

Contactor, AC-1, 400 A/690 V/40 °C, S10, 3-pole, 21-27.3 V AC/DC, PLC-IN optional, with varistor, 2 NO+2 NC, Connection rail/ screw terminal



product brand name	SIRIUS
Product designation	Contactor
Product type designation	3RT14

General technical data	
Size of contactor	S10
Product extension	
<ul style="list-style-type: none"> function module for communication 	No
<ul style="list-style-type: none"> Auxiliary switch 	Yes
<ul style="list-style-type: none"> Insulation voltage of main circuit with degree of pollution 3 rated value 	1 000 V
<ul style="list-style-type: none"> Insulation voltage of auxiliary circuit with degree of pollution 3 rated value 	690 V
Surge voltage resistance	
<ul style="list-style-type: none"> of main circuit rated value 	8 kV
<ul style="list-style-type: none"> of auxiliary circuit rated value 	6 kV
<ul style="list-style-type: none"> protection class IP on the front 	IP00; IP20 on the front with cover / box terminal
<ul style="list-style-type: none"> Protection class IP of the terminal 	IP00
Shock resistance at rectangular impulse	
<ul style="list-style-type: none"> at AC 	8,5g / 5 ms, 4,2g / 10 ms

<ul style="list-style-type: none"> • at DC 	8,5g / 5 ms, 4,2g / 10 ms
Shock resistance with sine pulse	
<ul style="list-style-type: none"> • at AC 	13,4g / 5 ms, 6,5g / 10 ms
<ul style="list-style-type: none"> • at DC 	13,4g / 5 ms, 6,5g / 10 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of contactor typical 	10 000 000
<ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block typical 	5 000 000
<ul style="list-style-type: none"> • of the contactor with added auxiliary switch block typical 	10 000 000
Reference code acc. to DIN EN 81346-2	Q

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-55 ... +80 °C
Relative humidity during operation	0 ... 95 %

Main circuit

Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Type of voltage for main current circuit	AC
Operating voltage	
<ul style="list-style-type: none"> • at AC <ul style="list-style-type: none"> — at 50 Hz rated value — at 60 Hz rated value 	27.3 V 27.3 V
Operating current	
<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 55 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-3 at 400 V rated value 	400 A 380 A 380 A 138 A
Minimum cross-section in main circuit	
<ul style="list-style-type: none"> • at maximum AC-1 rated value 	240 mm ²
No-load switching frequency	
<ul style="list-style-type: none"> • at AC • at DC 	1 000 1/h 1 000 1/h
Operating frequency	
<ul style="list-style-type: none"> • at AC-1 maximum 	600 1/h

Control circuit/ Control	
type of voltage	AC/DC
Type of voltage of the control supply voltage	AC/DC
Control supply voltage at AC	
• at 50 Hz rated value	21 ... 27.3 V
• at 60 Hz rated value	21 ... 27.3 V
Control supply voltage at DC	
• rated value	21 ... 27.3 V
Type of PLC-control input acc. to IEC 60947-1	Type 2
Consumed current at PLC-control input acc. to IEC 60947-1 maximum	20 mA
Operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• Full-scale value	1.1
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
Design of the surge suppressor	with varistor
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	530 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.8
Apparent holding power of magnet coil at AC	
• at 50 Hz	5 V·A
Inductive power factor with the holding power of the coil	
• at 50 Hz	0.5
Closing power of magnet coil at DC	580 W
Holding power of magnet coil at DC	3.4 W
Closing delay	
• at AC	45 ... 80 ms
• at DC	45 ... 80 ms
Opening delay	
• at AC	80 ... 100 ms
• at DC	80 ... 100 ms
Arcing time	10 ... 15 ms
Control version of the switch operating mechanism	PLC-IN or Standard A1 - A2 (adjustable)
Auxiliary circuit	
Number of NC contacts for auxiliary contacts	2
• attachable	4

