



SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 30A / AC15  
15A 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	<a href="#">3RF2900-3PA88</a>	
Product designation / _2 / of the accessories that can be ordered	power regulator	
Manufacturer article number / _2 / of the accessories that can be ordered	<a href="#">3RF2950-0HA36</a>	
Product designation / _4 / of the accessories that can be ordered	load monitoring	
Manufacturer article number / _4 / of the accessories that can be ordered	<a href="#">3RF2950-0GA36</a>	
Ambient temperature		
• during operating	°C	-25 ... +60
• during storage	°C	-55 ... +80
Installation altitude / at a height over sea level / maximum	m	1,000

<b>Resistance against vibration / according to IEC 60068-2-6</b>		2g
<b>Resistance against shock / according to IEC 60068-2-27</b>		15g / 11 ms
<b>Item designation</b>		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K
• according to DIN EN 61346-2		Q
<b>Number of NC contacts / for auxiliary contacts</b>		0
<b>Number of NO contacts / for auxiliary contacts</b>		0
<b>Number of change-over switches / for auxiliary contacts</b>		0

<b>Main circuit:</b>		
<b>Number of NO contacts / for main contacts</b>		1
<b>Number of NC contacts / for main contacts</b>		0
<b>Operating current</b>		
• at AC-1 / at 400 V / rated value	A	30
• at AC-51 / rated value	A	30
<b>Operating current / minimum</b>	mA	500
<b>Operating voltage</b>		
• at 50 Hz / at AC / rated value	V	48 ... 460
• at 60 Hz / at AC / rated value	V	48 ... 460
<b>Working area related to the operating voltage</b>		
• at 50 Hz / for AC	V	40 ... 506
• at 60 Hz / for AC	V	40 ... 506
<b>Operating frequency</b>		
• rated value	Hz	50 ... 60
<b>Relative symmetrical tolerance / of the operation frequency</b>	%	10
<b>Insulation voltage / rated value</b>	V	600
<b>Voltage slew rate / at the thyristor / for main contacts / maximum permissible</b>	V/µs	1,000
<b>Block voltage / at the thyristor / for main contacts / maximum permissible</b>	V	1,200
<b>Reverse current / of the thyristor</b>	mA	10
<b>Derating temperature</b>	°C	40
<b>Active power loss / total / typical</b>	W	33
<b>Resistance against the impulse current / rated value</b>	A	600
<b>I<sub>2t</sub>-level / maximum</b>	A <sup>2</sup> ·s	1,800

<b>Control circuit:</b>		
<b>Control supply voltage frequency</b>		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60

<b>Type of voltage / of the controlled supply voltage</b>		AC
<b>Control supply voltage / 1</b>		
• at 50 Hz / for AC	V	110
• initial rated value	V	230
• final rated value	V	230
• at 60 Hz / for AC	V	110
• initial rated value	V	230
• final rated value	V	230
<b>Control supply voltage</b>		
• 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
<b>Tolerance of the line frequency</b>	Hz	5
<b>Relative symmetrical tolerance / of the supply voltage frequency</b>	%	10
<b>Control current</b>		
• at minimum control supply voltage / for AC	mA	2
• for AC / rated value	mA	15
<b>Fuse assignments</b>	<a href="https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf">https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf</a>	

<b>Installation/mounting/dimensions:</b>		
<b>Type of mounting</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Type of fixing/fixation / series installation</b>		Yes
<b>Design of the thread / of the screw for fastening of the operating resource</b>		M4
<b>Tightening torque / of the screw for fastening of the operating resource</b>	N·m	1.5
<b>Width</b>	mm	45
<b>Height</b>	mm	100
<b>Depth</b>	mm	140.5

