

COUPL. CONT., AC-3, 3KW/400V, 1NO, 24 V DC, 0.7...1.25*US, W.
INTEGRATED DIODE, 3-POLE SIZE S00, SCREW TERMINALS
SUITABLE FOR PLC OUTPUTS



product brandname	SIRIUS
Product designation	Coupling relay
Product type designation	3RT2
General technical data	
Size of contactor	S00
Product extension	
• function module for communication	No
• Auxiliary switch	No
Insulation voltage	
• rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• between coil and main contacts acc. to EN 60947-1	400 V
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Shock resistance at rectangular impulse	
• at DC	6,7g / 5 ms, 4,2g / 10 ms

Shock resistance with sine pulse	
• at DC	10,5g / 5 ms, 6,6g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	30 000 000
Ambient conditions	
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
Main circuit	
Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Operating voltage	
• at AC-3 rated value maximum	690 V
Operating current	
• at AC-1 at 400 V	
— at ambient temperature 40 °C rated value	18 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	18 A
— up to 690 V at ambient temperature 60 °C rated value	16 A
• at AC-2 at 400 V rated value	7 A
• at AC-3	
— at 400 V rated value	7 A
— at 500 V rated value	6 A
— at 690 V rated value	4.9 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	2.5 mm ²
• at 40 °C minimum permissible	2.5 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2.6 A
• at 690 V rated value	1.8 A
Operating current	
• at 1 current path at DC-1	
— at 24 V rated value	15 A
— at 110 V rated value	1.5 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.42 A
• with 2 current paths in series at DC-1	

— at 24 V rated value	15 A
— at 110 V rated value	8.4 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.5 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	15 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.7 A
Operating current	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	15 A
— at 110 V rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	15 A
— at 110 V rated value	0.25 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.14 A
— at 600 V rated value	0.14 A
Operating power	
• at AC-1	
— at 230 V rated value	6.3 kW
— at 230 V at 60 °C rated value	6 kW
— at 400 V rated value	11 kW
— at 400 V at 60 °C rated value	10.5 kW
— at 690 V rated value	19 kW
— at 690 V at 60 °C rated value	18 kW
• at AC-2 at 400 V rated value	3 kW
• at AC-3	
— at 230 V rated value	1.5 kW
— at 400 V rated value	3 kW
— at 690 V rated value	4 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	1.15 kW
• at 690 V rated value	1.15 kW

Thermal short-time current limited to 10 s	56 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	0.4 W
No-load switching frequency	
• at DC	10 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	250 1/h

Control circuit/ Control

Type of voltage of the control supply voltage	DC
Control supply voltage at DC	
• rated value	24 V
Design of the surge suppressor	with diode
Closing power of magnet coil at DC	2.8 W
Holding power of magnet coil at DC	2.8 W
Closing delay	
• at DC	35 ... 60 ms
Opening delay	
• at DC	55 ... 75 ms
Arcing time	10 ... 15 ms
Residual current of the electronics for control with signal <0>	
• at AC at 230 V maximum permissible	3 mA
• at DC at 24 V maximum permissible	10 mA

Auxiliary circuit

Number of NO contacts	
• for auxiliary contacts	
— instantaneous contact	1
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
Operating current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A

• at 220 V rated value • at 600 V rated value	1 A 0.15 A
Operating current at DC-13	
• at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
Contact reliability of 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 • at 600 V rated value	4.8 A 6.1 A
Yielded mechanical performance [hp]	
• for single-phase AC motor — at 110/120 V rated value — at 230 V rated value • for three-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value	0.25 hp 0.75 hp 1.5 hp 2 hp 3 hp 5 hp
Contact rating of auxiliary contacts according to UL	A600 / Q600

Short-circuit protection

Design of the fuse link	
• for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 35 A gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 20 A fuse gG: 10 A

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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
• Side-by-side mounting	Yes
Height	58 mm
Width	45 mm

Depth	73 mm
Required spacing	
• for grounded parts — at the side	6 mm
• for live parts — at the side	6 mm

Connections/Terminals

Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts — solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ²
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
Type of connectable conductor cross-sections	
• for auxiliary contacts — single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12

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	100 FIT
Product function	
• Mirror contact acc. to IEC 60947-4-1	No
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Protection against electrical shock	finger-safe

