

Power controller Current range 20 A / 40 °C 110-230 V / 24 V AC/DC for semiconductor relay / contactor with partial load monitoring



Product brand name	SIRIUS
Product designation	power controller
Manufacturer's article number	
<ul style="list-style-type: none"> • _1 / of the accessories that can be ordered • _2 / of the accessories that can be ordered 	3RF2900-0RA88 4EM4700-8CB00
Product designation	
<ul style="list-style-type: none"> • _1 / of the accessories that can be ordered • _2 / of the accessories that can be ordered 	sealable end cover input reactor / 1AC

General technical data	
Product function	solid-state relay / solid-state contactor 3RF2
Insulation voltage	
<ul style="list-style-type: none"> • rated value 	600 V
Degree of pollution	3
Protection class IP	IP20
Shock resistance / acc. to IEC 60068-2-27	15g / 11 ms
Vibration resistance / acc. to IEC 60068-2-6	2g
Reference code / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750	A
Reference code / acc. to DIN EN 81346-2	K

Reference code / acc. to DIN EN 61346-2	K
Main circuit	
Number of poles / for main current circuit	0
Number of NO contacts / for main contacts	0
Number of NC contacts / for main contacts	0
Operating voltage / at AC	
• at 50 Hz / rated value	110 ... 230 V
• at 60 Hz / rated value	110 ... 230 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	93.5 ... 253 V
• at 60 Hz	93.5 ... 253 V
Operating current	
• at AC-1 / at 400 V / rated value	20 A
• at AC-51 / rated value	20 A
Derating temperature	40 °C
Control circuit/ Control	
Control supply voltage / 1	
• at DC	24 V
Control supply voltage / at AC	
• at 50 Hz / Full-scale value for signal<0> recognition	5 V
• at 60 Hz / Full-scale value for signal<0> recognition	5 V
Control supply voltage	
• at DC / Full-scale value for signal<0> recognition	5 V
Symmetrical line frequency tolerance	5 Hz
Control current / at minimum control supply voltage	
• at AC	2 mA
• at DC	2 mA
Control current / at AC / rated value	40 mA
Control current / at DC / rated value	40 mA
Number of NC contacts / for auxiliary contacts	1
Number of NO contacts / for auxiliary contacts	1
Number of CO contacts / for auxiliary contacts	0
Installation/ mounting/ dimensions	
Mounting type	clip-on
• Side-by-side mounting	Yes

Height	111.5 mm
Width	45 mm
Depth	69.5 mm
Installation altitude / at height above sea level / maximum	1 000 m

Connections/ Terminals

Type of electrical connection	
<ul style="list-style-type: none"> • for auxiliary and control current circuit 	screw-type terminals
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 conductors / 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)
Tightening torque / for auxiliary and control contacts / with screw-type terminals	0.5 ... 0.6 N·m
Tightening torque [lbf·in]	
<ul style="list-style-type: none"> • for auxiliary and control contacts / with screw-type terminals 	4.5 ... 5.3 lbf·in
Design of the thread / of the connection screw	
<ul style="list-style-type: none"> • of the auxiliary and control contacts 	M3
Wire stripping length / of the cable	
<ul style="list-style-type: none"> • for auxiliary and control contacts 	7 mm

Ambient conditions

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

Further information

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

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2920-0KA13>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2920-0KA13>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2920-0KA13>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2920-0KA13&lang=en

Short-circuit protection, design of the fuse link

https://www.automation.siemens.com/cd-static/material/info/3RF20_eng.pdf

Short-circuit protection, design of the fuse link

https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf

Short-circuit protection, design of the fuse link

https://www.automation.siemens.com/cd-static/material/info/3RF22_eng.pdf

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