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

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

### Certificates/approvals:

**General Product Approval**

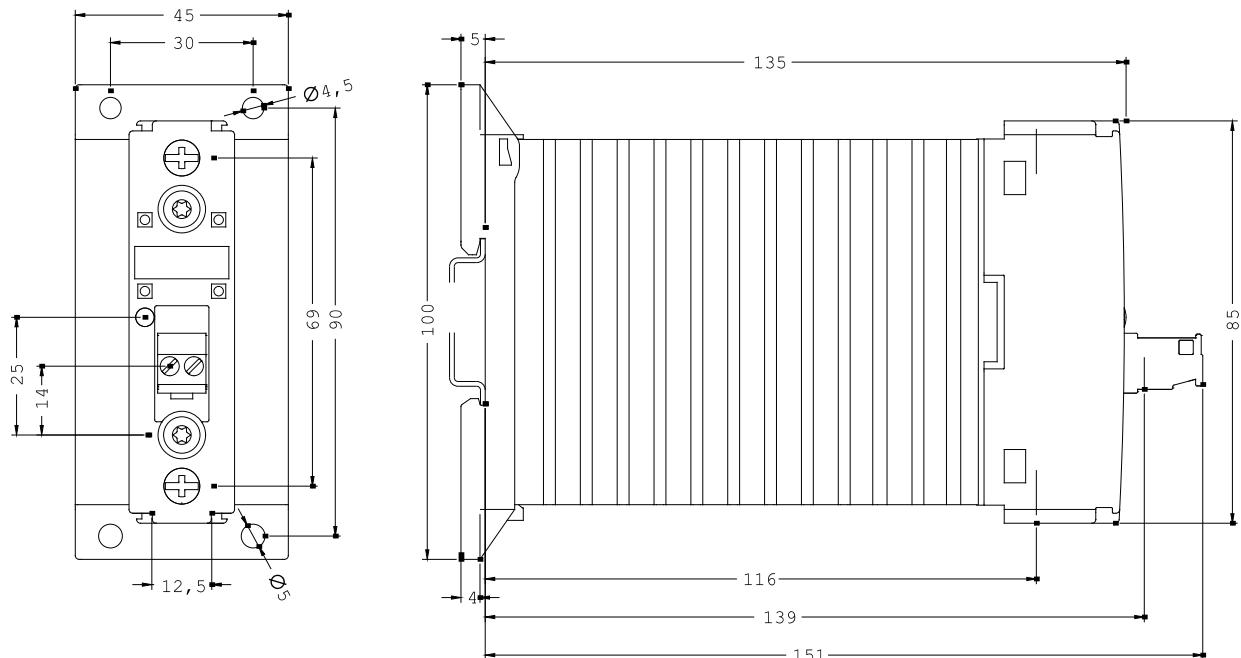
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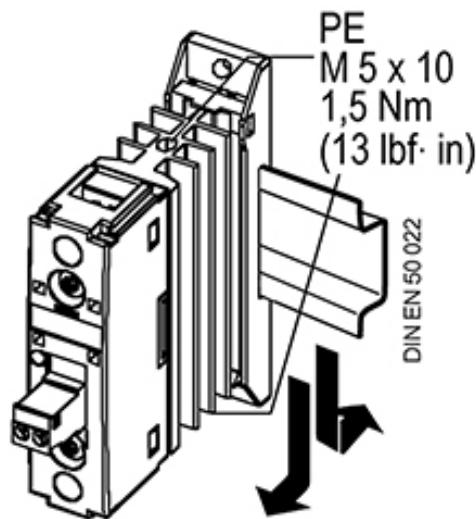
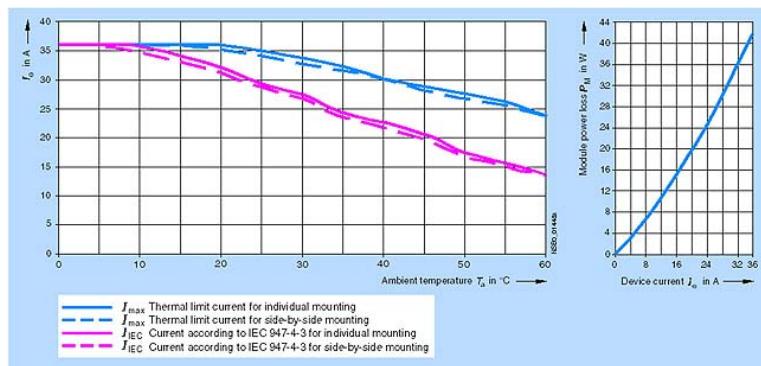
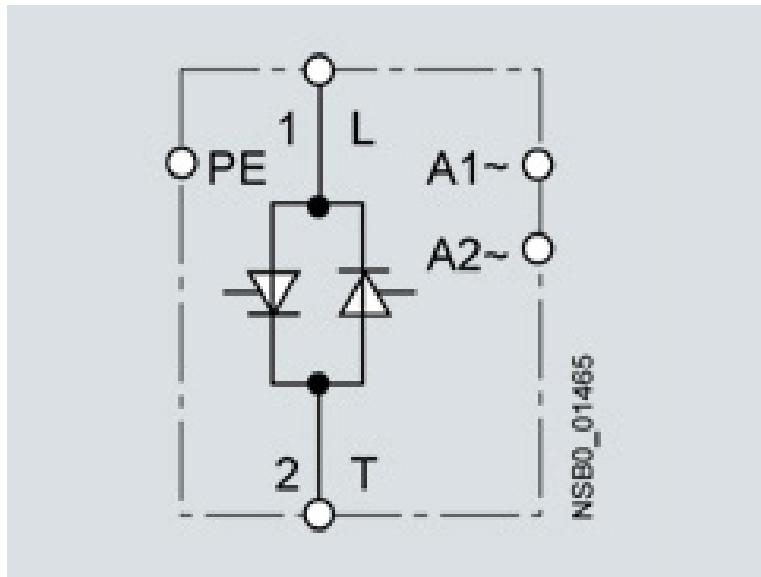


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last change:

Jul 17, 2012