



contactor AC-1, 18 A, 400 V / 40 °C, 4-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, spring-loaded 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	1.1 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	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at AC	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 Prohibition (Date)	10/01/2009
Weight	0.253 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	94.8 kg

global warming potential [CO2 eq] during manufacturing	1.15 kg
global warming potential [CO2 eq] during operation	93.8 kg
global warming potential [CO2 eq] after end of life	-0.178 kg
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	
<ul style="list-style-type: none"> ● at AC-1 at 400 V at ambient temperature 40 °C rated value 	18 A
<ul style="list-style-type: none"> ● 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 	18 A 16 A
<ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	9 A
<ul style="list-style-type: none"> ● at AC-4 at 400 V rated value 	8.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm ²
operational 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 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value 	16 A 16 A 2.1 A 0.8 A 0.6 A
<ul style="list-style-type: none"> ● with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value 	16 A 16 A 12 A 1.6 A 0.8 A
<ul style="list-style-type: none"> ● with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value 	16 A 16 A 16 A 16 A 1.3 A
<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 60 V rated value — at 110 V rated value 	16 A 0.5 A 0.15 A
<ul style="list-style-type: none"> ● with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 60 V rated value — at 110 V rated value 	16 A 5 A 0.35 A
<ul style="list-style-type: none"> ● with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value 	16 A 16 A 16 A 1.5 A 0.2 A
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 AC 	10 000 1/h
operating frequency at AC-1 maximum	1 000 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 	<p>110 V</p> <p>120 V</p>
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 	<p>0.8 ... 1.1</p> <p>0.8 ... 1.1</p>
apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> at 50 Hz at 60 Hz 	<p>26.4 VA</p> <p>26.4 VA</p>
inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> at 50 Hz at 60 Hz 	<p>0.81</p> <p>0.81</p>
apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> at 50 Hz at 60 Hz 	<p>4.4 VA</p> <p>4.4 VA</p>
inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> at 50 Hz at 60 Hz 	<p>0.24</p> <p>0.24</p>
closing delay	
<ul style="list-style-type: none"> at AC 	9 ... 35 ms
opening delay	
<ul style="list-style-type: none"> at AC 	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	
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 coordination 2 required 	<p>gG: 35 A (690 V, 100 kA)</p> <p>gG: 20 A (690 V, 100 kA)</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
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	70 mm
width	45 mm
depth	73 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 	<p>10 mm</p> <p>10 mm</p> <p>10 mm</p> <p>0 mm</p> <p>10 mm</p> <p>10 mm</p> <p>6 mm</p> <p>10 mm</p> <p>10 mm</p> <p>10 mm</p> <p>10 mm</p> <p>6 mm</p>
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 	spring-loaded terminals spring-loaded terminals Spring-type terminals Spring-type terminals
type of connectable conductor cross-sections <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • for AWG cables for main contacts 	2x (0.5 ... 4 mm ²) 2x (0,5 ... 4 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
connectable conductor cross-section for main contacts <ul style="list-style-type: none"> • solid • solid or stranded • stranded • finely stranded with core end processing • finely stranded without core end processing 	0.5 ... 4 mm ² 0.5 ... 4 mm ² 0.5 ... 4 mm ² 0.5 ... 2.5 mm ² 0.5 ... 2.5 mm ²
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 ... 4 mm ² 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 — finely stranded without core end processing • for AWG cables for auxiliary contacts 	2x (0.5 ... 2.5 mm ²) 2x (0,5 ... 4 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
AWG number as coded connectable conductor cross section for main contacts	20 ... 12
AWG number as coded connectable conductor cross section for auxiliary contacts	20 ... 12

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 60947-5-1 	Yes; with 3RH29 No
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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
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Approvals Certificates

General Product Approval	EMV
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Test Certificates **Maritime application**

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Maritime application	other
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Miscellaneous



Confirmation

Railway

Environment

[Special Test Certificate](#)



[Environmental Confirmations](#)

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=3RT2316-2AK60>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2316-2AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-2AK60>

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

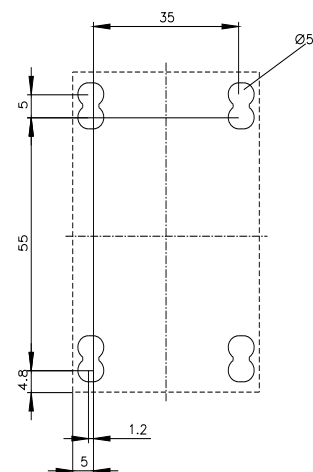
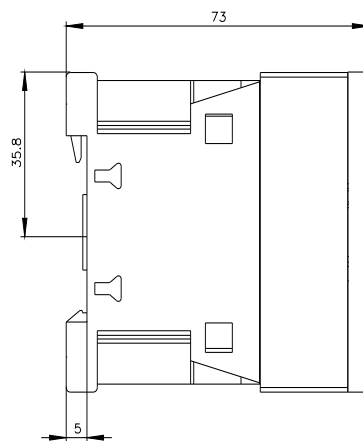
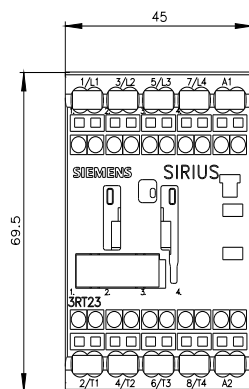
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2316-2AK60&lang=en

