



CONTACTOR, AC-3, 18.5KW/400V, 1NO+1NC,  
AC 230V 50HZ, 3-POLE,  
SZ S0 SCREW TERMINAL

**General technical data:**

<b>Product brand name</b>		SIRIUS
<b>Product designation</b>		3RT2 contactor
<b>Size of the contactor</b>		S0
<b>Protection class IP / frontal/front side</b>		IP20
<b>Degree of pollution</b>		3
<b>Altitude of installation site / at a height over sea level / maximum</b>	m	2,000
<b>Ambient temperature</b>		
• during storage	°C	-55 ... 80
• during the operating phase	°C	-25 ... 60
• during transport	°C	-55 ... 80
<b>Resistance against shock</b>		12.5g / 5 ms and 7.8g / 10 ms
<b>Impulse voltage resistance / rated value</b>	kV	6
<b>Insulation voltage / rated value</b>	V	690
<b>Resistive loss</b>		
• per conductor / typical	W	3.8
<b>Apparent loss power / of the magnet coil / at AC / typical</b>	V·A	9.8
<b>Item designation</b>		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K

<ul style="list-style-type: none"> <li>• according to DIN EN 61346-2</li> </ul>		Q
<b>Mechanical operating cycles as operating time</b>		
<ul style="list-style-type: none"> <li>• of the contactor / typical</li> </ul>		10,000,000
<ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block / typical</li> </ul>		10,000,000
<ul style="list-style-type: none"> <li>• of the contactor with added electronics-compatible auxiliary switch block / typical</li> </ul>		10,000,000
<b>Main circuit:</b>		
<b>Number of poles / for main current circuit</b>		3
<b>Number of NC contacts / for main contacts</b>		0
<b>Number of NO contacts / for main contacts</b>		3
<b>Operating voltage / at 3 AC / rated value</b>		
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	V	690
<b>Operating current / at AC-1 / at 400 V</b>		
<ul style="list-style-type: none"> <li>• at 40 °C ambient temperature / rated value</li> </ul>	A	50
<ul style="list-style-type: none"> <li>• at 60 °C ambient temperature / rated value</li> </ul>	A	45
<b>Operating current</b>		
<ul style="list-style-type: none"> <li>• at AC-2 / at 400 V / rated value</li> </ul>	A	38
<ul style="list-style-type: none"> <li>• at AC-3 / at 400 V / rated value</li> </ul>	A	38
<ul style="list-style-type: none"> <li>• at AC-4 / at 400 V / rated value</li> </ul>	A	20
<ul style="list-style-type: none"> <li>• with 1 current path / at DC-1 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> </ul>	A	35
	A	4.5
<ul style="list-style-type: none"> <li>• with 2 current paths in series / at DC-1 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> </ul>	A	35
	A	35
<ul style="list-style-type: none"> <li>• with 3 current paths in series / at DC-1 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> </ul>	A	35
	A	35
<ul style="list-style-type: none"> <li>• with 1 current path / at DC-3 / at DC-5 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> </ul>	A	20
	A	2.5
<ul style="list-style-type: none"> <li>• with 2 current paths in series / at DC-3 / at DC-5 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> </ul>	A	35
	A	15
<ul style="list-style-type: none"> <li>• with 3 current paths in series / at DC-3 / at DC-5 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> </ul>	A	35
	A	35
<b>Service power</b>		
<ul style="list-style-type: none"> <li>• at AC-2 / at 400 V / rated value</li> </ul>	kW	18.5

<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>• at 400 V / rated value</li> <li>• at 500 V / rated value</li> <li>• at 690 V / rated value</li> </ul> </li> <li>• at AC-4 / at 400 V / rated value</li> </ul>	kW	18.5
	kW	15
	kW	15
	kW	18.5
<b>Operating reactive power / at AC-6b</b>		
<ul style="list-style-type: none"> <li>• at 230 V / rated value</li> <li>• at 400 V / rated value</li> <li>• at 690 V / rated value</li> </ul>	var	0
	var	0
	var	0
<b>Off-load operating frequency</b>	1/h	5,000
<b>Switching frequency</b>		
<ul style="list-style-type: none"> <li>• at AC-1 / according to IEC 60947-6-2 / maximum</li> <li>• at AC-2 / according to IEC 60947-6-2 / maximum</li> <li>• at AC-3 / according to IEC 60947-6-2 / maximum</li> <li>• at AC-4 / according to IEC 60947-6-2 / maximum</li> </ul>	1/h	1,000
	1/h	750
	1/h	750
	1/h	250

