SIEMENS

Product data sheet 3RU2116-1KC1

OVERLOAD RELAY 9.0...12.5 A FOR MOTOR PROTECTION BGR S00,
CLASS 10 STAND-ALONE INSTALLATION MAIN CIRCUIT: SPRING-LOADED TERMINAL AUXILARY CIRCUIT:SPRING-LOADED TERMINAL MANUAL-AUTOMATIC-RESET

General technical data:		
Product brand name		SIRIUS
product designation		3RU2 thermal overload relay
Protection class IP / on the front		IP20
Insulation voltage / with degree of pollution 3		
• rated value	V	690
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
• during transport	°C	-55 … 80
• during storage	°C	-55 … 80
• during operating	°C	-40 … 70
Relative humidity		
• during operating phase	/ %	90
Resistance against shock		8g / 10 ms
Impulse voltage resistance / rated value	kV	6
Active power loss / total / typical	W	5.1
Item designation		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		F
• according to DIN EN 61346-2		F

Trip class		CLASS 10
Type of assignement		2
Size of overload relay		S00
Size of the contactor / can be combined		
• company-specific		S00

Main circuit:

Number of poles / for main current circuit		3
Operating voltage / at AC-3 / rated value		
• maximum	V	690
Operating current / at AC-3 / at 400 V		
• rated value	A	12.5
Service power / at AC-3		
• at 400 V / rated value	kW	5.5
• at 500 V / rated value	kW	7.5
• at 690 V / rated value	kW	7.5
Adjustable response current		
• of the current-dependent overload release	A	9 … 12.5
Operating current / of the fuse link / rated value	A	35

Auxiliary circuit:

Contact reliability / of the auxiliary contacts		< 1 error per 100 million operating cycles
Number of NC contacts / for auxiliary contacts		1
Number of NO contacts / for auxiliary contacts		1
Number of change-over switches / for auxiliary contacts		0
Operating current / of the auxiliary contacts		
• at AC-15		
• at 24 V	A	3
• at 110 V	A	3
• at 120 V	A	3
• at 125 V	A	3
• at 230 V	A	2
• at 400 V	A	1
• at DC-13		
• at 24 V	A	1
• at 110 V	A	0.22
• at 125 V	A	0.22
• at 220 V	A	0.11

Short-circuit:

Design of the fuse link / for short-circuit protection of the auxiliary switch / required		fuse gG: 10 A

Installation/mounting/dimensions:

Built in orientation		vertical
Type of mounting		stand-alone installation
Width	mm	45
Height	mm	87
Depth	mm	73
Distance, to be maintained, to the ranks assembly		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, to earthed part		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, conductive elements		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6

Connections:

Design of the electrical connection		
• for main current circuit		spring-loaded terminals
• for auxiliary and control current circuit		spring-loaded terminals
Product function / removable terminal for auxiliary and control circuit		No
Type of the connectable conductor cross-section		
• for main contacts		
• solid		2x (0.5 ... 4 mm2)
• stranded		2x (0.5 ... 4 mm2)
• finely stranded		
• with conductor end processing		2 x (0.5 ... 2.5 mm2)
• without conductor final cutting		2x (0.5 ... 2.5 mm2)

• for AWG conductors / for main contacts		1x (20 ... 12)
• for auxiliary contacts		
• solid		2x (0.5 ... 2.5 mm2)
• finely stranded		
• with conductor end processing		2x (0.5 ... 1.5 mm2)
• without conductor final cutting		2 x (0.5 ... 1.5 mm2)
• for AWG conductors / for auxiliary contacts		2x (20 ... 14)

Certificates/approvals:

Verification of suitability		CE / UL / CSA
• ATEX		No

General Product Approval				For use in hazardous locations	Test Certificates
CQC	CSA	ROSTEST	UL	DEKRA EXAM, DMT	Manufacturer

Shipping Approval					
ABS	DNV	GL	LRS	PRS	RINA

Shipping Approval	other
RMRS	Manufacturer

Reliability figures:

