



MONITORING RELAY ATTACHABLE TO CONTACTOR 3RT2. SIZE S00 STANDARD, DIGITAL ADJUSTABLE APPARENT/ACTIVE CURRENT MONIT. 1.6 - 16A, 20-400 HZ, 3-PHASE SUPPLY 24 V AC/DC 1 CO CONTACT, 1 SEMICOND. OUTPUT FOR ALARM AND WARNING, MONITORING FOR CURRENT OVERTHOOT/UNDERSHOOT PHASE FAILURE, WIRE BREAK PHASE SEQUENCE FAULT CURRENT BLOCKING CURRENT WARNING AND ALARM THRESHOLDS WITH OR W/O ERROR LOG ON-DELAY 0-99 S SPURIOUS PEAK SUPPR.0-30 S BREAK AFTER FAULT 0-300 MIN SCREW CONNECTION

General technical data:

product brandname		SIRIUS
Product designation		Monitoring relays
Design of the product		digitally adjustable, 3-phase current monitoring
Size of contactor can be combined company-specific		S00
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		K
Equipment marking acc. to DIN EN 61346-2		K
Mechanical service life (switching cycles) typical		10 000 000
Electrical endurance (switching cycles) at AC-15 at 230 V typical		100 000
Accuracy of digital display		+/-1 digit
Adjustable response delay time		
• when starting	s	0 ... 99
• with lower or upper limit violation	s	0 ... 30
Stand-by time for restart after fault	s	0.2
Phase number		3
Number of monitored phases		3
Product function		
• Overcurrent monitoring		Yes
• Undercurrent monitoring		Yes
• Overcurrent and undercurrent monitoring		Yes
• Apparent current monitoring		Yes
• active current monitoring		Yes
• undercurrent detection DC		No
• undercurrent detection 1 phase		No
• Overcurrent detection DC		No
• Current window recognition DC		No
• undercurrent detection 3 phases		Yes
• Overcurrent detection 1 phase		No
• Voltage window recognition 3 phase		No
• Voltage window recognition 1 phase		No
• phase sequence recognition		Yes
• can be activated or deactivated phase sequence recognition		Yes
• Auto-reset		Yes
• External reset		No
• Manual RESET		Yes
Adjustable pick-up value current		
• 1	A	1.6 ... 16
• 2	A	1.6 ... 16
Factor as multiple of the current monitoring upper limit for the adjustable value of a blocking current		2 ... 5

Response value residual current detection at 50/60 Hz typical	A	1.5
Relative metering precision		
<ul style="list-style-type: none"> relating to measured value 	%	5
Type of current for monitoring		AC
Measurable current at AC	A	1.6 ... 16
Adjustable switching hysteresis for measured current value	A	0.1 ... 3
Response time maximum	ms	200
Relative repeat accuracy	%	2
Temperature drift per °C	%/°C	0.1
Ampacity		
<ul style="list-style-type: none"> for permanent overcurrent maximum permissible 	A	16
<ul style="list-style-type: none"> for overcurrent duration < 1 s maximum permissible 	A	320

Supply voltage:

Type of voltage of the supply voltage		AC/DC
Supply voltage frequency 1	Hz	50 ... 60
Supply voltage 1		
<ul style="list-style-type: none"> at DC rated value 	V	24
<ul style="list-style-type: none"> at AC 		
<ul style="list-style-type: none"> — at 50 Hz rated value 	V	24
<ul style="list-style-type: none"> — 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 / open-circuit current
Operating current at 17 V minimum	mA	5
Number of outputs as contact-less semiconductor switching element for signaling function instantaneous contact		1
Ampacity of the semiconductor output		
<ul style="list-style-type: none"> at DC-13 at 240 V 	mA	20
<ul style="list-style-type: none"> at AC-14 at 240 V at 50/60 Hz 	mA	20
Residual current of the semiconductor output maximum	mA	0.035
Number of CO contacts		
<ul style="list-style-type: none"> for auxiliary contacts 		1
Operating current of auxiliary contacts		
<ul style="list-style-type: none"> at AC-15 		
<ul style="list-style-type: none"> — at 24 V 	A	3
<ul style="list-style-type: none"> — at 230 V 	A	3
<ul style="list-style-type: none"> — at 400 V 	A	3

- at DC-13
 - at 24 V
 - at 125 V
 - at 250 V

A	1
A	0.2
A	0.1

Inputs/ Outputs:

Short-circuit:

Installation/ mounting/ dimensions:

Mounting position		any
Mounting type		direct mounting
Width	mm	45
Height	mm	79
Depth	mm	80
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	0
• Backwards	mm	0
• upwards	mm	0
• downwards	mm	0
• at the side	mm	6
Required spacing for live parts		
• forwards	mm	0
• Backwards	mm	0
• upwards	mm	0
• downwards	mm	0
• at the side	mm	6

Connections/ Terminals:





Type of electrical connection		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
Product function		
• removable terminal for main circuit		No
• removable terminal for auxiliary and control circuit		Yes
Type of connectable conductor cross-sections		
• for main contacts		



— solid		2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x (1 ... 4 mm ²)
— finely stranded		
— with core end processing		2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors		
— for main contacts		1x 12, 2x (20 ... 14)
— for auxiliary contacts		2x (20 ... 14)
• for auxiliary contacts		
— solid		1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
— finely stranded		
— with core end processing		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
Tightening torque with screw-type terminals	N·m	0.8 ... 1.2

Certificates/ approvals:

Certificate of suitability	CE / UL / CSA
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General Product Approval	EMC	Declaration of Conformity
 CCC  CSA  UL	 EAC  C-Tick	 EG-Konf.

