



Monitoring relay, can be mounted to Contactor 3RT2, Size S0 standard, digitally adjustable Apparant/active current monitoring 4...40 A, 20...400 Hz, 3-phase Supply 24 V AC/DC 1 change-over contact, 1 semiconductor output for alarm and warning Monitoring for Current overshoot and undershoot Phase failure, Cable break Phase sequence Residual current Blocking current Warning and alarm thresholds with or without fault buffer ON delay 0-99 s Noise pulse suppression 0-30 s Pause after fault 0-300 min Screw connection system

Product brand name	SIRIUS
Product designation	Monitoring relays
Design of the product	digitally adjustable, 3-phase current monitoring
Product type designation	3RR2

General technical data	
Size of contactor can be combined company-specific	S0
Operating apparent output rated value	4 V·A
Insulation voltage <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • on the front • of the terminal 	IP20 IP20
Shock resistance	15g / 11 ms
Mechanical service life (switching cycles) <ul style="list-style-type: none"> • typical 	10 000 000
Electrical endurance (switching cycles)	

<ul style="list-style-type: none"> • 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	AC/DC
Supply voltage 1 at AC	
<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	24 V
	24 V
Supply voltage 1 at DC rated value	24 V
Supply voltage frequency	
<ul style="list-style-type: none"> • 1 	50 ... 60 Hz

Measuring circuit

Type of current for monitoring	AC
Adjustable pick-up value current	
<ul style="list-style-type: none"> • 1 • 2 	4 ... 40 A
	4 ... 40 A
Adjustable response delay time	
<ul style="list-style-type: none"> • when starting • with lower or upper limit violation 	0 ... 99 s
	0 ... 30 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
--------------------------	----------

Communication/ Protocol

Protocol is supported	
<ul style="list-style-type: none"> • IO-Link protocol 	No
Type of voltage supply via input/output link master	No

Auxiliary circuit

Number of CO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	1
Operating current of auxiliary contacts at AC-15	
<ul style="list-style-type: none"> • at 24 V • at 230 V • at 400 V 	3 A
	3 A
	3 A
Operating current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> • at 24 V • at 125 V 	1 A
	0.2 A

<ul style="list-style-type: none"> • 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	
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
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
Type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit 	screw-type terminals
<ul style="list-style-type: none"> • for auxiliary and control current circuit 	screw-type 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"> • 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 	2.5 ... 10 mm ²
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> — finely stranded with core end processing 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> • at AWG conductors for auxiliary contacts 	2x (20 ... 14)
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • for main contacts 	16 ... 8
Tightening torque	
<ul style="list-style-type: none"> • with screw-type terminals 	0.8 ... 1.2 N·m

Installation/ mounting/ dimensions




• (mounting position)	any
• (mounting type)	direct mounting
(height)	87 mm
Width	45 mm
Depth	91 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

Certificates/approvals

General Product Approval			EMC	Declaration of Conformity	
 CCC	 CSA	 UL		 C-Tick	 EG-Konf.

Declaration of Conformity	Test Certificates	Marine / Shipping			
Miscellaneous	Type Test Certificates/Test Report	Special Test Certificate	 ABS	 BUREAU VERITAS	 LRS

Marine / Shipping	other				
 PRS	 RINA	 RMRS	 DNV-GL DNVGL.COM/AF	Confirmation	

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RR2242-1FA30>

Cax online generator

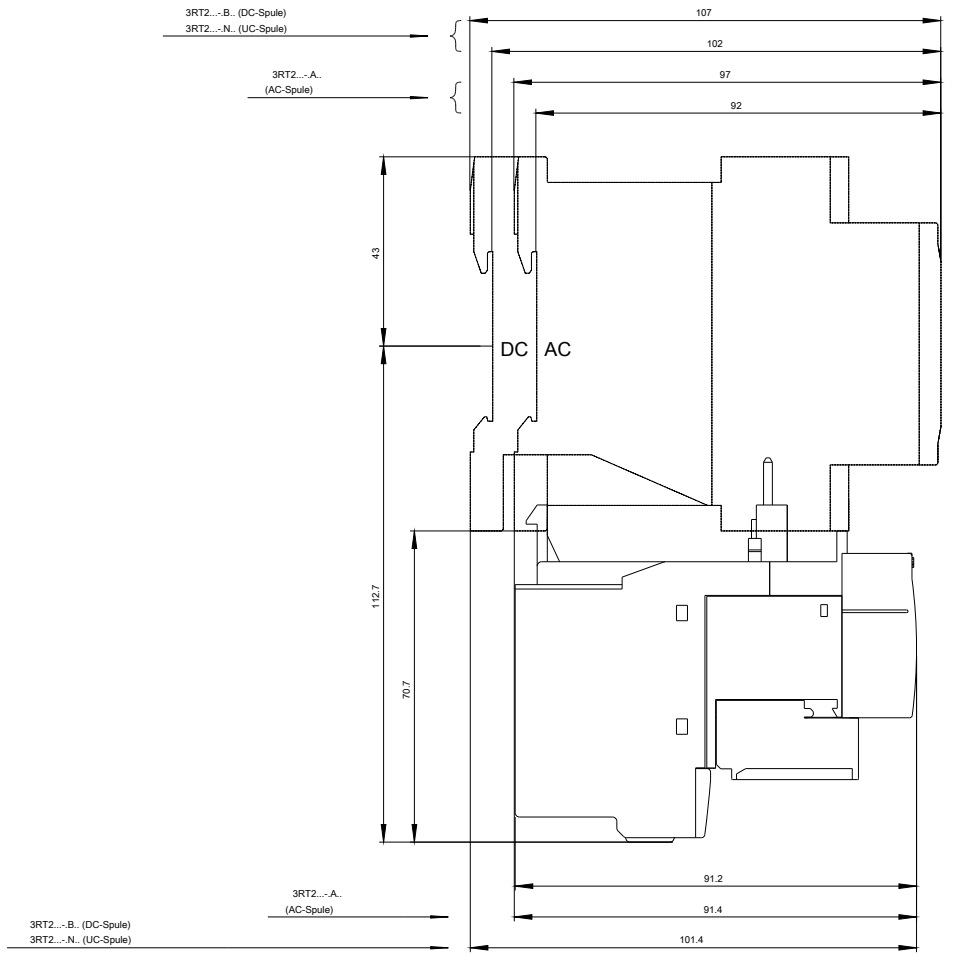
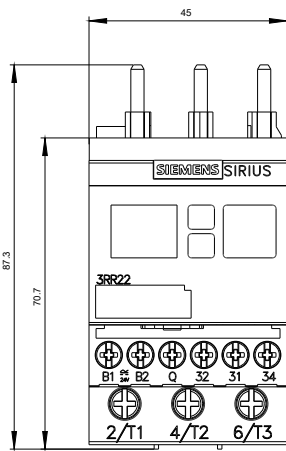
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2242-1FA30>

