



contactor AC-1, 110 A, 400 V / 40 °C, 4-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
General technical data	
size of contactor	S2
product extension	
• function module for communication	No
• auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	38.8 W
• at AC in hot operating state per pole	9.7 W
• without load current share typical	6.4 W
type of calculation of power loss current-dependent	quadratic
insulation voltage	
• of main circuit with degree of pollution 3 rated value	690 V
• of the auxiliary and control circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
• of main circuit rated value	6 kV
• of auxiliary circuit rated value	6 kV
shock resistance at rectangular impulse	
• at AC	11.8 g / 5 ms, 7.4 g / 10 ms
shock resistance with sine pulse	
• at AC	18.5 g / 5 ms, 11.6 g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibittance (day/month/year)	10/01/2014
Net Weight	1.1 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	

number of poles for main current circuit	4
number of NO contacts for main contacts	4
type of voltage for main current circuit	AC
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	110 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	110 A
— up to 690 V at ambient temperature 60 °C rated value	95 A
• at AC-3	
— at 400 V rated value	38 A
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm ²
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 60 V rated value	23 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	45 A
— at 60 V rated value	45 A
— at 110 V rated value	25 A
— at 220 V rated value	5 A
— at 440 V rated value	0.27 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	45 A
— at 60 V rated value	45 A
— at 110 V rated value	45 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
• at AC-1 maximum	700 1/h
Control circuit/ Control	
type of voltage	AC
type of voltage of the control supply voltage	AC
control supply voltage at AC	

<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	230 V 230 V
operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 ... 1.1 0.85 ... 1.1
apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	210 V·A 188 V·A
inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.69 0.65
apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	17.2 V·A 16.5 V·A
inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.36 0.39
closing delay	
<ul style="list-style-type: none"> • at AC 	10 ... 80 ms
opening delay	
<ul style="list-style-type: none"> • 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	1
<ul style="list-style-type: none"> • attachable • instantaneous contact 	2 1
number of NO contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • attachable • instantaneous contact 	2 1
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul style="list-style-type: none"> • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value 	10 A 3 A 2 A 1 A
operational current at DC-12	
<ul style="list-style-type: none"> • 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 6 A 6 A 3 A 2 A 1 A 0.15 A
operational current at DC-13	
<ul style="list-style-type: none"> • at 24 V rated value • at 48 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 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	
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
design of the fuse link	

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

gG: 160 A (690 V, 100 kA)
 gR: 80 A (690 V, 100 kA)
 gG: 10 A (690 V, 1 kA)

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
fastening method side-by-side mounting	Yes
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	114 mm
width	75 mm
depth	130 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — upwards — downwards — at the side 	10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm 6 mm

Connections/ Terminals

type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil 	screw-type terminals screw-type terminals Screw-type terminals screw terminal
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts 	2x (1 ... 35 mm²), 1x (1 ... 50 mm²) 2x (1 ... 25 mm²), 1x (1 ... 35 mm²) 2x (18 ... 2), 1x (18 ... 1)
connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing 	1 ... 50 mm² 1 ... 35 mm²
connectable conductor cross-section for auxiliary contacts	
<ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing • finely stranded without core end processing 	0.5 ... 2.5 mm² 0.5 ... 2.5 mm² 0.5 ... 2.5 mm²
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts 	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (20 ... 16), 2x (18 ... 14)
AWG number as coded connectable conductor cross section for main contacts	18 ... 1
AWG number as coded connectable conductor cross section for auxiliary contacts	20 ... 14

