



power controller current range 20 A / 40 °C 110 ... 230 V 24 V AC/DC with partial load monitoring for semiconductor relay / contactor

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
power loss [W] for rated value of the current	
<ul style="list-style-type: none">• without load current share typical	1 W
insulation voltage rated value	600 V
degree of pollution	3
surge voltage resistance of main circuit rated value	2.5 kV
shock resistance according to IEC 60068-2-27	15g / 11 ms
vibration resistance according to IEC 60068-2-6	2g
design of the switching function	NC contact
reference code according to IEC 81346-2	K
Substance Prohibitance (Date)	05/01/2012

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
type of voltage	AC/DC
operating voltage at AC	
<ul style="list-style-type: none">• at 50 Hz rated value• at 60 Hz rated value	110 ... 230 V 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	
<ul style="list-style-type: none">• at 50 Hz• at 60 Hz	93.5 ... 253 V 93.5 ... 253 V
operational current	
<ul style="list-style-type: none">• at AC-51 rated value	20 A
derating temperature	40 °C

Control circuit/ Control

type of voltage	AC/DC
control supply voltage at AC	
<ul style="list-style-type: none">• at 50 Hz rated value	20.5 ... 26.5 V

<ul style="list-style-type: none"> • at 60 Hz rated value 	20.5 ... 26.5 V
control supply voltage 1 at AC	
<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	24 V 24 V
control supply voltage at DC rated value	18 ... 30 V
control supply voltage 1	
<ul style="list-style-type: none"> • at DC rated value • at DC 	24 V 24 V
control supply voltage at AC	
<ul style="list-style-type: none"> • at 50 Hz full-scale value for signal<0> recognition • at 60 Hz full-scale value for signal<0> recognition 	5 V 5 V
control supply voltage at DC full-scale value for signal<0> recognition	5 V
supply voltage frequency for auxiliary and control circuit rated value	50 ... 60 Hz
symmetrical line frequency tolerance	5 Hz
control current at minimum control supply voltage	
<ul style="list-style-type: none"> • at AC • at DC 	2 mA 2 mA
control current at AC rated value	40 mA
control current at DC rated value	40 mA
Auxiliary circuit	
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	
fastening method	clip-on
<ul style="list-style-type: none"> • side-by-side mounting 	Yes
height	111.5 mm
width	45 mm
depth	69.5 mm
Connections/ Terminals	
type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> • for auxiliary and control circuit 	
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 mm²), 2x (0.5 ... 1.0 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²) 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] for auxiliary and control contacts with screw-type terminals	4.5 ... 5.3 lbf·in
design of the thread of the connection screw of the auxiliary and control contacts	M3
stripped length of the cable for auxiliary and control contacts	7 mm
Safety related data	
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
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 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 	2 kV / 5 kHz behavior criterion 2 2 kV behavior criterion 2 1 kV behavior criterion 2

- due to high-frequency radiation according to IEC 61000-4-6

electrostatic discharge according to IEC 61000-4-2
conducted HF interference emissions according to CISPR11

field-bound HF interference emission according to CISPR11


140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1

4 kV contact discharging / 8 kV air discharging, behavior criterion 2
Class A for industrial environment

Class B for the domestic, business and commercial environments

Certificates/ approvals

General Product Approval				EMC	Declaration of Conformity
	Confirmation				

Declaration of Conformity	Test Certificates	other
	Type Test Certificates/Test Report	Confirmation

Further information

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=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

