SIEMENS

Product data sheet

3RF2310-1BA24



SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 10 A / AC15 6A 40 DEG. C 48-460 V / 110-230 V AC INSTANTANEOUS SWITCHING

General technical data:			
Product brand name		SIRIUS	
product designation		solid-state contactor	
Product function	_	instantaneous switching	
Number of poles / for main current circuit		1	
Protection class IP	_	IP20	
Product designation / _1 / of the accessories that can be ordered		terminal cover	
Manufacturer article number / _1 / of the accessories that can be ordered		<u>3RF2900-3PA88</u>	
Product designation / _2 / of the accessories that can be ordered		power regulator	
Manufacturer article number / _2 / of the accessories that can be ordered		<u>3RF2920-0HA36</u>	
Product designation / _4 / of the accessories that can be ordered	_	load monitoring	
Manufacturer article number / _4 / of the accessories that can be ordered		<u>3RF2920-0GA36</u>	
Ambient temperature			
during operating	°C	-25 60	
during storage	°C	-55 80	
Installation altitude / at a height over sea level / maximum	m	1,000	

Resistance against shock / according to EEC 60068-2-27 15g/11 ms Item designation 15g/11 ms • according to DIN 40719 extendable after IEC 204-2 / according to DIN EN 61346-2 0 Number of NC contacts / for auxillary contacts 0 Number of NC contacts / for auxillary contacts 0 Number of NC contacts / for auxillary contacts 0 Number of NC contacts / for auxillary contacts 0 Number of NC contacts / for main contacts 1 Number of NC contacts / for main contacts 0 Number of NC contacts / for main contacts 0 Operating current 1 • # AC-1 / at 400 V / rated value A 10.5 Operating requery minimum mA 100 Operating requery minimum mA 100 Operating requery minimum mA 100 Operating requery minimum V 48 40 • at 60 Hz / at AC / rated value V 48 40 • at 60 Hz / at AC / rated value V 40 50 • at 60 Hz / at AC / rated value V 40 50 • at 60 Hz / at AC / rated value V 60	Resistance against vibration / according to IEC 60068-2-6		2g
item designation K • according to DN 40719 evendable after IEC 204-2 / according to DN EN 61346-2 Q Number of NC contacts / for auxiliary contacts 0 Number of NC contacts / for auxiliary contacts 0 Number of NC contacts / for auxiliary contacts 0 Number of NC contacts / for auxiliary contacts 0 Number of NC contacts / for main contacts 1 Number of NC contacts / for main contacts 1 Number of NC contacts / for main contacts 1 Number of NC contacts / for main contacts 1 Operating current 1 • at AC-1 / at 400 V/ rated value A 10.5 • at AC-41 / at 400 V/ rated value A 10.5 • at AC-41 / at 400 V/ rated value A 10.5 • at AC-41 / at 400 V/ rated value A 10.5 • at AC-41 / at 400 V/ rated value A 10.5 • at AC-41 / at 400 V/ rated value V 48 460 • at AC-41 / at 40 value V 48 460 • at BC Hz / at AC / rated value V 48 460 • at BC Hz / at AC / rated value V 40 506 Operating requesey V 40 506 • at BC Hz / for AC V 40 506 Operating requency %			
b IEC 750• according to DIN EN 61346-2QNumber of NC contacts / for auxiliary contacts0Number of NC contacts / for auxiliary contacts0Number of NC contacts / for main contacts1Number of NC contacts / for main contacts0Operating current1• at AC-1/ at 400 V/ rated valueA• at AC-51 / rated valueV• at BO Hz / far AC / rated valueV• at BO Hz / far AC / rated valueV• at BO Hz / far AC / rated valueV• at BO Hz / far AC / rated valueV• at BO Hz / far AC / rated valueV• at BO Hz / far ACV• at BO Hz / far ACV		_	
