



Contactor, AC-1, 160 A/400 V/40 °C, S3, 4-pole, 230 V AC/50 Hz, 1 NO+1 NC, screw terminal

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
General technical data	
size of contactor	S3
product extension	
• function module for communication	No
• auxiliary switch	Yes
surge voltage resistance	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
shock resistance at rectangular impulse	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
shock resistance with sine pulse	
• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (switching cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	100 000 000
reference code acc. to IEC 81346-2	Q
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
• ambient temperature during operation	-25 ... +60 °C
• ambient temperature during storage	-55 ... +80 °C
relative humidity during operation	95 %
Main circuit	
number of poles for main current circuit	4
number of NO contacts for main contacts	4
• operating voltage at AC	
— at 50 Hz rated value	690 V
— at 60 Hz rated value	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	160 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	160 A
— up to 690 V at ambient temperature 60 °C	140 A

rated value	
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm ²
short-time withstand current in cold operating state up to 40 °C	
<ul style="list-style-type: none"> limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum 	Use minimum cross-section acc. to AC-1 rated value Use minimum cross-section acc. to AC-1 rated value Use minimum cross-section acc. to AC-1 rated value Use minimum cross-section acc. to AC-1 rated value Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
<ul style="list-style-type: none"> at AC 	5 000 1/h
operating frequency at AC-1 maximum	1 000 1/s
Control circuit/ Control	
type of voltage	AC
type of voltage of the control supply voltage	AC
<ul style="list-style-type: none"> control supply voltage at AC at 50 Hz rated value 	230 V
operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> at 50 Hz 	0.8 ... 1.1
apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> at 50 Hz 	296 V·A
inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> at 50 Hz 	0.61
apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> at 50 Hz 	19 V·A
inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> at 50 Hz 	0.38
closing delay	
<ul style="list-style-type: none"> at AC 	13 ... 50 ms
opening delay	
<ul style="list-style-type: none"> at AC 	10 ... 21 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 	2
<ul style="list-style-type: none"> instantaneous contact 	1
number of NO contacts for auxiliary contacts	1
<ul style="list-style-type: none"> attachable 	2
<ul style="list-style-type: none"> instantaneous contact 	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 	6 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 	10 A 2 A

<ul style="list-style-type: none"> • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value 	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: 250 A (690 V, 100 kA) gR: 250 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	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	140 mm
width	96 mm
depth	152 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 	20 mm 10 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 20 mm 10 mm 10 mm 10 mm
Connections/ Terminals	
type of electrical connection <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	screw-type terminals screw-type terminals
type of connectable conductor cross-sections <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — stranded — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts 	2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 16 mm²), 2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²) 2x (10 ... 1/0), 1x (10 ... 2)
connectable conductor cross-section for main contacts <ul style="list-style-type: none"> • solid • solid or stranded • stranded • finely stranded with core end processing 	2.5 ... 16 mm² 4 ... 70 mm² 6 ... 70 mm² 2.5 ... 50 mm²

connectable conductor cross-section for auxiliary contacts	
<ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing 	0.5 ... 2.5 mm ² 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 — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)
<ul style="list-style-type: none"> • AWG number as coded connectable conductor cross section for main contacts • AWG number as coded connectable conductor cross section for auxiliary contacts 	10 ... 2 20 ... 14

Safety related data

product function	
<ul style="list-style-type: none"> • mirror contact acc. to IEC 60947-4-1 • positively driven operation acc. to IEC 60947-5-1 	Yes No
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front

Communication/ Protocol

product function bus communication	No
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Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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[Miscellaneous](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[Confirmation](#)

Further information

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=3RT2348-1AP00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2348-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2348-1AP00>

