SIEMENS

Product data sheet

CONTACTOR, AC-3, 7.5KW/400V, 1NO, DC 24V, 3-POLE, SZ S00 SCREW TERMINAL

Product brand name		
		SIRIUS
Product designation		3RT2 contactor
Size of the contactor		S00
Protection class IP / frontal/front side		IP20
Degree of pollution		3
Altitude of installation site / at a height over sea level / maximum	m	2,000
Ambient temperature		
during storage	°C	-55 80
 during the operating phase 	°C	-25 60
during transport	°C	-55 80
Resistance against shock		9.8g / 5 ms and 5.9g / 10 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690
Resistive loss		
per conductor / typical	W	2.2
of the magnet coil / at DC / typical	W	4
Item designation		
 according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 		к
according to DIN EN 61346-2		Q
Mechanical operating cycles as operating time		
of the contactor / typical		30,000,000
 of the contactor with added auxiliary switch block / typical 		10,000,000
 of the contactor with added electronics-compatible auxiliary switch block / typical 		10,000,000
Main circuit:		
Number of poles / for main current circuit		3
Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		3
		3

Operating current / at AC-1 / at 400 V		
• at 40 °C ambient temperature / rated value	А	22
• at 60 °C ambient temperature / rated value	А	20
Operating current		
• at AC-2 / at 400 V / rated value	А	17
• at AC-3 / at 400 V / rated value	А	17
• at AC-4 / at 400 V / rated value	А	12.5
• with 1 current path / at DC-1		
• at 24 V / rated value	А	20
• at 110 V / rated value	А	2.1
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	А	20
• at 110 V / rated value	А	12
• with 3 current paths in series / at DC-1		
• at 24 V / rated value	А	20
• at 110 V / rated value	А	20
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / rated value	А	20
• at 110 V / rated value	А	0.1
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	А	20
• at 110 V / rated value	А	0.35
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	А	20
• at 110 V / rated value	А	20
Service power		
• at AC-2 / at 400 V / rated value	kW	7.5
• at AC-3		
• at 400 V / rated value	kW	7.5
• at 500 V / rated value	kW	7.5
• at 690 V / rated value	kW	7.5
• at AC-4 / at 400 V / rated value	kW	4
Operating reactive power / at AC-6b		
• at 230 V / rated value	var	0
• at 400 V / rated value	var	0
• at 690 V / rated value	var	0
Off-load operating frequency	1/h	10,000
Switching frequency		
• at AC-1 / according to IEC 60947-6-2 / maximum	1/h	1,000
• at AC-2 / according to IEC 60947-6-2 / maximum	1/h	750

• at AC-3 / according to IEC 60947-6-2 / maximum	1/h	750
• at AC-4 / according to IEC 60947-6-2 / maximum	1/h	300

Control circuit:		
Design of activation of the operating mechanism		conventional
Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1		
• for DC		
rated value	V	24
Operating range factor control supply voltage rated value / of solenoid		
• for DC		0.8 1.1
Pull-in power / of the solenoid / with DC	W	4
Holding power / of solenoid / with DC	W	4