#### Control circuit:

<b>Design of activation of the operating mechanism</b>		conventional
<b>Type of voltage / of the controlled supply voltage</b>		AC
<b>control supply voltage frequency</b>		
<ul style="list-style-type: none"> <li>• 1 / rated value</li> </ul>	Hz	50
<b>Control supply voltage / 1</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC</li> <li>• rated value</li> </ul>	V	230
<b>Operating range factor control supply voltage rated value / of solenoid</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC</li> </ul>		0.8 ... 1.1
<b>Apparent pull-in power / of the solenoid / for AC</b>	V·A	77
<b>Apparent holding power / of the solenoid / for AC</b>	V·A	9.8
<b>Power factor inductive</b>		
<ul style="list-style-type: none"> <li>• at pull-in power of the coil</li> <li>• at holding power of the coil</li> </ul>		0.82
		0.25

#### Auxiliary circuit:

<b>Product extension / auxiliary switch</b>		Yes
<b>Contact reliability / of the auxiliary contacts</b>		1 faulty switching per 100 million (17 V, 1 mA)
<b>Number of NC contacts / for auxiliary contacts</b>		
<ul style="list-style-type: none"> <li>• instantaneous switching</li> <li>• lagging switching</li> </ul>		1
		0
<b>Number of NO contacts / for auxiliary contacts</b>		
<ul style="list-style-type: none"> <li>• instantaneous switching</li> </ul>		1

• leading switching		0
<b>Operating current / of the auxiliary contacts</b>		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V	A	10
• at 400 V	A	3
• at DC-12		
• at 48 V	A	6
• at 60 V	A	6
• at 110 V	A	3
• 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 220 V	A	0.3

#### Short-circuit:

##### Design of the fuse link

- for short-circuit protection of the auxiliary switch / required
- for short-circuit protection of the main circuit
  - at type of coordination 1 / required
  - at type of coordination 2 / required

fuse gL/gG: 10 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:  
100 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:  
35A

#### Installation/mounting/dimensions:

<b>built in orientation</b>		vertical
<b>Type of fixing/fixation</b>		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
<b>Type of fixing/fixation / Series installation</b>		Yes
<b>Width</b>	mm	45
<b>Height</b>	mm	85
<b>Depth</b>	mm	92
<b>distance, to be maintained, to the ranks assembly</b>		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	0
<b>distance, to be maintained, to earthed part</b>		

• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	6
<b>distance, to be maintained, conductive elements</b>		
• forwards	mm	6
• backwards	mm	6
• upwards	mm	6
• downwards	mm	10
• sideways	mm	6

<b>Connections:</b>		
<b>design of the electrical connection</b>		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
<b>Type of the connectable conductor cross-section</b>		
• for main contacts		
• unifilar		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )
• stranded wire		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )
• stranded wire		
• with conductor end processing		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
• at AWG-conductors / for main contacts		2x (16 ... 12), 2x (14 ... 8)
• for auxiliary contact		
• solid		2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• stranded wire		
• with wire end processing		2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors / for auxiliary contacts		2x (20 ... 16), 2x (18 ... 14)

<b>Certificates/approvals:</b>		
<b>verification of suitability</b>		CE / UL / CSA / CCC

<b>Safety:</b>		
<b>B10 value / with high demand rate</b>		
• according to SN 31920		1,000,000
<b>T1 value / for proof test interval or service life</b>		
• according to IEC 61508	a	20
<b>Proportion of dangerous failures</b>		
• with low demand rate / according to SN 31920	%	75
• with high demand rate / according to SN 31920	%	75
<b>Failure rate (FIT value) / with low demand rate</b>		

