SIEMENS

Data sheet 3RR2241-2FA30



MONITORING RELAY ATTACHABLE TO CONTACTOR 3RT2. SIZE S00 STANDARD, DIGITAL ADJUSTABLE APPARENT/ACTIVE CURRENT MONIT. 1.6 - 16A, 20-400 HZ, 3-PHASE SUPPLY 24 V AC/DC 1 CO CONTACT, 1 SEMICOND. FOR ALARM AND WARNING MONITORING FOR CURRENT OVERSHOOT/UNDERSHOOT PHASE FAILURE, WIRE BREAK PHASE SEQUENCE FAULT CURRENT BLOCKING CURRENT WARNING AND ALARM THRESHOLDS WITH OR W/O ERROR LOG ON-DELAY 0-99 S SPURIOUS PEAK SUPPR. 0-30 S BREAK AFTER FAULT 0-300 MIN SPRING-LOADED CONNECTION

General technical data:		
product brand name		SIRIUS
Product designation		multi-phase current monitoring
Design of the product		multi-phase current monitoring
Size of contactor can be combined company-specific		S00
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	4
Operating power Rated value	W	2.5
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K

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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 ... 99
• with lower or upper limit violation	s	0 ... 30
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		No
• Manual RESET		Yes
Adjustable response value current		
• 1	A	1.6 ... 16
• 2	A	1.6 ... 16
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	1.5
Relative metering precision		
• relating to measured value	%	5
Type of current for monitoring		AC
Measurable current with AC	A	1.6 ... 16

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Adjustable switching hysteresis for measured current value	A	0.1 ... 3
Response time maximum	ms	200
Relative repeat accuracy	%	2
Temperature drift per °C	%/°C	0.1
Ampacity		
• for permanent overcurrent maximum permissible	A	16
• for overcurrent duration < 1 s maximum permissible	A	320

Supply voltage:		
Type of voltage of the supply voltage		AC/DC
Supply voltage frequency 1	Hz	50 ... 60
Supply voltage 1		
• for DC Rated value	V	24
• with AC		
— at 50 Hz Rated value	V	24
— at 60 Hz Rated value	V	24
Buffering time in the event of power failure minimum	ms	10

Auxiliary circuit:		
Circuit principle of the output relay		closed-circuit current / open-circuit current
Operating current at 17 V minimum	mA	5
Number of outputs as contact-less semiconductor switching element for signaling function instantaneous contact		1
Ampacity of the semiconductor output		
• at DC-13 at 240 V	mA	20
• at AC-14 at 240 V at 50/60 Hz	mA	20
Residual current of the semiconductor output maximum	mA	0.035
Number of CO contacts		
• for auxiliary contacts		1
Operating current of the auxiliary contacts		
• at AC-15		
— at 24 V	A	3
— at 230 V	A	3
— at 400 V	A	3
• at DC-13		
— at 24 V	A	1
— at 125 V	A	0.2
— at 250 V	A	0.1

Inputs/ Outputs:

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Short-circuit:		

Installation/ mounting/ dimensions:		
mounting position		any
Mounting type		direct mounting
Width	mm	45
Height	mm	90
Depth	mm	80
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	0
• downwards	mm	0
• at the side	mm	6
Required spacing for live parts		
• forwards	mm	6
• Backwards	mm	0
• upwards	mm	0
• downwards	mm	0
• 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-section		
• for main contacts		
— solid		1x (0.5 ... 4 mm²)
— finely stranded		
— with core end processing		1x (0.5 ... 2.5 mm²)
— without core end processing		1x (0.5 ... 2.5 mm²)
• for AWG conductors		
— for main contacts		1x (20 ... 12)

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— for auxiliary contacts		2x (24 ... 16)
• for auxiliary contacts		
— solid		1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
— finely stranded		
— with core end processing		2x (0.25 ... 1.5 mm²)
— without core end processing		2x (0.25 ... 1.5 mm²)
Tightening torque with screw-type terminals	N·m	0.8 ... 1.2

Certificates/ approvals:

Certificate of suitability		CE / UL / CSA

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

Test Certificates		Shipping Approval			
Special Test Certificate	Type Test Certificates/Test Report	ABS	BUREAU VERITAS	DNV	GL

Shipping Approval			other	
LRS	RINA	RMRS	Environmental Confirmations	Confirmation

UL/CSA ratings:

Contact rating of the auxiliary contacts acc. 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

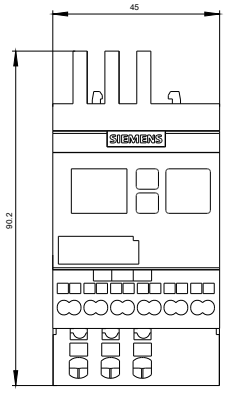
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

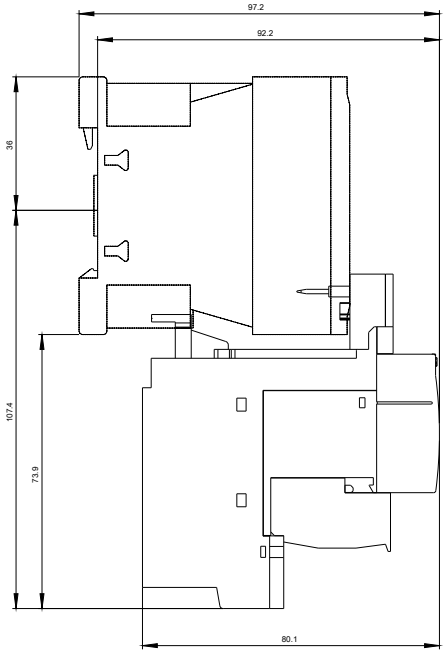
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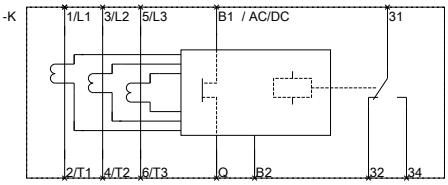
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RR22412FA30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR22412FA30&lang=en

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last modified: 27.04.2015

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