SIEMENS

Product data sheet

3RF2350-1BA24



SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 50A / AC15 25A 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		3RF2950-0HA36
Product designation / _4 / of the accessories that can be ordered	-	load monitoring
Manufacturer article number / _4 / of the accessories that can be ordered		3RF2950-0GA36
Ambient temperature		
during operating	°C	-25 60
during storage	°C	-55 80
Installation altitude / at a height over sea level / maximum	m	1,000

Control Control Resistance against shock / according to IEC 60068-2-27 Import 11 mm tem designation import 11 mm * according to DIM 40719 attendable after IEC 201-2 / according to DIM 50719 attendable	Resistance against vibration / according to IEC 60068-2-6	_	2g
tem designation K • according to DIN 40719 extendable after IEC 204.2 / according to DIN 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 auxiliary contacts 0 Number of NC contacts / for main contacts 0 Operating current 1 • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 400 V/ rated value A • at AC-1 / at 40 value V • at AC-1 / at AC / rated value A • at AC-1 / at AC / rated value V • at AC-1 / at AC / rated value V • at AC-1 / at AC / rated value V • at AC-1 / at AC / rated value V • at AC-1 / at AC / rated value V • at AC / rated value V <th></th> <th>_</th> <th></th>		_	
according to DIN 40719 extendable after IEC 204-2 / according to DIN EN 61346-2CNumber of NC contacts / for auxiliary contacts0Number of Contacts / for auxiliary contacts0Number of 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-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at 400 V / rated valueA• at AC-1 / at AC / rated valueA• at AC / rated valueV• at AC / rated valueI• at AC		_	
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Main circuit: Vision of NC contacts / for main contacts 1 Number of NC contacts / for main contacts 0 Operating current 0 • at AC-1 / at 400 V / rated value A 50 • at AC-51 / rated value V 48 460 Operating current / minimum mA 500 Operating voltage V 48 460 • at 50 Hz / rat AC / rated value V 48 460 • at 50 Hz / rat AC / rated value V 48 460 Working area related to the operating voltage V 48 460 • at 50 Hz / for AC V 40 506 • at do Hz / for AC V 40 506 • rated value Hz 50 60 Relative symmetrical tolorance / of the operation frequency % 10 • rated value V 600 Nottage / rated value MA 10 Block voltage / at t	Number of NO contacts / for auxiliary contacts	_	0
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Number of NC contacts / for main contacts0Operating currentI• at AC-1/ at 400 V/ rated valueA• at AC-51 / rated valueA• at AC-51 / rated valueMA• at AC-51 / rated valueMAOperating current / minimummAOperating voltageV• at 50 Hz / at AC / rated valueV• at 60 Hz / at AC / rated valueV• at 60 Hz / at AC / rated valueV• at 60 Hz / at AC / rated valueV• at 60 Hz / at AC / rated valueV• at 60 Hz / at AC / rated valueV• at 60 Hz / for ACV• rated valueHzfor atter walueHzfor atter walueV00Relative symmetrical tolerance / of the operation frequency%• rated valueVfor atter walueVNotage / rated valueVNotage / rated valueVBlock voltage / at the thyristor / for main contacts / maximum permissible%Reverse current / of the thyristormADerating temperatureAActive power loss / total / typicalAResistance against the impulse current / rated valueAAtive power loss / total / typicalA*Retire termeterAAtive power loss / total / typicalA*Resistance against the impulse current / rated value	Main circuit:		
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• at 50 Hz / at AC / rated value V 48 460 • at 60 Hz / at AC / rated value V 48 460 Working area related to the operating voltage V 48 460 • at 50 Hz / for AC V 40 506 • at 60 Hz / for AC V 40 506 • at 60 Hz / for AC V 40 506 Operating frequency V 40 506 • rated value Hz 50 60 Relative symmetrical tolerance / of the operation frequency % 10 • rated value V 600 Voltage slew rate / at the thyristor / for main contacts / maximum permissible 1,000 Block voltage / at the thyristor / for main contacts / maximum permissible N/µs 1,200 Reverse current / of the thyristor mA 10 Derating temperature °C 40 Active power loss / total / typical NV 54 Resistance against the impulse current / rated value A 1,150 Izt-level / maximum A²-s 6,600 Vortio supply voltage frequency Hz 50	Operating current / minimum	mA	500
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Working area related to the operating voltage V 40 506 • at 50 Hz / for AC V 40 506 • at 60 Hz / for AC V 40 506 Operating frequency V 40 506 • rated value Hz 50 60 Relative symmetrical tolerance / of the operation frequency % 10 Insulation voltage / rated value V 600 Voltage slew rate / at the thyristor / for main contacts / maximum permissible V/µs 1,000 Block voltage / at the thyristor / for main contacts / maximum permissible V 40 Reverse current / of the thyristor mA 10 Derating temperature °C 40 Active power loss / total / typical W 54 Resistance against the impulse current / rated value A 1,150 Izt-level / maximum A ² -s 6,600 Control supply voltage frequency Hz 50	• at 50 Hz / at AC / rated value	V	48 460
