SIEMENS

Data sheet 3RF2150-1AA02



Semiconductor relay, 1-phase 3RF2 Overall width 22.5 mm, 50 A 24-230 V / 24 V DC screw terminal

dosign of the product single-phase product type designation 3RF21	product brand name	SIRIUS
manufacturer's article number - 1 of the accessories that can be ordered - 2 of the accessories that can be ordered 3RF2900-3PA88 - 3 of the accessories that can be ordered 3RF2900-OPA18 - 4 of the accessories that can be ordered 3RF2900-OPA18 - 5 of the accessories that can be ordered 3RF2900-OPA18 - 5 of the accessories that can be ordered 3RF2900-OPA18 - 5 of the accessories that can be ordered - 5 of the accessories that can be ordered - 2 of the accessories that can be ordered - 2 of the accessories that can be ordered - 3 of the accessories that can be ordered - 4 of the accessories that can be ordered - 5 of the accessories that can be ordered - 5 of the accessories that can be ordered - 6 on the accessories that can be ordered - 7 of the accessories that can be ordered - 8 of the accessories that can be ordered - 9 of the accessories that can be ordered - 10 on the accessories that can be ordered - 2 of the accessories that can be ordered - 3 of the accessories that can be ordered - 4 of the accessories that can be ordered - 5 of the accessories that can be ordered - 6 on th	product designation	solid-state relay
manufacturer's article number • 1 of the accessories that can be ordered • 2 of the accessories that can be ordered • 3RF2890.0EA13 • 3 of the accessories that can be ordered • 4 of the accessories that can be ordered • 5 of the accessories that can be ordered • 5 of the accessories that can be ordered • 5 of the accessories that can be ordered • 1 of the accessories that can be ordered • 2 of the accessories that can be ordered • 3 of the accessories that can be ordered • 3 of the accessories that can be ordered • 3 of the accessories that can be ordered • 3 of the accessories that can be ordered • 4 of the accessories that can be ordered • 5 of the accessories that can be ordered • 5 of the accessories that can be ordered • 6 of the accessories that can be ordered • 6 of the accessories that can be ordered • 1 of the accessories that can be ordered • 2 of the accessories that can be ordered • 3 of the accessories that can be ordered • 4 of the accessories that can be ordered • 5 of the accessories that can be ordered • 6 of the accessories that can be ordered • 6 of the accessories that can be ordered • 6 of the accessories that can be ordered • 6 of the accessories that can be ordered • 6 of the accessories that can be ordered • 6 of the accessories that can be ordered • 1 of the accessories that can be ordered • 2 of the accessories that can be ordered • 3 of the accessories that can be ordered • 3 of the accessories that can be ordered • 2 of the accessories that can be ordered • 3 of the accessories that can be ordered • 4 of the accessories that can be ordered • 6 of W • 4 of the accessories that can be ordered • 6 of W • 4 of the accessories that can be ordered • 6 of W • 4 of the accessories that can be ordered • 6 of W • 4 of the accessories that can be ordered • 6 of W • 4 of the accessories that can be ordered • 6 of W • 4 of the accessories that can be ordered • 6 of W • 5 of the accessories that can be ordered • 6 of W • 5 of the accessories tha	design of the product	single-phase
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_ 3 of the accessories that can be ordered _ 4 of the accessories that can be ordered _ 5 of the accessories that can be ordered _ 5 of the accessories that can be ordered _ 5 of the accessories that can be ordered _ 5 of the accessories that can be ordered	_1 of the accessories that can be ordered	terminal cover
_ 4 of the accessories that can be ordered _ 5 of the accessories that can be ordered _ 5 of the accessories that can be ordered load monitoring, basis	_2 of the accessories that can be ordered	power regulator
• _5 of the accessories that can be ordered General technical data product function	_3 of the accessories that can be ordered	converter
product function zero-point switching power loss [V-A] maximum 66 VA power loss [W] for rated value of the current • at AC in hot operating state e 66 W • without load current share typical 0.4 W insulation voltage rated value 600 V type of voltage of the control supply voltage DC surge voltage resistance of main circuit rated value 6 kV shock resistance according to IEC 60068-2-27 15g / 11 ms vibration resistance according to IEC 60068-2-6 2g reference code according to IEC 81346-2 Q substance Prohibitance (Date) 05/28/2009 Main circuit number of NO contacts for main current circuit 1 number of NC contacts for main contacts 1 number of NC contacts for main contacts 0 operating voltage at AC • at 50 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	_4 of the accessories that can be ordered	load monitoring
product function 2ero-point switching power loss [V-A] maximum 66 VA power loss [W] for rated value of the current • at AC in hot operating state 66 W • at AC in hot operating state per pole 66 W • without load current share typical 0.4 W insulation voltage rated value 600 V type of voltage of the control supply voltage DC surge voltage resistance of main circuit rated value 6 kV shock resistance according to IEC 60068-2-27 15g / 11 ms vibration resistance according to IEC 60068-2-6 2g reference code according to IEC 61346-2 Q reference code according to IEC 81346-2 Q substance Prohibitance (Date) 05/28/2009 Main circuit number of NO contacts for main contacts 1 number of NC contacts for main contacts 0 operating voltage at AC • at 50 Hz rated value 24 230 V • at 60 Hz rated value 50 60 Hz	_5 of the accessories that can be ordered	load monitoring, basis