Test Certificates	Shipping Approval
Type Test Certificates/Test Report Special Test Certificate	 ABS  BUREAU VERITAS  LRS  PRS

Shipping Approval	other
 RINA  RMRS	Environmental Confirmations Confirmation

UL/CSA ratings:

Contact rating of auxiliary contacts according to UL	B300 / R300
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Safety related data:

Protection against electrical shock	finger-safe
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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

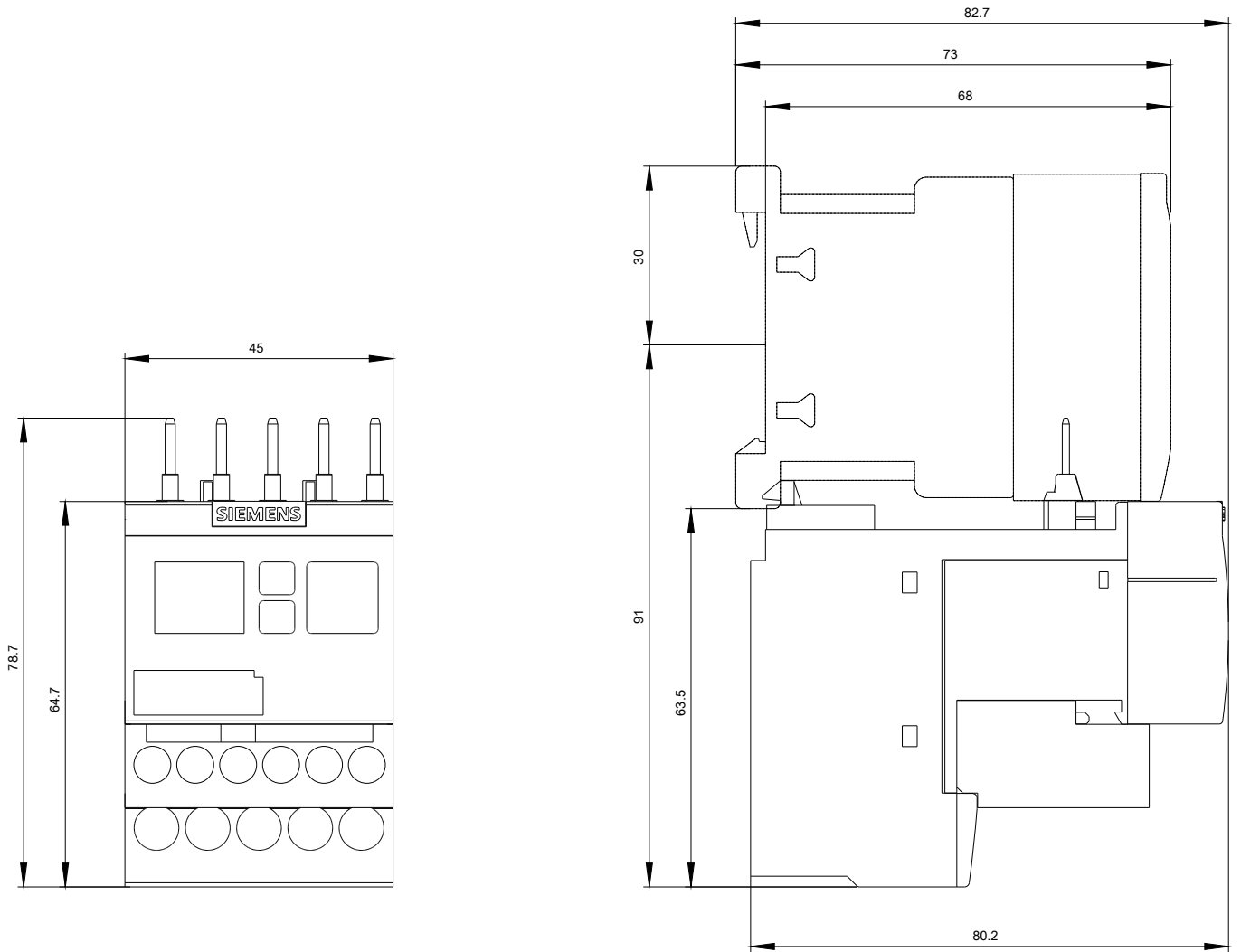
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RR2241-1FA30>

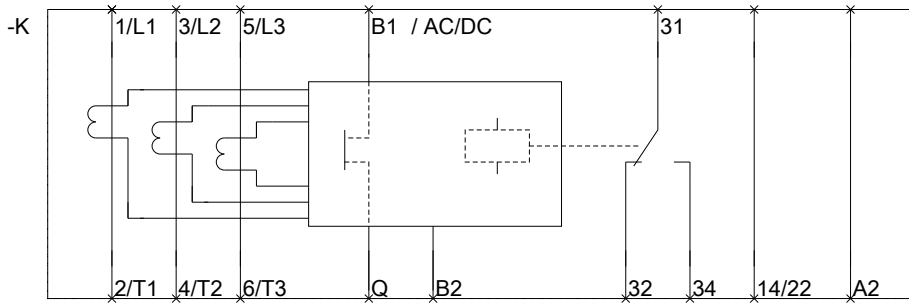
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2241-1FA30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RR2241-1FA30&lang=en





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