• at 50 Hz / for ACV40 506• at 60 Hz / for ACV40 506Operating frequencyHz50 60• rated valueHz50 60Relative symmetrical tolerance / of the operation frequency%00Insulation voltage / rated valueV600Voltage slew rate / at the thyristor / for main contacts / maximum permissibleV/µs1,000Block voltage / at the thyristor / for main contacts / maximum permissibleMA10Block voltage / at the thyristor / for main contacts / maximum permissibleMA10Reverse current / of the thyristormA10Derating temperature%4054Resistance against the impulse current / rated valueA1,150Control supply voltage frequency + 1/ rated valueHz50	• at 60 Hz / at AC / rated value	V	48 460
• at 60 Hz / for ACV40 506Operating frequencyHz50 60• rated valueHz50 60Relative symmetrical tolerance / of the operation frequency%60Insulation voltage / rated valueV600Voltage slew rate / at the thyristor / for main contacts / maximum permissibleV/µs1,000Block voltage / at the thyristor / for main contacts / maximum permissibleV1Reverse current / of the thyristormA0Control genpreature°C40Active power loss / total / typicalW54Resistance against the impulse current / rated valueA1,150Control 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/µs1,000Block voltage / at the thyristor / for main contacts / maximum permissibleV1,200Block voltage / at the thyristor / for main contacts / maximum permissibleMA10Derating temperaturemA10Active power loss / total / typicalW54Resistance against the impulse current / rated valueA1,150Izt-level / maximumA ² ·s6,600Control circuit:Control supply voltage frequency • 1/ rated valueHz50	• at 60 Hz / for AC	V	40 506
Relative symmetrical tolerance / of the operation frequency % 10 Insulation voltage / rated value V 600 Voltage slew rate / at the thyristor / for main contacts / maximum permissible 1,000 Block voltage / at the thyristor / for main contacts / maximum permissible V 1,200 Block voltage / at the thyristor / for main contacts / maximum permissible mA 10 Derating temperature mA 10 Active power loss / total / typical W 54 Resistance against the impulse current / rated value A 1,150 Izel-level / maximum A ² -s 6,600 Control circuit: Exercise Feruit Control supply voltage frequency Hz 50	Operating frequency		
Insulation voltage / rated value V 600 Voltage slew rate / at the thyristor / for main contacts / maximum permissible 1,000 Block voltage / at the thyristor / for main contacts / maximum permissible V/µs 1,200 Block voltage / at the thyristor / for main contacts / maximum permissible VM 1,200 Reverse current / of the thyristor mA 10 Derating temperature °C 40 Active power loss / total / typical W 54 Resistance against the impulse current / rated value A 1,150 Izt-level / maximum A ² -s 6,600	rated value	Hz	50 60
Voltage slew rate / at the thyristor / for main contacts / maximum permissible V/µs 1,000 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 54 Resistance against the impulse current / rated value A 1,150 Izt-level / maximum A ² -s 6,600	Relative symmetrical tolerance / of the operation frequency	%	10
maximum permissible Image: Control supply voltage frequency 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 54 Resistance against the impulse current / rated value A 1,150 I2t-level / maximum A ² -s 6,600 Control circuit: Control supply voltage frequency • 1 / rated value Hz 50	Insulation voltage / rated value	V	600
permissibleImage: Control circuit:Reverse current / of the thyristormA10Derating temperature°C40Active power loss / total / typicalW54Resistance against the impulse current / rated valueA1,150I2t-level / maximumA²-s6,600Control circuit:Control supply voltage frequency• 1 / rated valueHz50		V/µs	1,000
Derating temperature °C 40 Active power loss / total / typical W 54 Resistance against the impulse current / rated value A 1,150 I2t-level / maximum A ² -s 6,600 Control circuit: Control supply voltage frequency Hz 50		V	1,200
Active power loss / total / typical W 54 Resistance against the impulse current / rated value A 1,150 I2t-level / maximum A ² -s 6,600 Control circuit: V Control supply voltage frequency Hz 50	Reverse current / of the thyristor	mA	10
Resistance against the impulse current / rated value A 1,150 I2t-level / maximum A ² ·s 6,600 Control circuit:	Derating temperature	°C	40
I2t-level / maximum A ² -s 6,600 Control circuit: - - Control supply voltage frequency - - • 1 / rated value Hz 50	Active power loss / total / typical	W	54
Control circuit: Control supply voltage frequency • 1 / rated value Hz	Resistance against the impulse current / rated value	А	1,150
Control supply voltage frequency Hz • 1 / rated value Hz	I2t-level / maximum	A²·s	6,600
• 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		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	67.5
Height	mm	100
Depth	mm	156