• 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)**

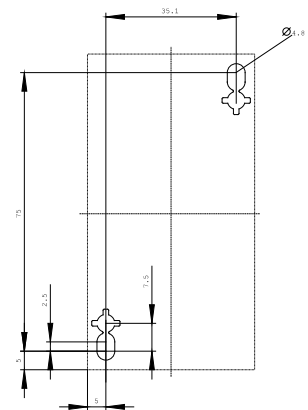
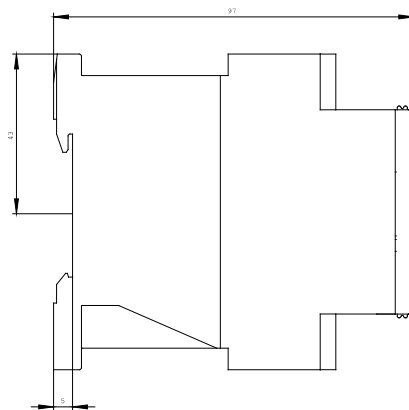
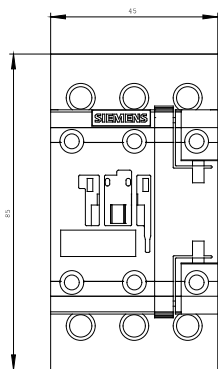
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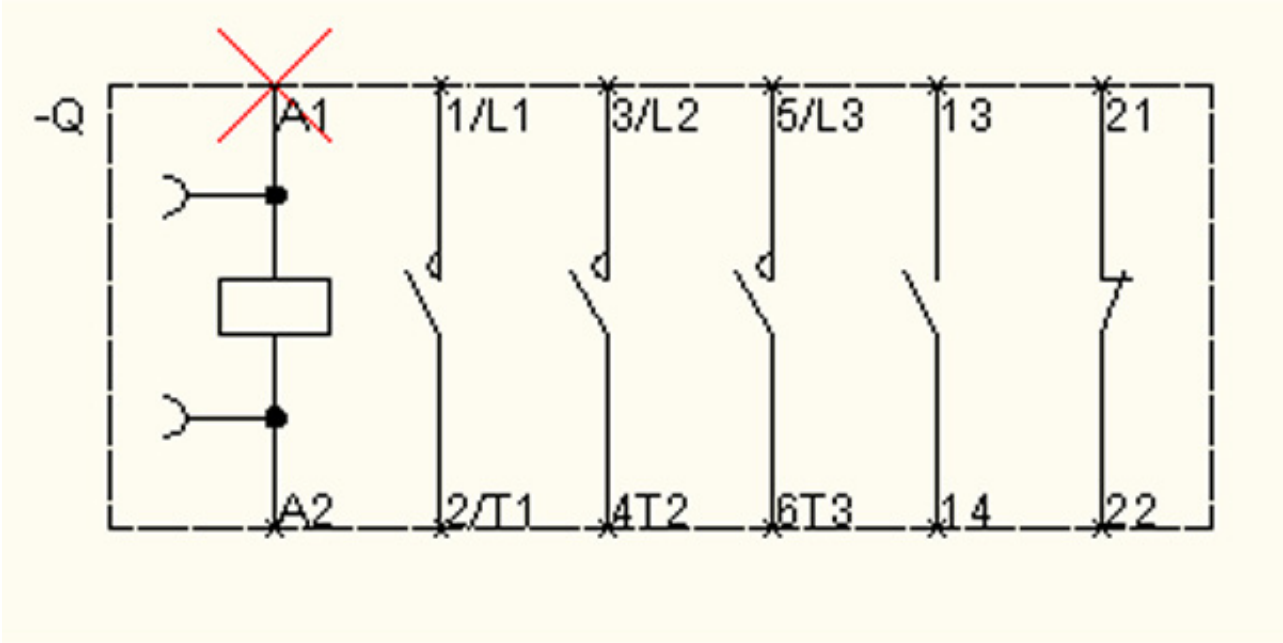
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/3RT2028-1AP00/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RT2028-1AP00](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2028-1AP00)





last change:

May 8, 2010