SIEMENS

Data sheet 3RR2142-2AA30



MONITORING RELAY ATTACHABLE TO CONTACTOR 3RT2. SIZE S0 BASIC, ANALOG ADJUSTABLE APPARENT CURRENT MONITORING 4 - 40A, 50-60 HZ, 2-PHASE SUPPLY 24 V AC/DC 1 CO CONTACT MONITORING FOR CURRENT OVERSHOOT/UNDERSHOOT PHASE FAILURE, WIRE BREAK WITH OR W/O ERROR LOG ON-DELAY 0-60 S SPURIOUS PEAK SUPPR.0-30 S SWITCHING HYSTERESIS 6% SPRING-LOADED CONNECTION

General technical data:		
product brand name		SIRIUS
Product designation		multi-phase current monitoring
Design of the product		multi-phase current monitoring
Size of contactor can be combined company-specific		S0
Protection class IP		
• on the front		IP20
of the terminal		IP20
Insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 Rated value	V	690
Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
during storage	°C	-40 + 80
 during operation 	°C	-25 + 60
Electromagnetic compatibility		IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
EMI immunity acc. to IEC 60947-1		ambience A (industrial sector)
EMC emitted interference acc. to IEC 60947-1		ambience A (industrial sector)
Shock resistance		15g / 11 ms
Vibration resistance		10 55 Hz / 0.35 mm
Surge voltage resistance Rated value	kV	6
Operating apparent output Rated value	V·A	4
Operating power Rated value	W	2.5
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		К

Equipment marking acc. to DIN EN 61346-2		К
Mechanical service life (switching cycles) typical		10 000 000
Electrical endurance (switching cycles) at AC-15 at 230 V typical		100 000
Adjustable response delay time		
when starting	s	0 60
 with lower or upper limit violation 	S	0 30
Stand-by time for restart after fault	S	0.3
Phase number		3
Number of monitored phases		2
Product function		
Overcurrent monitoring		Yes
 Undercurrent monitoring 		Yes
 Overcurrent and undercurrent monitoring 		Yes
 Apparent current monitoring 		Yes
 active current monitoring 		No
• undercurrent detection DC		No
• undercurrent detection 1 phase		No
Overcurrent detection DC		No
Current window recognition DC		No
undercurrent detection 3 phases		No
Overcurrent detection 1 phase		No
 Voltage window recognition 3 phase 		No
Voltage window recognition 1 phase		No
phase sequence recognition		No
 can be activated or deactivated phase sequence recognition 		No
Auto-reset		Yes
External reset		No
Manual RESET		Yes
Adjustable response value current		
• 1	Α	4 40
• 2	Α	4 40
Relative metering precision		
 relating to measuring range limit 	%	10
Type of current for monitoring		AC
Measurable current with AC	Α	4 40
Relative switching hysteresis for measured current value	%	6.25
Response time maximum	ms	300
Relative repeat accuracy	%	2
Temperature drift per °C	%/°C	0.1
Ampacity		
Ampacity		

 for permanent overcurrent maximum permissible 	Α	40
 for overcurrent duration < 1 s maximum permissible 	Α	800

Supply voltage:		
Type of voltage of the supply voltage		AC/DC
Supply voltage frequency 1	Hz	50 60
Supply voltage 1		
 for DC Rated value 	V	24
• with AC		
— at 50 Hz Rated value	V	24
— at 60 Hz Rated value	V	24
Buffering time in the event of power failure minimum	ms	10

Auxiliary circuit:		
Circuit principle of the output relay		closed-circuit current
Operating current at 17 V minimum	mA	5
Number of CO contacts		
• for auxiliary contacts		1
Operating current of the auxiliary contacts		
● at AC-15		
— at 24 V	Α	3
— at 230 V	Α	3
— at 400 V	Α	3
• at DC-13		
— at 24 V	Α	1
— at 125 V	Α	0.2
— at 250 V	Α	0.1

Inputs/ Outputs:

Short-circuit:

Installation/ mounting/ dimensions:		
mounting position		any
Mounting type		direct mounting
Width	mm	45
Height	mm	109
Depth	mm	92
Required spacing with side-by-side mounting		
forwards	mm	0
Backwards	mm	0
• upwards	mm	0
• downwards	mm	0

• at the side	mm	0
Required spacing for grounded parts		
• forwards	mm	6
Backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• at the side	mm	6
Required spacing for live parts		
• forwards	mm	6
Backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• at the side	mm	6

Connections/ Terminals:		
Type of electrical connection		
• for main current circuit		spring-loaded terminals
 for auxiliary and control current circuit 		spring-loaded terminals
Product function		
 removable terminal for main circuit 		No
 removable terminal for auxiliary and control circuit 		Yes
Type of connectable conductor cross-section		
• for main contacts		
— solid		1x (1 10 mm²)
— finely stranded		
 — with core end processing 		1x (1 6 mm²)
 — without core end processing 		1x (1 6 mm²)
 for AWG conductors 		
— for main contacts		1x (18 8)
— for auxiliary contacts		2x (24 16)
 for auxiliary contacts 		
— solid		1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
— finely stranded		
 — with core end processing 		2x (0.25 1.5 mm²)
 without core end processing 		2x (0.25 1.5 mm²)
Tightening torque with screw-type terminals	N·m	0.8 1.2

Certificates/ approvals:	
Certificate of suitability	CE / UL / CSA

General Product Approval

EMC

Declaration of Conformity













Test Certificates

Shipping Approval

Special Test Certificate

Type Test Certificates/Test Report









Shipping Approval









Environmental Confirmations

Confirmation

UL/CSA ratings:

Contact rating of the auxiliary contacts acc. to UL

B300 / R300

Safety related data:

Protection against electrical shock

finger-safe

Further information

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

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

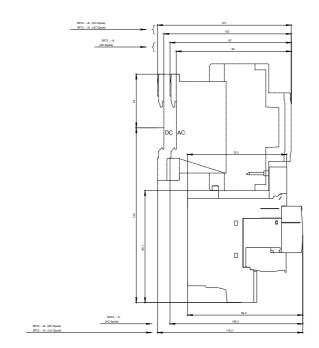
http://www.siemens.com/industrymall

Cax online generator

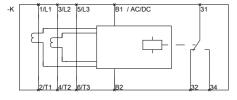
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR21422AA30

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RR21422AA30/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RR21422AA30&lang=en



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