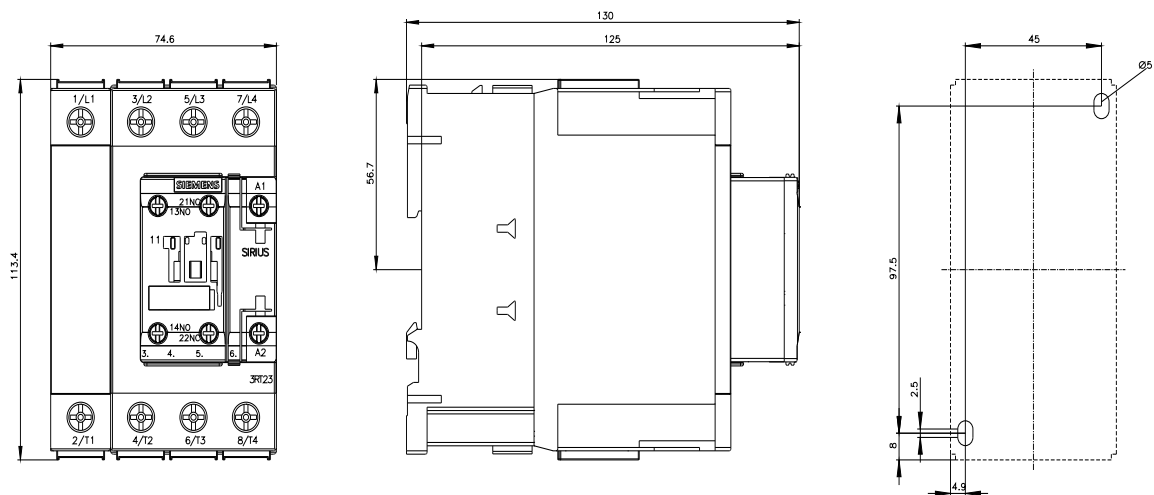
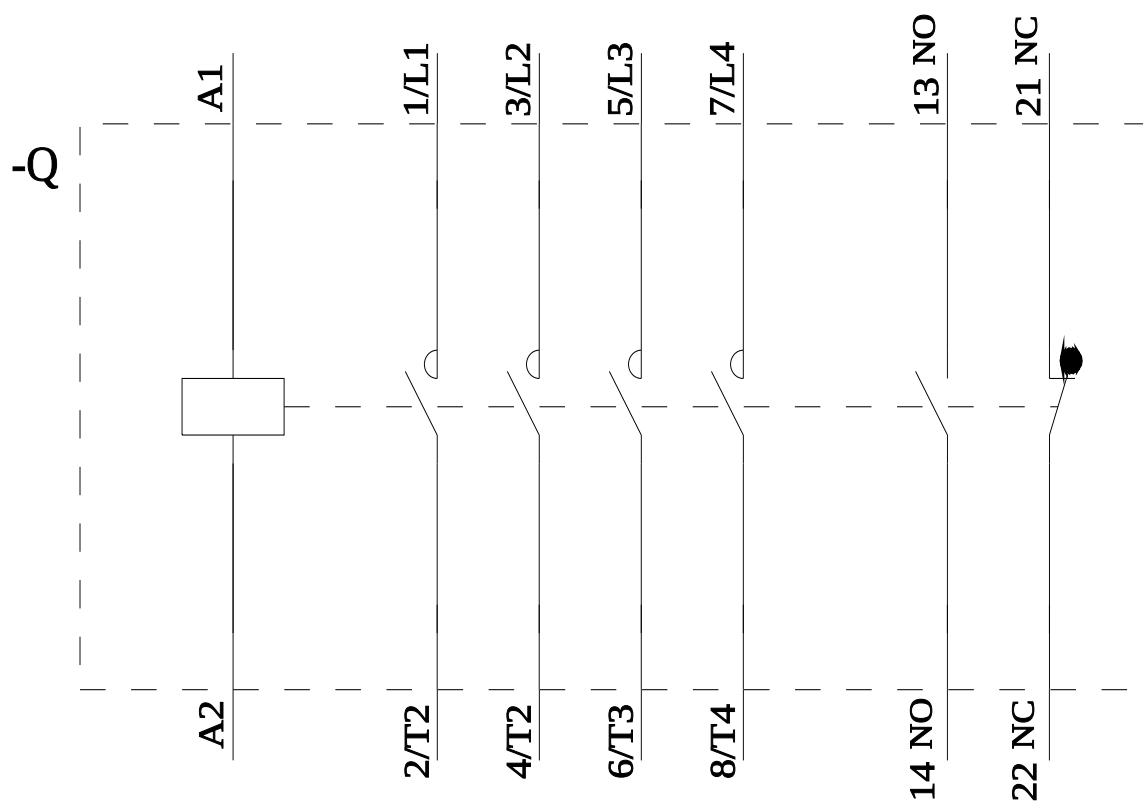
Safety related data

product function	
<ul style="list-style-type: none"> • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5- 	Yes No

Electrical Safety			
protection class IP on the front according to IEC 60529	IP20		
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front		
Communication/ Protocol			
product function bus communication	No		
Approvals Certificates			
Environmental Product Declaration			
<ul style="list-style-type: none">• global warming potential [CO2 eq] / during manufacturing• global warming potential [CO2 eq] / during operation• global warming potential [CO2 eq] / after end of life• global warming potential [CO2 eq] / total	<div>4.83 kg</div> <div>297 kg</div> <div>-0.64 kg</div> <div>302 kg</div>		
Environment	General Product Approval		
Environmental Confirmations	<div></div> <div></div> <div></div> <div></div> <div></div>		
General Product Approval	EMV	Test Certificates	Maritime application
<div></div> <div></div> <div></div>	Special Test Certificate	Type Test Certificates/Test Report	<div></div>
Maritime application			other
<div></div> <div></div> <div></div> <div></div> <div></div>	Confirmation		
other	Railway	Dangerous goods	
<div></div>	Special Test Certificate	Transport Information	

Further information

Information on the packaging
<https://support.industry.siemens.com/cs/ww/en/view/109813875>
 Information for data generation and storage
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
 Information- and Downloadcenter (Catalogs, Brochures,...)
<https://www.siemens.com/ic10>
 Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2337-1AL20>
 Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2337-1AL20>
 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2337-1AL20&lang=en
 Cax online generator
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2337-1AL20>
 Kennlinien
<https://curves.simaris.siemens.com/curves/3RT2337-1AL20>



last modified:

7/22/2026

