SIEMENS

Data sheet

3RT2015-1AQ02



CONTACTOR, AC-3, 3KW/400V, 1NC, AC 380V 50/60HZ, 3-POLE, SZ S00 SCREW TERMINAL

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)			
 of the contactor typical 		30 000 000	
• of the contactor with added electronics-		5 000 000	
compatible auxiliary switch block typical			
 of the contactor with added auxiliary switch 		10 000 000	
block typical			
Thermal short-time current restricted to 10 s	A	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	
1ain 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	

 at AC-3 Rated value maximum 	V	690
Operating current		
• at AC-1		
— at 400 V at ambient temperature 40 °C Rated value	A	18
— up to 690 V at ambient temperature 40 °C Rated value	А	18
— up to 690 V at ambient temperature 60 °C Rated value	А	16
 at AC-2 at 400 V Rated value 	А	7
● at AC-3		
— at 400 V Rated value	А	7
— at 500 V Rated value	А	6
— at 690 V Rated value	А	4.9
• at AC-4 at 400 V Rated value	А	6.5
Operating current with 1 current path		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	1.5
— at 220 V Rated value	А	0.6
— at 440 V Rated value	А	0.42
— at 600 V Rated value	А	0.42
• at DC-3 at DC-5		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	0.1
Operating current with 2 current paths in series		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	8.4
— at 220 V Rated value	А	1.2
— at 440 V Rated value	А	0.6
— at 600 V Rated value	А	0.5
• at DC-3 at DC-5		
— at 110 V Rated value	А	0.25
— at 24 V Rated value	А	15
Operating current with 3 current paths in series		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	15
— at 220 V Rated value	А	15
— at 440 V Rated value	А	0.9
— at 600 V Rated value	А	0.7

