



extended load monitoring current range 90 A / 40 °C 110 ... 230 V 24 V
AC/DC for semiconductor relay / contactor

product brand name	SIRIUS
product designation	extended load monitoring
manufacturer's article number	
• _1 of the accessories that can be ordered	3RF2900-0RA88
product designation	
• _1 of the accessories that can be ordered	sealable end cover

General technical data

product function	solid-state relay / solid-state contactor 3RF2
power loss [W] for rated value of the current	
• 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	CO contact
reference code according to IEC 81346-2	B
Substance Prohibittance (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	
• 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
operational current	
• at AC-51 rated value	90 A
derating temperature	40 °C

Control circuit/ Control

type of voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	20.5 ... 26.5 V
• 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
control supply voltage at DC rated value	24 V
control supply voltage 1	18 ... 30 V
<ul style="list-style-type: none"> • at DC rated value • at DC 	24 V
control supply voltage at AC	24 V
<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
control supply voltage at DC full-scale value for signal<0> recognition	5 V
supply voltage frequency for auxiliary and control circuit rated value	5 V
symmetrical line frequency tolerance	50 ... 60 Hz
control current at minimum control supply voltage	5 Hz
<ul style="list-style-type: none"> • at AC • at DC 	2 mA
control current at AC rated value	2 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	1
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 • 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
conducted HF interference emissions according to CISPR11
field-bound HF interference emission according to CISPR11

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=3RF2990-0GA13>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2990-0GA13>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2990-0GA13>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2990-0GA13&lang=en



