SIEMENS

Product data sheet 3RF2450-1AB55

SEMI-CONDUCTOR CONTAC.3-PH.3RF2 AC51 50A 40 DEG. C 48-600V / 230V AC 2-PHASE CONTROLLED SCREW TERMINAL BLOCKING VOLTAGE 1200V

General technical data:		
Product brand name		SIRIUS
product designation		solid-state contactor
Product function		zero-point switching
Number of poles / for main current circuit		3
Protection class IP		IP20
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		
• according to DIN 40719 extendable after IEC 204-2 / according 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		2
Number of NC contacts / for main contacts		0
Operating current / at AC-1 / at 400 V / rated value	A	50
Operating current / at AC-51 / rated value	A	50
Reverse current / of the thyristor	mA	10
Derating temperature	°C	40
Operating current / minimum	mA	500
Resistance against the impulse current / rated value	A	1,150
I2t-level / maximum	$A^2 \cdot s$	6,600
Operating voltage		
• at 50 Hz / at AC / rated value	V	48 … 600
• at 60 Hz / at AC / rated value	V	48 … 600
Working area related to the operating voltage		
• at 50 Hz / for AC	V	40 … 660
• at 60 Hz / for AC	V	40 … 660
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	1,600
Fuse assignments		https://www.automation.siemens.com/cd-static/material/info/3RF24_eng.pdf

Control circuit:

Type of voltage / of the controlled supply voltage		AC
Control supply voltage / 1		
• at 50 Hz		
• for AC	V	180 … 230
• at 60 Hz		
• for AC	V	180 … 230
Control supply voltage frequency		
• 1	Hz	45
• 2	Hz	66
Control supply voltage / at 50 Hz / for AC / final value for signal<0>-recognition	V	180
Control supply voltage / at 60 Hz / for AC / final value for signal<0>-recognition	V	180
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

Installation/mounting/dimensions:

Type of mounting		screw fixing
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	157.5
Height	mm	100
Depth	mm	121

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 (lbf·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		14 … 10
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	7.5 … 5.3

Certificates/approvals:

General Product Approval		Test Certificates	other
CSA	ROSTEST	Manufacturer	Manufacturer
UL			

Further information:

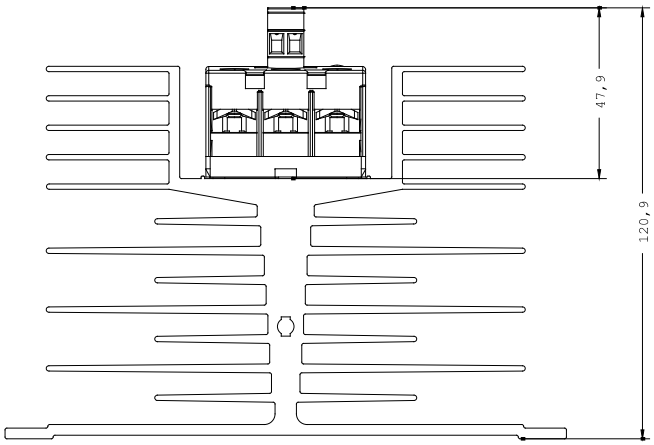
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

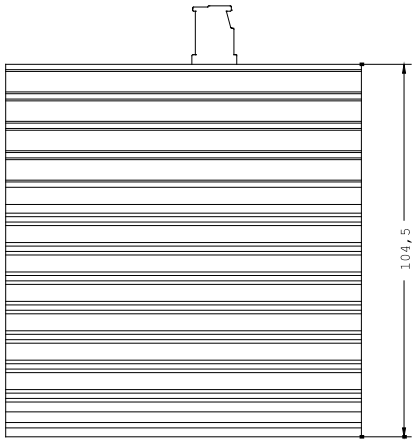
Industry Mall (Online ordering system)
http://www.siemens.com/industrial-controls/mall

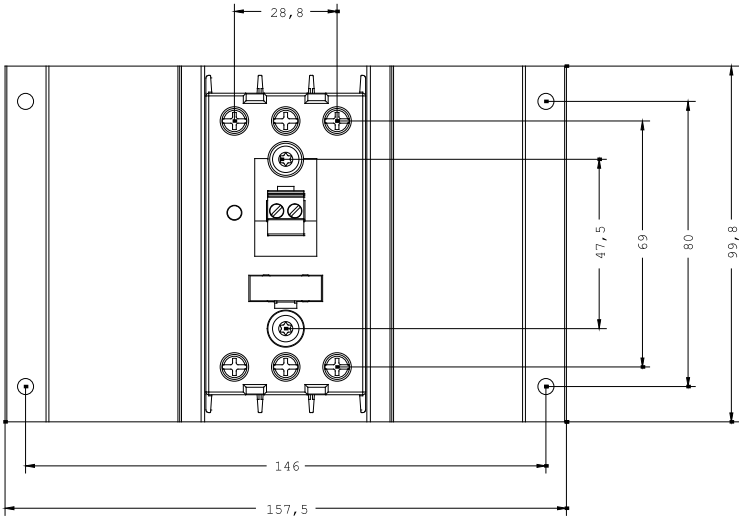
Cax online generator:
http://www.siemens.com/cax