• at DC-3 at DC-5 - - at 110 V Rated value A 15 - at 22 V Rated value A 15 - at 24 V Rated value A 0.14 - at 440 V Rated value A 0.14 - at 440 V Rated value A 0.14 - at 600 V Rated value A 0.14 - at AC-1 at 400 V Rated value kW 1 • at AC-1 at 400 V Rated value kW 3 • at AC-1 at 400 V Rated value kW 6 - at 230 V at 60 °C Rated value kW 6.3 - at 230 V at 60 °C Rated value kW 10.5 - at 230 V at 60 °C Rated value kW 19 - at 230 V at 60 °C Rated value kW 19 - at 230 V Rated value kW 15 - at 230 V Rated value kW 15 - at 230 V Rated value kW 15 - at 400			
Label ControlA1.2- at 220 V Rated valueA15- at 400 V Rated valueA0.14- at 600 V Rated valueA0.14Operating power at AC-1 at 400 V Rated valueKW3• at AC-2 at 400 V Rated valueKW3• at AC-4 at 400 V Rated valueKW3• at AC-4 at 400 V Rated valueKW6- at 230 V Rated valueKW6- at 230 V Rated valueKW6.3- at 400 V at 60 "C Rated valueKW6.3- at 400 V at 60 "C Rated valueKW10.5- at 400 V at 60 "C Rated valueKW19- at 400 V at 60 "C Rated valueKW19- at 400 V at 60 "C Rated valueKW15- at 690 V Rated valueKW15- at 400 V Rated valueKW1.5- at 400 V Rated valueKW1.5- at 400 V Rated valueKW1.15Operating power for ≥ 200000 operating cycles at AC-4-AC-4• at 400 V Rated valueKW1.15Operating frequency• at 400 V Rated valueKW1.15Operating power for ≥ 200000 operating cycles at AC-4-• at 400 V Rated valueKW1.15Operating frequency• at 600 V Rated valueV380• at 600 V Rated valueV380• at 60 Hz• at 60 Hz• at	• at DC-3 at DC-5		
	— at 110 V Rated value	А	15
	— at 220 V Rated value	А	1.2
	— at 24 V Rated value	А	15
Operating power integration of the second of the secon	— at 440 V Rated value	А	0.14
• 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 • at AC-1 KW 6 • at AC-1 - - • at AC-1 KW 6 • at AC-1 KW 6.3 - at 230 V Rated value KW 6.3 - at 400 V at 60 °C Rated value KW 10.5 - at 690 V Rated value KW 18 - at 690 V Rated value KW 19 • at AC-3 - - - at 230 V Rated value KW 15 - at 230 V Rated value KW 15 - at 400 V Rated value KW 15 - at 400 V Rated value KW 115 Operating power for > 20000 operating cycles at AC-4 - • at 400 V Rated value KW 115 • at 600 V Rated value KW 115 • at 600 V Rated value V 380 • at 600 V Rated value V 380 • at 600 V Rated value V 380	— at 600 V Rated value	А	0.14
at AC-2 at 400 V Rated valueKW3• at AC-2 at 400 V Rated valueKW3• at AC-1 at 230 V at 60 °C Rated valueKW6- at 230 V Rated valueKW6.3- at 230 V Rated valueKW10.5- at 400 V Rated valueKW10.5- at 690 V Rated valueKW18- at 690 V Rated valueKW19• at AC-3 at 230 V Rated valueKW3- at 690 V Rated valueKW3- at 230 V Rated valueKW3- at 400 V Rated valueKW4Operating power for 2 20000 operating cycles at AC-3 at 400 V Rated valueKW1.15- at 400 V Rated valueKW1.15• at 600 V Rated valueV380• at 600 V Rated valueV380• at 60 Hz Rated valueV380• at 50 Hz Rated valueV380• at 50 Hz0.8 1.1• at 60 Hz0.8 1.1 <tr< td=""><td>Operating power</td><td>-</td><td></td></tr<>	Operating power	-	
at AC-4 at 400 V Rated value KW 3 Operating power - at 230 V Rated value KW 6 - at 230 V Rated value KW 6.3 - at 400 V at 60 °C Rated value KW 10.5 - at 600 V at 60 °C Rated value KW 10.5 - at 600 V at 60 °C Rated value KW 10.5 - at 600 V at 60 °C Rated value KW 10.5 - at 600 V Rated value KW 19 • at 600 V Rated value KW 10 - at 600 V Rated value KW 10.5 - at 600 V Rated value KW 10.5 - at 600 V Rated value KW 1.5 - at 600 V Rated value KW 3 - at 600 V Rated value KW 1.5 - at 600 V Rated value KW 1.15 Operating power for 2 200000 operating cycles at AC-3 - AC-4 - - • at 400 V Rated value KW 1.15 • at 400 V Rated value KW 1.15 • at 600 V Rated value KW 1.15 • at 600 V Rated value V 380 • at 60 Hz Rated value V 380 • at 60 Hz Rated value V 380 • at 60 Hz 0.8 1.1	• at AC-1 at 400 V Rated value	kW	11
Operating power • at AC-1 KW 6 - at 230 V at 60 °C Rated value KW 6.3 - at 230 V Rated value KW 6.3 - at 400 V at 60 °C Rated value KW 10.5 - at 690 V Rated value KW 18 - at 690 V Rated value KW 18 - at 690 V Rated value KW 19 • at AC-3 - - - at 230 V Rated value KW 1.5 - at 230 V Rated value KW 1.5 - at 690 V Rated value KW 3 - at 690 V Rated value KW 3 - at 690 V Rated value KW 4 Operating power for 2 200000 operating cycles at AC-3 - AC-4 - - • at 400 V Rated value KW 1.15 • at 400 V Rated value KW 1.15 • at 600 V Rated value KW 1.15 • at 60 Hz Rated value V 380 • at 60 Hz Rated value V 380 • at 60 Hz 0.8 1.1 • at 60 Hz 0.8 1.1	• at AC-2 at 400 V Rated value	kW	3
• at AC-1∨∨- at 230 V at 60 °C Rated valueKW6.3- at 230 V Rated valueKW10.5- at 400 V at 60 °C Rated valueKW18- at 690 V Rated valueKW18- at 690 V Rated valueKW1.5- at 230 V Rated valueKW1.5- at 230 V Rated valueKW3- at 230 V Rated valueKW3- at 690 V Rated valueKW1.5- at 690 V Rated valueKW4Operating power for ≥ 200000 operating cycles at AC-4KW1.15- at 690 V Rated valueKW1.15- at 690 V Rated valueV380- at 690 V Rated valueV380- at 690 V Rated valueV380- at 600 Hz Rated valueV380- at 50 Hz0.8 1.1- at 50 Hz0.8 1.1- at 60 Hz0.8 1.1 <td>• at AC-4 at 400 V Rated value</td> <td>kW</td> <td>3</td>	• at AC-4 at 400 V Rated value	kW	3
- at 230 V at 60 °C Rated valueKW6- at 230 V Rated valueKW6.3- at 400 V at 60 °C Rated valueKW10.5- at 690 V at 60 °C Rated valueKW18- at 690 V Rated valueKW19• at AC-3 at 230 V Rated valueKW3- at 690 V Rated valueKW3- at 690 V Rated valueKW4Operating power for 2 00000 operating cycles at AC-4-• at 400 V Rated valueKW1.15• at 690 V Rated valueKW1.15• at 600 V Rated valueKW1.15• at 600 V Rated valueKW1.15• at 600 V Rated valueKW1.15• at 60 V Rated valueV380• at 60 V Rated valueV380• at 60 Hz Rated valueV380• at 60 Hz Rated valueV380• at 60 Hz Rated valueV380• at 60 Hz0.8 1.1• at 60 Hz0.8	Operating power	-	
