



Solid-state contactor 3-phase 3RF2 AC 51 / 30 A / 40 °C 48-600 V / 4-30 V
DC 3-phase controlled screw terminal Blocking voltage 1200 V

product brand name	SIRIUS
product designation	solid-state contactor
design of the product	three-phase controlled
product type designation	3RF24
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	91 W
• per pole	30.33 W
power loss [W] for rated value of the current without load current share typical	0.9 W
insulation voltage rated value	600 V
degree of pollution	3
type of voltage of the control supply voltage	DC
surge voltage resistance of main circuit rated value	6 kV
shock resistance acc. to IEC 60068-2-27	15g / 11 ms
vibration resistance acc. to IEC 60068-2-6	2g
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.07.2006 00:00:00
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
number of NC contacts for main contacts	0
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	
• at AC-51 rated value	30 A

<ul style="list-style-type: none"> • at AC-51 acc. to IEC 60947-4-3 • acc. to UL 508 rated value 	22 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	1 200 V
reverse current of the thyristor	10 mA
derating temperature	40 °C
surge current resistance rated value	1 200 A
I²t value maximum	7 200 A ² ·s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage 1 <ul style="list-style-type: none"> • at DC rated value • at DC 	30 V 4 ... 30 V
control supply voltage <ul style="list-style-type: none"> • at DC initial value for signal <1> detection • at DC full-scale value for signal<0> recognition 	4 V 1 V
symmetrical line frequency tolerance	5 Hz
control current at minimum control supply voltage <ul style="list-style-type: none"> • at DC 	22 mA
control current at DC rated value	30 mA
ON-delay time	1 ms; additionally max. one half-wave
Auxiliary circuit	
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Installation/ mounting/ dimensions	
fastening method <ul style="list-style-type: none"> • side-by-side mounting 	screw fixing Yes
height	100 mm
width	89.5 mm
depth	128 mm
Connections/ Terminals	
type of electrical connection <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	screw-type terminals screw-type terminals
type of connectable conductor cross-sections <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing • at AWG cables for main contacts 	2x (1.5 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (14 ... 10)
connectable conductor cross-section for main contacts <ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing 	1.5 ... 6 mm ² 1 ... 10 mm ²
type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary and control contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (AWG 20 ... 12)
AWG number as coded connectable conductor cross section for main contacts	14 ... 10
tightening torque <ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals 	2 ... 2.5 N·m 0.5 ... 0.6 N·m

tightening torque [lbf·in] <ul style="list-style-type: none">• for main contacts with screw-type terminals• for auxiliary and control contacts with screw-type terminals	18 ... 22 lbf·in 7.5 ... 5.3 lbf·in	
design of the thread of the connection screw <ul style="list-style-type: none">• for main contacts• of the auxiliary and control contacts	M4 M3	
stripped length of the cable <ul style="list-style-type: none">• for main contacts• for auxiliary and control contacts	7 mm 7 mm	
Safety related data		
protection class IP on the front acc. to IEC 60529	IP20	
touch protection on the front acc. 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 <ul style="list-style-type: none">• during operation• during storage	-25 ... +60 °C -55 ... +80 °C	
Electromagnetic compatibility		
conducted interference <ul style="list-style-type: none">• due to burst acc. to IEC 61000-4-4• due to conductor-earth surge acc. to IEC 61000-4-5• due to conductor-conductor surge acc. to IEC 61000-4-5• due to high-frequency radiation acc. 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 acc. to IEC 61000-4-2	4 kV contact discharging / 8 kV air discharging, behavior criterion 2	
conducted HF interference emissions acc. to CISPR11	Class A for industrial environment	
field-bound HF interference emission acc. to CISPR11	Class A for industrial environment	
Short-circuit protection, design of the fuse link		
manufacturer's article number <ul style="list-style-type: none">• of full range R fuse link 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	3NE1803-0 5SE1335: Maximum operating voltage 400 V! 3NE8003-1 3NC1032 3NC1450 3NC2280	
manufacturer's article number of the gG fuse at NH design usable <ul style="list-style-type: none">• up to 460 V	3NA3812	
Certificates/ approvals		
General Product Approval	EMC	Declaration of Conformity



[Miscellaneous](#)

Test Certificates

other

[Type Test Certificates/Test Report](#)

[Confirmation](#)

Further information

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=3RF2430-1AC45>

Cax online generator

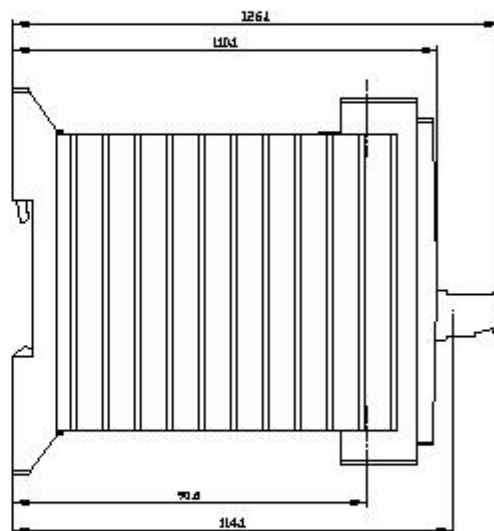
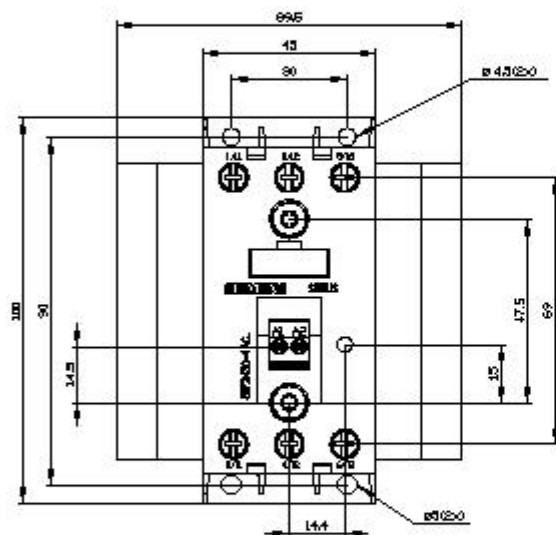
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2430-1AC45>