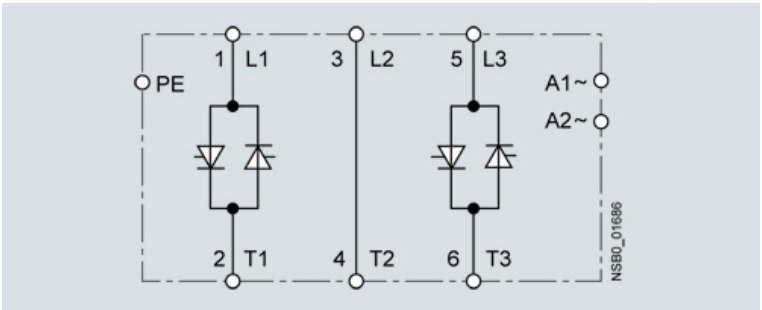
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RF2450-1AB55/all

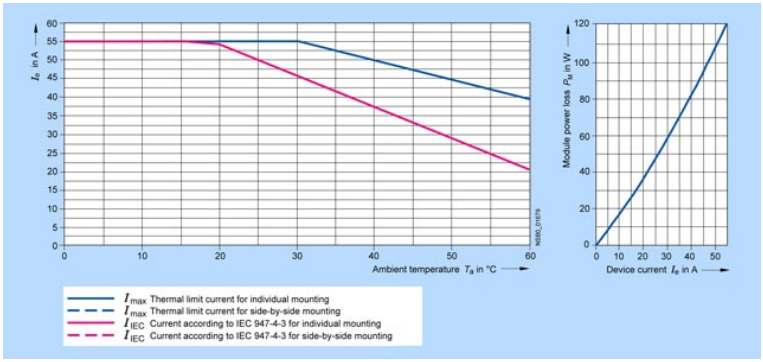
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2450-1AB55

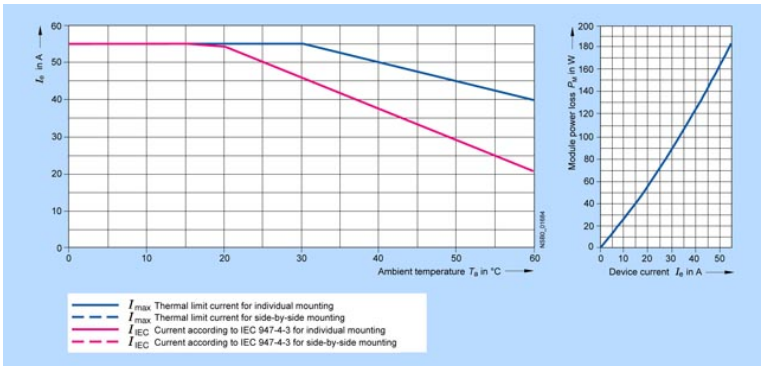


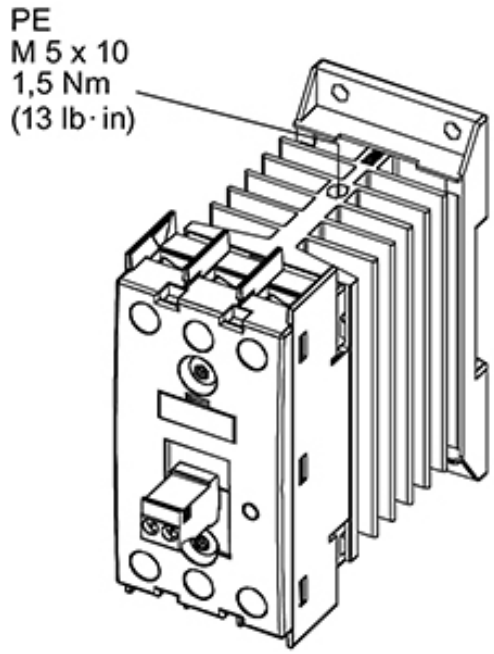












last change: Aug 22, 2011