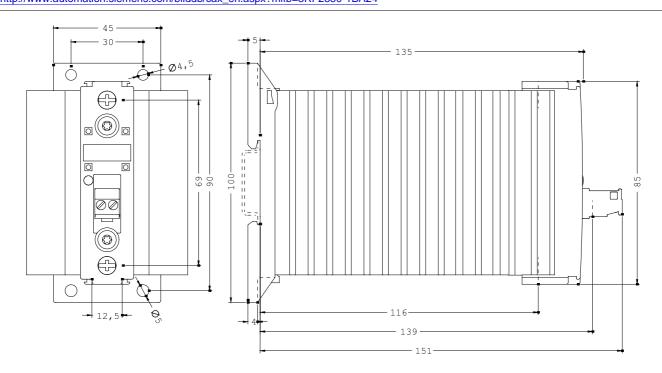
Connections:		
Design of the electrical connection / for main current circuit		screw-type terminals
Design of the thread / of the connection screw / for main contacts		M4
Tightening torque / for main contacts		
with screw-type terminals	N∙m	2 2.5
Tightening torque (Ibf·in) / for main contacts		
with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

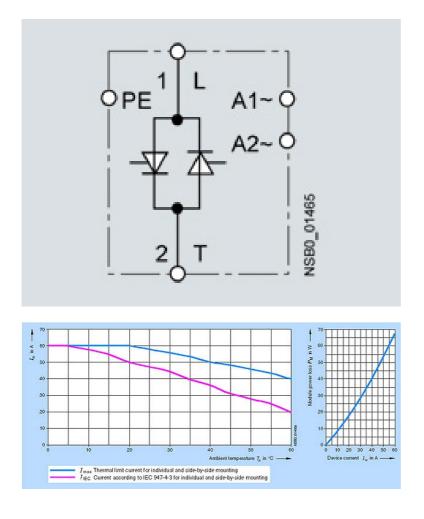
• solid		2x (1.5 2.5 mm²), 2x (2.5 6 mm²)
finely stranded		
with conductor end processing		2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
for AWG conductors		
for main contacts		2x (14 10)
 for auxiliary and control contacts 		1x (AWG 20 12)
 for auxiliary and control contacts 		
• solid		1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
finely stranded		
 with conductor end processing 		1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
without conductor final cutting		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 (Ibf-in) / for auxiliary and control contacts		
with screw-type terminals	lbf∙in	4.5 5.3
Certificates/approvals:		

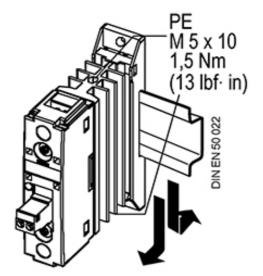
Certificates/approvals:

General Produ	ct Approval		Test Certificates	other	
CSA	<u>ROSTEST</u>	UL	Manufacturer	<u>Manufacturer</u>	
Further inform		ogs Brochures)			
Information- and Downloadcenter (Catalogs, Brochures,) http://www.siemens.com/industrial-controls/catalogs					
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CAx-Online-Ger http://www.sieme					
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Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2350-1BA24







last change:

Oct 24, 2011