



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
<ul style="list-style-type: none"> — 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
<ul style="list-style-type: none"> • protection class IP on the front • Protection class IP of the terminal 	IP20
Shock resistance	15g / 11 ms
Vibration resistance	10 ... 55 Hz / 0.35 mm
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • typical 	10 000 000
Electrical endurance (switching cycles)	

• at AC-15 at 230 V typical	100 000
Reference code acc. to DIN EN 81346-2	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	3 A
• Operating current of auxiliary contacts at AC-15 at 230 V	3 A
• operating current of auxiliary contacts at DC-13 at 24 V	1 A

<ul style="list-style-type: none"> operating current of auxiliary contacts at DC-13 at 125 V 	0.2 A
<ul style="list-style-type: none"> operating current of auxiliary contacts at DC-13 at 250 V 	0.1 A
Contact rating of auxiliary contacts according to UL	B300 / R300

Main circuit

Operating power	
<ul style="list-style-type: none"> rated value 	2.5 W

Outputs

Ampacity of the semiconductor output in SIO mode	200 mA
Operating current at 17 V minimum	5 mA

Electromagnetic compatibility

EMC emitted interference	
<ul style="list-style-type: none"> acc. to IEC 60947-1 	ambience A (industrial sector)
EMI immunity	
<ul style="list-style-type: none"> acc. to IEC 60947-1 	ambience A (industrial sector)

Safety related data

Protection against electrical shock	finger-safe
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Connections/ Terminals

Product function	
<ul style="list-style-type: none"> removable terminal for main circuit 	No
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	Yes
<ul style="list-style-type: none"> Type of electrical connection for main current circuit 	spring-loaded terminals
<ul style="list-style-type: none"> Type of electrical connection for auxiliary and control current circuit 	spring-loaded terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid 	2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²)
<ul style="list-style-type: none"> — finely stranded with core end processing 	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
<ul style="list-style-type: none"> — finely stranded without core end processing 	1x (1 ... 6 mm ²)
<ul style="list-style-type: none"> at AWG conductors for main contacts 	2 x (16 ... 14), 2x (14 ... 8)
Connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> single or multi-stranded 	1 ... 10 mm ²
<ul style="list-style-type: none"> finely stranded with core end processing 	1 ... 6 mm ²
<ul style="list-style-type: none"> finely stranded without core end processing 	1 ... 6 mm ²
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> 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)
— finely stranded without core end processing	2x (0.25 ... 1.5 mm ²)
• at AWG conductors for auxiliary contacts	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	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	6 mm
— Backwards	0 mm
— upwards	6 mm
— at the side	6 mm
— downwards	6 mm
• for live parts	
— forwards	6 mm
— Backwards	0 mm
— upwards	6 mm
— downwards	6 mm
— at the side	6 mm

Ambient conditions

Installation altitude at height above sea level	
• maximum	2 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C

Certificates/ approvals

General Product Approval				EMC	
 CCC	 CSA	Manufacturer Declaration	 UL		 RCM
Declaration of Conformity		Test Certificates		Marine / Shipping	
 EG-Konf.	Miscellaneous	Type Test Certificates/Test Report	Special Test Certificate	 ABS	 LRS
Marine / Shipping				other	
 PRS	 RINA	 RMRS	 DNV-GL DNVGL.COM/AF	Confirmation	

Further information

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=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,...)

