# SIEMENS

#### Product data sheet

## 3RT2035-1AC20



CONTACTOR,AC3:18.5KW/400V, 1NO+1NC, 24V AC 50/60HZ, 3-POLE, SIZE S2, SCREW TERMINAL

General technical data:		
product brand name		SIRIUS
Size of contactor		S2
Product expansion		
Auxiliary switch		Yes
function module for communication		No
Protection class IP / on the front		IP20
Degree of pollution		3
Installation altitude / at height above sea level / maximum	m	2,000
Ambient temperature		
during storage	°C	-55 +80
during operation	°C	-25 +60
Surge voltage resistance / Rated value	kV	6
Insulation voltage / Rated value	V	690
maximum permissible voltage for safe isolation / between coil and main contacts / acc. to EN 60947-1	V	400
Mechanical service life (switching cycles)		
of the contactor / typical		10,000,000
of the contactor with added auxiliary switch block / typical		10,000,000
<ul> <li>of the contactor with added electronics-compatible auxiliary switch block / typical</li> </ul>		5,000,000

Main circuit:		
Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		3
Connectable conductor cross-section / in main circuit		
• at AC-1		
• at 40 °C / minimum permissible	mm²	16
• at 60 °C / minimum permissible	mm²	25
Operating current		
• at AC-1 / up to 690 V		
• at ambient temperature 40 °C / Rated value	А	60
• at ambient temperature 60 °C / Rated value	А	55
• at AC-2 / at 400 V / Rated value	А	40
• at AC-3		
• at 400 V / Rated value	А	40
• at 500 V / Rated value	А	40
• at 690 V / Rated value	А	24
• at AC-4 / at 400 V / Rated value	А	35
Operating current / for $\geq$ 200000 operating cycles / at AC-4		
• at 400 V / Rated value	А	22
• at 690 V / Rated value	А	18.5
Operating current		
• with 1 current path / at DC-1		
• at 24 V / Rated value	А	55
• at 110 V / Rated value	А	4.5
• at 220 V / Rated value	А	2
• at 440 V / Rated value	А	0.4
• at 600 V / Rated value	А	0.25
• with 2 current paths in series / at DC-1		
• at 24 V / Rated value	А	55
• at 110 V / Rated value	А	45
• at 220 V / Rated value	А	5
• at 440 V / Rated value	А	1
• at 600 V / Rated value	А	0.8
• with 3 current paths in series / at DC-1		
• at 24 V / Rated value	А	55
• at 110 V / Rated value	А	45
• at 220 V / Rated value	А	45
• at 440 V / Rated value	А	2.9
• at 600 V / Rated value	А	1.4

Operating current		
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / Rated value	А	35
• at 110 V / Rated value	А	2.5
• at 220 V / Rated value	А	2
• at 440 V / Rated value	А	0.1
• at 600 V / Rated value	А	0.06
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / Rated value	А	55
• at 110 V / Rated value	А	25
• at 220 V / Rated value	А	5
• at 440 V / Rated value	А	0.27
• at 600 V / Rated value	А	0.16
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / Rated value	А	55
• at 110 V / Rated value	А	45
• at 220 V / Rated value	А	25
• at 440 V / Rated value	А	0.6
• at 600 V / Rated value	А	0.6
Operating power		
• at AC-1 / at 230 V / Rated value	kW	23
• at AC-1 / at 400 V / Rated value	kW	39
• at AC-1 / at 690 V / Rated value	kW	68
• at AC-2		
• at 400 V / Rated value	kW	18.5
• at AC-3		
• at 230 V / Rated value	kW	11
• at 400 V / Rated value	kW	18.5
• at 500 V / Rated value	kW	22
• at 690 V / Rated value	kW	22
• at AC-4		
• at 400 V / Rated value	kW	18.5
Dperating power / for $\geq$ 200000 operating cycles / at AC-4		
• at 400 V / Rated value	kW	11.6
• at 690 V / Rated value	kW	16.8
Thermal short-time current / restricted to 10 s	А	400
Active power loss / at AC-3 / at 400 V / for rated value of the operating current / per conductor	W	2.2
No-load switching frequency		
• with AC	1/h	5,000