Initial controlKW6.3- at 230 V Rated valueKW10.5- at 690 V at 60 °C Rated valueKW18- at 690 V Rated valueKW19• at AC-3 at 230 V Rated valueKW1.5- at 400 V Rated valueKW3- at 690 V Rated valueKW4Operating power for ≥ 20000 operating cycles at AC-4-AC-4• at 400 V Rated valueKW1.15• at 690 V Rated valueKW1.15• at 600 V Rated valueKW1.15• at 600 V Rated valueKW1.15• at 400 V Rated valueV380• at 400 V Rated valueV380• at 60 Hz Rated valueV380• at 60 Hz Rated valueV380• at 60 Hz0.8 1.1• at 60 Hz	• at AC-1		
$ \begin{array}{ c c c } - at 60 \lor at 60 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	— at 230 V at 60 °C Rated value	kW	6
- 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 KW 1.15 • 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: ////////////////////////////////////	— at 230 V Rated value	kW	6.3
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 ≥ 20000 operating cycles at AC-4 - - • at 400 V Rated value kW 1.15 • at 400 V Rated value kW 1.15 • at 690 V Rated value kW 1.15 • at 690 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 • at 50 Hz ated value V 380 • at 60 Hz Rated value V 380 • at 50 Hz 0.8 1.1 • at 60 Hz 0.8 1.1	— at 400 V at 60 °C Rated value	kW	10.5
at AC-3Image from the set of t	— at 690 V at 60 °C Rated value	kW	18
at 230 V Rated valueKW1.5 at 400 V Rated valueKW3 at 690 V Rated valueKW4Operating power for > 200000 operating cycles at AC-4KW1.15• at 400 V Rated valueKW1.15• at 690 V Rated valueKW1.15• at AC-3 maximum1/h750Control circuit/ Control:AC• at AC-3 maximum1/h750Control supply voltage with AC • at 50 Hz Rated valueV380• at 60 Hz Rated valueV380• at 60 Hz0.8 1.10.8 1.1• at 60 Hz0.8 1.10.8 1.1Auxiliary circuit:Image: Simple coll with AC • at 60 Hz1	— at 690 V Rated value	kW	19
	• at AC-3		
	— at 230 V Rated value	kW	1.5
Operating power for ≥ 200000 operating cycles at AC-4 KW 1.15 • at 400 V Rated value KW 1.15 • at 690 V Rated value KW 1.15 Operating frequency • at AC-3 maximum 1/h • 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 • at 60 Hz Rated value V 380 Operating range factor control supply voltage rated value of the magnet coil with AC 0.8 1.1 • at 50 Hz 0.8 1.1 0.85 1.1	— at 400 V Rated value	kW	3
AC-4Image: control supply control supply voltage rated valueKW1.15• at 690 V Rated valueKW1.15Operating frequency • at AC-3 maximum1/h750Control circuit/ Control:750Type of voltage of the control supply voltageACControl supply voltage with AC • at 50 Hz Rated valueV380Operating range factor control supply voltage rated value of the magnet coil with AC 	— at 690 V Rated value	kW	4
• at 690 V Rated value kW 1.15 Operating frequency • at AC-3 maximum 1/h 750 • at AC-3 maximum 1/h 750 Control circuit/ Control: Type of voltage of the control supply voltage • at 50 Hz Rated value V 380 • 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 0.8 1.1 • at 50 Hz 0.8 1.1 0.85 1.1 Auxiliary circuit: Number of NC contacts • for auxiliary contacts 1			
Operating frequency • at AC-3 maximum1/h750Control circuit/ Control:1/h750Type of voltage of the control supply voltageACControl supply voltage with AC • at 50 Hz Rated valueV380Operating range factor control supply voltage rated value of the magnet coil with AC • at 50 HzV380Operating range factor control supply voltage rated value of the magnet coil with AC • at 50 Hz0.8 1.1 0.85 1.1Auxiliary circuit:Image: State state state 0 Hz1	• at 400 V Rated value	kW	1.15
• at AC-3 maximum1/h750Control circuit/ Control:Type of voltage of the control supply voltageACControl supply voltage with ACAC• at 50 Hz Rated valueV380• at 60 Hz Rated valueV380Operating range factor control supply voltage rated value of the magnet coil with AC0.8 1.1• at 50 Hz0.8 1.1• at 60 Hz <td>• at 690 V Rated value</td> <td>kW</td> <td>1.15</td>	• at 690 V Rated value	kW	1.15
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 V 380 • at 50 Hz 0.8 1.1 0.85 1.1 Auxiliary circuit: V 0.85 1.1 Auxiliary contacts 1 1	Operating frequency	-	
Type of voltage of the control supply voltageACControl supply voltage with AC380• at 50 Hz Rated valueV• at 60 Hz Rated valueVOperating range factor control supply voltage rated value of the magnet coil with ACV• at 50 Hz0.8 1.1• at 60 Hz0.85 1.1• at 60 HzV• at 60 Hz1	• at AC-3 maximum	1/h	750
Control supply voltage with ACV380• at 50 Hz Rated valueV380• at 60 Hz Rated valueV380Operating range factor control supply voltage rated value of the magnet coil with ACV380• at 50 Hz0.8 1.10.8 1.1• at 60 Hz0.8 1.10.85 1.1• at 60 HzV1			
• at 50 Hz Rated valueV380• at 60 Hz Rated valueV380Operating range factor control supply voltage rated value of the magnet coil with ACV380• at 50 Hz0.8 1.1• at 60 Hz0.85 1.1Auxiliary circuit:VNumber of NC contacts • for auxiliary contacts — instantaneous contactIImage: Contact of NameI• at at at a contact of NameI• at a contact of NameI			AC
• at 60 Hz Rated valueV380Operating range factor control supply voltage rated value of the magnet coil with ACV380• at 50 Hz0.8 1.10.8 1.1• at 60 Hz0.85 1.10.85 1.1Auxiliary circuit:V1Number of NC contacts • for auxiliary contacts — instantaneous contact1		V	290
Operating range factor control supply voltage rated value of the magnet coil with AC 0.8 • at 50 Hz 0.8 • at 60 Hz 0.85 Auxiliary circuit: Number of NC contacts • for auxiliary contacts 1		-	
value of the magnet coil with AC0• at 50 Hz0.8 1.1• at 60 Hz0.85 1.1Auxiliary circuit:Number of NC contacts• for auxiliary contacts1		V	380
• at 60 Hz • for auxiliary circuit: • for auxiliary contacts • for auxiliary contacts • instantaneous contact 1			
Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact 1	● at 50 Hz		0.8 1.1
Number of NC contacts • for auxiliary contacts — instantaneous contact 1	● at 60 Hz		0.85 1.1
for auxiliary contacts instantaneous contact 1			
— instantaneous contact 1			
	-		
Number of NO contacts			1
	Number of NO contacts		