<ul style="list-style-type: none"> instantaneous contact 	2
Number of NO contacts for auxiliary contacts	2
<ul style="list-style-type: none"> attachable 	4
<ul style="list-style-type: none"> instantaneous contact 	2
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
<ul style="list-style-type: none"> at 230 V rated value 	6 A
<ul style="list-style-type: none"> at 400 V rated value 	3 A
<ul style="list-style-type: none"> at 500 V rated value 	2 A
<ul style="list-style-type: none"> at 690 V rated value 	1 A
Operating current at DC-13	
<ul style="list-style-type: none"> at 24 V rated value 	10 A
<ul style="list-style-type: none"> at 48 V rated value 	2 A
<ul style="list-style-type: none"> at 60 V rated value 	2 A
<ul style="list-style-type: none"> at 110 V rated value 	1 A
<ul style="list-style-type: none"> at 125 V rated value 	0.9 A
<ul style="list-style-type: none"> at 220 V rated value 	0.3 A
<ul style="list-style-type: none"> at 600 V rated value 	0.1 A
Design of the miniature circuit breaker	
<ul style="list-style-type: none"> 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)

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: 500 A (690 V, 100 kA) gR: 500 A (690 V, 100 kA) gG: 10 A (500 V, 1 kA)

Installation/ mounting/ dimensions

<ul style="list-style-type: none"> mounting position 	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
Mounting type	screw fixing
<ul style="list-style-type: none"> Side-by-side mounting 	Yes
Height	210 mm
Width	145 mm
Depth	202 mm
Required spacing	
<ul style="list-style-type: none"> with side-by-side mounting <ul style="list-style-type: none"> forwards upwards 	20 mm 10 mm

— downwards	10 mm
— at the side	0 mm
• for grounded parts	
— forwards	20 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm

Connections/ Terminals

Width of connection bar	25 mm
Thickness of connection bar	6 mm
Diameter of holes	11 mm
Number of holes	1
<ul style="list-style-type: none"> • Type of electrical connection for main current circuit • Type of electrical connection for auxiliary and control current circuit • Type of electrical connection at contactor for auxiliary contacts • Type of electrical connection of magnet coil 	<p>Connection bar</p> <p>screw-type terminals</p> <p>Screw-type terminals</p> <p>Screw-type terminals</p>
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • at AWG conductors for main contacts 	2/0 ... 500 kcmil
Connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> • single or multi-stranded • stranded 	<p>70 ... 240 mm²</p> <p>70 ... 240 mm²</p>
Connectable conductor cross-section for auxiliary contacts	
<ul style="list-style-type: none"> • single or multi-stranded • finely stranded with core end processing 	<p>0.5 ... 4 mm²</p> <p>0.5 ... 2.5 mm²</p>
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts 	<p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)</p> <p>2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), max. 2x (0,75 ... 4 mm²)</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 1x 12</p>

Safety related data

Product function

- Mirror contact acc. to IEC 60947-4-1
- positively driven operation acc. to IEC 60947-5-1

Yes
No

Protection against electrical shock finger-safe when touched vertically from front acc. to IEC 60529

Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery
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[Type Examination Certificate](#)

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

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other	Railway
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[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

