



CURRENT MONITORING RELAY MOUNTABLE ON
CONT. 3RT2, SZ. S0, APPARENT/ACTIVE CURR.
MONIT. 4 - 40A, 20-400 HZ, 3-PH., SUPPLY 24 V DC, 1
CO CONTACT, MONITORING F. CURRENT OVER-
/UNDERSHOOT, CURRENT ASYMMETRY, PHASE
FAILURE / WIRE BREAK, PHASE SEQUENCE, FAULT
CURRENT, BLOCKING CURRENT, SWITCHING
CYCLE/OP. HOURS COUNTER, WARNING/ALARM
THRESHOLDS, AUTO OR MANUAL RESET ON-
DELAY 0-999.9 S OFF-DELAY 0-999.9 S RECLOSING
DELAY 0-999.9MIN SPRING-LOADED CONNECTION

Figure similar

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		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	2.5
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 ... 999.9
• with lower or upper limit violation	s	0 ... 999.9
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		Yes
• Manual RESET		Yes
Adjustable pick-up value current		
• 1	A	4 ... 40
• 2	A	4 ... 40

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	4
Relative metering precision • relating to measured value	%	5
Type of current for monitoring		AC
Measurable current at AC	A	4 ... 40
Adjustable switching hysteresis for measured current value	A	0.1 ... 8
Response time maximum	ms	200
Relative repeat accuracy	%	2
Temperature drift per °C	%/°C	0.1
Ampacity • for permanent overcurrent maximum permissible • for overcurrent duration < 1 s maximum permissible	A A	40 800

Supply voltage:

Type of voltage of the supply voltage		DC
Supply voltage 1 • at DC rated value • at DC	V V	24 18 ... 30

Auxiliary circuit:

Circuit principle of the output relay		closed-circuit current / open-circuit current
Operating current at 17 V minimum	mA	5
Number of CO contacts • for auxiliary contacts		1
Operating current of auxiliary contacts • at AC-15 — at 24 V — at 230 V • at DC-13 — at 24 V — at 125 V — at 250 V	A A A A A	3 3 1 0.2 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-sections		
• for main contacts		
— solid		2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²)
— finely stranded		
— with core end processing		2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
— without core end processing		1x (1 ... 6 mm ²)
• at AWG conductors		
— for main contacts		2 x (16 ... 14), 2x (14 ... 8)
— for auxiliary contacts		2x (24 ... 16)
• for auxiliary contacts		
— solid		1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
— finely stranded		

— with core end processing		2x (0.25 ... 1.5 mm ²)
— without core end processing		2x (0.25 ... 1.5 mm ²)
Tightening torque with screw-type terminals	N·m	0.8 ... 1.2

Certificates/ approvals:

Certificate of suitability

CE / UL / CSA

General Product Approval

Declaration of Conformity



CCC



CSA

[Manufacturer Declaration](#)



UL



EG-Konf.

Test Certificates	Shipping Approval	other
Type Test Certificates/Test Report	 ABS	 LRS
	 RINA	Environmental Confirmations
		Confirmation

UL/CSA ratings:

Contact rating of auxiliary contacts according 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