Operating frequency		
• at AC-1 / maximum	1/h	1,200
• at AC-2 / maximum	1/h	750
• at AC-3 / maximum	1/h	1,000
• at AC-4 / maximum	1/h	300
Control circuit/ Control:		
Type of voltage / of the control supply voltage		AC
Control supply voltage	_	
• with AC / at 50 Hz / Rated value	V	24
• with AC / at 60 Hz / Rated value	V	24
Operating range factor control supply voltage rated value / of the magnet coil	_	
• with AC / at 50 Hz		0.8 1.1
• with AC / at 60 Hz		0.85 1.1
Apparent pick-up power / of the magnet coil / with AC	_	
• at 50 Hz	V·A	210
• at 60 Hz	V·A	188
Apparent holding power / of the magnet coil / with AC	_	
• at 50 Hz	V·A	17.2
• at 60 Hz	V·A	16.5
Closing delay	_	
• with AC	ms	10 80
Opening delay	_	
• with AC	ms	10 18
Arcing time	ms	10 20
Auxiliary circuit:		
Number of NC contacts / for auxiliary contacts / instantaneous contact		1
Number of NO contacts / for auxiliary contacts / instantaneous contact		1
Operating current		
• at AC-12 / maximum	А	10
• at AC-15		
• at 230 V / Rated value	А	10
• at 400 V / Rated value	А	3
• at 500 V / Rated value	А	2
• at 690 V / Rated value	А	1
Operating current / at DC-12		
• at 24 V / Rated value	А	10

