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Data sheet 3RR2441-1AA40



Current monitoring relay for IO-Link, can be mounted to Contactor 3RT2, Size S00 Apparant/active current monitoring 1.6-16 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	3RR22
General technical data	
size of contactor can be combined company-specific	S00
product function	current monitoring
operating apparent power 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
type of voltage of the operating voltage for actuation	DC
surge voltage resistance rated value	6 kV
consumed current	
● at 24 V	90 mA
● at 240 V	12 mA
protection class IP	
● on the front	IP20
● of the terminal	IP20
shock resistance	15 g / 11 ms
vibration resistance	10 ... 55 Hz / 0.35 mm
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
reference code according to IEC 81346-2	K
relative repeat accuracy	2 %
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	0.23 kg
Control circuit/ Control	
control supply voltage at DC rated value	24 V
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	

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type of current for monitoring	AC
adjustable current response value current	
● 1	1.6 ... 16 A
● 2	1.6 ... 16 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 ... 3 A
accuracy of digital display	+/-1 digit
Precision	
temperature drift per °C	0.1 %/°C
Short-circuit protection	
design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gG: 4 A
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
data volume	
● of the address range of the inputs with cyclical transfer total	4 byte
● of the address range of the outputs with cyclical transfer total	2 byte
Auxiliary circuit	
number of CO contacts	
● for auxiliary contacts	1
● delayed switching	1
operational current of auxiliary contacts at AC-15	
● at 24 V	3 A
● at 230 V	3 A
operational current of auxiliary contacts at DC-13	
● at 24 V	1 A
● at 125 V	0.2 A
● at 250 V	0.1 A
contact rating of auxiliary contacts according to UL	B300 / R300
Main circuit	
operating power rated value	2.5 W
ampacity of the semiconductor output in SIO mode	200 mA
operational current at 17 V minimum	5 mA
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	ambience A (industrial sector)
EMC immunity according to IEC 60947-1	ambience A (industrial sector)
Safety related data	
product function suitable for safety function	No
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
Connections/ Terminals	
product component removable terminal for main circuit	No
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw terminal
● for main current circuit	screw-type terminals
● for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections for main contacts	
● solid	1x (0.5 ... 4 mm²)
● finely stranded with core end processing	1x (0.5 ... 2.5 mm²)
connectable conductor cross-section for main contacts	
● solid or stranded	0.75 ... 4 mm²

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● finely stranded with core end processing	0.5 ... 2.5 mm²
type of connectable conductor cross-sections	
● for auxiliary contacts	
— solid	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
● for AWG cables for auxiliary contacts	2x (20 ... 14)
AWG number as coded connectable conductor cross section for main contacts	20 ... 12
tightening torque with screw-type terminals	0.8 ... 1.2 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	direct mounting
height	79 mm
width	45 mm
depth	80 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	0 mm
— backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
● for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 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

Approvals Certificates

Environment	General Product Approval				
Environmental Confirmations	CCC	cULus	EAC	Manufacturer Declaration	CE EG-Konf.

General Product Approval	EMV	Test Certificates		Maritime application	
UKCA	RCM	Type Test Certificates/Test Report	Special Test Certificate	ABS	BUREAU VERITAS

