

Product data sheet 3RU2116-1KC0

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

Protection class IP / frontal/front side P20 Insulation voltage / with degree of pollution 3 valed value P30 Altitude of installation site / at a height over sea level / maximum m 2,000 Ambient temperature - Umage of the contraction of the perature of uning transport ° C .55 80 - during storage ° C .55 80 - during the operating phase ° C .40 70 Relative humidity 9 89 / 10 ms - during the operating phase 89 / 10 ms Resistance against shock 89 / 10 ms Impulse voltage resistance / rated value W 3.9 tem designation * * * * * * * * * * * * * * * * * * *	General technical data:	_	
Insulation voltage / with degree of pollution 3	Product brand name		SIRIUS
Intitude of installation site / at a height over sea level / maximum Ambient temperature • during transport • during storage • during storage • during the operating phase • during the operating phase • during the operating phase • during the operating phase • during the	Protection class IP / frontal/front side		IP20
Altitude of installation site / at a height over sea level / maximum Ambient temperature - during transport - during storage - during the operating phase Relative humidity - during the operating phase Resistance against shock Impulse voltage resistance / rated value Real loss power / total / typical Item designation - according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 - according to DIN 801346-2 Trip class Type of assignement Size of overload relay Size of the contactor / can be combined - company-specific Size of the contactor / can be combined - company-specific Size of vertoad relay Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value - maximum V 690 Operating current / at AC-3 / at 400 V	Insulation voltage / with degree of pollution 3		
Makimum Ambient temperature • during transport • during storage • during the operating phase Relative humidity • during the operating phase Resistance against shock Impulse voltage resistance / rated value Real loss power / total / typical tem designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2 Trip class Type of assignement Size of overload relay Size of the contactor / can be combined • company-specific S00 Main circuit: Number of poles / for main current circuit • maximum V 690 Operating current / at AC-3 / at 400 V	rated value	V	690
e during transport e during storage c during the operating phase Relative humidity e during the operating phase Resistance against shock Impulse voltage resistance / rated value Real loss power / total / typical Item designation e according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 e according to DIN EN 61346-2 Trip class CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined e company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value e maximum V 690 Operating current / at AC-3 / at 400 V		m	2,000
 during storage during the operating phase C -40 70 Relative humidity during the operating phase /% 90 Resistance against shock lmpulse voltage resistance / rated value kV 6 Real loss power / total / typical accoording to DIN 40719 extendable after IEC 204-2 / according to IEC 750 according to DIN EN 61346-2 F Trip class CLASS 10 Type of assignement 2 Size of overload relay Size of overload relay Size of the contactor / can be combined company-specific S00 Main circuit: Number of poles / for main current circuit operating voltage / at 3 AC / rated value maximum V 690 Operating current / at AC-3 / at 400 V	Ambient temperature		
• during the operating phase **C	during transport	°C	-55 80
Relative humidity • during the operating phase Resistance against shock Impulse voltage resistance / rated value Real loss power / total / typical • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2 Fripiclass CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined • company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	during storage	°C	-55 80
 during the operating phase Resistance against shock Impulse voltage resistance / rated value Real loss power / total / typical tem designation according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 according to DIN EN 61346-2 Trip class CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined company-specific S00 Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value maximum V 690 Operating current / at AC-3 / at 400 V 	during the operating phase	°C	-40 70
Resistance against shock Impulse voltage resistance / rated value Real loss power / total / typical W 3.9 Item designation *according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 *according to DIN EN 61346-2 Trip class CLASS 10 Type of assignement 2 Size of overload relay Size of the contactor / can be combined *company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value *maximum V 690 Operating current / at AC-3 / at 400 V	Relative humidity		
Impulse voltage resistance / rated value Real loss power / total / typical W 3.9 Item designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2 Frip class CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined • company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	during the operating phase	/ %	90
Real loss power / total / typical Item designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2 Frip class CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined • company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Resistance against shock		8g / 10 ms
Item designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2 Frip class CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined • company-specific Size of poles / for main current circuit Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Impulse voltage resistance / rated value	kV	6
* according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 * according to DIN EN 61346-2 Trip class CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined * company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value * maximum V 690 Operating current / at AC-3 / at 400 V	Real loss power / total / typical	W	3.9
to IEC 750 • according to DIN EN 61346-2 F Trip class CLASS 10 Type of assignement 2 Size of overload relay Size of the contactor / can be combined • company-specific Sumber of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Item designation		
Trip class CLASS 10 Type of assignement Size of overload relay Size of the contactor / can be combined • company-specific Operating voltage / at 3 AC / rated value • maximum Operating contactor / can be combined Operating voltage / can be combined Operating voltage /			F
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 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	according to DIN EN 61346-2		F
Size of overload relay Size of the contactor / can be combined • company-specific Size of the contactor / can be combined • company-specific Size of the contactor / can be combined • company-specific Size of the contactor / can be combined Size of the contactor / can be combined \$ 500 Main circuit: Number of poles / for main current circuit 3 Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Trip class		CLASS 10
Size of the contactor / can be combined • company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Type of assignement		2
• company-specific Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Size of overload relay		S00
Main circuit: Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Size of the contactor / can be combined		
Number of poles / for main current circuit Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	• company-specific		S00
Operating voltage / at 3 AC / rated value • maximum V 690 Operating current / at AC-3 / at 400 V	Main circuit:		
• maximum V 690 Operating current / at AC-3 / at 400 V	Number of poles / for main current circuit		3
Operating current / at AC-3 / at 400 V	Operating voltage / at 3 AC / rated value		
	• maximum	V	690
• rated value A 12.5	Operating current / at AC-3 / at 400 V		
	• rated value	Α	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	W	7,500
Adjustable response current		
of the current-dependent overload release	Α	9 12.5
Operating current / of the fuse link / rated value	Α	35