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

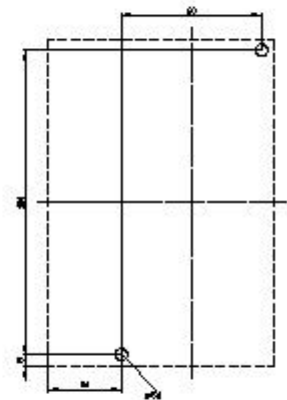
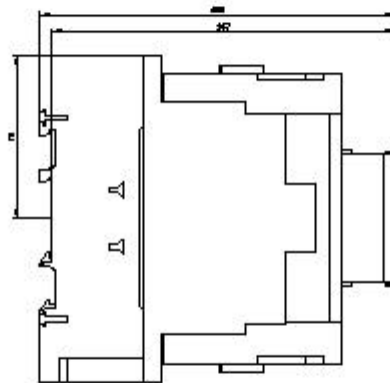
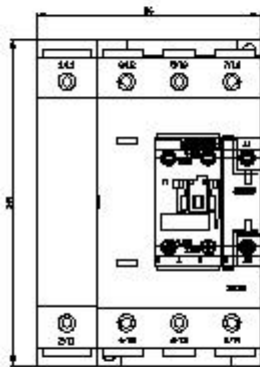
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2348-1AP00&lang=en

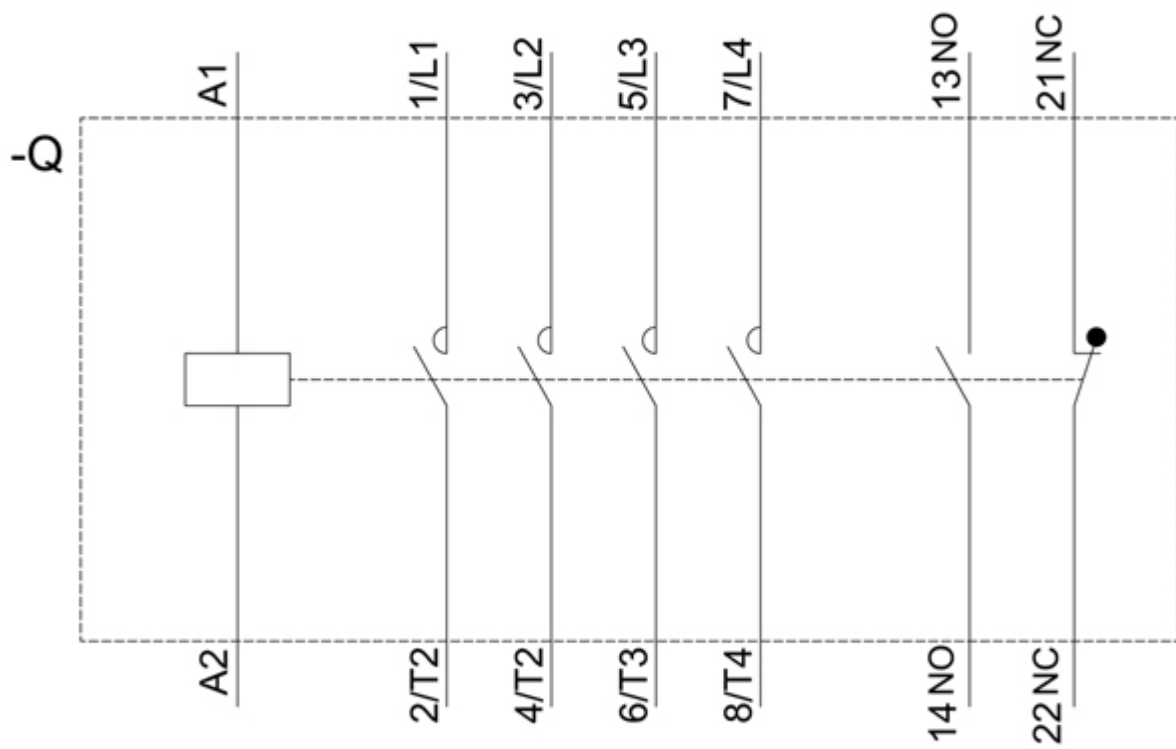
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2348-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2348-1AP00&objecttype=14&gridview=view1>





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