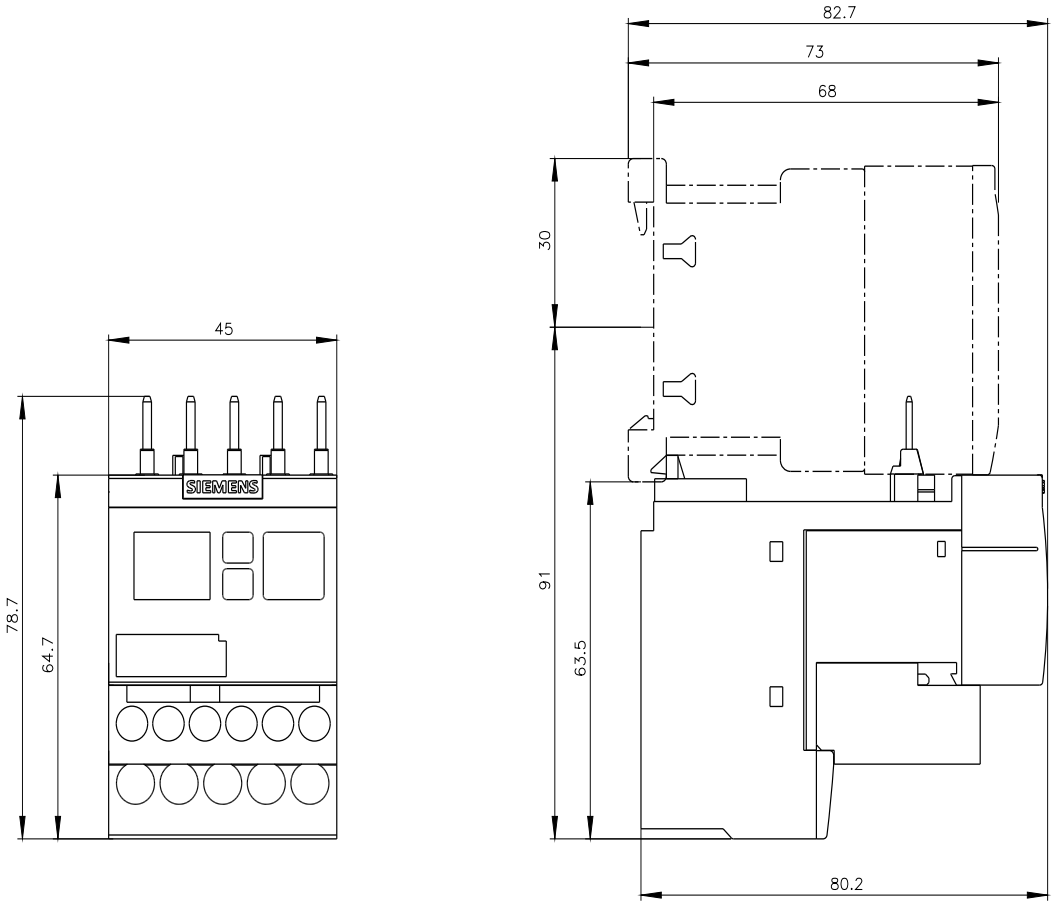
Maritime application	other

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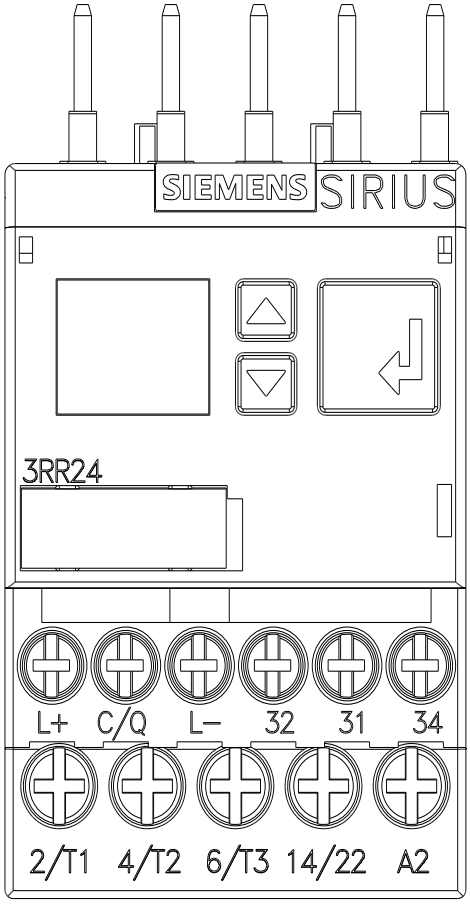
Confirmation

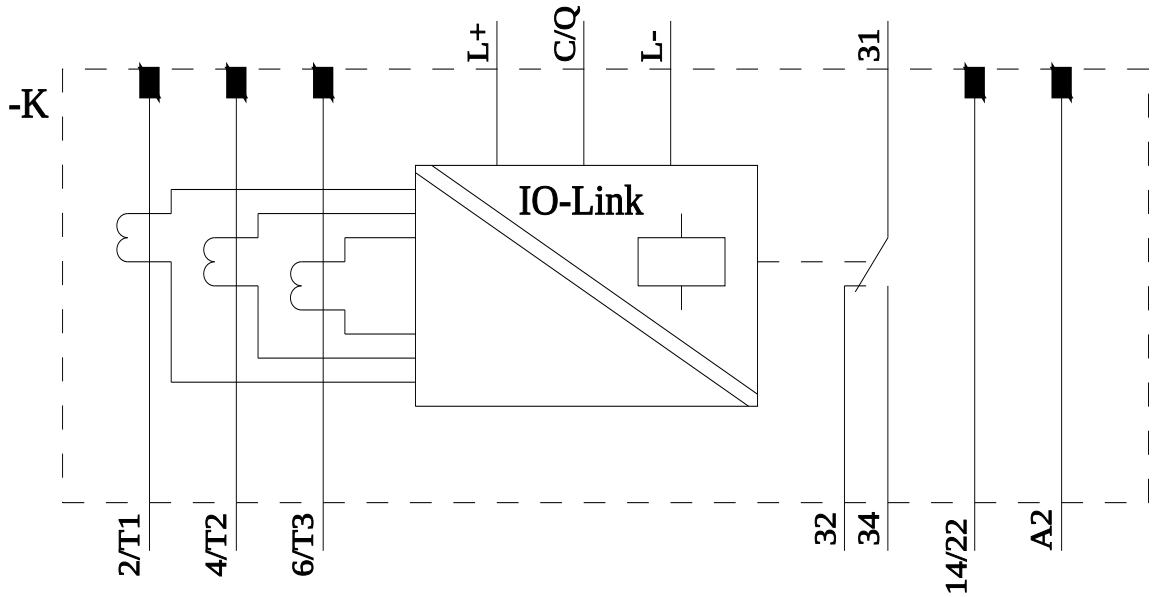
Further information

Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
Information for data generation and storage
https://support.industry.siemens.com/cs/ww/en/view/109995012
Information- and Downloadcenter (Catalogs, Brochures,…)
https://www.siemens.com/ic10
Industry Mall (Online ordering system)
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
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Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
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