



Solid-state contactor AC 51 / 10 A / 40 °C 48-460 V / 24 V DC screw terminal Low power consumption

product brand name	SIRIUS
product designation	solid-state contactor
design of the product	1-pole
product type designation	3RF23
General technical data	
degree of pollution	3
surge voltage resistance of main circuit rated value	6 kV
protection class IP on the front according to IEC 60529	IP20
reference code according to IEC 81346-2	Q
Substance Prohibition (Date)	05/28/2009
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4
Weight	0.14 kg
Main circuit	
type of voltage of the operating voltage	AC
operational current	
• at AC-51 rated value	10.5 A
• at AC-51 according to IEC 60947-4-3	7.5 A
• according to UL 508 rated value	9.6 A
operational current minimum	101 mA
rate of voltage rise at the thyristor for main contacts maximum permissible	1 000 V/ μ s
I ² t value maximum	200 A ² ·s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage 1 at DC rated value	24 V
control supply voltage 1 at DC rated value maximum permissible	30 V
control supply voltage 1 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	6.5 mA
control current at DC rated value	9 mA
ON-delay time	1 ms; additionally max. one half-wave
OFF-delay time	1 ms; additionally max. one half-wave
Auxiliary circuit	
type of switching contact	normally open contact (NO)
Installation/ mounting/ dimensions	

fastening method	screw fixing and snap-on mounting on standard mounting rail 35 mm according to IEC 60715
height	95 mm
width	22.5 mm
depth	88 mm

Connections/ Terminals

product component removable terminal for auxiliary and control circuit	Yes
stripped length of the cable	
• for main contacts	10 mm
• for auxiliary and control contacts	7 mm

Electrical Safety

protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front

Electromagnetic compatibility

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, business and commercial environments

Short-circuit protection, design of the fuse link

manufacturer's article number <ul style="list-style-type: none"> • of gS fuse for semiconductor protection at NH design usable • of full range R fuse link for semiconductor protection at cylindrical 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 	3NE1813-0 5SE1316 3NE8015-1 3NC1016 3NC1420 3NC2220
manufacturer's article number of the gG fuse <ul style="list-style-type: none"> • at NH design usable • at cylindrical design 10 x 38 mm usable • at cylindrical design 14 x 51 mm usable 	3NA6801 3NW6001-1: These fuses have a smaller rated current than the semiconductor relays 3NW6101-1: These fuses have a smaller rated current than the semiconductor relays
manufacturer's article number <ul style="list-style-type: none"> • of NEOZED fuse usable 	5SE2306: These fuses have a smaller rated current than the semiconductor relays

Approvals Certificates

General Product Approval	EMV	Test Certificates
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[Type Test Certificates/Test Report](#)

Test Certificates	other	Railway	Environment
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[Special Test Certificate](#)



[Confirmation](#)



[Special Test Certificate](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RF2310-1AA04-0KN0>

Cax online generator

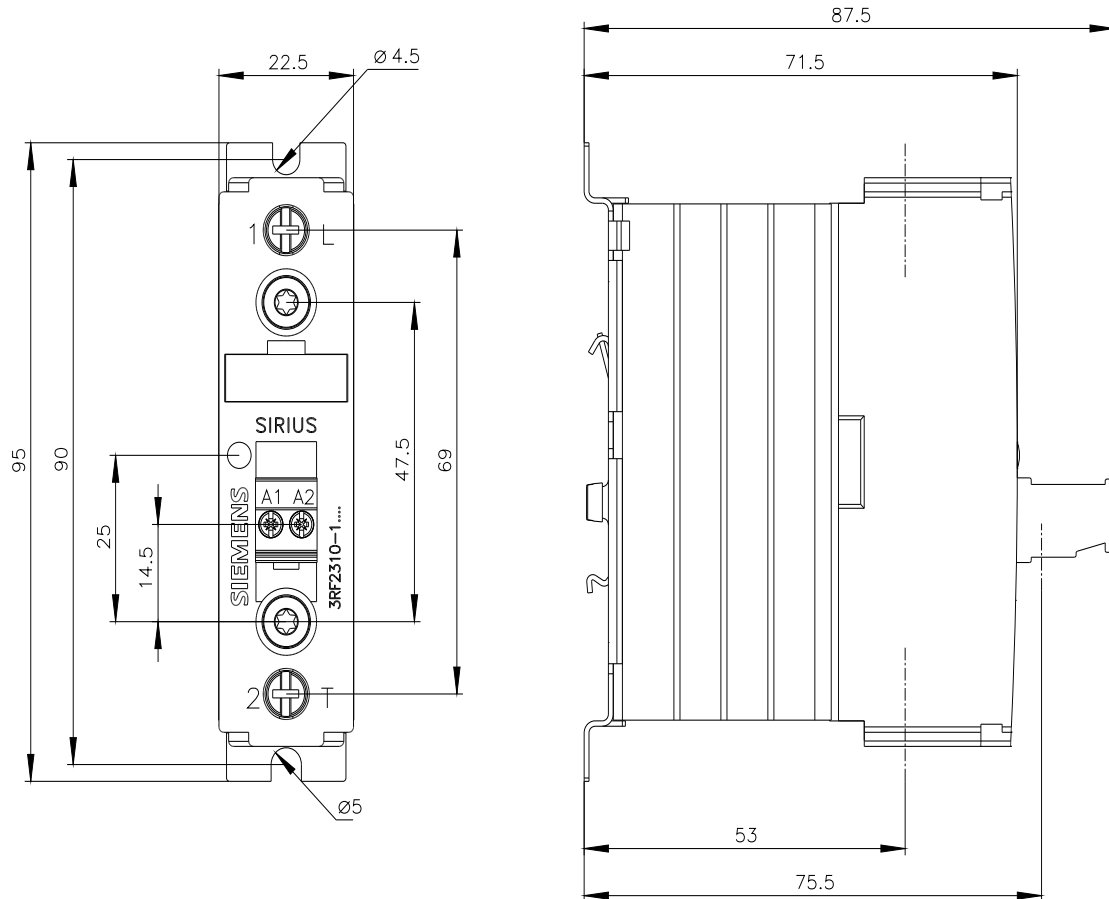
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2310-1AA04-0KN0>