power loss [V-A] maximum power loss [W] for rated value of the current at AC in hot operating state at AC in hot operating state per pole building at active	General technical data	
power loss [W] for rated value of the current • at AC in hot operating state 66 W • at AC in hot operating state per pole 66 W • without load current share typical 0.4 W insulation voltage rated value 600 V type of voltage of the control supply voltage DC surge voltage resistance of main circuit rated value 6 kV shock resistance according to IEC 60068-2-27 15g / 11 ms vibration resistance according to IEC 60068-2-6 2g reference code according to IEC 81346-2 Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 05/28/2009 Main circuit 1 number of Poles for main current circuit 1 number of NO contacts for main contacts 1 number of NC contacts for main contacts 0 operating voltage at AC • at 50 Hz rated value 24 230 V • at 60 Hz rated value 50 60 Hz	product function	zero-point switching
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at AC in hot operating state per pole without load current share typical insulation voltage rated value type of voltage of the control supply voltage surge voltage resistance of main circuit rated value shock resistance according to IEC 60068-2-27 tisg / 11 ms vibration resistance according to IEC 60068-2-6 reference code according to IEC 60068-2-6 greference code according to IEC 81346-2 Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NC contacts for main contacts number of NC contacts for main contacts operating voltage at AC at 60 Hz rated value by Interval AU operating frequency rated value 50 60 Hz	power loss [W] for rated value of the current	
without load current share typical insulation voltage rated value type of voltage of the control supply voltage surge voltage resistance of main circuit rated value shock resistance according to IEC 60068-2-27 is j / 11 ms vibration resistance according to IEC 60068-2-6 greference code according to EN 61346-2 q Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC at 50 Hz rated value at 60 Hz rated value of NC contact value at 60 Hz rated value 50 60 Hz	 at AC in hot operating state 	66 W
insulation voltage rated value type of voltage of the control supply voltage surge voltage resistance of main circuit rated value shock resistance according to IEC 60068-2-27 15g / 11 ms vibration resistance according to IEC 60068-2-6 reference code according to EN 61346-2 Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Main circuit number of NO contacts for main current circuit number of NC contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 50 60 Hz	 at AC in hot operating state per pole 	66 W
type of voltage of the control supply voltage surge voltage resistance of main circuit rated value shock resistance according to IEC 60068-2-27 vibration resistance according to IEC 60068-2-6 reference code according to EN 61346-2 Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 50 60 Hz	without load current share typical	0.4 W
surge voltage resistance of main circuit rated value shock resistance according to IEC 60068-2-27 15g / 11 ms vibration resistance according to IEC 60068-2-6 2g reference code according to EN 61346-2 Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 05/28/2009 Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts 0 operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 50 60 Hz	insulation voltage rated value	600 V
shock resistance according to IEC 60068-2-27 vibration resistance according to IEC 60068-2-6 reference code according to EN 61346-2 Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 50 60 Hz	type of voltage of the control supply voltage	DC
reference code according to EN 61346-2 reference code according to EN 61346-2 Q reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 50 60 Hz	surge voltage resistance of main circuit rated value	6 kV
reference code according to EN 61346-2 Q reference code according to IEC 81346-2 Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 50 60 Hz	shock resistance according to IEC 60068-2-27	15g / 11 ms
reference code according to IEC 81346-2 Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	vibration resistance according to IEC 60068-2-6	2g
Substance Prohibitance (Date) Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	reference code according to EN 61346-2	Q
Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	reference code according to IEC 81346-2	Q
number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	Substance Prohibitance (Date)	05/28/2009
number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	Main circuit	
number of NC contacts for main contacts operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	number of poles for main current circuit	1
operating voltage at AC • at 50 Hz rated value • at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	number of NO contacts for main contacts	1
 at 50 Hz rated value at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz 	number of NC contacts for main contacts	0
• at 60 Hz rated value 24 230 V operating frequency rated value 50 60 Hz	operating voltage at AC	
operating frequency rated value 50 60 Hz	• at 50 Hz rated value	24 230 V
	at 60 Hz rated value	24 230 V
relative symmetrical tolerance of the operating frequency 10 %	operating frequency rated value	50 60 Hz
	relative symmetrical tolerance of the operating frequency	10 %

