

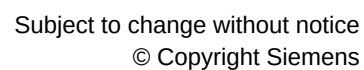
phase-out type semiconductor relay, 3-phase 3RF2 30 A / 40 °C 48-600 V / 4-30 V DC 2-phase controlled spring-loaded terminal blocking voltage 1200 V for mounting on available cooling surfaces

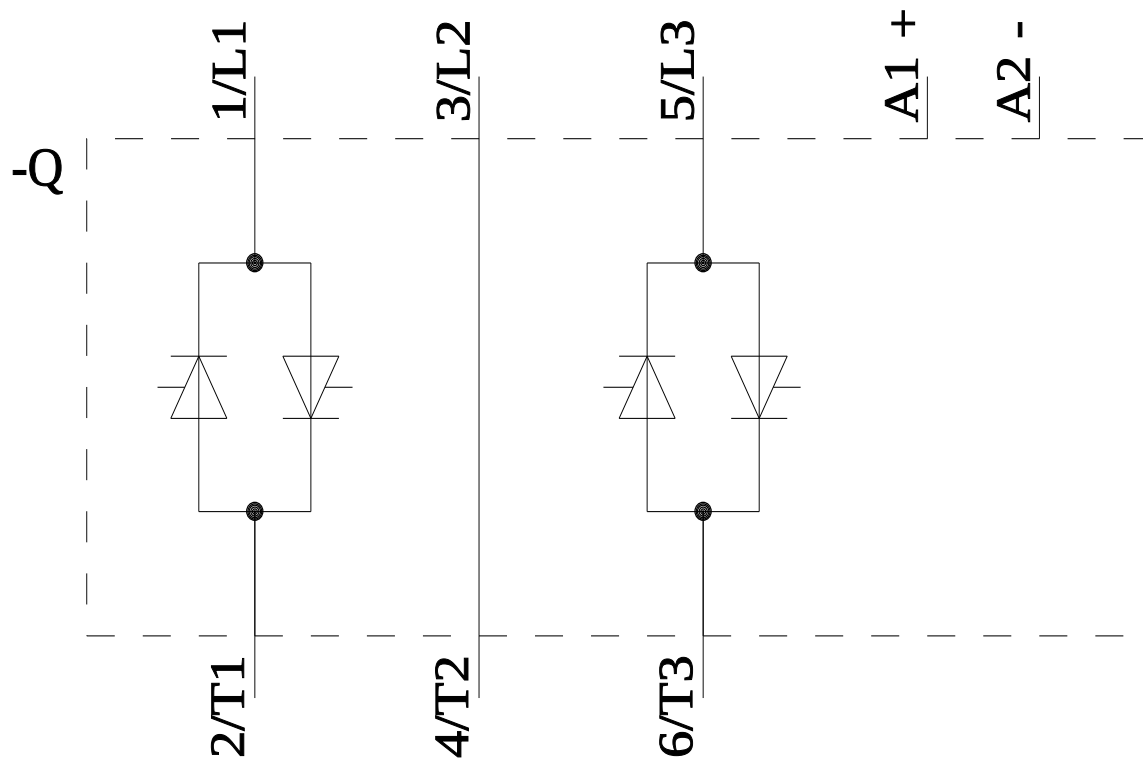
product brand name	SIRIUS
product designation	solid-state relay
design of the product	2-pole controlled
product type designation	3RF22
manufacturer's article number	
• _2 of the accessories that can be ordered	3RF2900-0EA18
product designation	
• _2 of the accessories that can be ordered	converter
General technical data	
product function	zero-point switching
power loss [W] for rated value of the current	
• at AC in hot operating state	81 W
• at AC in hot operating state per pole	81 W
• without load current share typical	0.9 W
insulation voltage rated value	600 V
surge voltage resistance of main circuit rated value	6 kV
protection class IP	IP20
protection class IP on the front according to IEC 60529	IP20
shock resistance according to IEC 60068-2-27	15 g / 11 ms
vibration resistance according to IEC 60068-2-6	2 g
reference code according to IEC 81346-2	Q
Substance Prohibitance (day/month/year)	07/01/2006
SVHC substance name	Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	0.14 g
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	2
number of NC contacts for main contacts	0
type of voltage of the operating voltage	AC
operating voltage	
• at AC	
— at 50 Hz rated value	48 ... 600 V
— at 60 Hz rated value	48 ... 600 V
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	40 ... 660 V
• at 60 Hz	40 ... 660 V
operational current rated value maximum	30 A
operational current	
• at AC-1 at 400 V rated value	30 A
• at AC-51 rated value	20 A
• according to UL 508 rated value	20 A
ampacity maximum	30 A
operational current minimum	500 mA
rate of voltage rise at the thyristor for main contacts maximum permissible	500 V/μs