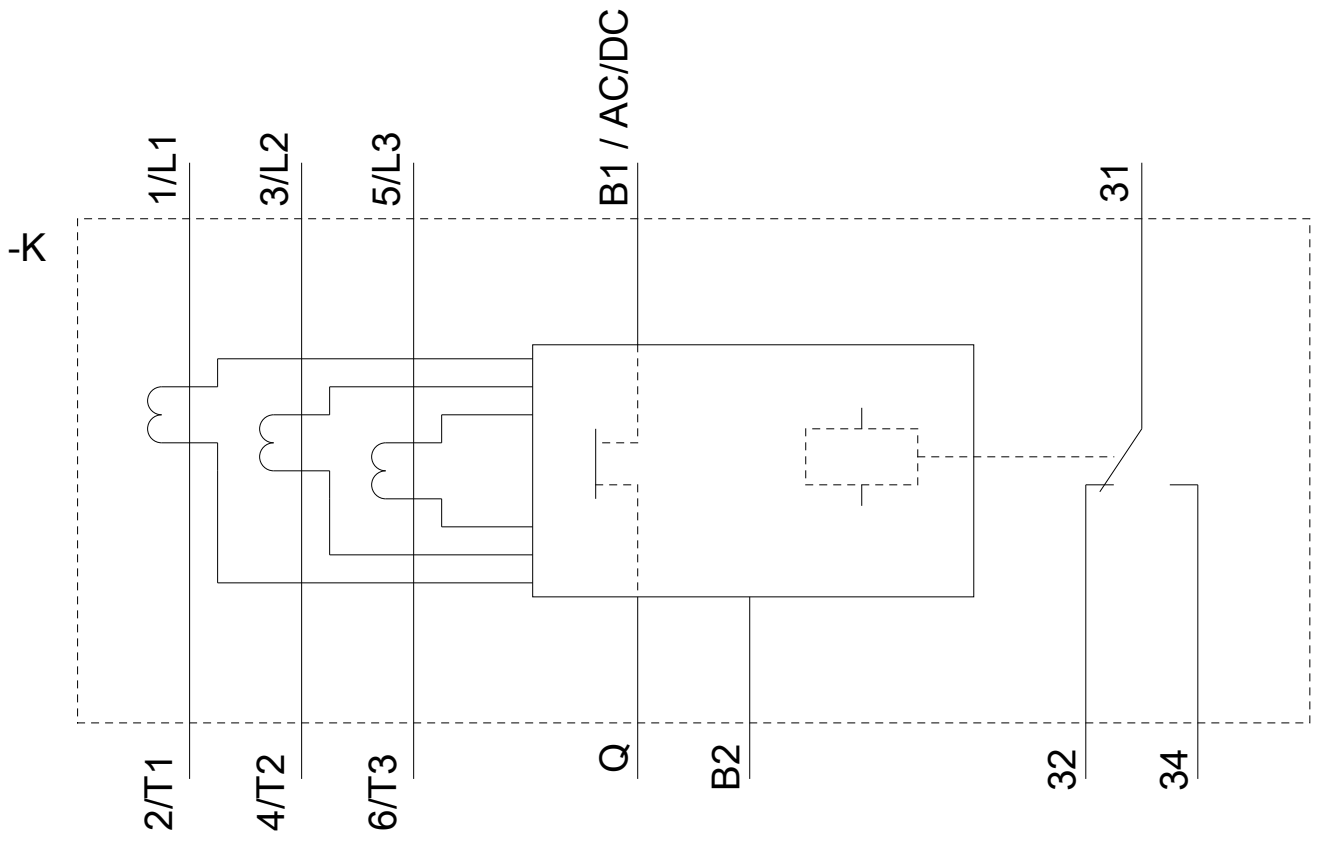
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2242-1FA30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2242-1FA30&lang=en





last modified:

04/03/2019