Mean time to failure (MTTF) / with high demand rate	a	2,280
Proportion of dangerous failures		
• with low demand rate / according to SN 31920	%	50
• with high demand rate / according to SN 31920	%	50
Failure rate (FIT value) / with low demand rate		
• according to SN 31920	FIT	50
T1 value / for proof test interval or service life		
• according to IEC 61508	a	20
Protection against electrical shock		finger-safe

Further information:

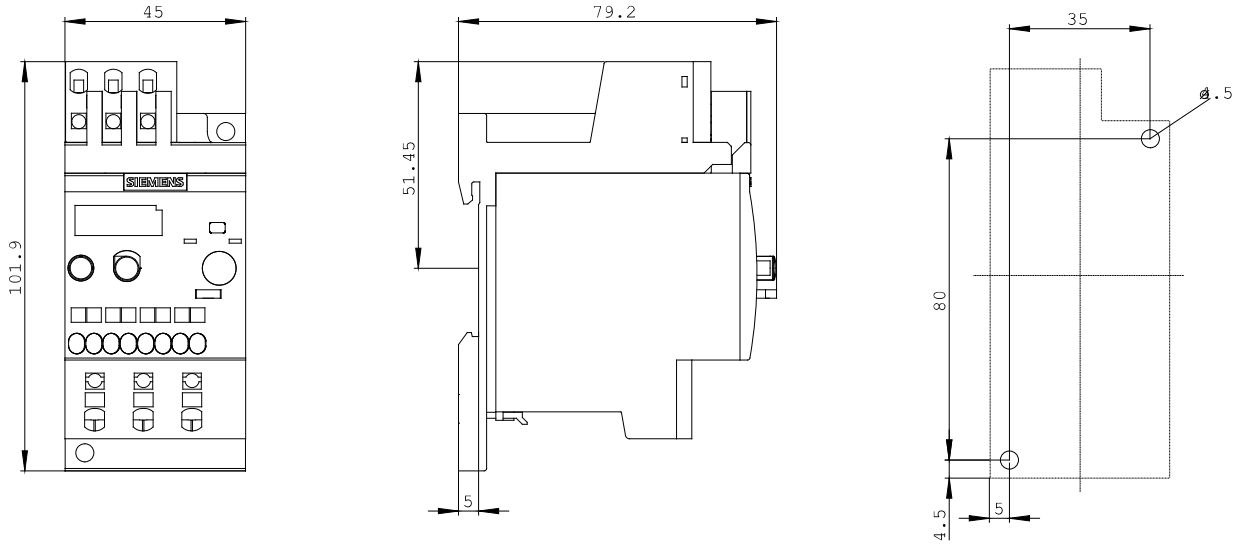
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

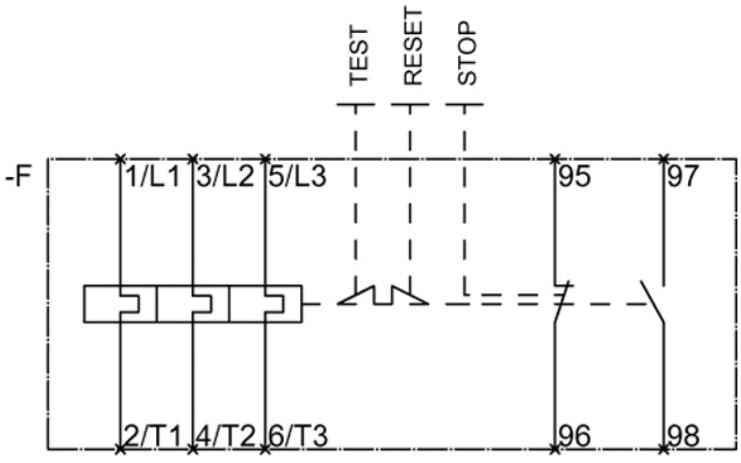
Industry Mall (Online ordering system)
http://www.siemens.com/industrial-controls/mall

Cax online generator:
http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RU2116-1KC1/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RU2116-1KC1





last change: Oct 17, 2011