# **SIEMENS**

Data sheet 3RT2015-1AQ01



CONTACTOR, AC-3, 3KW/400V, 1NO, AC 380V, 50/60 HZ, 3-POLE, SZ S00 SCREW TERMINAL

Figure similar

product brand name	SIRIUS
Product designation	3RT2 contactor

General technical data:		
Insulation voltage		
Rated value	V	690
Degree of pollution		3
Surge voltage resistance Rated value	kV	6
Mechanical service life (switching cycles)		
<ul> <li>of the contactor typical</li> </ul>		30 000 000
<ul> <li>of the contactor with added electronics- compatible auxiliary switch block typical</li> </ul>		5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>		10 000 000
Thermal short-time current restricted to 10 s	Α	56
Protection class IP		
• on the front		IP20
of the terminal		IP20
Equipment marking		
• acc. to DIN EN 61346-2		Q
• acc. to DIN EN 81346-2		Q

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
Operating voltage	

<ul> <li>at AC-3 Rated value maximum</li> </ul>	V	690
Operating current		
• at AC-1		
<ul> <li>— at 400 V at ambient temperature 40 °C</li> <li>Rated value</li> </ul>	А	18
<ul> <li>up to 690 V at ambient temperature 40 °C</li> <li>Rated value</li> </ul>	Α	18
<ul> <li>up to 690 V at ambient temperature 60 °C</li> <li>Rated value</li> </ul>	Α	16
• at AC-2 at 400 V Rated value	Α	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
Operating 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
• at DC-3 at DC-5		
— at 24 V Rated value	Α	15
— at 110 V Rated value	Α	0.1
Operating current 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
• at DC-3 at DC-5		
— at 110 V Rated value	Α	0.25
— at 24 V Rated value	Α	15
Operating current 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

• at DC-3 at DC-5		
— at 110 V Rated value	Α	15
— at 220 V Rated value	Α	1.2
— at 24 V Rated value	Α	15
— at 440 V Rated value	Α	0.14
— at 600 V Rated value	Α	0.14
Operating power		
• at AC-1 at 400 V Rated value	kW	11
• at AC-2 at 400 V Rated value	kW	3
• at AC-4 at 400 V Rated value	kW	3
Operating power		
• at AC-1		
— at 230 V at 60 °C Rated value	kW	6
— at 230 V Rated value	kW	6.3
— at 400 V at 60 °C Rated value	kW	10.5
— at 690 V at 60 °C Rated value	kW	18
— at 690 V Rated value	kW	19
• 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
Operating power for ≥ 200000 operating cycles at AC-4		
• at 400 V Rated value	kW	1.15
• at 690 V Rated value	kW	1.15
Operating frequency		
• at AC-3 maximum	1/h	750
Control circuit/ Control:		
Type of voltage of the control supply voltage		AC
Control supply voltage with AC		
● at 50 Hz Rated value	V	380
• at 60 Hz Rated value	V	380
Operating range factor control supply voltage rated		
value of the magnet coil with AC		0.0 4.4
• at 50 Hz		0.8 1.1
● at 60 Hz		0.85 1.1
Auxiliary circuit:		
Number of NC contacts		
• for auxiliary contacts		
— instantaneous contact		0
Number of NO contacts		

for auxiliary contacts		
instantaneous contact		1
Product expansion Auxiliary switch		Yes
Operating current at AC-15	_	
• at 230 V Rated value	Α	10
● at 400 V Rated value	Α	3
• at 690 V Rated value	Α	1
Operating current		
• at DC-12 at 125 V Rated value	Α	2
• at DC-12 at 220 V Rated value	Α	1
• at DC-12 at 600 V Rated value	Α	0.15
● at DC-13 at 125 V Rated value	Α	0.9
• at DC-13 at 220 V Rated value	Α	0.3
• at DC-13 at 600 V Rated value	Α	0.1
Operating current		
• at DC-12		
— at 60 V Rated value	Α	6
— at 110 V Rated value	Α	3
• at DC-13		
— at 24 V Rated value	Α	10
— at 60 V Rated value	Α	2
— at 110 V Rated value	Α	1
Contact reliability of the auxiliary contacts		1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
● at 480 V Rated value	Α	4.8
● at 600 V Rated value	Α	6.1
yielded mechanical performance [hp]		
<ul> <li>for single-phase AC motor at 110/120 V Rated value</li> </ul>	metric hp	0.25
<ul> <li>for single-phase AC motor at 230 V Rated value</li> </ul>	metric hp	0.75
<ul> <li>for three-phase AC motor at 200/208 V Rated value</li> </ul>	metric hp	1.5
• for three-phase AC motor at 220/230 V Rated value	metric hp	2
• for three-phase AC motor at 460/480 V Rated value	metric hp	3
• for three-phase AC motor at 575/600 V Rated	metric	5

Short-circuit:

Contact rating of the auxiliary contacts acc. to UL

A600 / Q600

hp

#### Design of the fuse link

- for short-circuit protection of the main circuit
  - with type of assignment 1 required
  - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

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

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A

fuse gL/gG: 10 A

mounting position		+/-180° rotation possible on vertical mounting
		surface; can be tilted forward and backward by +/-
		22.5° on vertical mounting surface
Mounting type		screw and snap-on mounting onto 35 mm standard
		mounting rail according to DIN EN 50022
<ul> <li>Side-by-side mounting</li> </ul>		Yes
Height	mm	57.5
Width	mm	45
Depth	mm	73
Required spacing		
<ul><li>with side-by-side mounting</li></ul>		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— downwards	mm	0
— at the side	mm	0
• for grounded parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— at the side	mm	6
— downwards	mm	0
• for live parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— downwards	mm	0
— at the side	mm	6

Connections/ Terminals:	
Type of 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		
<ul><li>— single or multi-stranded</li></ul>		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 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 main contacts</li> </ul>		2x (20 16), 2x (18 14), 2x 12
<ul> <li>for auxiliary contacts</li> </ul>		
<ul><li>— single or multi-stranded</li></ul>		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 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), 2x 12
Apparent pick-up power of the magnet coil with AC		
● at 50 Hz	V·A	27
● at 60 Hz	V·A	31.7

Safety related data:		
B10 value with high demand rate acc. to SN 31920		1 000 000
Proportion of dangerous failures		
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	%	40
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	%	73
Failure rate [FIT] with low demand rate acc. to SN	FIT	100
31920		
Product function Mirror contact acc. to IEC 60947-4-1		Yes
• Note		with 3RH29
T1 value for proof test interval or service life acc. to	у	20
IEC 61508		
Protection against electrical shock		finger-safe

Mechanical data:		
Size of contactor		S00
Ambient conditions:		
Installation altitude at height above sea level	m	2 000
mavimum		

Installation altitude at height above sea level	m	2 000
maximum		
Ambient temperature		
<ul><li>during operation</li></ul>	°C	-25 +60
during storage	°C	-55 <b>+</b> 80

## Certificates/ approvals:

#### **General Product Approval**

Declaration of Conformity

Test Certificates











Special Test Certificate

### **Shipping Approval**













**Shipping Approval** 

other





Environmental Confirmations



#### Further information

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

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

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20151AQ01

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

 $\underline{\text{http://support.automation.siemens.com/WW/view/en/3RT20151AQ01/all}}$ 

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT20151AQ01&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT20151AQ01&lang=en</a>