Certificates/approvals

General Product Approval	Functional Safety/Safety of Machinery
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[Type Examination](#)

Declaration of Conformity	Test Certificates	Shipping Approval
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Shipping Approval	other
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[Environmental Confirmations](#)

[Confirmation](#)

other	Railway
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[Confirmation](#)

Further information

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2015-1JB41>

Cax online generator

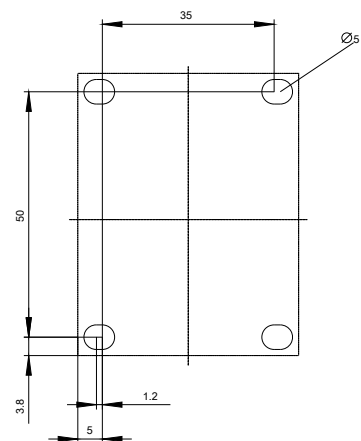
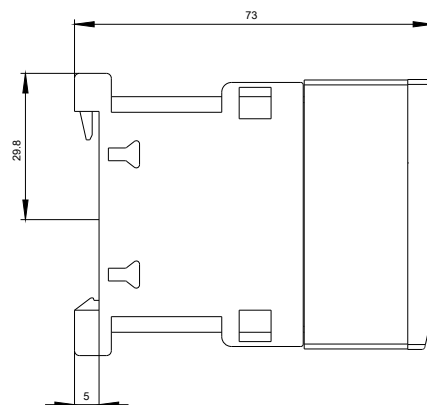
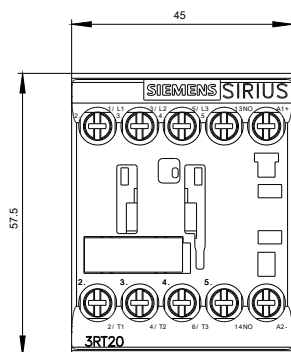
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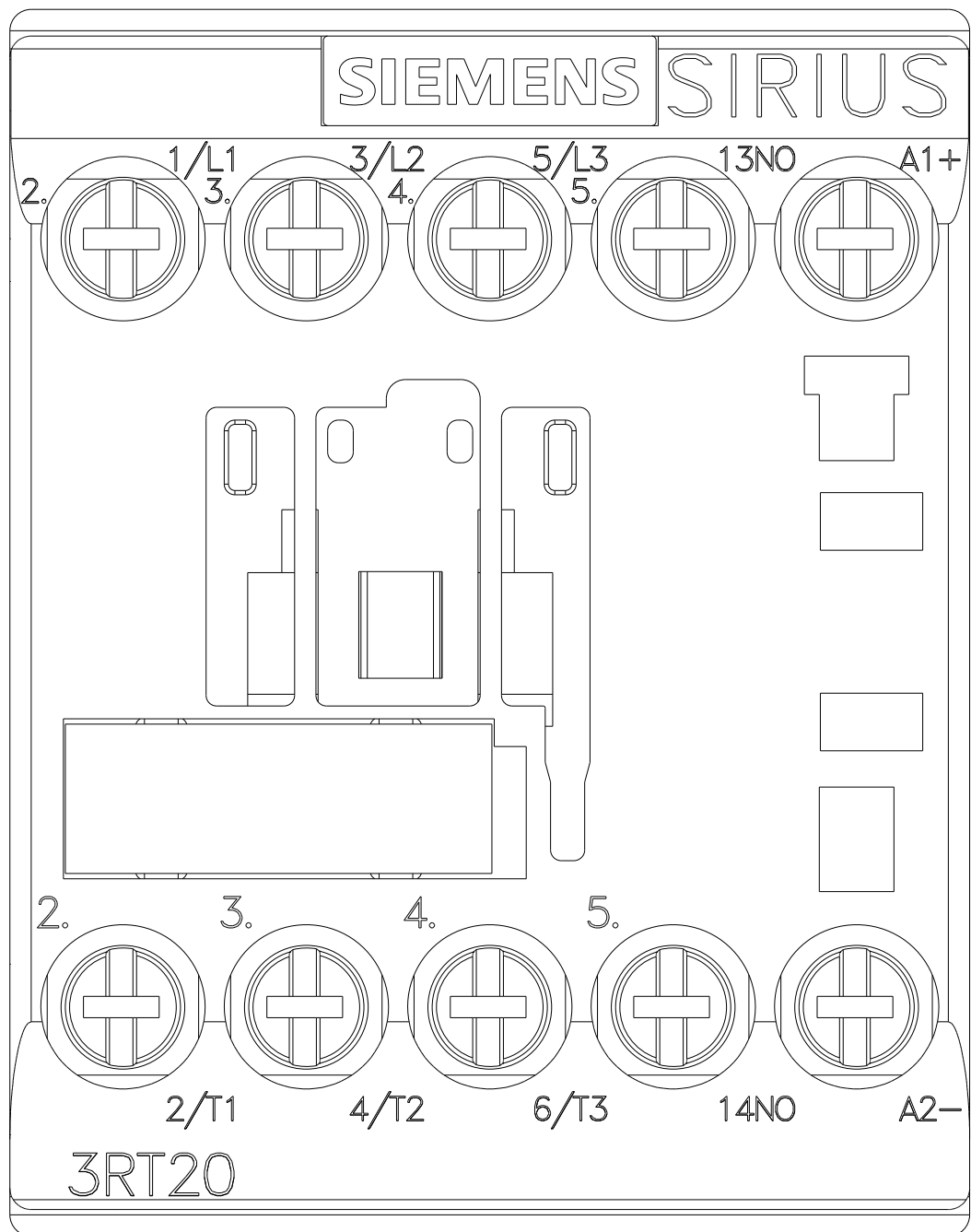
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