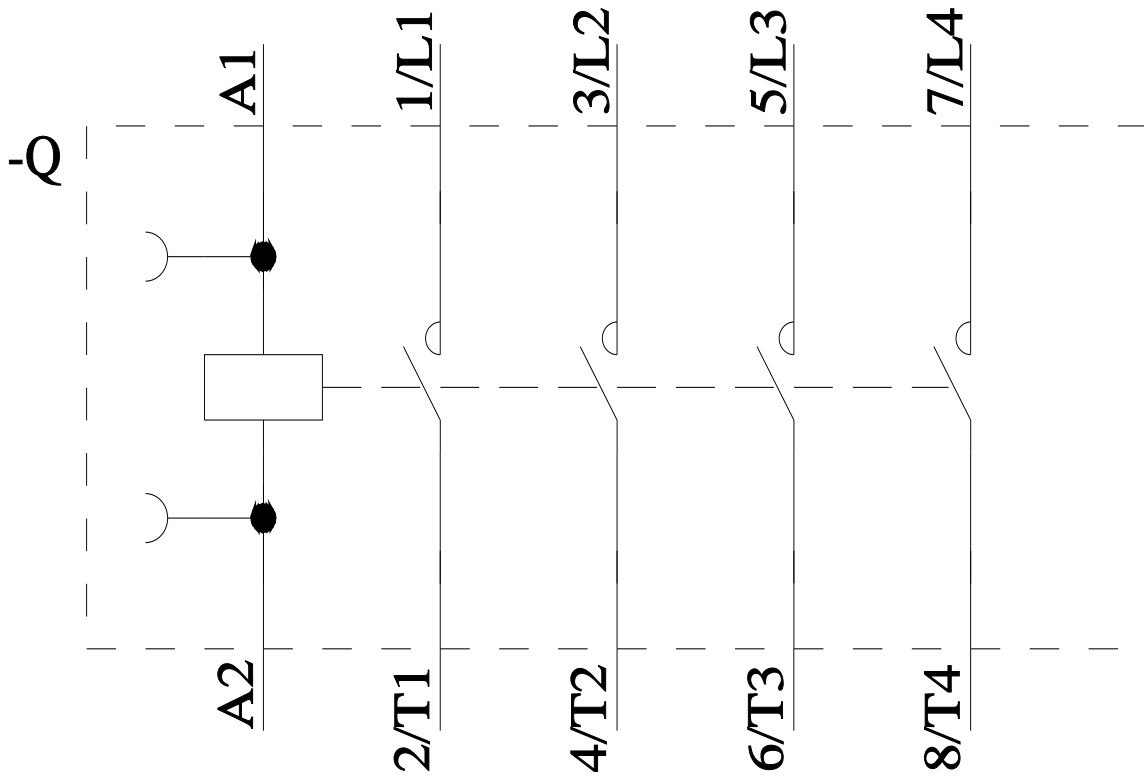
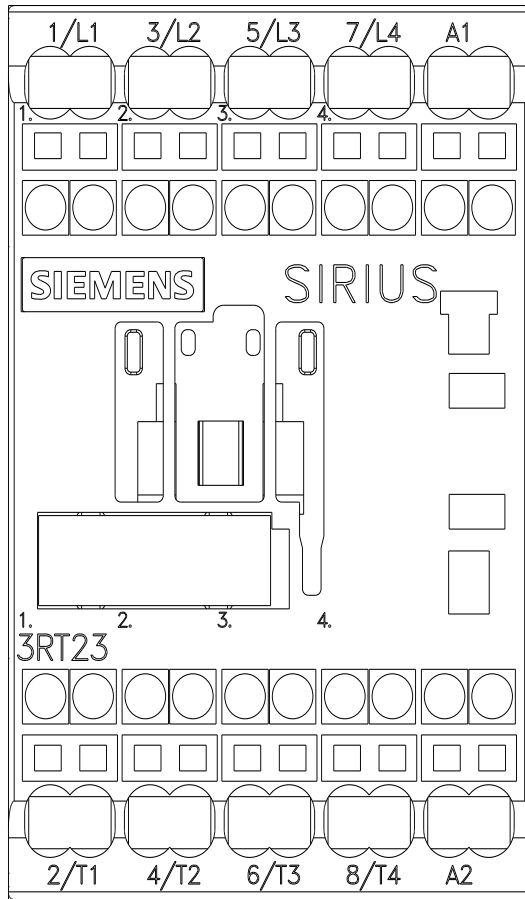
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-2AK60/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2316-2AK60&objecttype=14&gridview=view1>





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