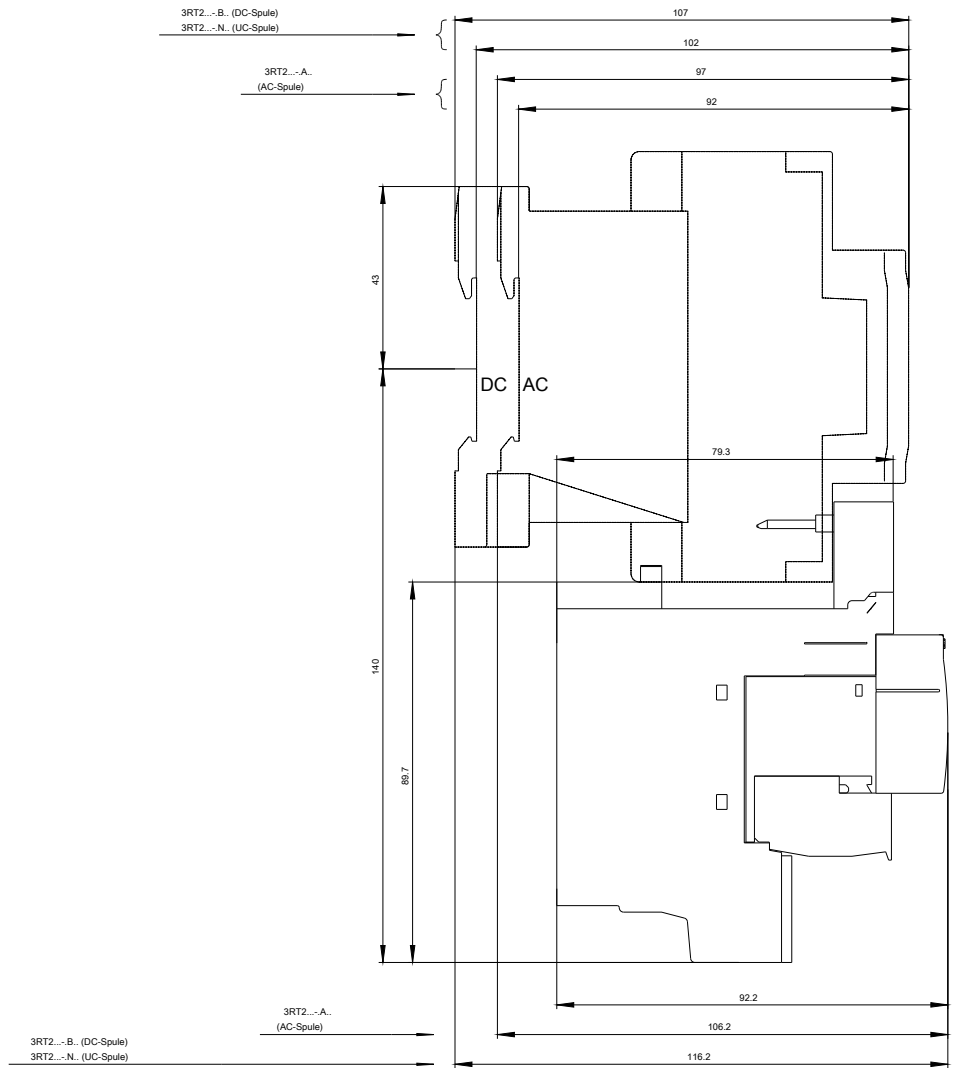
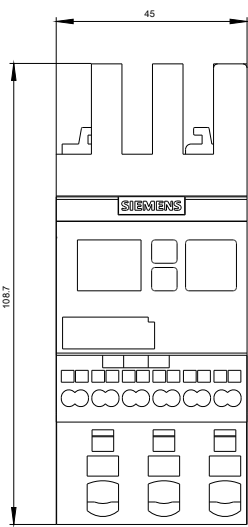
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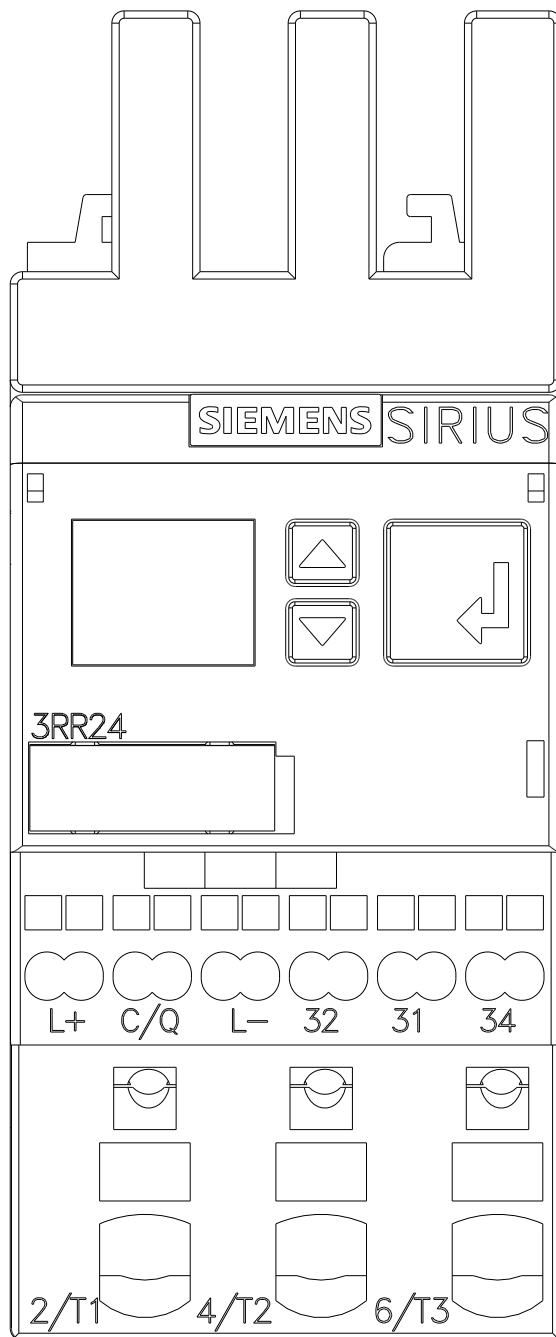
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

