



contactor AC-1, 18 A, 400 V / 40 °C, 4-pole, 24 V DC, screw terminal, size: S00

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
General technical data	
size of contactor	S00
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	4.4 W
• at AC in hot operating state per pole	1.1 W
• without load current share typical	4 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 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 (operating cycles)	
• of contactor typical	30 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
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	184 kg
Global Warming Potential [CO ₂ eq] during manufacturing	1.55 kg




Global Warming Potential [CO2 eq] during operation	183 kg
Global Warming Potential [CO2 eq] after end of life	-0.249 kg
Main circuit	
number of poles for main current circuit	4
number of NO contacts for main contacts	4
operational current <ul style="list-style-type: none"> at AC-1 at 400 V at ambient temperature 40 °C rated value at AC-1 <ul style="list-style-type: none"> up to 690 V at ambient temperature 40 °C rated value up to 690 V at ambient temperature 60 °C rated value at AC-3 <ul style="list-style-type: none"> at 400 V rated value at AC-4 at 400 V rated value 	18 A 18 A 16 A 9 A 8.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm ²
operating power <ul style="list-style-type: none"> at AC-3 at 400 V rated value at AC-4 at 400 V rated value 	4 kW 4 kW
no-load switching frequency <ul style="list-style-type: none"> at DC 	10 000 1/h
operating frequency at AC-1 maximum	1 000 1/h
Control circuit/ Control	
type of voltage	DC
type of voltage of the control supply voltage	DC
control supply voltage at DC rated value <ul style="list-style-type: none"> 	24 V
operating range factor control supply voltage rated value of magnet coil at DC <ul style="list-style-type: none"> initial value full-scale value 	0.8 1.1
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay <ul style="list-style-type: none"> at DC 	30 ... 100 ms
opening delay <ul style="list-style-type: none"> at DC 	7 ... 13 ms
arcing time	10 ... 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts <ul style="list-style-type: none"> attachable 	2
number of NO contacts for auxiliary contacts <ul style="list-style-type: none"> attachable 	2
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: 35 A (690 V, 100 kA) gG: 20 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 DIN rail according to DIN EN 60715
height	58 mm
width	45 mm
depth	73 mm
required spacing <ul style="list-style-type: none"> with side-by-side mounting 	

— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
• for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
• at contactor for auxiliary contacts	Screw-type terminals
• of magnet coil	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
• solid or 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)
connectable conductor cross-section for main contacts	
• solid	0.5 ... 4 mm ²
• solid or stranded	0.5 ... 4 mm ²
• stranded	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
connectable conductor cross-section for auxiliary contacts	
• solid or stranded	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
— solid or 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)
• for AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
AWG number as coded connectable conductor cross section	
• for main contacts	20 ... 12
• for auxiliary contacts	20 ... 12
Safety related data	
product function	
• mirror contact according to IEC 60947-4-1	Yes; with 3RH29
IEC 61508	
T1 value	
• for proof test interval or service life according to IEC 61508	20 a
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](#)



General Product Approval	EMV	Functional Safety	Test Certificates		Marine / Shipping
		Type Examination Certificate	Type Test Certificates/Test Report	Special Test Certificate	

Marine / Shipping



other	Dangerous Good		Environment	
Miscellaneous	Confirmation	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=3RT2316-1BB40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2316-1BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-1BB40>

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

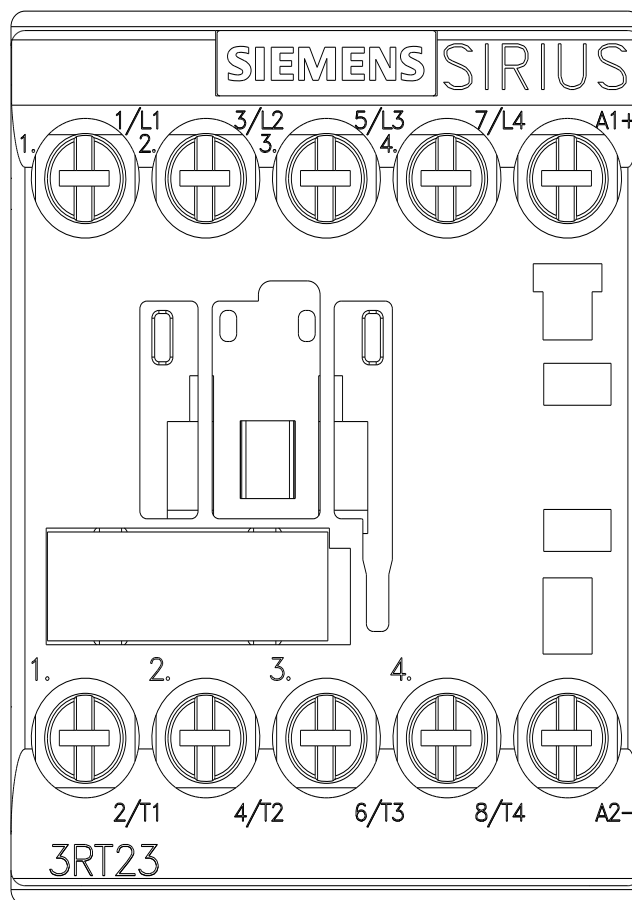
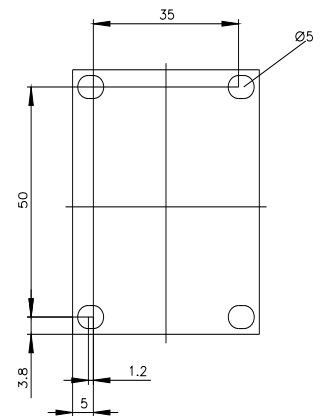
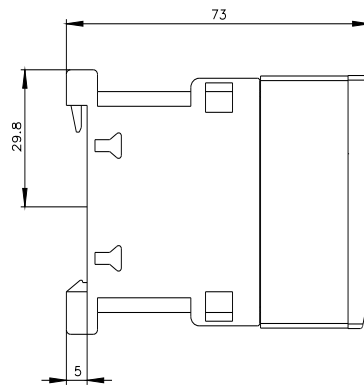
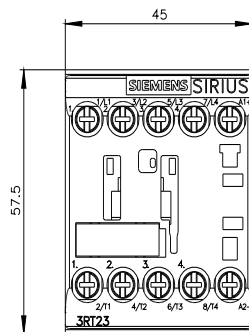
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2316-1BB40&lang=en

