# SIEMENS

## **Product data sheet**

### 3RF2320-1AA22



SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 20 A 40 DEGREES C 24-230 V / 110-230 V AC SCREW TERMINAL

General technical data:			
Product brand name		SIRIUS	
product designation		solid-state contactor	
Product function		zero-point 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 / _4 / of the accessories that can be ordered	-	load monitoring	
Manufacturer article number / _4 / of the accessories that can be ordered		<u>3RF2920-0GA33</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 vibration / according to IEC 60068-2-6		2g	
Resistance against shock / according to IEC 60068-2-27		15g / 11 ms	
Item designation			

<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according</li> </ul>		К		
to IEC 750		K		
according to DIN EN 61346-2		Q		
Number of NC contacts / for auxiliary contacts	_	0		
Number of NO contacts / for auxiliary contacts	_	0		
Number of change-over switches / for auxiliary contacts	_	0		
Main circuit:				
Number of NO contacts / for main contacts		1		
Number of NC contacts / for main contacts	-	0		
Operating current	_			
• at AC-1 / at 400 V / rated value	А	20		
• at AC-51 / rated value	А	20		
Operating current / minimum	mA	500		
Operating voltage				
• at 50 Hz / at AC / rated value	V	24 230		
• at 60 Hz / at AC / rated value	V	24 230		
Working area related to the operating voltage	-			
• at 50 Hz / for AC	V	20 253		
• at 60 Hz / for AC	V	20 253		
Operating frequency	_			
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	800		
Reverse current / of the thyristor	mA	10		
Derating temperature	°C	40		
Active power loss / total / typical	W	20		
Resistance against the impulse current / rated value	А	600		
I2t-level / maximum	A²·s	1,800		
Control circuit:				
Control supply voltage frequency				
• 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		
<ul> <li>at 60 Hz / for AC / final value for signal&lt;0&gt;-recognition</li> </ul>	V	40		
Tolerance of the line frequency	Hz	5		
Relative symmetrical tolerance / of the supply voltage frequency	%	10		
Control current				
<ul> <li>at minimum control supply voltage / for AC</li> </ul>	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		
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	140.5		

Design of the electrical connection / for main current circuit screw-type terminals Design of the thread / of the connection screw / for main M4 contacts Tightening torque / for main contacts 2 ... 2.5 • with screw-type terminals N∙m Tightening torque (lbf-in) / for main contacts lbf∙in 18 ... 22 • with screw-type terminals 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)	
<ul> <li>for auxiliary and control contacts</li> </ul>		1x (AWG 20 12)		
<ul> <li>for auxiliary and control contacts</li> </ul>				
• 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	6	
stranded wire				
with conductor end processing	mm²	1 10		
<ul> <li>for auxiliary and control contacts</li> </ul>				
• solid	mm²	0.5 2	2.5	
stranded wire				
with conductor end processing / minimum	mm²	0.5 2.5		
<ul> <li>without conductor final cutting</li> </ul>	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				
<ul> <li>for auxiliary and control contacts</li> </ul>		20 12	2	
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	0.5 0.6	
Tightening torque (lbf-in) / for auxiliary and control contacts				
• with screw-type terminals	lbf-in 4.5 5		i.3	
Certificates/approvals:				
General Product Approval	Test Certificates		other	
	Manufacture	[	Manufacturer	

**Further information:** 

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

Industry Mall (Online ordering system)

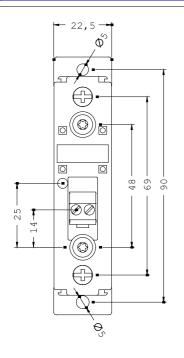
http://www.siemens.com/industrial-controls/mall

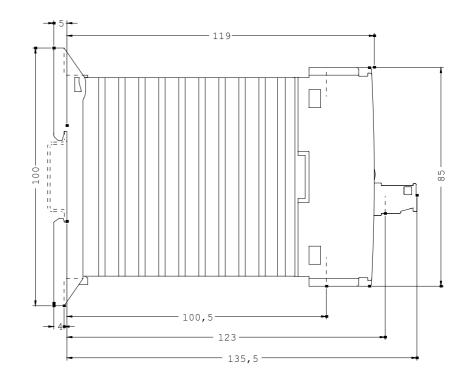
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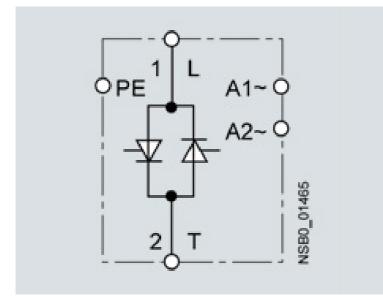
http://www.siemens.com/cax

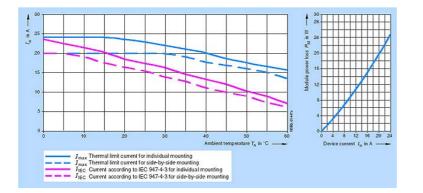
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RF2320-1AA22/all

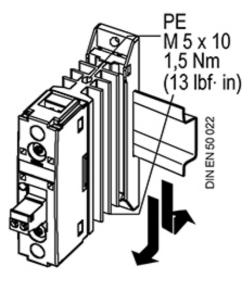
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RF2320-1AA22











last change:

Aug 22, 2011