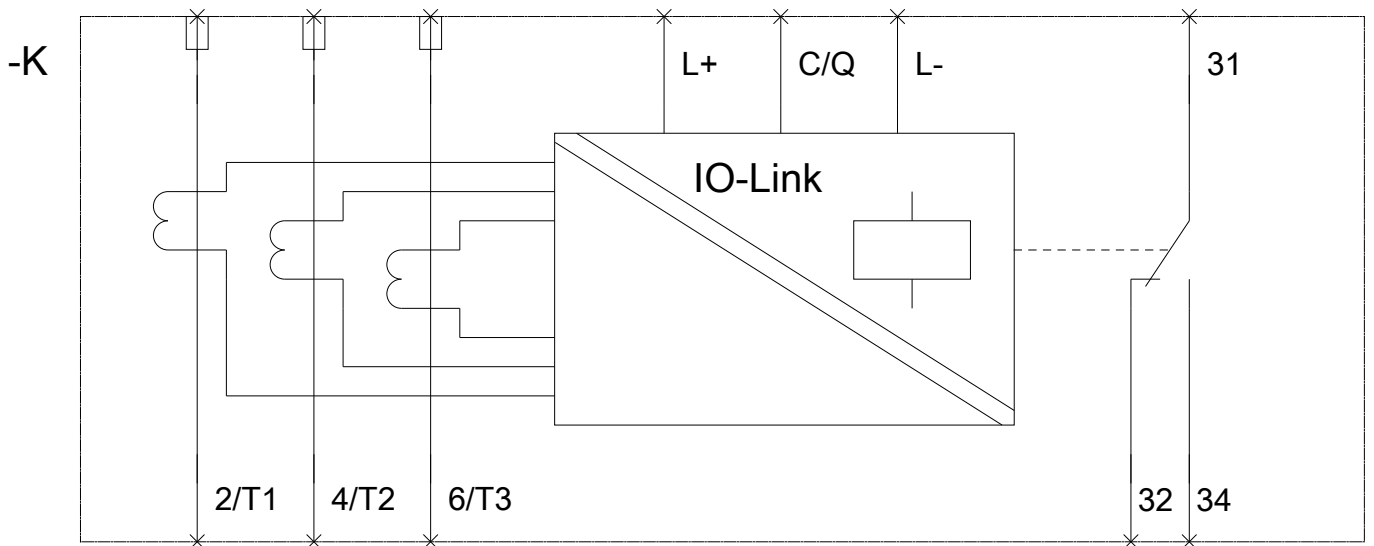
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2442-2AA40&lang=en

Characteristic: Derating

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







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