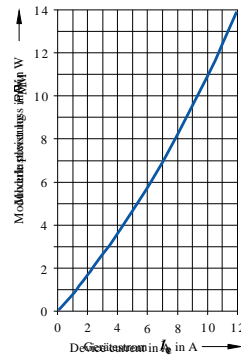
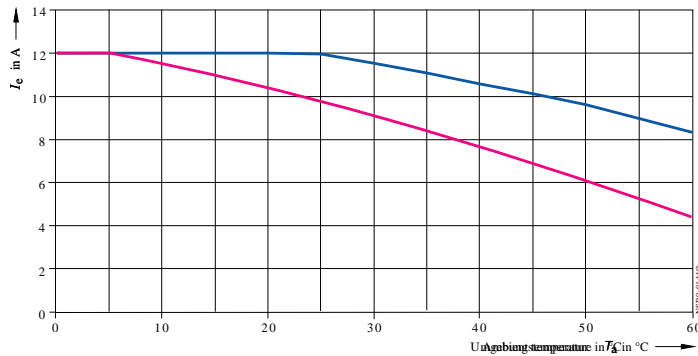
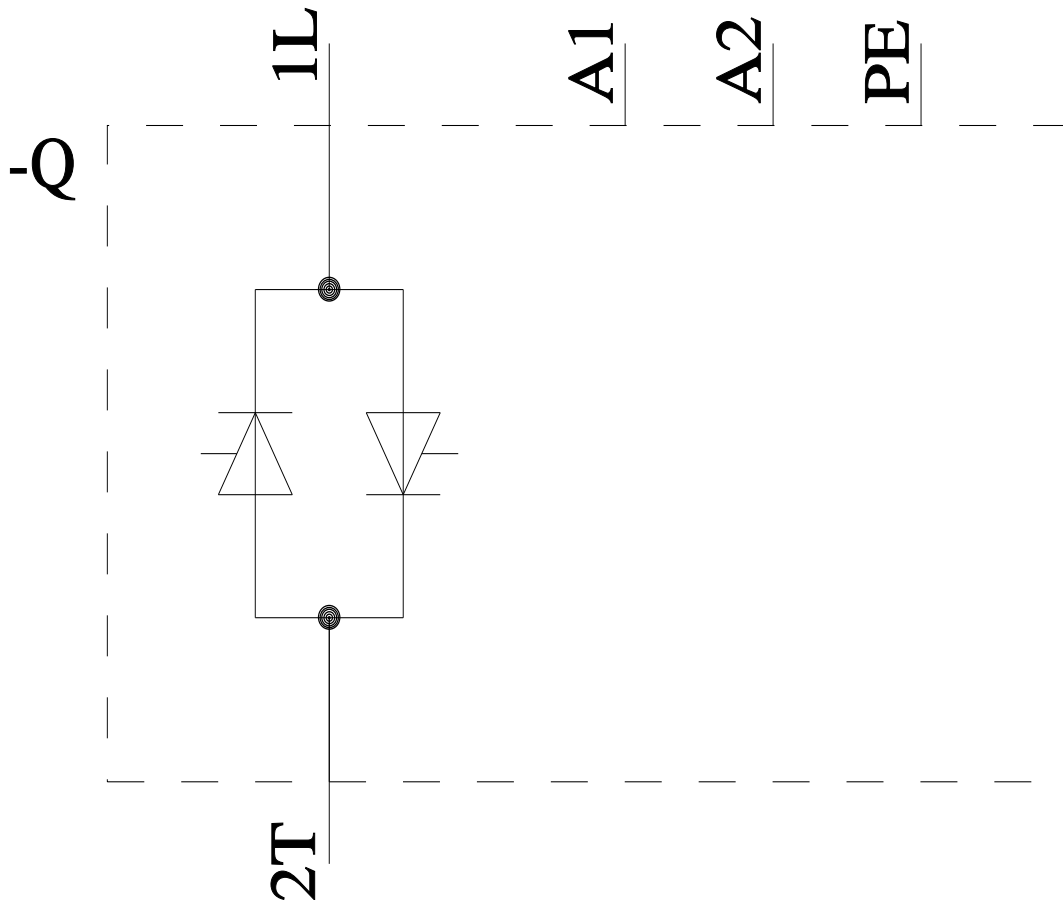
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2310-1AA04-0KN0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2310-1AA04-0KN0&lang=en





— $I_{c,max}$ Thermal limit (current on the DC side) / Derating
— $I_{c,EC}$ Current limit (diode forward current) / Derating

last modified:

5/19/2025