



power contactor AC-1 275 A / 690 V / 40 °C 3-pole, Uc: 220-240 V AC(50-60 Hz) / DC drive: conventional auxiliary contacts 2 NO + 2 NC main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
product designation	Contacteur
product type designation	3RT14
<b>General technical data</b>	
size of contactor	S6
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	86.4 W
• at AC in hot operating state per pole	28.8 W
• without load current share typical	5.2 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
• of main circuit with degree of pollution 3 rated value	1 000 V
• of auxiliary circuit with degree of pollution 3 rated value	500 V
surge voltage resistance	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
shock resistance at rectangular impulse	
• at AC	8,5g / 5 ms, 4,2g / 10 ms
• at DC	8,5g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at AC	13,4g / 5 ms, 6,5g / 10 ms
• at DC	13,4g / 5 ms, 6,5g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• of the contactor with added electronically optimized auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1
<b>Ambient conditions</b>	
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	3
number of NO contacts for main contacts	3
number of NC contacts for main contacts	0
type of voltage for main current circuit	AC
operational current	
<ul style="list-style-type: none"> <li>at AC-1 <ul style="list-style-type: none"> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 55 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> <li>at AC-3 <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 690 V rated value</li> </ul> </li> </ul>	275 A 250 A 250 A 97 A 97 A
minimum cross-section in main circuit at maximum AC-1 rated value	140 mm²
no-load switching frequency	
<ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>	2 000 1/h 2 000 1/h
operating frequency 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	
<ul style="list-style-type: none"> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> </ul>	220 ... 240 V 220 ... 240 V
control supply voltage at DC rated value	
<ul style="list-style-type: none"> <li></li> </ul>	220 ... 240 V
operating range factor control supply voltage rated value of magnet coil at DC	
<ul style="list-style-type: none"> <li>initial value</li> <li>full-scale value</li> </ul>	0.8 1.1
operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	0.8 ... 1.1 0.8 ... 1.1
design of the surge suppressor	with varistor
apparent pick-up power	
<ul style="list-style-type: none"> <li>at minimum rated control supply voltage at AC <ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul> </li> <li>at maximum rated control supply voltage at AC <ul style="list-style-type: none"> <li>at 60 Hz</li> <li>at 50 Hz</li> </ul> </li> </ul>	250 VA 250 VA 300 VA 300 VA
apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	300 VA
inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	0.9
apparent holding power	
<ul style="list-style-type: none"> <li>at minimum rated control supply voltage at DC</li> <li>at maximum rated control supply voltage at DC</li> </ul>	4.3 VA 5.2 VA
apparent holding power	
<ul style="list-style-type: none"> <li>at minimum rated control supply voltage at AC <ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul> </li> <li>at maximum rated control supply voltage at AC <ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul> </li> </ul>	4.8 VA 4.8 VA 5.8 VA 5.8 VA
apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	5.8 VA

<b>inductive power factor with the holding power of the coil</b> • at 50 Hz	0.8
<b>closing power of magnet coil at DC</b>	360 W
<b>holding power of magnet coil at DC</b>	5.2 W
<b>closing delay</b> • at AC • at DC	20 ... 95 ms 20 ... 95 ms
<b>opening delay</b> • at AC • at DC	40 ... 60 ms 40 ... 60 ms
<b>arcing time</b>	10 ... 15 ms
<b>control version of the switch operating mechanism</b>	Standard A1 - A2
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b> • attachable • instantaneous contact	2 4 2
<b>number of NO contacts for auxiliary contacts</b> • attachable • instantaneous contact	2 4 2
<b>operational current at AC-12 maximum</b>	10 A
<b>operational current at AC-15</b> • 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
<b>operational current at DC-13</b> • 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 2 A 2 A 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)
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
<b>Short-circuit protection</b>	
<b>product function short circuit protection</b>	No
<b>design of the fuse link</b> • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required	  gG: 355 A (690 V, 100 kA) gR: 350 A (690 V, 100 kA) gG: 10 A (500 V, 1 kA)
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
<b>fastening method</b>	screw fixing
<b>height</b>	172 mm
<b>width</b>	120 mm
<b>depth</b>	170 mm
<b>required spacing</b> • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards	  20 mm 10 mm 10 mm 0 mm  20 mm 10 mm 10 mm 10 mm

- for live parts
  - forwards 20 mm
  - upwards 10 mm
  - downwards 10 mm
  - at the side 10 mm

## Connections/ Terminals

<b>type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>	Connection bar screw-type terminals Screw-type terminals Screw-type terminals
<b>width of connection bar</b>	17 mm
<b>thickness of connection bar</b>	3 mm
<b>diameter of holes</b>	9 mm
<b>number of holes</b>	1
<b>connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• stranded</li> </ul>	25 ... 120 mm <sup>2</sup> 25 ... 120 mm <sup>2</sup>
<b>connectable conductor cross-section for auxiliary contacts</b>	
<ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup> 0.5 ... 2.5 mm <sup>2</sup>
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts               <ul style="list-style-type: none"> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), max. 2x (0.75 ... 4 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), max. 2x (0.75 ... 4 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14), 1x 12