operating range relative to the operating voltage at AC			
● at 50 Hz	20 253 V		
• at 60 Hz	20 253 V		
operational current			
 at AC-51 rated value 	50 A		
 according to UL 508 rated value 	50 A		
ampacity maximum	50 A		
operational current minimum	500 mA		
rate of voltage rise at the thyristor for main contacts maximum permissible	1 000 V/µs		
blocking voltage at the thyristor for main contacts maximum permissible	800 V		
reverse current of the thyristor	10 mA		
derating temperature	40 °C		
surge current resistance rated value	600 A		
I2t value maximum	1 800 A ² ·s		
Control circuit/ Control			
type of voltage of the control supply voltage	DC		
control supply voltage 1			
at DC rated value	30 V		
• at DC	15 24 V		
control supply voltage			
at DC initial value for signal <1> detection	15 V		
at DC full-scale value for signal <0> recognition	5 V		
control current at minimum control supply voltage			
• at DC	13 mA		
control current at DC rated value	15 mA		
ON-delay time	1 ms; additionally max. one half-wave		
OFF-delay time	1 ms; additionally max. one half-wave		
Auxiliary circuit	i ins, additionally max. one hall-wave		
	0		
number of NC contacts for auxiliary contacts	0		
number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts	0		
Installation/ mounting/ dimensions			
fastening method	screw fixing		
side-by-side mounting	Yes		
design of the thread of the screw for securing the equipment	M4		
tightening torque of fixing screw maximum	1.5 N·m		
tightening torque [lbf·in] of fixing screw maximum	13 lbf-in		
height	85 mm		
width	22.5 mm		
depth	48 mm		
Connections/ Terminals			
type of electrical connection			
 for main current circuit 	screw-type terminals		
for auxiliary and control circuit	screw-type terminals		
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		
 for AWG cables for main contacts 	2x (14 10)		
connectable conductor cross-section for main contacts			
 solid or stranded 	1.5 6 mm²		
 finely stranded with core end processing 	1 10 mm²		
type of connectable conductor cross-sections			
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)		
finely stranded without core end processing	1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)		
for AWG cables for auxiliary and control contacts	1x (AWG 20 12)		
- 101 /1110 Gables for auxiliary and control contacts	1. (1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		

