



Current monitoring relay for IO-Link, can be mounted to Contactor, 3RT2, Size S2 Apparent/active current monitoring 8-80 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 Screw 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	S2
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 IP00
Shock resistance	10g / 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	8 ... 80 A
• 2	8 ... 80 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	0.2 ... 16 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	
Current-carrying capacity of semiconductor output in the SIO mode	200 mA
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 when touched vertically from front acc. to IEC 60529
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	screw-type terminals screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts — solid — stranded — finely stranded with core end processing • at AWG conductors for main contacts	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) 2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) 2x (18 ... 2), 1x (18 ... 1)
Connectable conductor cross-section for main contacts	
• single or multi-stranded • finely stranded with core end processing	1 ... 50 mm ² 1 ... 35 mm ²
Type of connectable conductor cross-sections	
• 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)
• at AWG conductors for auxiliary contacts	2x (20 ... 14)
AWG number as coded connectable conductor cross section	
• for main contacts	18 ... 1
Tightening torque	
• with screw-type terminals	0.8 ... 1.2 N·m

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	direct mounting
Height	99 mm
Width	55 mm
Depth	112 mm
Required spacing	
• with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	10 mm
— at the side	0 mm
• for grounded parts	
— forwards	10 mm
— Backwards	0 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— Backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm

Ambient conditions

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

Certificates/ approvals

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

Further information

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

www.siemens.com/ic10

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RR2443-1AA40>

Cax online generator

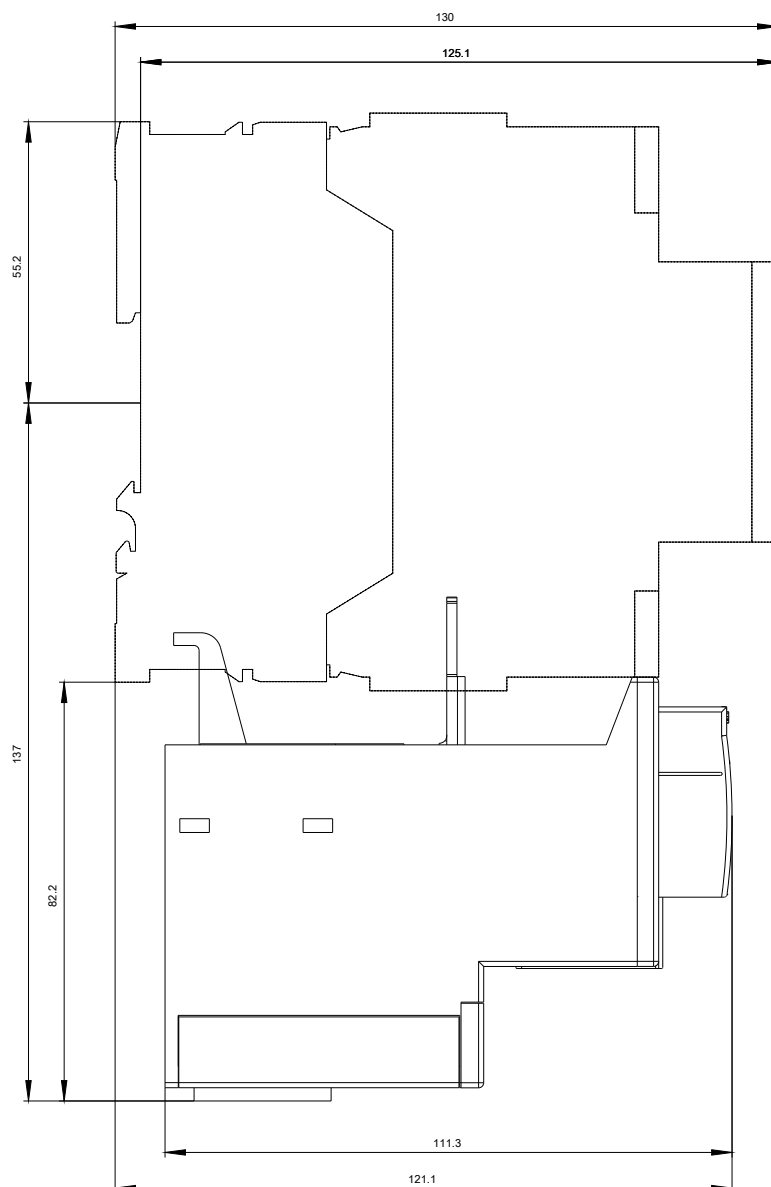
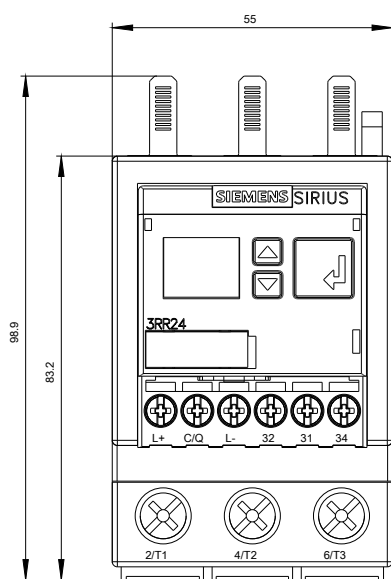
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2443-1AA40>

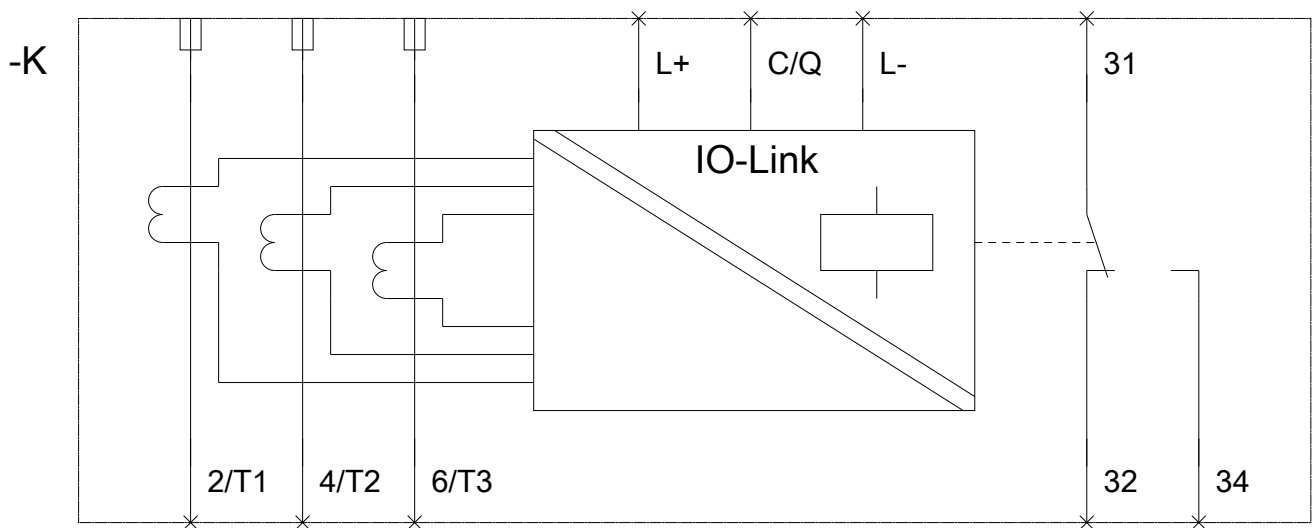
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2443-1AA40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2443-1AA40&lang=en





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