



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
type of calculation of power loss depending on pole	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	11.8g / 5 ms, 7.4g / 10 ms
shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 10 ms
mechanical service life (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 Prohibition (Date)	10/01/2014
Weight	1.14 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 %
Environmental footprint	
Environmental Product Declaration (EPD)	Yes
Global Warming Potential [CO ₂ eq] total	302 kg
Global Warming Potential [CO ₂ eq] during manufacturing	4.83 kg

Global Warming Potential [CO2 eq] during operation	297 kg
Global Warming Potential [CO2 eq] after end of life	-0.64 kg
Main circuit	
number of poles for main current circuit	4
number of NO contacts for main contacts	4
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 mm²
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	
• at 50 Hz rated value	230 V
• at 60 Hz rated value	230 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 VA
• at 60 Hz	188 VA
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 VA
• at 60 Hz	16.5 VA
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	1
• attachable	2
• instantaneous contact	1
number of NO contacts for auxiliary contacts	1
• attachable	2
• instantaneous contact	1
operational current at AC-12 maximum	10 A
operational 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
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
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required	gG: 10 A (230 V, 400 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	
product function short circuit protection	No
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 	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-type terminals
type of connectable conductor cross-sections for main contacts <ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing 	2x (1 ... 35 mm²), 1x (1 ... 50 mm²) 2x (1 ... 25 mm²), 1x (1 ... 35 mm²)
connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> • solid or stranded 	1 ... 50 mm²

<ul style="list-style-type: none"> finely stranded with core end processing 	1 ... 35 mm ²
connectable conductor cross-section for auxiliary contacts	
<ul style="list-style-type: none"> solid or stranded 	0.5 ... 2.5 mm ²
<ul style="list-style-type: none"> finely stranded with core end processing 	0.5 ... 2.5 mm ²
<ul style="list-style-type: none"> finely stranded without core end processing 	0.5 ... 2.5 mm ²
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> — solid 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
<ul style="list-style-type: none"> — solid or stranded 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
<ul style="list-style-type: none"> — finely stranded with core end processing 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
<ul style="list-style-type: none"> for AWG cables for auxiliary contacts 	2x (20 ... 16), 2x (18 ... 14)
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> for main contacts 	18 ... 1
<ul style="list-style-type: none"> for auxiliary contacts 	20 ... 14

Safety related data

product function	
<ul style="list-style-type: none"> mirror contact according to IEC 60947-4-1 	Yes
<ul style="list-style-type: none"> positively driven operation according to IEC 60947-5-1 	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

General Product Approval



[Confirmation](#)



[KC](#)

General Product Approval	EMV	Test Certificates	Marine / Shipping
--------------------------	-----	-------------------	-------------------



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
-------------------	-------



[Confirmation](#)

Railway	Dangerous goods	Environment
---------	-----------------	-------------

[Special Test Certificate](#)

[Transport Information](#)



[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&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, ...)

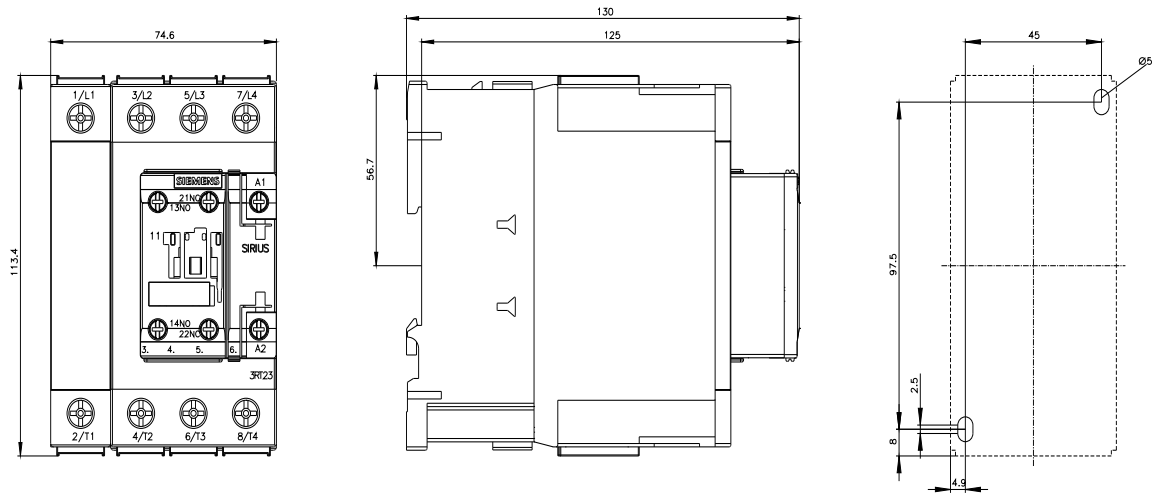
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2337-1AL20&lang=en