• at 60 V / Rated value       A       6         • at 60 V / Rated value       A       6         • at 10 V / Rated value       A       3         • at 125 V / Rated value       A       2         • at 220 V / Rated value       A       1         • at 220 V / Rated value       A       0.3         • at 800 V / Rated value       A       0.3         • at 800 V / Rated value       A       0.15         Operating current / at DC-13			
• at 110 V / Rated valueA3• at 125 V / Rated valueA2• at 220 V / Rated valueA1• at 440 V / Rated valueA0.3• at 600 V / Rated valueA0.15Operating current / at DC-13• at 24 V / Rated valueA10• at 48 V / Rated valueA2• at 60 V / Rated valueA2• at 60 V / Rated valueA2• at 10 V / Rated valueA1• at 25 V / Rated valueA0.9• at 125 V / Rated valueA0.3• at 220 V / Rated valueA0.14• at 600 V / Rated valueA0.14• at 600 V / Rated valueA0.1UUCSA ratings:Vielded mechanical performance [hp]• for single-phase AC motor-• at 120 V / Rated valuehp3• at 200 / Rated valuehp3• at 200 / Rated valuehp3• at 200 / Rated valuehp3• for three-phase AC motor-• at 200 / Rated valuehp10• at 200 / Rated valuehp15• at 200 / Rated valuehp30• at 460 / V Rated valuehp40Full-load current (FLA) / for three-phase AC motor-• at 460 V / Rated valuehp40	• at 48 V / Rated value	А	6
• at 125 V / Rated valueA2• at 220 V / Rated valueA1• at 440 V / Rated valueA0.3• at 600 V / Rated valueA0.15Operating current / at DC-13• at 24 V / Rated valueA10• at 24 V / Rated valueA2• at 80 V / Rated valueA2• at 80 V / Rated valueA2• at 10 V / Rated valueA1• at 25 V / Rated valueA0.9• at 125 V / Rated valueA0.3• at 20 V / Rated valueA0.14• at 20 V / Rated valueA0.14• at 600 V / Rated valueA0.1UUCSA ratings:Vielded mechanical performance [hp]• for single-phase AC motor-• at 101/120 V / Rated valuehp3• at 200/208 V / Rated valuehp15• for three-phase AC motor-• at 200/208 V / Rated valuehp10• at 200/208 V / Rated valuehp10• at 200/208 V / Rated valuehp30• at 460/480 V / Rated valuehp30• at 460/480 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motor-• at 460 V / Rated valuehp40	• at 60 V / Rated value	А	6
• at 220 V / Rated value       A       1         • at 440 V / Rated value       A       0.3         • at 600 V / Rated value       A       0.15         Operating current / at DC-13       I       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	• at 110 V / Rated value	А	3
• at 440 V / Rated valueA0.3• at 600 V / Rated valueA0.15Operating current / at DC-13I• at 24 V / Rated valueA10• at 48 V / Rated valueA2• at 60 V / Rated valueA2• at 60 V / Rated valueA1• at 10 V / Rated valueA0.9• at 25 V / Rated valueA0.9• at 25 V / Rated valueA0.3• at 440 V / Rated valueA0.14• at 400 V / Rated valueA0.14• at 200 V / Rated valueA0.1Vielded mechanical performance [tp]• for single-phase AC motorhp3• at 200 V / Rated valuehp7.5• for three-phase AC motorhp10• at 200/208 V / Rated valuehp15• at 460/480 V / Rated valuehp30• at 460/480 V / Rated valuehp40Full-locad current (FLA) / for three-phase AC motorA40	• at 125 V / Rated value	А	2
• at 800 V / Rated valueA0.15Operating ourrent / at DC-13A10• at 24 V / Rated valueA2• at 48 V / Rated valueA2• at 48 V / Rated valueA2• at 60 V / Rated valueA2• at 100 V / Rated valueA1• at 110 V / Rated valueA0.9• at 125 V / Rated valueA0.9• at 220 V / Rated valueA0.14• at 00 V / Rated valueA0.14• at 600 V / Rated valueA0.1UU/CSA ratings:yielded mechanical performance [hp]• for single-phase AC motorhp3• at 210 V / Rated valuehp7.5• for three-phase AC motorhp10• at 200/208 V / Rated valuehp15• at 200/208 V / Rated valuehp30• at 200/208 V / Rated valuehp40• at 480 V / Rated valuehp40	• at 220 V / Rated value	А	1
Operating current / at DC-13A10• at 24 V / Rated valueA2• at 48 V / Rated valueA2• at 60 V / Rated valueA2• at 60 V / Rated valueA2• at 110 V / Rated valueA1• at 125 V / Rated valueA0.9• at 220 V / Rated valueA0.3• at 220 V / Rated valueA0.14• at 600 V / Rated valueA0.14• at 600 V / Rated valueA0.1UL/CSA ratings:yiel/ded mechanical performance [tp]• for single-phase AC motorhp3• at 210 V / Rated valuehp7.5• for three-phase AC motor-1• at 200/208 V / Rated valuehp10• at 200/208 V / Rated valuehp10• at 200/208 V / Rated valuehp30• at 480 V / Rated valuehp30• at 480 V / Rated valuehp40	• at 440 V / Rated value	А	0.3
• at 24 V / Rated valueA10• at 48 V / Rated valueA2• at 60 V / Rated valueA2• at 60 V / Rated valueA1• at 110 V / Rated valueA1• at 125 V / Rated valueA0.9• at 220 V / Rated valueA0.3• at 440 V / Rated valueA0.14• at 600 V / Rated valueA0.14• at 600 V / Rated valueA0.1UUCSA ratings:Vielded mechanical performance [hp]• for single-phase AC motorhp3• at 101/120 V / Rated valuehp3• at 230 V / Rated valuehp7.5• for three-phase AC motorhp10• at 200/208 V / Rated valuehp15• at 200/208 V / Rated valuehp30• at 200/208 V / Rated valuehp30• at 460/480 V / Rated valuehp40• at 460/480 V / Rated valuehp40• at 460/480 V / Rated valuehp40• at 480 V / Rated valueA40	• at 600 V / Rated value	А	0.15
• at 48 V / Rated valueA2• at 60 V / Rated valueA2• at 10 V / Rated valueA1• at 125 V / Rated valueA0.9• at 220 V / Rated valueA0.3• at 440 V / Rated valueA0.14• at 600 V / Rated valueA0.14• at 600 V / Rated valueA0.1• at 200 V / Rated valueA0.1• for single-phase AC motor• at 110/120 V / Rated valuehp3• at 200 / Rated valuehp7.5• for three-phase AC motor• at 200 / Rated valuehp10• at 200 / Rated valuehp10• at 200 / Rated valuehp10• at 200 / Rated valuehp30• at 460/480 V / Rated valuehp30• at 460/480 V / Rated valuehp40• at 480 V / Rated valuehp40• at 480 V / Rated valueA40	Operating current / at DC-13		
• at 60 V / Rated valueA2• at 110 V / Rated valueA1• at 125 V / Rated valueA0.9• at 220 V / Rated valueA0.3• at 440 V / Rated valueA0.14• at 600 V / Rated valueA0.1• at 600 V / Rated valueA0.1• at 220 V / Rated valueA0.1• at 600 V / Rated valueA0.1• for single-phase AC motor• at 110/120 V / Rated valuehp3• at 230 V / Rated valuehp7.5• for three-phase AC motor• at 200/208 V / Rated valuehp10• at 220/230 V / Rated valuehp15• at 60/480 V / Rated valuehp30• at 575/600 V / Rated valuehp30• at 480 V / Rated valuehp40	• at 24 V / Rated value	А	10