Product extension / auxiliary switchMesiContact reliability / of the auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)Number of NC contacts / for auxiliary contacts0• lagging switching0• lagging switching0• leading switching1• leading switching1• leading switching0• leading switching0• leading switching0• leading switching0• leading switching0• at AC-12 / maximumA• at AC-15-• at AC-15-• at AC-12-• at 4&0 VAA• at 40 VAA<	Auxiliary circuit:		
Number of NC contacts / for auxiliary contactsImage: contacts / for auxiliary contacts• instantaneous switching0Number of NO contacts / for auxiliary contacts1• instantaneous switching1• instantaneous switching0• leading switching0Operating current / of the auxiliary contacts1• at AC-12 / maximumA• at AC-1510• at AC-1510• at AC-12A• at 420 VA• at 48 VA• at 60 VA• at 10 VA• at 48 VA• at 40 VA• at 48 VA• at 10 VA• at 20 VA• at 48 VA• at 60 VA<	Product extension / auxiliary switch		Yes
instantaneous switching0Number of NO contacts / for auxiliary contacts1instantaneous switching1istantaneous switching0operating current / of the auxiliary contactsAat AC-12 / maximumAat AC-15Aat AC-15Aat 230 VAat 400 VAat 400 VAat 48 VAat 48 VAat 220 VAat 420 VAat 48 VAat 48 VAat 220 VAat 220 VAat 220 VAat 20 VAat 21 VAat 20 VAat 21 VAat 20 VA <tr< td=""><td>Contact reliability / of the auxiliary contacts</td><td></td><td>1 faulty switching per 100 million (17 V, 1 mA)</td></tr<>	Contact reliability / of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
lagging switching0Number of NO contacts / for auxiliary contacts1instantaneous switching1ieading switching0Operating current / of the auxiliary contactsAat AC-12 / maximumAat AC-15-at AC-15Aat 230 VAat 400 VAat at Oc12-at 48 VAat 60 VAat 220 VAat 420 VAat 48 VAat 48 VAat 420 VAat 48 VAat 48 VAat 420 VAat 10VAat 110 VAat 110 VAat 10VAat 110 VAat 100 V <td>Number of NC contacts / for auxiliary contacts</td> <td></td> <td></td>	Number of NC contacts / for auxiliary contacts		
Number of NO contacts / for auxiliary contacts1• instantaneous switching1• leading switching0Operating current / of the auxiliary contacts4• at AC-12 / maximumA• at AC-15A• at AC-15A• at AC-15A• at 400 VA• at 400 V• at 400 V• at 400 V• at 400 V• at 200 V• at 200 V• at 48 V• at 48 V• at 400 V• at 48 V• at 400 V• at 48 V• at 400 V <td>instantaneous switching</td> <td></td> <td>0</td>	instantaneous switching		0
·instantaneous switching 1 ·leading switching 0 Operating current / of the auxiliary contacts A ·at AC-12 / maximum A ·at AC-15 A ·at AC-15 A ·at 230 V A ·at 400 V A ·at 230 V A ·at 400 V A ·at 200 V AA ·at 48 V A ·at 220 V AA ·at 220 V AA ·at 24 V A ·at 24 V A ·at 48 V A ·at 60 V A ·at 60 V	lagging switching		0
• leading switching 0 Operating current / of the auxiliary contacts	Number of NO contacts / for auxiliary contacts		
Operating current / of the auxiliary contacts A 10 • at AC-12 / maximum A 10 • at AC-15 A 10 • at AC-15 A 10 • at AC0 V A 3 • at 400 V A 3 • at 400 V A 6 • at 00 V A 6 • at 60 V A 6 • at 220 V A 1 • at 220 V A 1 • at 220 V A 1 • at 24 V A 6 • at 48 V A 2 • at 60 V A 2 • at 60 V A 2 • at 60 V A 1	instantaneous switching		1
• at AC-12 / maximum A 10 • at AC-15 A 10 • at 230 V A 10 • at 400 V A 3 • at 400 V A 6 • at 48 V A 6 • at 60 V A 3 • at 60 V A 3 • at 220 V A 1 • at 220 V A 1 • at 220 V A 6 • at 220 V A 1 • at 24 V A 6 • at 24 V A 6 • at 24 V A 6 • at 60 V A 6 • at 10 V A 6 • at 10 V A 6	leading switching		0
• at AC-15Image: Constraint of the system of t	Operating current / of the auxiliary contacts		
・ at 230 V A 10 ・ at 400 V A 3 ・ at 400 C-12 - - ・ at 48 V A 6 ・ at 60 V A 6 ・ at 60 V A 3 ・ at 60 V A 6 ・ at 10 V A 3 ・ at 220 V A 1 ・ at 220 V A 1 ・ at 220 V A 1 ・ at 24 V A 5 ・ at 48 V A 2 ・ at 48 V A 2 ・ at 60 V A 2 ・ at 60 V A 2	• at AC-12 / maximum	А	10
• at 400 V A 3 • at DC-12 A 6 • at 48 V A 6 • at 60 V A 6 • at 60 V A 3 • at 110 V A 3 • at 220 V A 1 • at 220 V A 6 • at 220 V A 1 • at 24 V A 6 • at 48 V A 6 • at 48 V A 6 • at 60 V A 2 • at 60 V A 2 • at 60 V A 2 • at 60 V A 1	• at AC-15		
・at DC-12 ・at 48 V A ・at 48 V A ・at 60 V A ・at 110 V A ・at 220 V A ・at 24 V A ・at 48 V A ・at 48 V A ・at 48 V A ・at 40 V A ・at 410 V A ・at 110 V A	• at 230 V	А	10
• at 48 V A 6 • at 60 V A 6 • at 110 V A 3 • at 220 V A 1 • at 220 V A 6 • at 220 V A 1 • at 220 V A 1 • at 220 V A 6 • at 24 V A 6 • at 48 V A 2 • at 60 V A 2 • at 110 V A 1	• at 400 V	А	3
・at 60 VA6・at 110 VA3・at 220 VA1・at 220 VA1・at 24 VA6・at 48 VA2・at 60 VA2・at 110 VA1	• at DC-12		
• at 110 V A 3 • at 220 V A 1 • at 220 V A 5 • at DC-13 - - • at 24 V A 6 • at 48 V A 2 • at 60 V A 2 • at 110 V A 1	• at 48 V	А	6
• at 220 V A 1 • at DC-13 - - • at 24 V A 6 • at 48 V A 2 • at 60 V A 2 • at 110 V A 1	• at 60 V	А	6
・at DC-13 Image: Constraint of the system of the syst	• at 110 V	А	3
• at 24 V A 6 • at 48 V A 2 • at 60 V A 2 • at 110 V A 1	• at 220 V	А	1
• at 48 V A 2 • at 60 V A 2 • at 110 V A 1	• at DC-13		
• at 60 V A 2 • at 110 V A 1	• at 24 V	А	6
• at 110 V A 1	• at 48 V	А	2
	• at 60 V	А	2
• at 220 V A 0.3	• at 110 V	А	1
	• at 220 V	А	0.3