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Number of NO contacts / for main contacts1Number of NC contacts / for main contacts0Operating currentI• at AC-1 / at 400 V / rated valueA10.5Intervention• at AC-51 / rated valueA• at AC-51 / rated valueAOperating current / minimummAOperating current / minimummAOperating voltageV• at 50 Hz / at AC / rated valueV• at 50 Hz / at AC / rated valueV• at 50 Hz / at AC / rated valueV• at 50 Hz / br ACV• at 50 Hz / for ACV• at 50 Hz / for ACV• at 60 Hz / for ACI <th>Number of change-over switches / for auxiliary contacts</th> <th>_</th> <th>0</th>	Number of change-over switches / for auxiliary contacts	_	0
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• at 60 Hz / for ACV40 506Operating frequencyHz50 60• rated valueHz50 60Relative symmetrical tolerance / of the operation frequency%10Insulation voltage / rated valueV600Voltage slew rate / at the thyristor / for main contacts / maximum permissibleV/µs500Block voltage / at the thyristor / for main contacts / maximum permissibleV1,200Reverse current / of the hyristormA10Derating temperature°C40Active power loss / total / typicalW11Resistance against the impulse current / rated valueA ² -s200Control supply voltage frequency + 1/ rated valueHz50	Working area related to the operating voltage		
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• rated valueHz50 60Relative symmetrical tolerance / of the operation frequency%10Insulation voltage / rated valueV600Voltage slew rate / at the thyristor / for main contacts / maximum permissibleV/µs500Block voltage / at the thyristor / for main contacts / maximum permissibleV1,200Reverse current / of the thyristormA10Derating temperature°C40Active power loss / total / typicalW11Resistance against the impulse current / rated valueA200Izt-level / maximumA ² ·s200Control circuit:Control supply voltage frequency • 1/ rated valueHz50	• at 60 Hz / for AC	V	40 506
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Voltage slew rate / at the thyristor / for main contacts / maximum permissible V/µs 500 Block voltage / at the thyristor / for main contacts / maximum permissible V 1,200 Reverse current / of the thyristor mA 10 Derating temperature °C 40 Active power loss / total / typical W 11 Resistance against the impulse current / rated value A 200 I2t-level / maximum A ² -s 200 Control circuit: Hz 50	Relative symmetrical tolerance / of the operation frequency	%	10
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permissibleImage: Control supply voltage frequencyPermissiblemAReverse current / of the thyristormA0°C40Active power loss / total / typicalW11Resistance against the impulse current / rated valueA200Izt-level / maximumA²-s200Control circuit:Hz50		V/µs	500
Derating temperature °C 40 Active power loss / total / typical W 11 Resistance against the impulse current / rated value A 200 I2t-level / maximum A ² -s 200		V	1,200
Active power loss / total / typical W 11 Resistance against the impulse current / rated value A 200 I2t-level / maximum A ² ·s 200	Reverse current / of the thyristor	mA	10
Resistance against the impulse current / rated value A 200 I2t-level / maximum A²-s 200 Control circuit: Control supply voltage frequency • 1 / rated value Hz 50	Derating temperature	°C	40
I2t-level / maximum A ² ·s 200 Control circuit: Hz 50	Active power loss / total / typical	W	11
Control circuit: Control supply voltage frequency • 1 / rated value Hz	Resistance against the impulse current / rated value	А	200
Control supply voltage frequency Hz 50	l2t-level / maximum	A²·s	200
• 1 / rated value Hz 50	Control circuit:		
	Control supply voltage frequency		
• 2 / rated value Hz 60	• 1 / rated value	Hz	50
	• 2 / rated value	Hz	60

