

CONTACTOR,AC3:22KW/400V, 1NO+1NC, 110V AC 50/60HZ, 3-POLE, SIZE S2, SCREW TERMINAL



Figure similar

Product brand name	SIRIUS
Product designation	Power contactor
Product type designation	3RT2
General technical data	
Size of contactor	S2
Product extension	
• function module for communication	No
• Auxiliary switch	Yes
Insulation voltage	
• rated value	690 V
Degree of pollution	3
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	IP00
Shock resistance at rectangular impulse	
• at AC	11.8g / 5 ms, 7.4g / 10 ms
Shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	10 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000

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	70 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	70 A
— up to 690 V at ambient temperature 60 °C rated value	60 A
• at AC-2 at 400 V rated value	50 A
• at AC-3	
— at 400 V rated value	50 A
— at 500 V rated value	50 A
— at 690 V rated value	24 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	16 mm ²
• at 40 °C minimum permissible	25 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	24 A
• at 690 V rated value	20 A
Operating current	

<ul style="list-style-type: none"> • at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value 	<p>55 A</p> <p>4.5 A</p> <p>1 A</p> <p>0.4 A</p> <p>0.25 A</p> <p>55 A</p> <p>45 A</p> <p>5 A</p> <p>1 A</p> <p>0.8 A</p> <p>55 A</p> <p>55 A</p> <p>45 A</p> <p>2.9 A</p> <p>1.4 A</p>
Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value 	<p>35 A</p> <p>2.5 A</p> <p>1 A</p> <p>0.1 A</p> <p>0.06 A</p> <p>55 A</p> <p>25 A</p> <p>5 A</p> <p>0.27 A</p> <p>0.16 A</p> <p>55 A</p> <p>55 A</p> <p>25 A</p> <p>0.6 A</p> <p>0.35 A</p>
Operating power	
<ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — at 230 V rated value — at 230 V at 60 °C rated value 	<p>26 kW</p> <p>23 kW</p>

— at 400 V rated value	46 kW
— at 400 V at 60 °C rated value	39 kW
— at 690 V rated value	79 kW
— at 690 V at 60 °C rated value	68 kW
• at AC-2 at 400 V rated value	22 kW
• at AC-3	
— at 230 V rated value	15 kW
— at 400 V rated value	22 kW
— at 500 V rated value	30 kW
— at 690 V rated value	22 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	12.6 kW
• at 690 V rated value	18.2 kW
Thermal short-time current limited to 10 s	420 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	4 W
No-load switching frequency	
• at AC	5 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	600 1/h
• at AC-3 maximum	800 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	110 V
• at 60 Hz rated value	110 V
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	210 V·A
• at 60 Hz	188 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.69
• at 60 Hz	0.65
Apparent holding power of magnet coil at AC	
• at 50 Hz	17.2 V·A
• at 60 Hz	16.5 V·A

Inductive power factor with the holding power of the coil	
• at 50 Hz	0.36
• at 60 Hz	0.39
Closing delay	
• at AC	10 ... 80 ms
Opening delay	
• at AC	10 ... 18 ms
Arcing time	10 ... 20 ms
Control version of the switch operating mechanism	Standard A1 - A2

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	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	1 A
• at 600 V rated value	0.15 A
Operating current at DC-13	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
• at 600 V rated value	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	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	<p>52 A</p> <p>52 A</p>
Yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	<p>3 hp</p> <p>10 hp</p> <p>15 hp</p> <p>15 hp</p> <p>40 hp</p> <p>50 hp</p>
Contact rating of auxiliary contacts according to UL	A600 / P600

Short-circuit protection

Design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required 	<p>gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A</p> <p>gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 80 A</p> <p>fuse gG: 10 A</p>

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
<ul style="list-style-type: none"> • Side-by-side mounting 	Yes
Height	114 mm
Width	55 mm
Depth	130 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side 	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>10 mm</p> <p>0 mm</p> <p>50 mm</p> <p>6 mm</p>

— downwards	50 mm
• for live parts	
— forwards	10 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— 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	
— single or multi-stranded	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²)
— finely stranded with core end processing	2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²)
• at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
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)
— 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)

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 %
Product function	
• Mirror contact acc. to IEC 60947-4-1	Yes
• positively driven operation acc. to IEC 60947-5-1	No
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529

Certificates/approvals

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



Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other
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[Confirmation](#)

[Environmental Confirmations](#)

