## **SIEMENS**

Data sheet 3RR2143-1AA30



Monitoring relay, can be mounted to Contactor 3RT2, Size S2 basic, analog adjustment Apparent current monitoring 8...80 A, 50...60 Hz, 2-phase Supply 24 V AC/DC 1 change-over contact Monitoring for Current overshoot and undershoot Phase failure, Cable break with or without fault buffer ON delay 0-60 s Noise pulse suppression 0-30 s Switching hysteresis 6% Screw connection system

product brand name	SIRIUS
product designation	Monitoring relays
design of the product	analogically adjustable, 2-phase current monitoring
product type designation	3RR2
General technical data	
size of contactor can be combined company-specific	S2
operating apparent power rated value	4 VA
insulation voltage for overvoltage category III according to IEC 60664	
<ul> <li>with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance rated value	6 kV
consumed current at 24 V	90 mA
protection class IP	
<ul><li>on the front</li></ul>	IP20
<ul> <li>of the terminal</li> </ul>	IP00
shock resistance	10g / 11 ms
vibration resistance	10 55 Hz / 0.35 mm
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
reference code according to IEC 81346-2	K
relative repeat accuracy	2 %
Substance Prohibitance (Date)	03/01/2017
Supply voltage	
type of voltage of the supply voltage	AC/DC
supply voltage 1 at AC	
<ul> <li>at 50 Hz rated value</li> </ul>	24 V
<ul> <li>at 60 Hz rated value</li> </ul>	24 V
supply voltage 1 at DC rated value	24 V
supply voltage frequency 1	50 60 Hz
Measuring circuit	
type of current for monitoring	AC
adjustable current response value current	
• 1	8 80 A
• 2	8 80 A
adjustable response delay time	
when starting	0 60 s
with lower or upper limit violation	0 30 s
Precision	
temperature drift per °C	0.1 %/°C
Short-circuit protection	

design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gG: 4 A
Communication/ Protocol	
protocol is supported IO-Link protocol  type of voltage supply via input/output link master	No No
Auxiliary circuit	
number of CO contacts	
for auxiliary contacts	1
operational current of auxiliary contacts at AC-15	
• at 24 V	3 A
• at 230 V	3 A
• at 400 V	3 A
operational current of auxiliary contacts at DC-13	
• at 24 V	1 A
● at 125 V	0.2 A
● at 250 V	0.1 A
contact rating of auxiliary contacts according to UL	B300 / R300
Main circuit	
operating power rated value	2.5 W
ampacity of the semiconductor output in SIO mode	20 mA
operational current at 17 V minimum	5 mA
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	ambience A (industrial sector)
EMC immunity according to IEC 60947-1	ambience A (industrial sector)
Connections/ Terminals	
product component removable terminal for main circuit	No
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
<ul> <li>for main current circuit</li> </ul>	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
type of connectable conductor cross-sections	
for main contacts	
— solid	2x (1 35 mm²), 1x (1 50 mm²)
— stranded	2x (1 35 mm²), 1x (1 50 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 25 mm²), 1x (1 35 mm²)
<ul> <li>at AWG cables for main contacts</li> </ul>	2x (18 2), 1x (18 1)
connectable conductor cross-section for main contacts	
<ul> <li>solid or stranded</li> </ul>	1 50 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	1 35 mm²
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
— solid	1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (20 14)
AWG number as coded connectable conductor cross section for main contacts	18 1
tightening torque with screw-type terminals	0.8 1.2 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	direct mounting
height	99 mm
width	55 mm
depth	112 mm
required spacing	
<ul><li>with side-by-side mounting</li></ul>	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	10 mm
— at the side	0 mm

<ul> <li>for grounded parts</li> </ul>	
— forwards	10 mm
— backwards	0 mm
— upwards	10 mm
— at the side	10 mm
<ul><li>downwards</li></ul>	10 mm
<ul> <li>for live parts</li> </ul>	
— forwards	10 mm
— backwards	0 mm
— upwards	10 mm
<ul><li>downwards</li></ul>	10 mm
— at the side	10 mm
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m

ambient temperature

 during operation • during storage

-25 ... +60 °C -40 ... +80 °C

Certificates/ approvals

## **General Product Approval**

**EMC** 



Confirmation









**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping





Special Test Certific-<u>ate</u>

Type Test Certificates/Test Report





Marine / Shipping

other







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=3RR2143-1AA30

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RR2143-1AA30}$ 

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

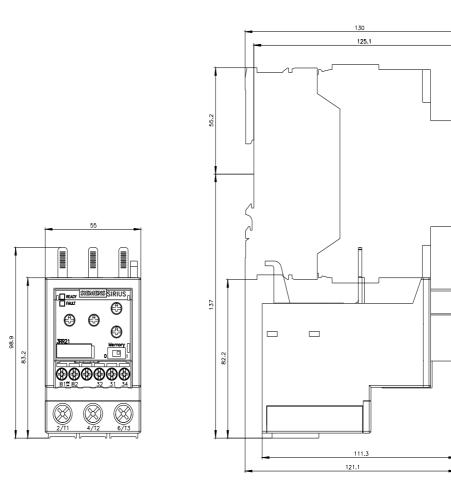
https://support.industry.siemens.com/cs/ww/en/ps/3RR2143-1AA30

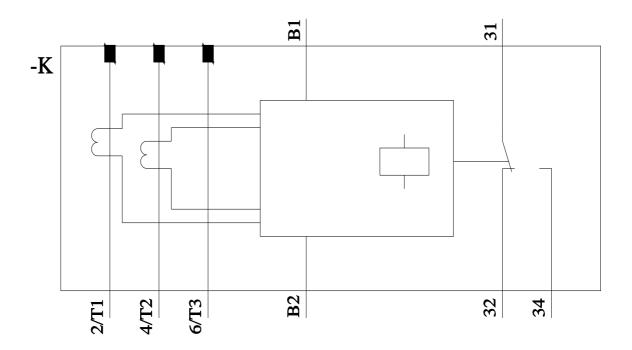
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RR2143-1AA30&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RR2143-1AA30/manual





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