



Current monitoring relay for IO-Link, can be mounted to Contactor, 3RT2, Size S0 Apparant/active current monitoring 4-40 A, 20-400 Hz, 3-phase Supply voltage 24 V DC 1 change-over contact Monitoring for Current overshoot and undershoot Current asymmetry Phase failure, Cable break Phase sequence, Residual current Blocking current, Switching cycle and Operating hours counter Warning and alarm thresholds Auto-reset or manual reset ON delay 0-9999.9 s OFF delay 0-9999.9 s Reclosing delay 0-300 min spring-type connection system

Product brand name	SIRIUS
Product designation	Monitoring relays
Design of the product	digitally adjustable, 3-phase current monitoring, IO-Link
Product type designation	3RR2
General technical data	
Size of contactor can be combined company-specific	S0
Operating apparent output rated value	2.5 V·A
Insulation voltage • for overvoltage category III according to IEC 60664 — with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 kV
Protection class IP • on the front • of the terminal	IP20 IP20
Shock resistance	15g / 11 ms
Vibration resistance	10 ... 55 Hz / 0.35 mm
Mechanical service life (switching cycles) • typical	10 000 000

Electrical endurance (switching cycles)	
• at AC-15 at 230 V typical	100 000
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K
Reference code acc. to DIN EN 81346-2	K
Reference code acc. to DIN EN 61346-2	K
Relative repeat accuracy	2 %

Supply voltage

Type of voltage of the supply voltage	DC
Supply voltage 1 at DC rated value	24 V
Relative negative tolerance of the supply voltage	25 %
Relative positive tolerance of the supply voltage	25 %

Measuring circuit

Type of current for monitoring	AC
Adjustable pick-up value current	
• 1	4 ... 40 A
• 2	4 ... 40 A
Adjustable response delay time	
• when starting	0 ... 999.9 s
• with lower or upper limit violation	0 ... 999.9 s
Adjustable switching hysteresis for measured current value	0.1 ... 8 A
Accuracy of digital display	+/-1 digit

Precision

Temperature drift per °C	0.1 %/°C
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Communication/ Protocol

Protocol is supported	
• IO-Link protocol	Yes
IO-Link transfer rate	COM2 (38,4 kBaud)
Point-to-point cycle time between master and IO-Link device minimum	10 ms
Type of voltage supply via input/output link master	Yes
Amount of data	
• of the address area of the inputs with cyclical transfer total	4 byte
• of the address area of the outputs with cyclical transfer total	2 byte

Auxiliary circuit

Number of CO contacts	
• for auxiliary contacts	1
Operating current of auxiliary contacts at AC-15	

• at 24 V • at 230 V	3 A 3 A
Operating current of auxiliary contacts at DC-13	
• at 24 V • at 125 V • at 250 V	1 A 0.2 A 0.1 A
Contact rating of auxiliary contacts according to UL	B300 / R300
Main circuit	
Operating power	
• rated value	2.5 W
Outputs	
Operating current at 17 V minimum	5 mA
Electromagnetic compatibility	
EMC emitted interference	
• acc. to IEC 60947-1	ambience A (industrial sector)
EMI immunity	
• acc. to IEC 60947-1	ambience A (industrial sector)
Safety related data	
Protection against electrical shock	finger-safe
Connections/ Terminals	
Product function	
• removable terminal for main circuit • removable terminal for auxiliary and control circuit	No Yes
Type of electrical connection	
• for main current circuit • for auxiliary and control current circuit	spring-loaded terminals spring-loaded terminals
Type of connectable conductor cross-sections	
• for main contacts — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG conductors for main contacts	2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 1x (1 ... 6 mm ²) 2 x (16 ... 14), 2x (14 ... 8)
Connectable conductor cross-section for main contacts	
• single or multi-stranded • finely stranded with core end processing • finely stranded without core end processing	1 ... 10 mm ² 1 ... 6 mm ² 1 ... 6 mm ²
Type of connectable conductor cross-sections	

• for auxiliary contacts — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG conductors for auxiliary contacts	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (24 ... 16)
AWG number as coded connectable conductor cross section	
• for main contacts	18 ... 8
Tightening torque	
• with screw-type terminals	0.8 ... 1.2 N·m

Installation/ mounting/ dimensions	
Mounting position	any
Mounting type	direct mounting
Height	109 mm
Width	45 mm
Depth	92 mm
Required spacing	
• with side-by-side mounting — forwards — Backwards — upwards — downwards — at the side • for grounded parts — forwards — Backwards — upwards — at the side — downwards • for live parts — forwards — Backwards — upwards — downwards — at the side	0 mm 0 mm 0 mm 0 mm 0 mm 6 mm 0 mm 6 mm 6 mm 6 mm 6 mm 0 mm 6 mm 6 mm 6 mm