Type of voltage / of the controlled supply voltage		AC
Control supply voltage / 1	_	
• at 50 Hz / for AC		
initial rated value	V	110
• final rated value	V	230
• at 60 Hz / for AC		
initial rated value	V	110
• final rated value	V	230
Control supply voltage	_	
• at 50 Hz / for AC / final value for signal<0>-recognition	V	40
• at 60 Hz / for AC / final value for signal<0>-recognition	V	40
Tolerance of the line frequency	Hz	5
Relative symmetrical tolerance / of the supply voltage frequency	%	10
Control current	_	
 at minimum control supply voltage / for AC 	mA	2
• for AC / rated value	mA	15
Fuse assignments	_	https://www.automation.siemens.com/cd- static/material/info/3RF21_eng.pdf
Installation/mounting/dimensions:		
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail

		mounting rail
Type of fixing/fixation / series installation		Yes
Design of the thread / of the screw for fastening of the operating resource		M4
Tightening torque / of the screw for fastening of the operating resource	N∙m	1.5
Width	mm	22.5
Height	mm	100
Depth	mm	94

Connections:		
Design of the electrical connection / for main current circuit		screw-type terminals
Design of the thread / of the connection screw / for main contacts		M4
Tightening torque / for main contacts		
with screw-type terminals	N∙m	2 2.5
Tightening torque (Ibf·in) / for main contacts		
with screw-type terminals	lbf∙in	18 22
Type of the connectable conductor cross-section		
for main contacts		

• solid		2x (1.5 2.5 mm2), 2x (2.5 6 mm2)
finely stranded		
 with conductor end processing 		2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2
for AWG conductors		
• for main contacts		2x (14 10)
 for auxiliary and control contacts 		1x (AWG 20 12)
 for auxiliary and control contacts 		
• solid		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
finely stranded		
 with conductor end processi ng 		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
• without conductor final cut ting	_	1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
Conductor cross section that can be connected		
for main contacts		
• solid	mm²	1.5 6
stranded wire		
 with conductor end processing 	mm²	1 10
 for auxiliary and control contacts 		
• solid	mm²	0.5 2.5
stranded wire		
with conductor end processing / minimum	mm²	0.5 2.5
without conductor final cutting	mm²	0.5 2.5
AWG number / as coded connectable conductor cross-section / for main contacts		10 14
Design of the electrical connection / for auxiliary and control current circuit		screw-type terminals
Design of the thread / of the connection screw / of the auxiliary and control pins	-	M3
AWG number / as coded connectable conductor cross-section		
 for auxiliary and control contacts 		20 12
Skinning length / of the cable / for main contacts	mm	7
Skinning length / of the cable / for auxiliary and control contacts	mm	7
Tightening torque / for auxiliary and control contacts		
with screw-type terminals	N∙m	0.5 0.6
Tightening torque (lbf-in) / for auxiliary and control contacts		
• with screw-type terminals	lbf∙in	4.5 5.3

Certificates/approvals:

General Product Ap	proval	Test Certificates	other
(SA)	<u>ROSTEST</u>	Manufacturer	Manufacturer

Further information:

Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

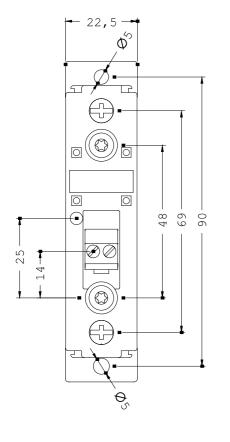
http://www.siemens.com/industrial-controls/mall

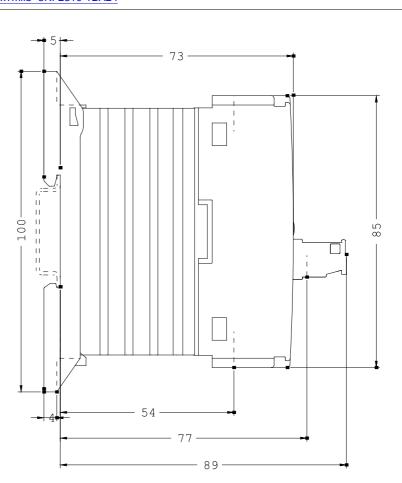
CAx-Online-Generator

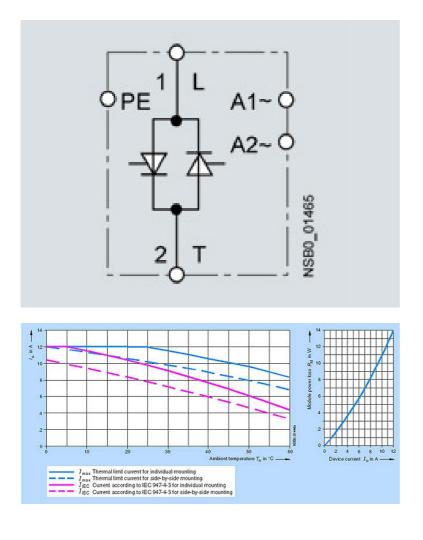
http://www.siemens.com/cax

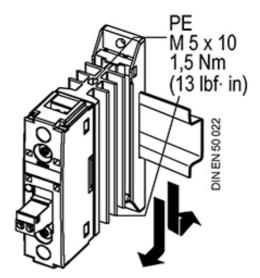
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RF2310-1BA24/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2310-1BA24









last change:

Aug 22, 2011