 for auxiliary contacts 		
— instantaneous contact		0
Product expansion Auxiliary switch		Yes
Operating current at AC-15	-	
• at 230 V Rated value	А	10
• at 400 V Rated value	А	3
• at 690 V Rated value	А	1
Operating current	-	
• at DC-12 at 125 V Rated value	А	2
 at DC-12 at 220 V Rated value 	А	1
• at DC-12 at 600 V Rated value	А	0.15
• at DC-13 at 125 V Rated value	А	0.9
• at DC-13 at 220 V Rated value	А	0.3
• at DC-13 at 600 V Rated value	А	0.1
Operating current		
• at DC-12		
— at 60 V Rated value	А	6
— at 110 V Rated value	А	3
• at DC-13		
— at 24 V Rated value	А	10
— at 60 V Rated value	А	2
— at 110 V Rated value	А	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	А	4.8
• at 600 V Rated value	А	6.1
yielded mechanical performance [hp]		
 for single-phase AC motor at 110/120 V Rated value 	metric hp	0.25
 for single-phase AC motor at 230 V Rated value 	metric hp	0.75
 for three-phase AC motor at 200/208 V Rated value 	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 value 	metric hp	5
Contact rating of the auxiliary contacts acc. to UL		A600 / Q600
Short-circuit:		