Auxiliary circuit:		
Contact reliability / of the auxiliary contacts		< 1 error per 100 million operating cycles
Number of NC contacts / for auxiliary contact		1
Number of NO contacts / for auxiliary contact		1
Number of change-over switches / for auxiliary contact		0
Operating current / of the auxiliary contacts		
• at AC-15		
• at 24 V	Α	3
• at 110 V	Α	3
• at 120 V	Α	3
• at 125 V	Α	3
• at 230 V	Α	2
• at 400 V	Α	1
• at DC-13		
• at 24 V	Α	1
• at 110 V	Α	0.22
• at 125 V	Α	0.22
• at 220 V	Α	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 fixing/fixation		direct mounting
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		
• unifilar	2x (0.5 4 mm2)	
stranded wire	2x (0.5 4 mm2)	
stranded wire		
 with conductor end processing 	2 x (0.5 2.5 mm2)	
 without conductor final cutting 	2x (0.5 2.5 mm2)	
• at AWG-conductors / for main contacts	1x (20 12)	
for auxiliary contacts		
• solid	2x (0.5 2.5 mm2)	
• finely stranded		
• with wire 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	

Safety:

Mean time to failure (MTTF) / with high demand rate		
according to SN 31920	а	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	а	20
Protection against electrical shock		finger-safe

Further information:

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

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

Global Industry Mall (Online ordering system)

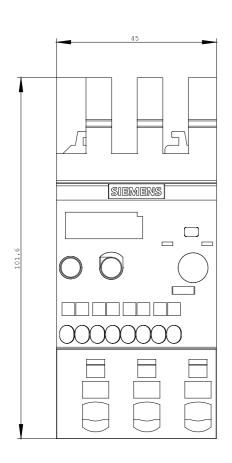
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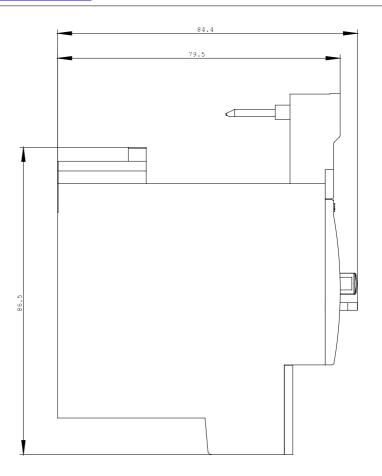
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

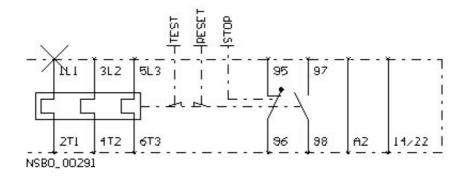
http://support.automation.siemens.com/WW/view/en/3RU2116-1KC0/all

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RU2116-1KC0







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