· at 110 V / Rated valueA1· at 125 V / Rated valueA0.9· at 220 V / Rated valueA0.3· at 440 V / Rated valueA0.14· at 600 V / Rated valueA0.1 <b>UL/CSA ratings:UL/CSA ratings:ylelded mechanical performance [hp]</b> ··· for single-phase AC motorhp3· at 110/120 V / Rated valuehp7.5· for three-phase AC motor··· at 220/208 V / Rated valuehp10· at 220/208 V / Rated valuehp15· at 460/480 V / Rated valuehp30· at 575/600 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motorA40	• at 48 V / Rated value	А	2
· at 125 V / Rated valueA0.9· at 220 V / Rated valueA0.3· at 440 V / Rated valueA0.14· at 600 V / Rated valueA0.14· at 600 V / Rated valueA0.1UL/CSA ratings:vielded mechanical performance [hp]·· for single-phase AC motor-· at 110/120 V / Rated valuehp3· at 230 V / Rated valuehp7.5· for three-phase AC motor· at 200/208 V / Rated valuehp10· at 220/230 V / Rated valuehp15· at 460/480 V / Rated valuehp30· at 600 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motorA40	• at 60 V / Rated value	А	2
• at 220 V / Rated valueA0.3• at 440 V / Rated valueA0.14• at 600 V / Rated valueA0.1ULCSA ratings:yielded mechanical performance [hp]•• for single-phase AC motorhp3• at 110/120 V / Rated valuehp3• at 230 V / Rated valuehp7.5• for three-phase AC motorhp10• at 200/208 V / Rated valuehp15• at 200/208 V / Rated valuehp30• at 200/208 V / Rated valuehp30• at 600 V / Rated valuehp40Full-Hoad current (FLA) / for three-phase AC motorA40	• at 110 V / Rated value	А	1
• at 440 V / Rated valueA0.14• at 600 V / Rated valueA0.1UL/CSA ratings:vielded mechanical performance [hp]-• for single-phase AC motorhp3• at 110/120 V / Rated valuehp3• at 230 V / Rated valuehp7.5• for three-phase AC motor• at 200/208 V / Rated valuehp10• at 220/230 V / Rated valuehp15• at 60/480 V / Rated valuehp30• at 575/600 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motorA40	• at 125 V / Rated value	А	0.9
• at 600 V / Rated valueA0.1UL/CSA ratings:yielded mechanical performance [hp]-• for single-phase AC motor-• at 110/120 V / Rated valuehp• at 230 V / Rated valuehp• at 230 V / Rated valuehp• for three-phase AC motor-• at 200/208 V / Rated valuehp• at 220/230 V / Rated valuehp• at 220/230 V / Rated valuehp• at 460/480 V / Rated valuehp• at 480 V / Rated valuehp• at 480 V / Rated valueA• at 480 V / Rated valueA	• at 220 V / Rated value	А	0.3
UL/CSA ratings:yielded mechanical performance [hp]• for single-phase AC motorhp• at 110/120 V / Rated valuehp• at 230 V / Rated valuehp• at 230 V / Rated valuehp• for three-phase AC motor-• at 200/208 V / Rated valuehp• at 200/208 V / Rated valuehp• at 220/230 V / Rated valuehp• at 220/230 V / Rated valuehp• at 460/480 V / Rated valuehp• at 460/480 V / Rated valuehp• at 460/480 V / Rated valuehp• at 480 V / Rated valueA• at 480 V / Rated valueA	• at 440 V / Rated value	А	0.14
yielded mechanical performance [hp]Image: space	• at 600 V / Rated value	А	0.1
<ul> <li>for single-phase AC motor</li> <li>at 110/120 V / Rated value</li> <li>hp 3</li> <li>at 230 V / Rated value</li> <li>hp 7.5</li> <li>for three-phase AC motor</li> <li>at 200/208 V / Rated value</li> <li>hp 10</li> <li>at 220/230 V / Rated value</li> <li>hp 15</li> <li>at 460/480 V / Rated value</li> <li>hp 30</li> <li>at 575/600 V / Rated value</li> <li>hp 40</li> </ul>	UL/CSA ratings:		
· at 110/120 V / Rated valuehp3· at 230 V / Rated valuehp7.5· for three-phase AC motor· at 200/208 V / Rated valuehp10· at 220/230 V / Rated valuehp15· at 460/480 V / Rated valuehp30· at 575/600 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motorA40	yielded mechanical performance [hp]		
· at 230 V / Rated valuehp7.5· for three-phase AC motorhp10· at 200/208 V / Rated valuehp15· at 220/230 V / Rated valuehp30· at 460/480 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motorA40	for single-phase AC motor		
<ul> <li>for three-phase AC motor</li> <li>at 200/208 V / Rated value</li> <li>hp</li> <li>10</li> <li>hp</li> <li>at 220/230 V / Rated value</li> <li>hp</li> <li>15</li> <li>at 460/480 V / Rated value</li> <li>hp</li> <li>30</li> <li>at 575/600 V / Rated value</li> <li>hp</li> <li>40</li> </ul> Full-load current (FLA) / for three-phase AC motor <ul> <li>A 480 V / Rated value</li> <li>A</li> </ul>	• at 110/120 V / Rated value	hp	3
• at 200/208 V / Rated value       hp       10         • at 220/230 V / Rated value       hp       15         • at 460/480 V / Rated value       hp       30         • at 575/600 V / Rated value       hp       40	• at 230 V / Rated value	hp	7.5
• at 220/230 V / Rated valuehp15• at 460/480 V / Rated valuehp30• at 575/600 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motor• at 480 V / Rated valueA40	for three-phase AC motor		
• at 460/480 V / Rated valuehp30• at 575/600 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motorK• at 480 V / Rated valueA40	• at 200/208 V / Rated value	hp	10
• at 575/600 V / Rated valuehp40Full-load current (FLA) / for three-phase AC motorA40• at 480 V / Rated valueA40	• at 220/230 V / Rated value	hp	15
Full-load current (FLA) / for three-phase AC motor       • at 480 V / Rated value     A     40	• at 460/480 V / Rated value	hp	30
• at 480 V / Rated value A 40	• at 575/600 V / Rated value	hp	40
	Full-load current (FLA) / for three-phase AC motor		
• at 600 V / Rated value A 41	• at 480 V / Rated value	А	40
	• at 600 V / Rated value	А	41
Contact rating / of the auxiliary contacts / acc. to UL A600 / P600	Contact rating / of the auxiliary contacts / acc. to UL		A600 / P600
Short-circuit:	Short-circuit:		
Design of the fuse link	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 auxiliary switch / required		fuse gL/gG: 10 A
for short-circuit protection of the main circuit	<ul> <li>for short-circuit protection of the main circuit</li> </ul>		
• with type of assignment 1 / required gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A	with type of assignment 1 / required		gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A
Installation/ mounting/ dimensions:	Installation/ mounting/ dimensions:		
mounting position       +/-180° rotation possible on vertical mounting surface         +/-180° rotation possible on vertical mounting surface       +/- 22.5° on vertical mounting surface	mounting position		

Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Width	mm	55
Height	mm	113.4
Depth	mm	130
Spacing required / with side-by-side mounting	mm	0
Connections/ terminals:		
Design of the electrical connection		
for main current circuit		screw-type terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>		screw-type terminals
Type of connectable conductor cross-section		
for main contacts		
single or multi-stranded		2x (1 35 mm²), 1x (1 50 mm²)
<ul> <li>finely stranded / with core end processing</li> </ul>		2x (1 25 mm²), 1x (1 35 mm²)
for AWG conductors / for main contacts		2x (18 2), 1x (18 1)
Type of connectable conductor cross-section		
<ul> <li>for auxiliary contacts</li> </ul>		
single or multi-stranded		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
<ul> <li>finely stranded / with core end processing</li> </ul>		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>for AWG conductors / for auxiliary contacts</li> </ul>		2x (20 16), 2x (18 14)
Safety related data:		
Proportion of dangerous failures		
• with low demand rate / acc. to SN 31920	%	40
• with high demand rate / acc. to SN 31920	%	73
Product function		
• Mirror contact acc. to IEC 60947-4-1		Yes
positively driven operation acc. to IEC 60947-5-1		No
Certificates/ approvals:		
General Product Approval other		
	on	

#### Further information:

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

## Industry Mall (Online ordering system)

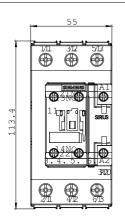
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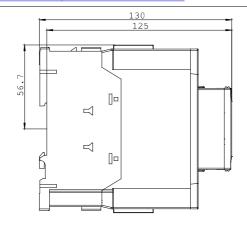
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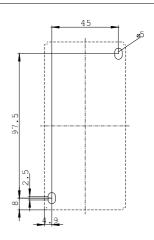
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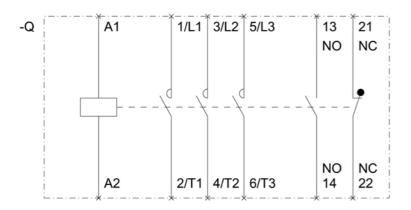
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RT2035-1AC20/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RT2035-1AC20









last change:

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