blocking voltage at the thyristor for main contacts maximum permissible	1 200 V
reverse current of the thyristor	10 mA
derating temperature	40 °C
surge current resistance rated value	300 A
I²t value maximum	450 A ² ·s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage 1 at DC	4 ... 30 V
control supply voltage at DC	
• initial value for signal <1> detection	4 V
• full-scale value for signal<0> recognition	1 V
control current at minimum control supply voltage	
• at DC	22 mA
control current at DC rated value	30 mA
ON-delay time	1 ms; additionally max. one half-wave
OFF-delay time	1 ms; additionally max. one half-wave
Installation/ mounting/ dimensions	
fastening method side-by-side mounting	Yes
fastening method	screw fixing
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	95 mm
width	45 mm
depth	47 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
• for main current circuit	spring-loaded terminals
• for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (0.5 ... 2.5 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²)
— finely stranded without core end processing	2x (0.5 ... 2.5 mm ²)
• for AWG cables for main contacts	2x (18 ... 14)
connectable conductor cross-section for main contacts	
• solid or stranded	0.5 ... 2.5 mm ²
• finely stranded with core end processing	0.5 ... 1.5 mm ²
• finely stranded without core end processing	0.5 ... 2.5 mm ²
type of connectable conductor cross-sections	
• for auxiliary and control contacts	
— solid	0.5 ... 1.5 mm ²
— finely stranded with core end processing	0.5 ... 2.5 mm ²
— finely stranded without core end processing	0.5 ... 2.5 mm ²
• for AWG cables for auxiliary and control contacts	1x (20 ... 12)
AWG number as coded connectable conductor cross section for main contacts	10 ... 14
tightening torque	
• for main contacts with screw-type terminals	2 ... 2.5 N·m
design of the thread of the connection screw	
• for main contacts	M4
stripped length of the cable	
• for main contacts	10 mm
• for auxiliary and control contacts	10 mm
UL/CSA ratings	
operational current according to UL 508 rated value	20 A

Electrical Safety						
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front					
Ambient conditions						
installation altitude at height above sea level maximum	1 000 m					
ambient temperature - during operation - during storage	-25 ... +60 °C -55 ... +80 °C					
Electromagnetic compatibility						
conducted interference - due to burst according to IEC 61000-4-4 - due to conductor-earth surge according to IEC 61000-4-5 - due to conductor-conductor surge according to IEC 61000-4-5 - due to high-frequency radiation according to IEC 61000-4-6	2 kV / 5 kHz, behavior criterion 2 2 kV, behavior criterion 2 1 kV, behavior criterion 2 140 dBuV in the frequency range 0.15 ... 80 MHz, 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 A for industrial environment					
Short-circuit protection, design of the fuse link						
manufacturer's article number - of full range R fuse link for semiconductor protection at NH design usable - of back-up R fuse link for semiconductor protection at NH design usable - of back-up R fuse link for semiconductor protection at cylindrical design 10 x 38 mm usable - of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable - of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable	3NE1814-0: These fuses have a smaller rated current than the semiconductor relays 3NE8003-1 3NC1025: These fuses have a smaller rated current than the semiconductor relays 3NC1430 3NC2232					
manufacturer's article number of the gG fuse at NH design usable - up to 460 V - up to 600 V	3NA3803-6: These fuses have a smaller rated current than the semiconductor relays 3NA3803-6: These fuses have a smaller rated current than the semiconductor relays					
Approvals Certificates						
Environment	General Product Approval					
Environmental Confirmations     						
General Product Approval	EMV	Test Certificates	other			
		Type Test Certificates/Test Report	Confirmation	Miscellaneous	Confirmation	
other						
						
Further information						
Information on the packaging						
https://support.industry.siemens.com/cs/ww/en/view/109813875						

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2230-2AB45&lang=en





last modified:

4/4/2026