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=3RT2036-1AG20>

Cax online generator

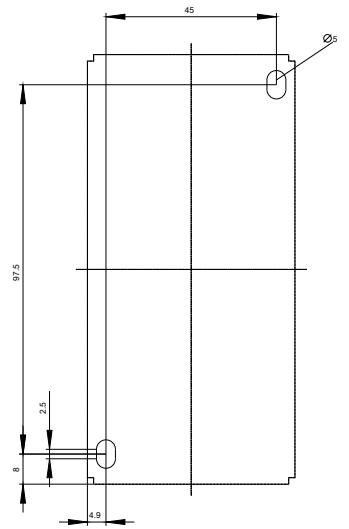
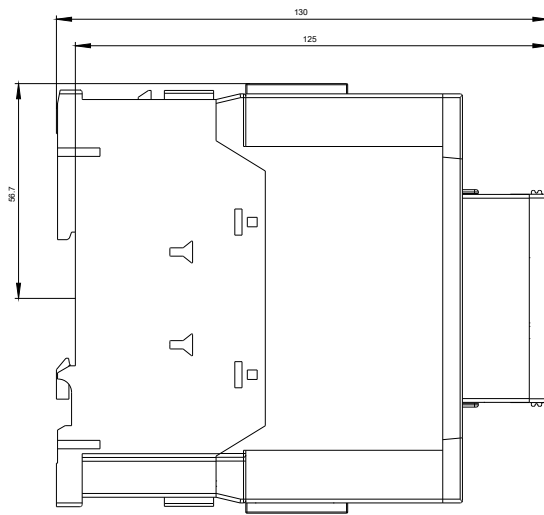
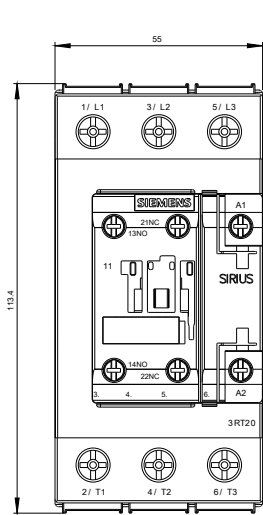
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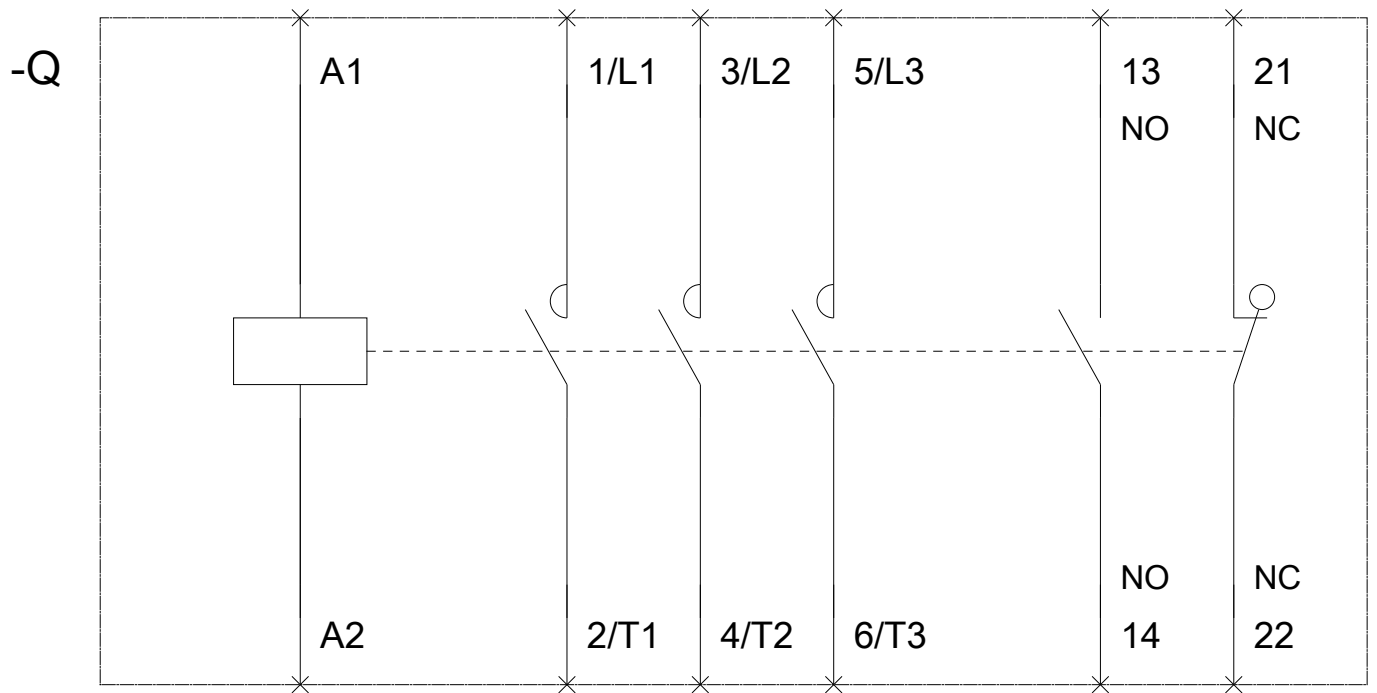
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2036-1AG20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2036-1AG20&lang=en





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