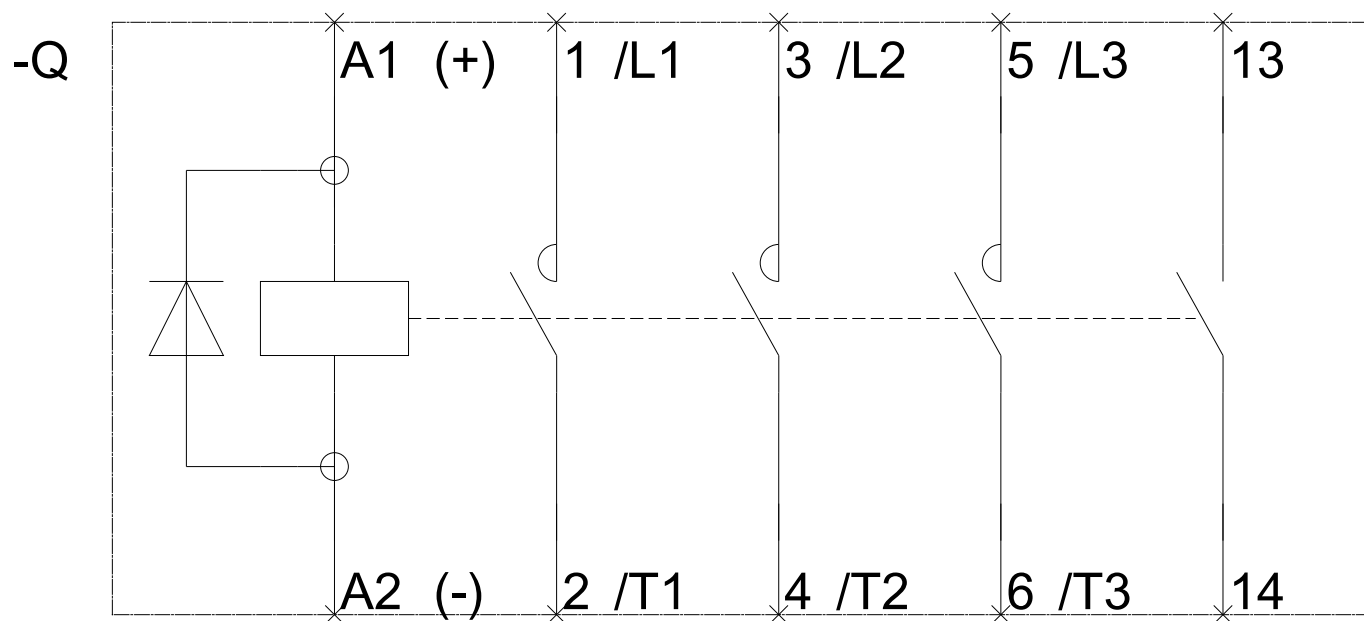
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1JB41>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-1JB41&lang=en







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