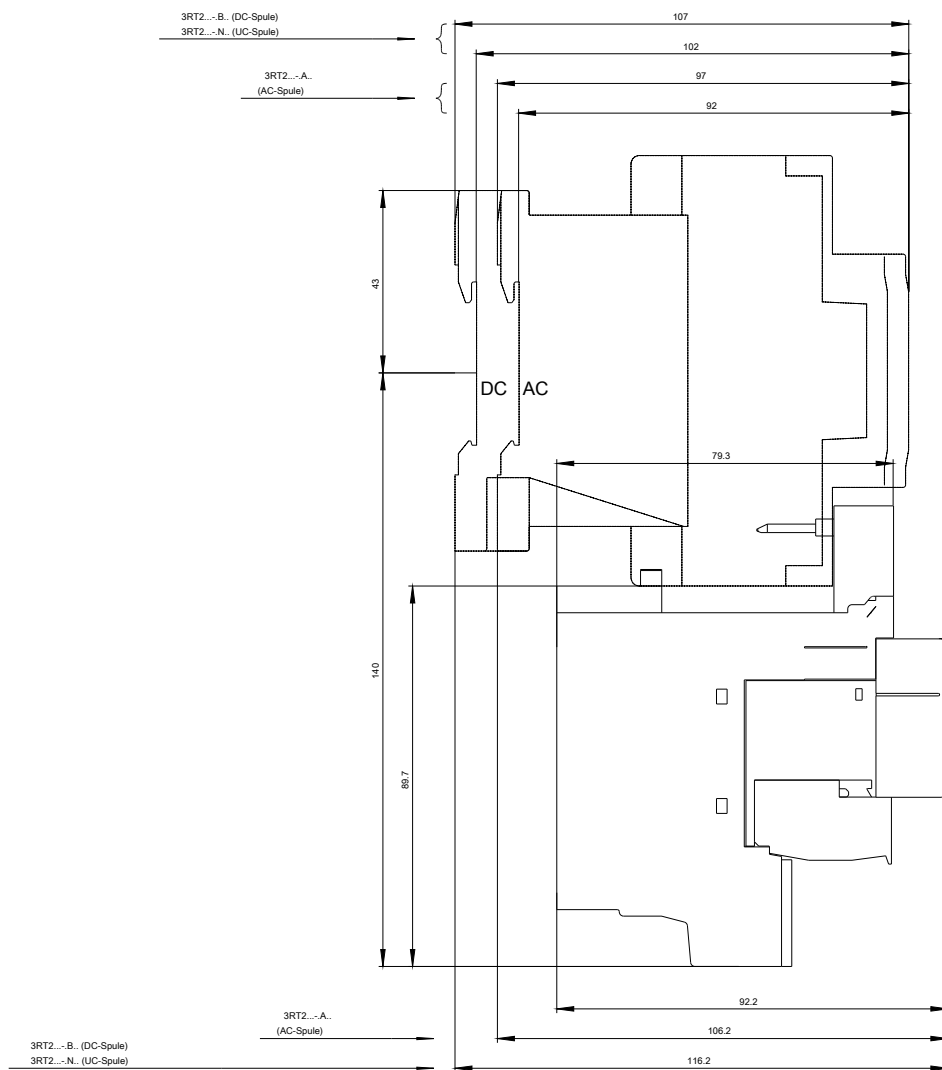
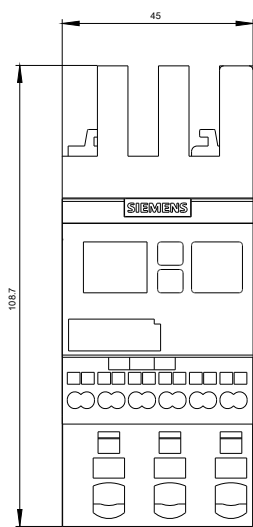
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2442-2AA40>

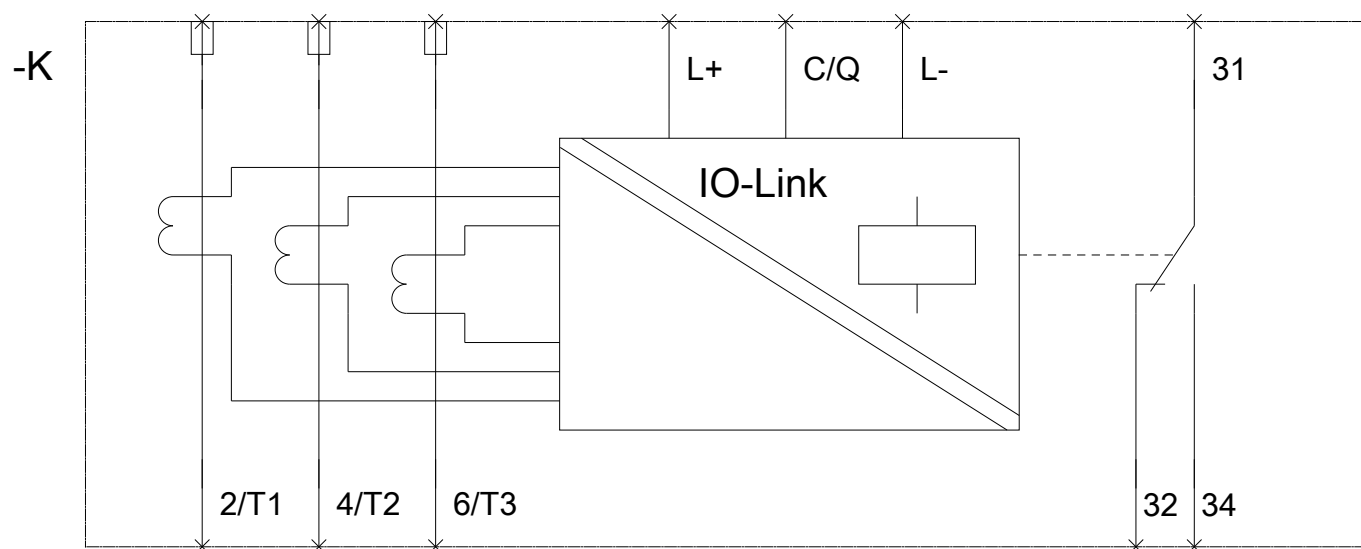
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2442-2AA40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2442-2AA40&lang=en





last modified:

07/01/2017