# SIEMENS

# **Product data sheet**

### 3RF2440-1AB55



SEMI-CONDUCTOR CONTAC.3-PH.3RF2 AC51 40A 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		
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		к
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	А	40
Operating current / at AC-51 / rated value	А	40
Reverse current / of the thyristor	mA	10
Derating temperature	°C	40
Operating current / minimum	mA	500
Resistance against the impulse current / rated value	А	1,150
I2t-level / maximum	A²·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		
<ul> <li>at minimum control supply voltage / for AC</li> </ul>	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	113.5
Height	mm	100
Depth	mm	121

Design of the electrical connection / for main current circuitIcrew-type terminalsM4Design of the thread / of the connection screw / for main contactsM4Tightening torque / for main contactsN-m22.5with screw-type terminalsN-m22.5Tightening torque (lbf-in) / for main contactsIbf-in1822with screw-type terminalsIbf-in1822Type of the connectable conductor cross-section22.5 mm2), 2x (2.5 6 mm2)• for main contacts2.x (1 2.5 mm2), 2x (2.5 6 mm2)• solid2.x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for AWG conductors2.x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts2.x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2• for auxiliary and control contacts2.x (1 2.5 mm2), 2x (0.5 1, 0 mm2)• for auxiliary and control contacts1.x (AWG 20 12)• for auxiliary and control contacts1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• finely stranded1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• finely stranded1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• finely stranded1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• with conductor final cutting1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• with conductor final cutting1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• for main contacts1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• for auxiliary and control contacts1.x (0.5 2.5 mm2), 2x (0.5 1, 0 mm2)• with conductor final cutting1.x (	Connections:		
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• for auxiliary and control contacts1x (AWG 20 12)• for auxiliary and control contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing • without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connected • for main contacts1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)	for AWG conductors		
• for auxiliary and control contactsImage: Solid• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connectedImage: Solid• for main contactsImage: Solid	for main contacts		2x (14 10)
• solid1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• finely stranded1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connected1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• for main contactsImage: Conductor conductor final cutting	<ul> <li>for auxiliary and control contacts</li> </ul>		1x (AWG 20 12)
<ul> <li>finely stranded</li> <li>with conductor end processing</li> <li>without conductor final cutting</li> <li>1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)</li> <li>1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)</li> <li>1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)</li> <li>for main contacts</li> </ul>	<ul> <li>for auxiliary and control contacts</li> </ul>		
• with conductor end processing1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)• without conductor final cutting1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)Conductor cross section that can be connected• for main contacts	• solid		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	finely stranded		
Conductor cross section that can be connected       • for main contacts	<ul> <li>with conductor end processing</li> </ul>		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
for main contacts	without conductor final cutting		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
	Conductor cross section that can be connected		
• solid mm <sup>2</sup> 1.5 6	for main contacts		
	• solid	mm²	1.5 6
stranded wire	stranded wire		

with conductor end processing	mm²	1 10
<ul> <li>for auxiliary and control contacts</li> </ul>		
• 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** 

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s other Manufacturer

**Test Certificates** 

Manufacturer

## Further information:

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

ROSTEST

### Industry Mall (Online ordering system)

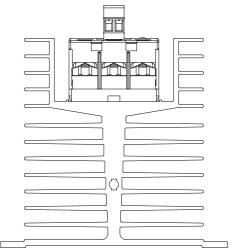
http://www.siemens.com/industrial-controls/mall

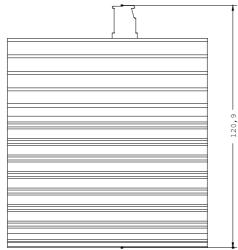
### Cax online generator:

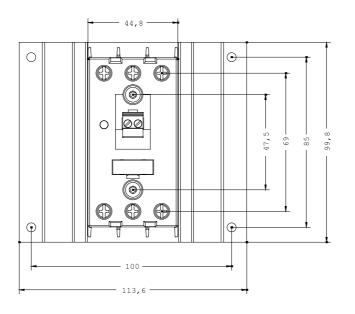
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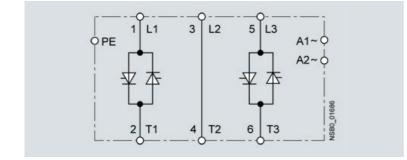
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RF2440-1AB55/all

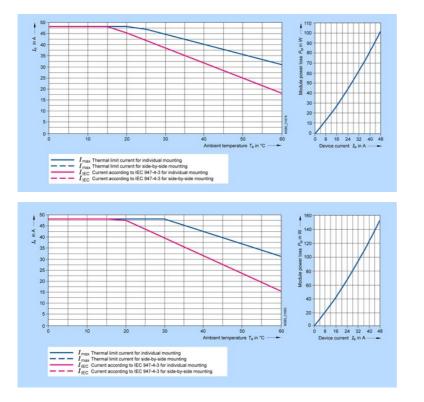
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RF2440-1AB55

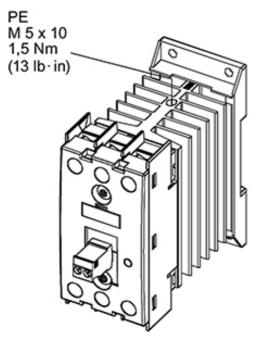












last change:

Aug 22, 2011