## Safety related data

<b>product function</b>	
<ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> </ul>	Yes No
Electrical Safety	
<b>protection class IP on the front according to IEC 60529</b>	IP00; IP20 with box terminal/cover
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front with box terminal/cover

## Approvals Certificates

### General Product Approval



[Confirmation](#)



### General Product Approval

### EMV

### Functional Safety

### Test Certificates

[KC](#)



[Type Examination Certificate](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

### Marine / Shipping

### other



[Confirmation](#)

### other

### Railway

### Environment

[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

[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=3RT1456-6AP36>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1456-6AP36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1456-6AP36>

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

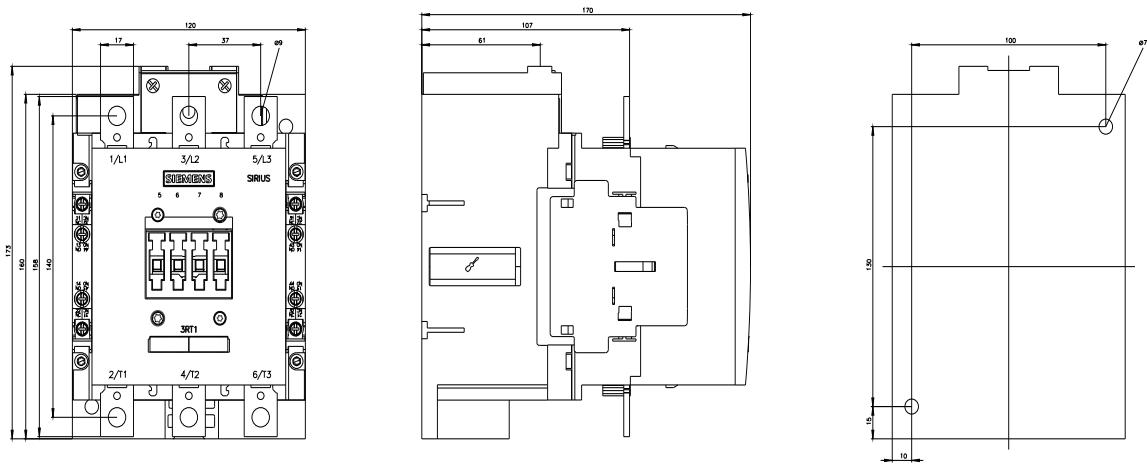
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1456-6AP36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1456-6AP36&lang=en)

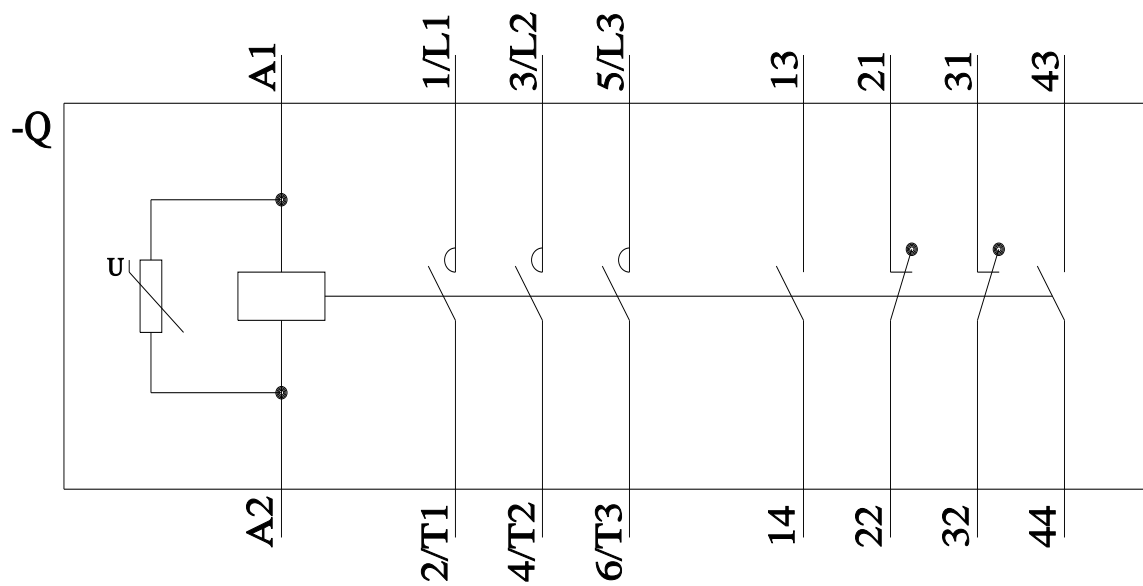
### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1456-6AP36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1456-6AP36&objecttype=14&gridview=view1>





last modified:

3/14/2024