Ambient conditions	
Installation altitude at height above sea level	
• maximum	2 000 m

Certificates/ approvals

General Product Approval	EMC
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CCC



CSA

[Manufacturer Declaration](#)



UL



RCM

Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS



LRS

Marine / Shipping	other
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PRS



RINA



RMRS



DNVGL.COM/AF

[Confirmation](#)

Further information

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

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RR2442-2AA40>

Cax online generator

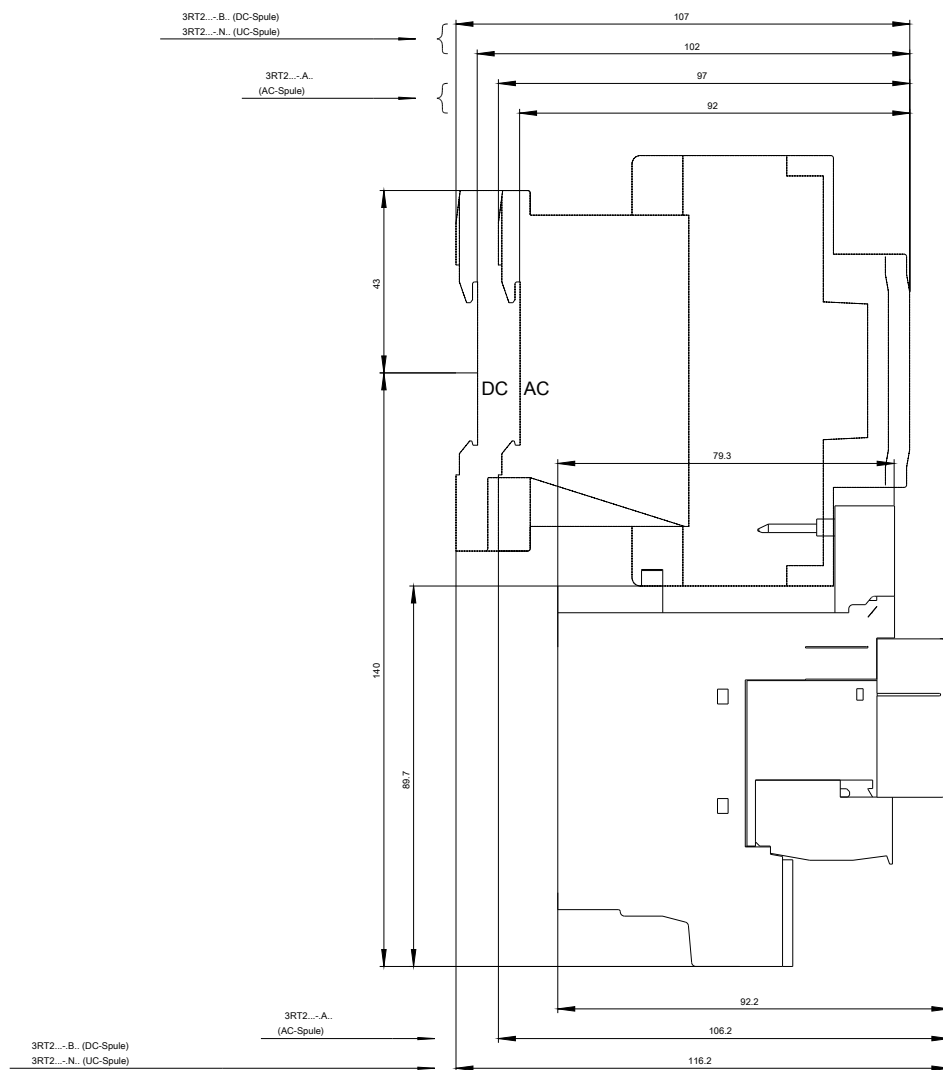
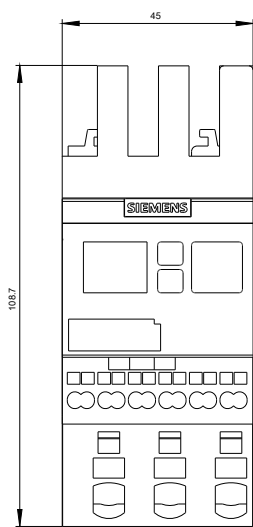
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2442-2AA40>

