# **SIEMENS**

Product data sheet 3RT2015-1BB41



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

General technical data:		
product brand name		SIRIUS
Size of the contactor		S00
Product extension / auxiliary switch		Yes
Product extension / function module for communication		No
Protection class IP / on the front		IP20
Protection against electrical shock		finger-safe
Degree of pollution		3
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
during storage	°C	-55 +80
during operating	°C	-25 +60
Shock resistance		
at rectangular impulse		
• at DC		6,7g / 5 ms, 4,2g / 10 ms
at sine pulse		
• at DC		10,5g / 5 ms, 6,6g / 10 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690

Maximum permissible voltage for protective separation / between coil and main contacts / in accordance with EN 60947-1	V	400
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
<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
Operating current / at AC-1 / at 400 V		
• at 40 °C ambient temperature / rated value	Α	18
• at 60 °C ambient temperature / rated value	Α	16
Connectable conductor cross-section / in main circuit		
• at AC-1		
• at 40 °C / minimum permissible	m²	2.5
• at 60 °C / minimum permissible	m²	2.5
Operational current		
• at AC-2 / at 400 V / rated value	А	7
• at AC-3		
• at 400 V / rated value	Α	7
at 500 V / rated value	Α	6
• at 690 V / rated value	Α	4.9
• at AC-4 / at 400 V / rated value	Α	6.5
Operational current		
• with 1 current path / at DC-1		
at 24 V / rated value	Α	15
at 110 V / rated value	Α	1.5
• at 220 V / rated value	Α	0.6
• at 440 V / rated value	Α	0.42
• at 600 V / rated value	Α	0.42
• with 2 current paths in series / at DC-1		
• at 24 V / rated value	Α	15
• at 110 V / rated value	Α	8.4
• at 220 V / rated value	Α	1.2
• at 440 V / rated value	Α	0.6
• at 600 V / rated value	Α	0.5
• with 3 current paths in series / at DC-1		
• at 24 V / rated value	Α	15
• at 110 V / rated value	Α	15

• at 220 V / rated value	Α	15
• at 440 V / rated value	Α	0.9
• at 600 V / rated value	Α	0.7
Operational current		
• with 1 current path / at DC-3 / at DC-5		
• at 24 V / rated value	Α	15
• at 110 V / rated value	Α	0.1
• with 2 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	Α	15
• at 110 V / rated value	Α	0.25
• with 3 current paths in series / at DC-3 / at DC-5		
• at 24 V / rated value	Α	15
• at 110 V / rated value	Α	15
• at 220 V / rated value	Α	1.2
• at 440 V / rated value	Α	0.14
• at 600 V / rated value	Α	0.14
Service power		
• at AC-1		
• at 230 V / rated value	kW	6.3
• at 400 V / rated value	kW	11
• at 500 V / rated value	kW	13.8
• at 690 V / rated value	kW	19
• at AC-2 / at 400 V / rated value	kW	3
• at AC-3		
• at 230 V / rated value	kW	1.5
• at 400 V / rated value	kW	3
• at 690 V / rated value	kW	4
at AC-4 / at 400 V / rated value	kW	3
Active power loss / at AC-3 / at 400 V / with rated operational current value / per conductor	W	0.4
Off-load operating frequency		
• at AC	1/h	10,000
• at DC	1/h	10,000
Frequency of operation		
• at AC-1 / according to IEC 60947-6-2	1/h	1,000
• at AC-2 / according to IEC 60947-6-2	1/h	750
• at AC-3 / according to IEC 60947-6-2	1/h	750
• at AC-4 / according to IEC 60947-6-2	1/h	250

#### Control circuit:

	_	
Type of voltage / of the controlled supply voltage		DC
Control supply voltage		
• for DC / rated value	V	24
operating range factor control supply voltage rated value / of the magnet coil		
• for DC		0.8 1.1
Pull-in power / of the solenoid / for DC	W	4
Holding power / of the solenoid / for DC	W	4
Closing delay		
• at DC	ms	30 100
Opening delay		
• at DC	ms	7 13
Arcing time	ms	10 15
Residual current / of electronics / for control with signal <0>		
• at 230 V / with AC / maximum permissible	mA	3
• at 24 V / with DC / maximum permissible	mA	10
Auxiliary circuit:		
Contact reliability / of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
Number of NC contacts / for auxiliary contacts / instantaneous switching		0
Number of NO contacts / for auxiliary contacts / instantaneous switching		1
Operating current / of the auxiliary contacts		

