



Contactor, AC-1, 18 A/400 V/40 °C, S00, 4-pole, 110 V AC/50 Hz, 120 V/60 Hz, screw terminal

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
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 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 %

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	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 • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value • at AC-4 at 400 V rated value <p>minimum cross-section in main circuit at maximum AC-1 rated value</p> <p>operating power</p> <ul style="list-style-type: none"> • at AC-3 at 400 V rated value • at AC-4 at 400 V rated value <p>short-time withstand current in cold operating state up to 40 °C</p> <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 <p>no-load switching frequency</p> <ul style="list-style-type: none"> • at AC <p>operating frequency at AC-1 maximum</p>	<p>18 A</p> <p>16 A</p> <p>9 A</p> <p>8.5 A</p> <p>2.5 mm²</p> <p>4 kW</p> <p>4 kW</p> <p>Use minimum cross-section acc. to AC-1 rated value</p> <p>Use minimum cross-section acc. to AC-1 rated value</p> <p>Use minimum cross-section acc. to AC-1 rated value</p> <p>Use minimum cross-section acc. to AC-1 rated value</p> <p>Use minimum cross-section acc. to AC-1 rated value</p> <p>10 000 1/h</p> <p>1 000 1/h</p>
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	
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 	<p>gG: 35 A (690 V, 100 kA)</p> <p>gG: 20 A (690 V, 100 kA)</p> <p>gG: 10 A (690 V, 1 kA)</p>

required

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

- side-by-side mounting

Yes

height

58 mm

width

45 mm

depth

73 mm

required spacing

- 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
- 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

— solid

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²

— solid or stranded

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²

— finely stranded with core end processing

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

- at AWG cables for main contacts

2x (20 ... 16), 2x (18 ... 14), 2x 12

connectable conductor cross-section for main contacts

- solid
- solid or stranded
- stranded
- finely stranded with core end processing

0.5 ... 4 mm²

0.5 ... 4 mm²

0.5 ... 4 mm²

0.5 ... 2.5 mm²

connectable conductor cross-section for auxiliary contacts

- solid or stranded
- finely stranded with core end processing

0.5 ... 4 mm²

0.5 ... 2.5 mm²

type of connectable conductor cross-sections

- for auxiliary contacts

— solid

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

— solid or stranded

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²

— finely stranded with core end processing

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

- at AWG cables for auxiliary contacts

2x (20 ... 16), 2x (18 ... 14), 2x 12

AWG number as coded connectable conductor cross section

- for main contacts
- for auxiliary contacts

20 ... 12

20 ... 12

Safety related data

product function

- mirror contact according to IEC 60947-4-1

Yes; with 3RH29

T1 value for proof test interval or service life according to IEC 61508

20 y

protection class IP on the front according to IEC

IP20

60529

touch protection on the front according to IEC 60529

finger-safe, for vertical contact from the front

Communication/ Protocol

product function bus communication

No

Certificates/ approvals

General Product Approval

EMC


[Confirmation](#)
Functional
Safety/Safety of
Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

[Type Examination
Certificate](#)


EG-Konf.

[Type Test Certificates/Test Report](#)
[Special Test Certificate](#)


Marine / Shipping



LRS



PRS



RINA



RMRS

other

Railway

[Confirmation](#)
[Environmental Con-
firmations](#)


VDE

[Vibration and Shock](#)

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=3RT2316-1AK60>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2316-1AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-1AK60>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2316-1AK60&lang=en
Characteristic: Tripping characteristics, I_t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-1AK60/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2316-1AK60&objecttype=14&gridview=view1>