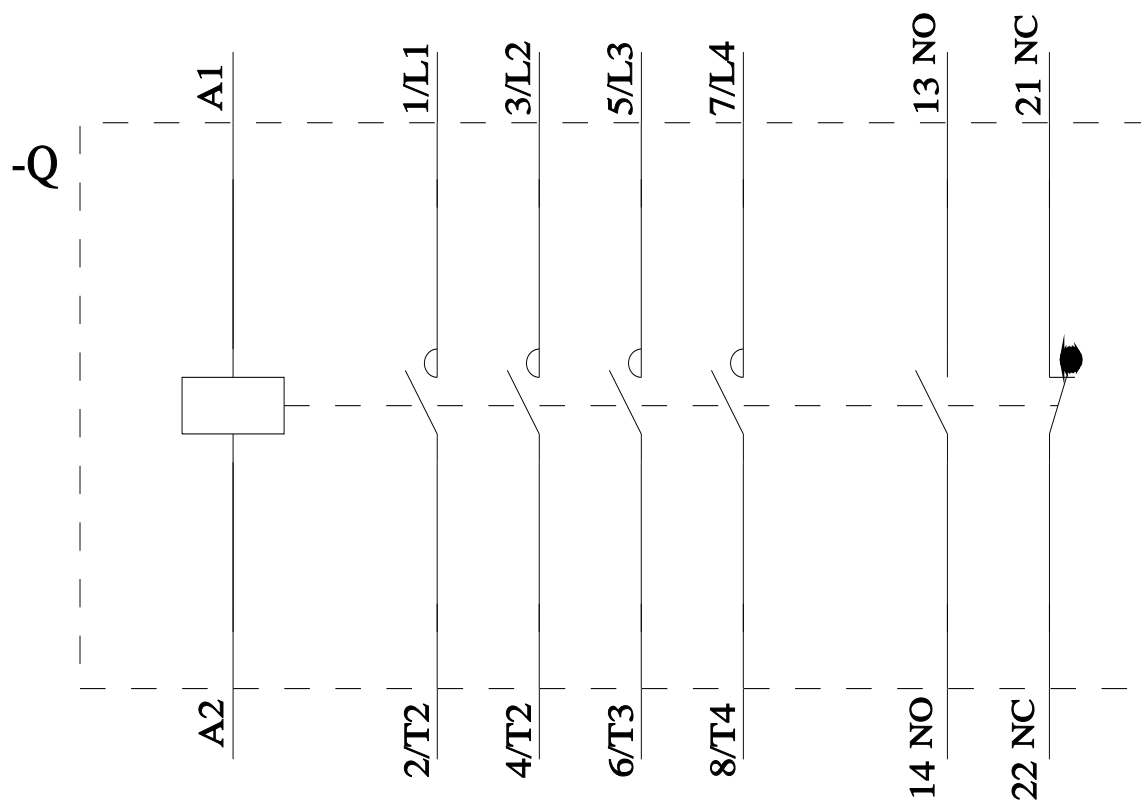
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2337-1AL20/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2337-1AL20&objecttype=14&gridview=view1>





last modified:

8/1/2024

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Siemens:](#)

[3RT23371AL20](#)