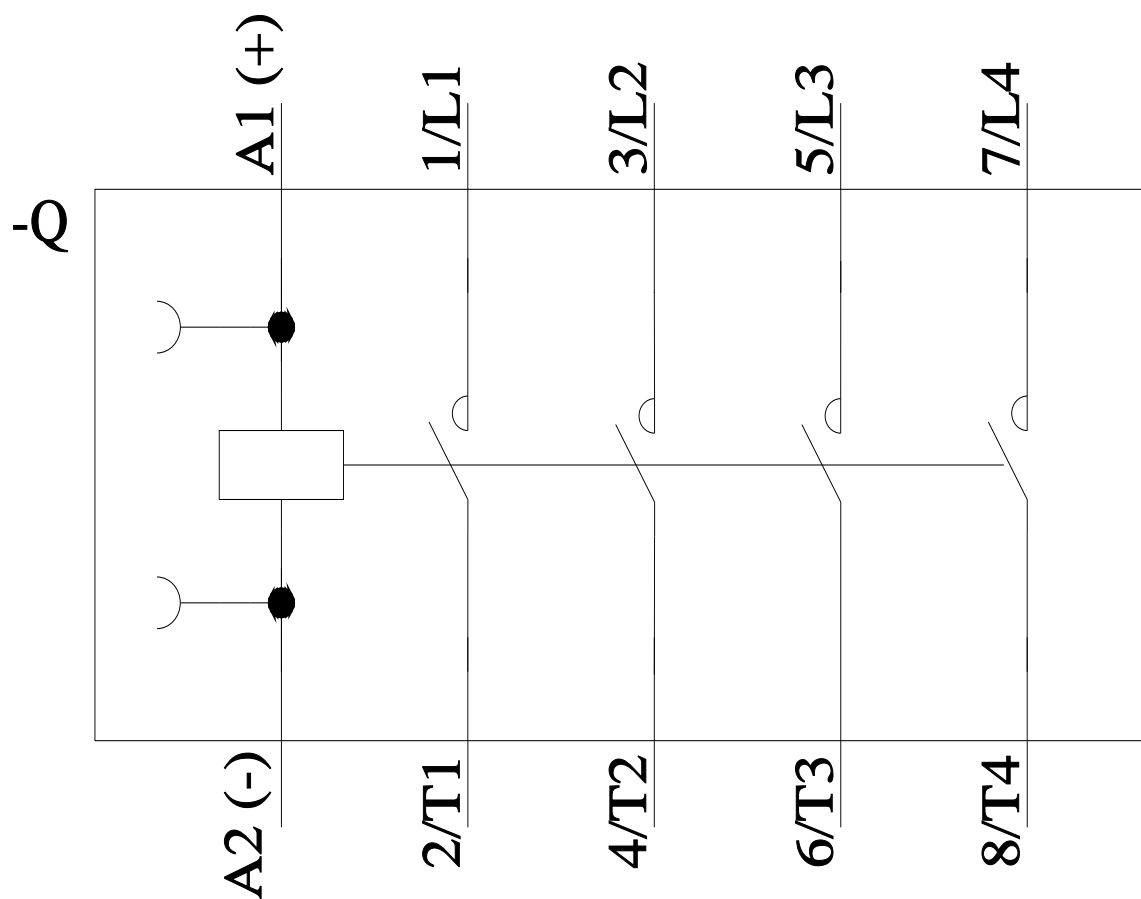
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-1BB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2316-1BB40&objecttype=14&gridview=view1>





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