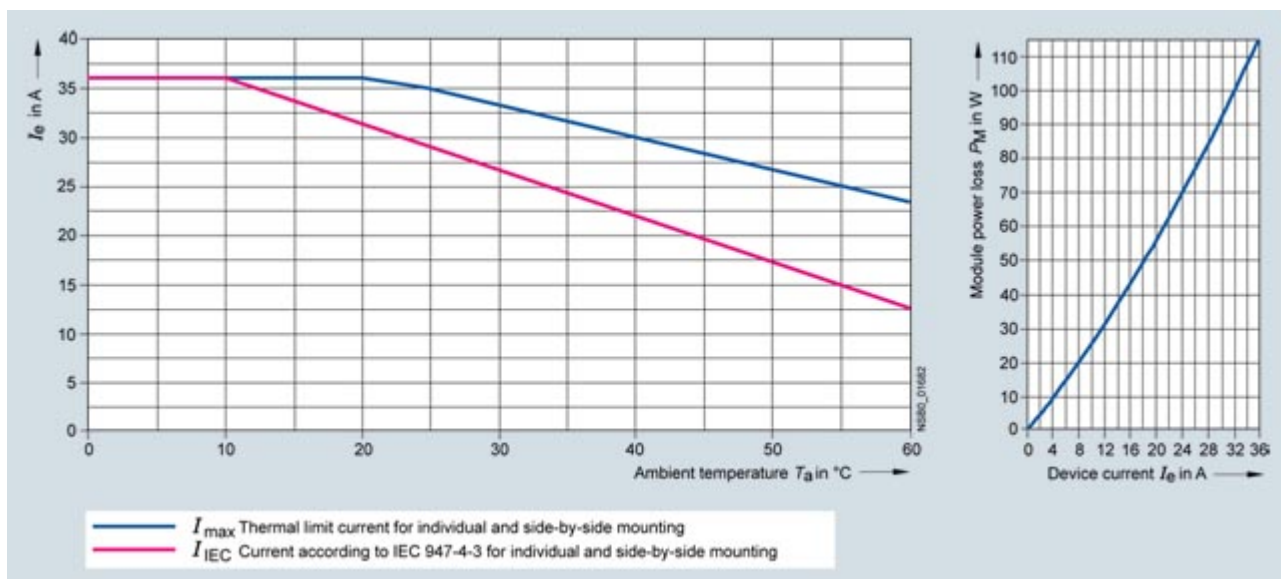
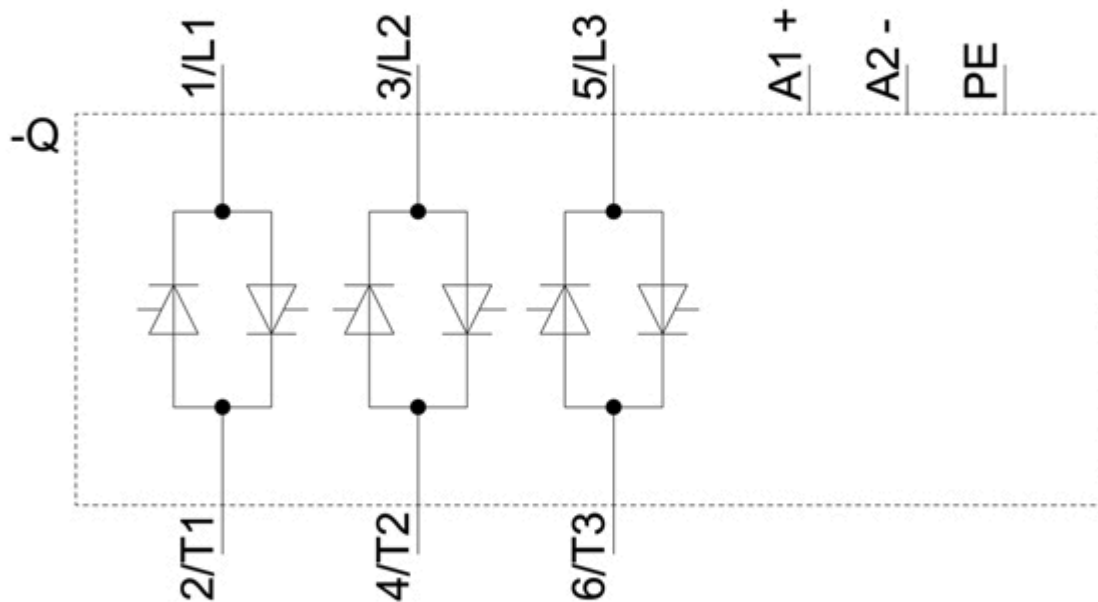
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2430-1AC45>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2430-1AC45&lang=en





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