 - 24 V DC	SC 3 DD 6010	SC 3 DD 6020
	48 - 600 VAC 50/60 Hz	24 - 230 V AC/DC	SC 3 DA 6010	SC 3 DA 6020
Output Specifications			SC3DX / 10 A	SC3DX / 20 A
Operational current AC-1			10 A max.	20 A max.
Operational current AC-3		10 A max.	10 A max.	
Leakage current			1 mA AC max.	1 mA AC max.
Minimum operational current			10 mA AC	10 mA AC
Duty cycle			Continuous operation	
Current Derating		Amb. Temperature	SC3DX / 10 A	SC3DX / 20 A
<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		40°C	10.0 A AC-1 / AC-3	20.0 A AC-1
		50°C	8.0 A AC-1 / AC-3	16.0 A AC-1
		60°C	6.5 A AC-1 / AC-3	13.0 A AC-1

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	SC3 DD XXXX	SC3 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



in the table

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Wiring Diagram			Thermal Specifications	
		Main terminal 1/L1-2/T1&	Power dissipation for continuous operation PDmax.	3.3 W/A
	12	3L2-4T2&5L3-6T3. Con- trol terminals A1-A2.	Power dissipation for intermittent operation PD	1.2 W/ A dutycycle
	Terminal 11 and 12 have no connection with the internal		Cooling method.	Natural convection
		Mounting	Vertical +/-30°	
	~	<ul> <li>circuit, but are intended</li> <li>for connection to the</li> <li>optional thermal overload</li> <li>protection. See application</li> <li>information for further</li> <li>details see 49</li> </ul>	Operating temperature range IEC 158-2	-5C° to 40°C
	Ø		Storage temperature IEC 158-2	-20C° to 80°C
			Max. operating temperature with AC-1 current derating according to table	60°C
Thermal Overload Pro	otecti	ion	Insulation Specifications	
			Rated insulation voltage	Ui 660 V
Optional thermal overload protection is possible by inserting a thermostat in the slot		Rated impulse withstand voltage	Uimp. 4 kV	
			Installation category	III
	on the right hand side of the Soft starter.	EMC		
	Type number UP62-100 See application hints for further details page 49		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	See	page 4	.9
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Contactor Type	Co-ordination Type 1		Co-ordination Type 2	
	Operating Class		Ferraz	Siemens
SC3DX 2310 / 4010 / 6010	50 A gL / gG		660gRB 10-30	5SD4 80 500 V Max.
SC3DX 2320 / 4020 / 6020	50 A gL / gG		660gRB 10-30	5SD4 80 500 V Max.
Environment		Cable Wiring Information		
Degree of protection / Pollution degree IP 20 / 3		See page 57		
Approvals		Dimension and Mounting Instruction		
CAN/CSA-C22.2 / UL Std No. 508		See page 57		
Applications Information		Overload Protection		
See page 49		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.