switching		C .
Number of NO contacts / for auxiliary contacts / instantaneous switching		1
Operating current / of the auxiliary contacts		
• [nicht versorgt: PMD_ABP551_001_000]		
•	Α	2
• at 690 V	Α	1
UL/CSA ratings:		
yielded mechanical performance (hp)		

yielded mechanical performance (hp)		
<ul> <li>for single-phase squirrel cage motors</li> </ul>		
• at 110/120 V / rated value	hp	0.25
• at 230 V / rated value	hp	0.75
for three-phase squirrel cage motors		
• at 200/208 V / rated value	hp	1.5
• at 220/230 V / rated value	hp	2
• at 460/480 V / rated value	hp	3
• at 575/600 V / rated value	hp	5
Operating current (FLA) / for three-phase squirrel cage motors		
• at 480 V / rated value	Α	4.8
• at 600 V / rated value	Α	6.1

Contact rating designation / for auxiliary contacts / according to UL		A600 / Q600
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		
with type of assignment 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:		
mounting position		+/-180° rotation possible on vertical mounting surface can be tilted forward and backward by +/- 22.5° on vertical mounting surface
Type of mounting		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	73
Distance, to be maintained, to the ranks assembly / sidewards	mm	0
Connections:		
Design of the electrical connection		
for main current circuit		screw-type terminals
for auxiliary and control current circuit		screw-type terminals
Type of the connectable conductor cross-section		
for main contacts		
• solid		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
• finely stranded		
with conductor end processing		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• for AWG conductors / for main contacts		2x (20 16), 2x (18 14), 2x 12
for auxiliary contacts		
• solid		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
• finely stranded		

Sicherheitsrelevante Kenngrößen:	
B10 value / with high demand rate	
• according to SN 31920	1,000,000

• with conductor end processing
• for AWG conductors / for auxiliary contacts

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (20 ... 16), 2x (18 ... 14), 2x 12

T1 value / for proof test interval or service life		
according to IEC 61508	а	20
Proportion of dangerous failures		
<ul> <li>with low demand rate / according to SN 31920</li> </ul>	%	40
with high demand rate / according to SN 31920	%	73
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	100
Product function		
mirror contact to IEC 60947-4-1		Yes
• comment		with 3RH29
<ul> <li>positively driven operation to IEC 60947-5-1</li> </ul>		No

# Certificates/approvals:

# **General Product Approval**

Functional Safety / Safety of Machinery

**Declaration of** Conformity









Type Examination



#### **Test Certificates**

other

**Special Test** Certificate

Type Test Certificates/Test Report

## **Shipping Approval**













# **Shipping Approval**





other Confirmation



## **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

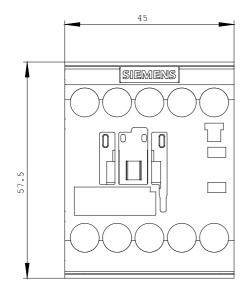
http://www.siemens.com/cax

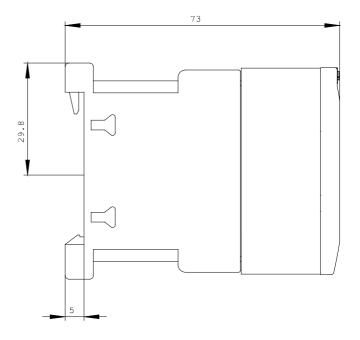
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

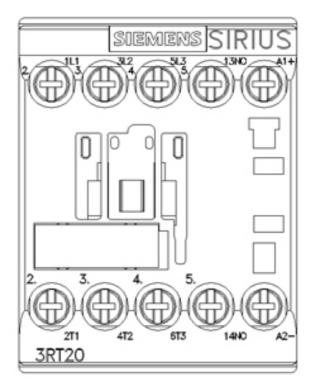
http://support.automation.siemens.com/WW/view/en/3RT2015-1BB41/all

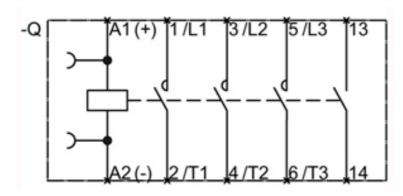
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RT2015-1BB41









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