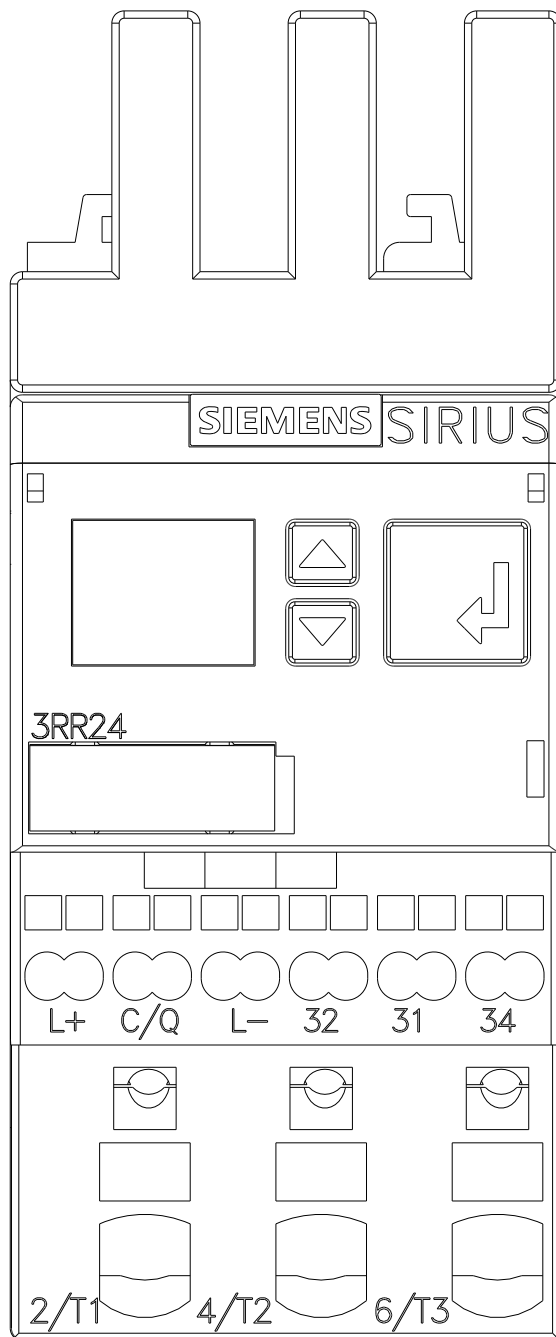
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

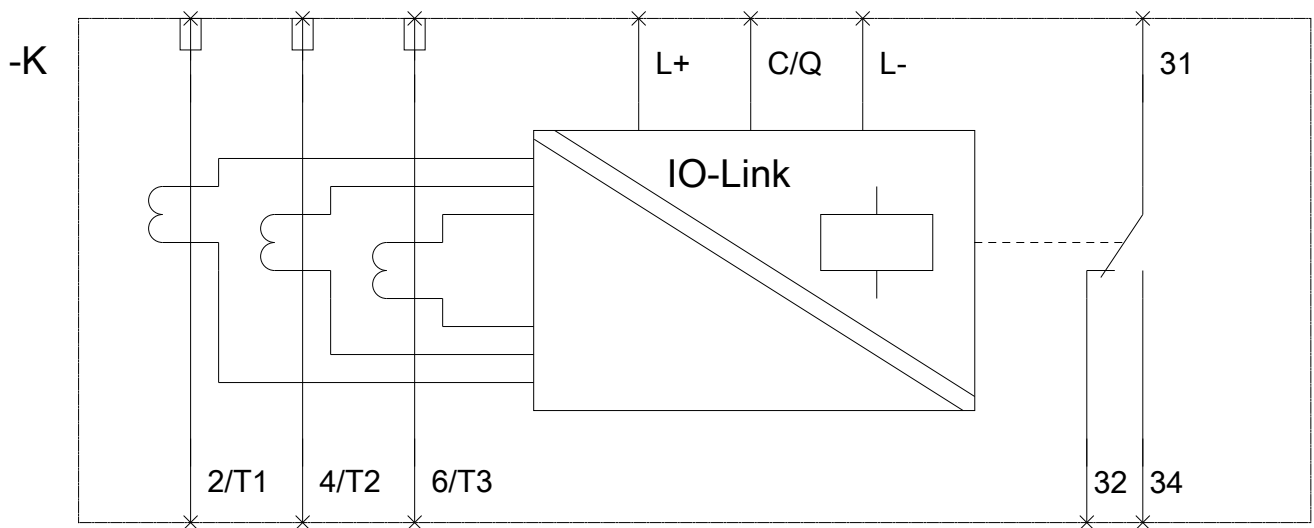
<https://support.industry.siemens.com/cs/ww/en/ps/3RR2442-2AA40>

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







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