

Reference: 3RF2150-1AA44-1KK0

SOLID-STATE RELAY 1-PHASE 3RF2  
WIDTH 22.5MM, 50A 48-460V / 4-30V DC  
SCREW TERMINALS WITHOUT CONTROL  
CONNECTOR CUSTOMER-SPECIFIC  
DESIGN

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General technical data:	
product brand name	SIRIUS
Product designation	solid-state relay
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's article number _1 of the accessories that can be ordered	3RF2900-3PA88
Product designation _3 of the accessories that can be ordered	converter
Manufacturer's article number _3 of the accessories that can be ordered	3RF2900-0EA18
Product designation _4 of the accessories that can be ordered	load monitoring
Manufacturer's article number _4 of the accessories that can be ordered	3RF2950-0GA16
Product designation _5 of the accessories that can be ordered	load monitoring, basis
Manufacturer's article number _5 of the accessories that can be ordered	3RF2920-0FA08
Ambient temperature	
during operation	°C -25 ... +60

during storage	°C	-55 ... +80
Installation altitude at height above sea level maximum	m	1 000
Vibration resistance acc. to IEC 60068-2-6		2g
Shock resistance acc. to IEC 60068-2-27		15g / 11 ms
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K
Equipment marking acc. to DIN EN 61346-2		Q
Number of NC contacts for auxiliary contacts		0
Number of NO contacts for auxiliary contacts		0
Number of CO contacts for auxiliary contacts		0
Main circuit:		
Number of NO contacts for main contacts		1
Number of NC contacts for main contacts		0
Operating current		
rated value maximum	A	50
at AC-51 rated value	A	50
minimum	mA	500
Operating voltage at AC		
at 50 Hz rated value	V	48 ... 460
at 60 Hz rated value	V	48 ... 460
Operating range relative to the operating voltage at AC		
at 50 Hz	V	40 ... 506
at 60 Hz	V	40 ... 506
Operating frequency rated value	Hz	50 ... 60
Relative symmetrical tolerance of the operating frequency	%	10
Insulation voltage rated value	V	600
Rate of voltage rise at the thyristor for main contacts maximum permissible	V/μs	1 000
Blocking voltage at the thyristor for main contacts maximum permissible	V	1 200
Reverse current of the thyristor	mA	10
Derating temperature	°C	40
Power loss [W] total typical	W	66
Power loss [V•A] maximum	V•A	66
Surge current resistance rated value	A	600
I <sup>2</sup> t value maximum	A <sup>2</sup> •s	1 800
Short-circuit protection, design of the fuse link		
Control circuit/ Control:		
Type of voltage of the control supply voltage		DC

Control supply voltage 1		
at DC		
— Initial rated value	V	4
— Final rated value	V	30
Control supply voltage		
at DC Full-scale value for signal<0> recognition	V	1
Control current		
at minimum control supply voltage		
— at DC	mA	2
at DC rated value	mA	15
Installation/ mounting/ dimensions:		
Mounting type	screw fixing	
Mounting type Side-by-side mounting	Yes	
Design of the thread of the screw for securing the equipment	M4	
Tightening torque of the screw for securing the equipment	N·m	1.5
Witd>	mm	22.5
Height	mm	85
Depth	mm	48
Connections/Terminals:		
Type of 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	7 ... 10.3
Type of connectable conductor cross-sections		
for main contacts		
— solid	2x (1.5 ... 2.5 mm²), 2x (2.5 ... 6 mm²)	
— finely stranded		
— with core end processing	2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²	
at 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 core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)	

— without core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )	
Connectable conductor cross-section		
for main contacts		
— single or multi-stranded	mm <sup>2</sup>	1.5 ... 6
— finely stranded		
— with core end processing	mm <sup>2</sup>	1 ... 10
for auxiliary and control contacts		
— solid	mm <sup>2</sup>	0.5 ... 2.5
— finely stranded		
— with core end processing	mm <sup>2</sup>	0.5 ... 2.5
— without core end processing	mm <sup>2</sup>	0.5 ... 2.5
AWG number as coded connectable conductor cross section		
for main contacts	14 ... 10	
for auxiliary and control contacts	20 ... 12	
Type of electrical connection for auxiliary and control current circuit	screw-type terminals	
Design of the thread of the connection screw of the auxiliary and control contacts	M3	
Wire stripping length of the cable		
for main contacts	mm	7
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	4.5 ... 5.3