Short-circuit:			
Design of the fuse link			
• for short-circuit protection of the auxiliary switch / required		fuse gL/gG: 10 A	
• for short-circuit protection of the main circuit			
 at type of coordination 1 / required 		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A	
• at type of coordination 2 / required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20A	
Installation/mounting/dimensions:			
installation/mounting/unitensions.	_		
built in orientation		vertical	
Type of fixing/fixation		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022	

Type of fixing/fixation		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Type of fixing/fixation / Series installation		Yes
Width	mm	45
Height	mm	57.5
Depth	mm	72
distance, to be maintained, to the ranks assembly		
forwards	mm	0
backwards	mm	0
• upwards	mm	6
downwards	mm	6
• sidewards	mm	0
distance, to be maintained, to earthed part		
forwards	mm	6
backwards	mm	0
• upwards	mm	6
downwards	mm	6
• sidewards	mm	6
distance, to be maintained, conductive elements		
forwards	mm	6
backwards	mm	6
• upwards	mm	6
downwards	mm	10
• sidewards	mm	6

 Connections:

 design of the electrical connection
 screw-type terminals

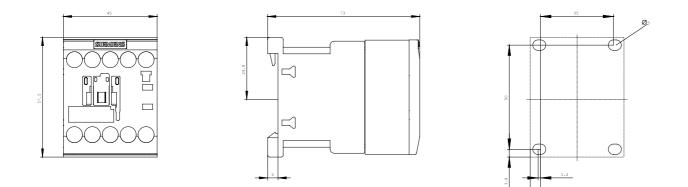
 • for main current circuit
 screw-type terminals

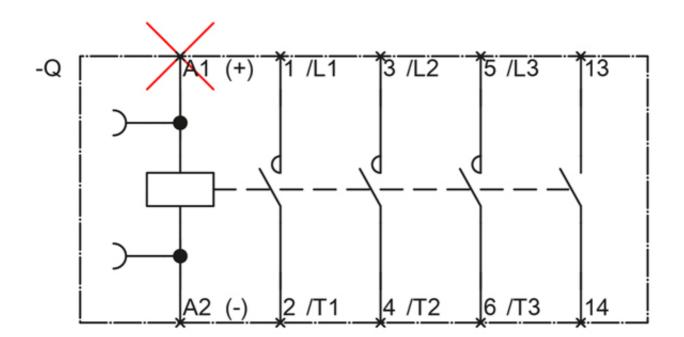
 • for auxiliary and control current circuit
 screw-type terminals

 Type of the connectable conductor cross-section
 screw-type terminals

• for main contacts		
• unifilar		2x (0.5 1.5 mm2), 2x (0.75 2.5 mm2), 2x 4 mm2
stranded wire		2x (0.5 1.5 mm2), 2x (0.75 2.5 mm2), 2x 4 mm2
stranded wire		
 with conductor end processing 		2x (0.5 1.5 mm2), 2x (0.75 2.5 mm2)
 at AWG-conductors / for main contacts 		2x (20 16), 2x (18 14), 2x 12
for auxiliary contact		
• solid		2x (0.5 1.5 mm2), 2x (0.75 2.5 mm2), 2x 4 mm2
stranded wire		
with wire end processing		2x (0.5 1.5 mm2), 2x (0.75 2.5 mm2)
 for AWG conductors / for auxiliary contacts 		2x (20 16), 2x (18 14), 2x 12
Certificates/approvals:		
verification of suitability		CE / UL / CSA / CCC
Safety:		
B10 value / with high demand rate		
according to SN 31920		1,000,000
T1 value / for proof test interval or service life		
according to IEC 61508	а	20
Proportion of dangerous failures		
 with low demand rate / according to SN 31920 	%	75
with high demand rate / according to SN 31920	%	75
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	50
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) http://www.siemens.com/industrial-controls/mall_		
Service&Support (Manuals, Certificates, Characteristics, FAQs,) http://support.automation.siemens.com/WW/view/en/3RT2018-1BB41/all		

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2018-1BB41





last change:

May 8, 2010