AWG number as coded connectable conductor cross section for main contacts	14 10				
tightening torque					
 for main contacts with screw-type terminals 	2 2.5 N·m				
 for auxiliary and control contacts with screw-type terminals 	0.5 0.6 N·m				
tightening torque [lbf·in]					
 for main contacts with screw-type terminals 	7 10.3 lbf·in				
 for auxiliary and control contacts with screw-type terminals 	4.5 5.3 lbf-in				
design of the thread of the connection screw					
• for main contacts	M4				
of the auxiliary and control contacts	M3				
stripped length of the cable	_				
• for main contacts	7 mm				
for auxiliary and control contacts of the related data.	7 mm				
afety related data	IDOO				
protection class IP on the front according to IEC 60529	IP20	from the front			
touch protection on the front according to IEC 60529 Imbient conditions	finger-safe, for vertical contact	nom the nont			
	1 000 m				
installation altitude at height above sea level maximum	1 000 m				
ambient temperature	25 ±60 °C				
during operationduring storage	-25 +60 °C -55 +80 °C				
lectromagnetic compatibility	-55 100 0				
conducted interference					
due to burst according to IEC 61000-4-4	2 kV / 5 kHz behavior criterion 2				
due to conductor-earth surge according to IEC 61000-4-5	2 kV behavior criterion 2				
due to conductor-conductor surge according to IEC 61000-4-5	1 kV behavior criterion 2				
 due to high-frequency radiation according to IEC 61000- 4-6 	140 dBuV in the frequency range 0.15 80 MHz, behavior criterion 1				
field-based interference according to IEC 61000-4-3	80 MHz 1 GHz 10 V/m, behavior criterion 1				
electrostatic discharge according to IEC 61000-4-2	4 kV contact discharging / 8 kV air discharging, behavior criterion 2				
conducted HF interference emissions according to CISPR11	Class A for industrial environment				
field-bound HF interference emission according to CISPR11	Class B for the domestic, busin	ness and commercial envi	ronments		
hort-circuit protection, design of the fuse link					
manufacturer's article number					
 of gS fuse for semiconductor protection at NH design usable 	3NE1817-0				
of full range R fuse link for semiconductor protection at cylindrical design usable	<u>5SE1350</u>				
of back-up R fuse link for semiconductor protection at NH design usable	3NE8017-1				
of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable final up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable	<u>3NC1450</u>				
of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable	<u>3NC2263</u>				
manufacturer's article number of the gG fuse	01140040 7				
at NH design usable	3NA6810: These fuses have a smaller rated current than the semiconductor relays				
at cylindrical design 14 x 51 mm usable	3NW6107-1; These fuses have a smaller rated current than the semiconductor relays				
at cylindrical design 22 x 58 mm usable	3NW6207-1; These fuses have relays	a smaller rated current the	nan the semiconductor		
manufacturer's article number	50D0744 Ti				
of DIAZED fuse usable	5SB2711; These fuses have a relays	smaller rated current than	1 the semiconductor		
Sertificates/ approvals					
General Product Approval		EMC	Declaration of Conformity		



Confirmation









Declaration of Conformity

Test Certificates other



Type Test Certificates/Test Report

Special Test Certificate

Confirmation



Vibration and Shock

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2150-1AA02

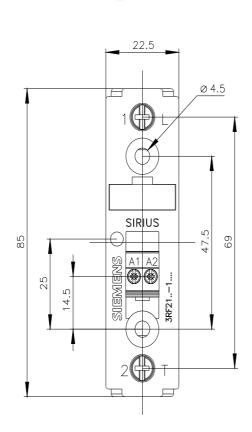
Cax online generator

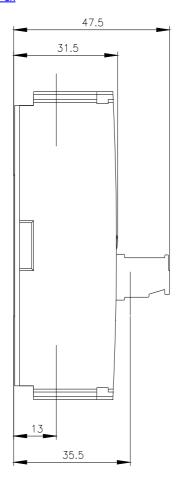
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2150-1AA02

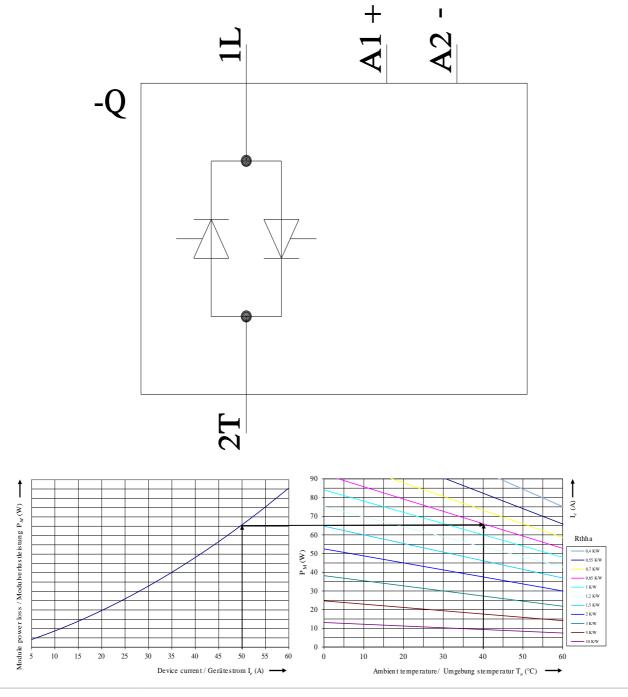
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RF2150-1AA02

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2150-1AA02&lang=en







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