Short-circuit:

Design of the fuse link		
 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
— with type of assignment 2 required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A
 for short-circuit protection of the auxiliary switch required 		fuse gL/gG: 10 A
nstallation/ mounting/ dimensions:		
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
Side-by-side mounting		Yes
Height	mm	57.5
Width	mm	45
Depth	mm	73
Required spacing		
 with side-by-side mounting 		
— 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		screw type terminals
for main current circuit		screw-type terminals
 for auxiliary and control current circuit 		screw-type terminals

 for main contacts 		
— single or multi-stranded		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
- finely stranded with core 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 		
— single or multi-stranded		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
— finely stranded with core 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
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	-	
 with low demand rate acc. to SN 31920 	%	40
 with high demand rate acc. to SN 31920 	%	73
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	100
Product function Mirror contact acc. to IEC 60947-4-1	-	Yes
T1 value for proof test interval or service life acc. to IEC 61508	У	20
Protection against electrical shock		finger-safe
Mechanical data:		
Size of contactor		S00
Ambient conditions:		
Installation altitude at height above sea level	m	2 000
maximum		
Ambient temperature		
 during operation 	°C	-25 +60
• during storage	°C	-55 +80
Certificates/ approvals:		

General Prod	luct Approval			Declaration of Conformity	Test Certificates
	(SA)	EHC		EG-Konf.	Special Test Certificate
Shipping App	proval				
ABS	BUREAU VERITAS		GL GL	Lloyd's Register	PRS
Shipping App	proval	other			
RINA	RMRS	Environmental Confirmations			

⁻urther information

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

Industry Mall (Online ordering system)

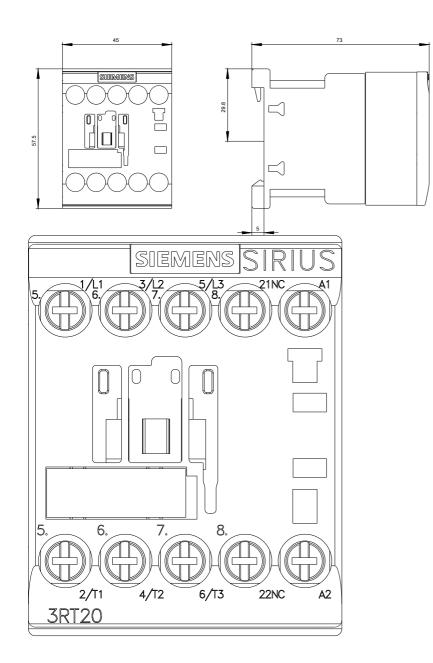
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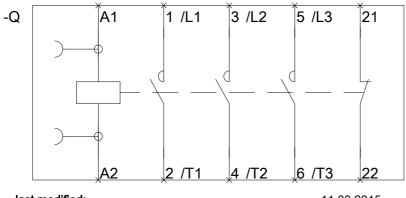
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