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=3RT1466-6NB36>

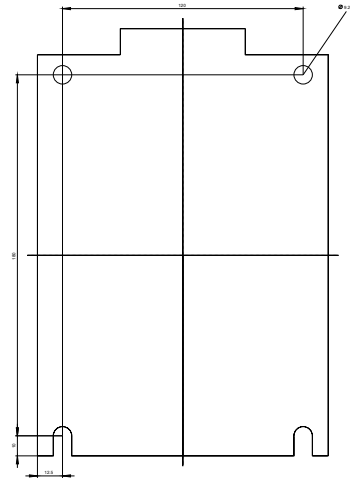
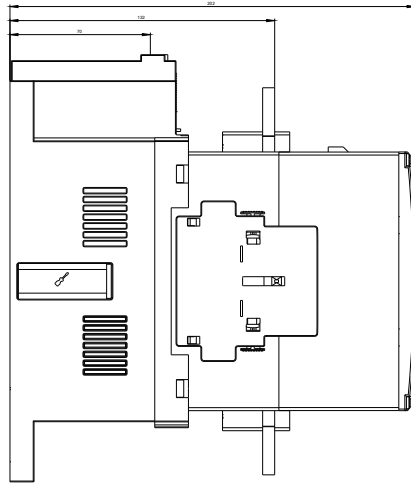
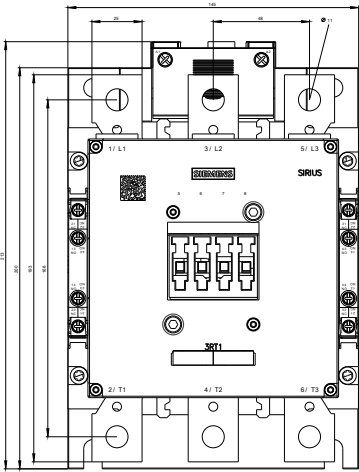
Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1466-6NB36>

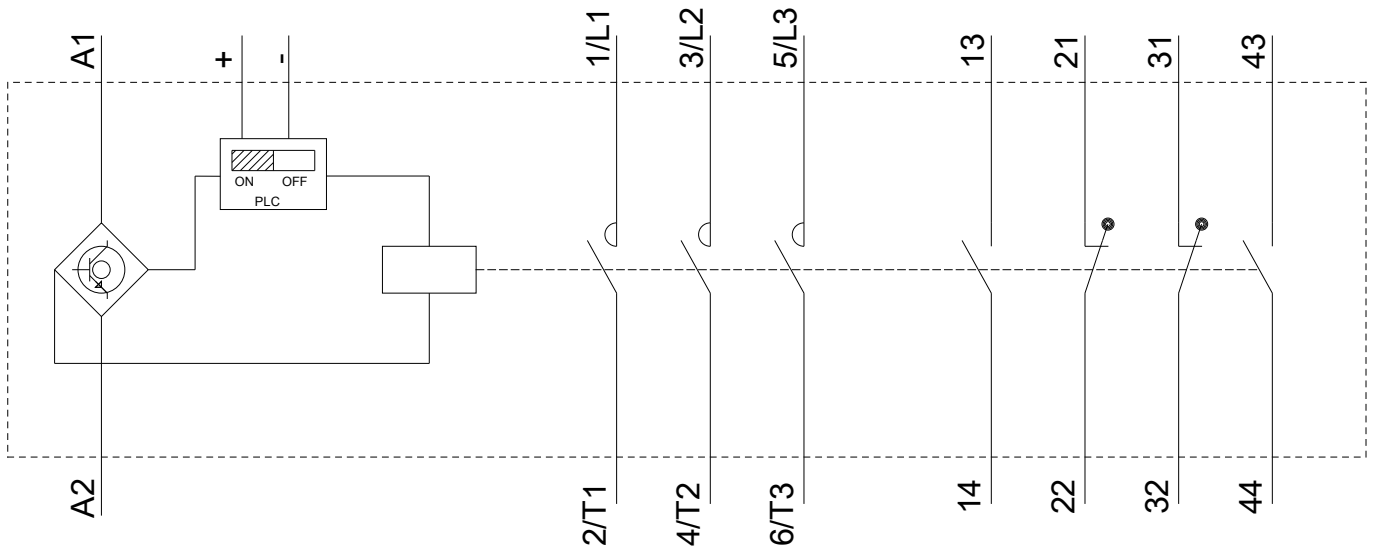
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1466-6NB36>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1466-6NB36&lang=en

Characteristic: Tripping characteristics, I^t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1466-6NB36/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1466-6NB36&objecttype=14&gridview=view1>





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