



power contactor, AC-3, 9 A, 4 kW / 400 V, 4-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, main contacts: 2 NO + 2 NC, screw terminal, size: S00

<b>product brand name</b>	SIRIUS
<b>product designation</b>	contactor
<b>product type designation</b>	3RT25
<b>General technical data</b>	
<b>size of contactor</b>	S00
<b>product extension</b>	
• function module for communication	No
• auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state per pole	0.3 W
• without load current share typical	1.2 W
<b>type of calculation of power loss depending on pole</b>	quadratic
<b>insulation voltage</b>	
• of main circuit with degree of pollution 3 rated value	690 V
• of auxiliary circuit with degree of pollution 3 rated value	690 V
<b>surge voltage resistance</b>	
• of main circuit rated value	6 kV
• of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
<b>shock resistance at rectangular impulse</b>	
• at AC	6,7g / 5 ms, 4,2g / 10 ms
<b>shock resistance with sine pulse</b>	
• at AC	10,5g / 5 ms, 6,6g / 10 ms
<b>mechanical service life (operating cycles)</b>	
• of contactor typical	30 000 000
• 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
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	10/01/2009
<b>Weight</b>	0.24 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
<b>relative humidity minimum</b>	10 %
<b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>	95 %
<b>Environmental footprint</b>	

Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	39.6 kg
global warming potential [CO2 eq] during manufacturing	1.18 kg
global warming potential [CO2 eq] during operation	38.5 kg
global warming potential [CO2 eq] after end of life	-0.155 kg
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	4
<b>number of NO contacts for main contacts</b>	2
<b>number of NC contacts for main contacts</b>	2
<b>operational current</b>	
<ul style="list-style-type: none"> <li>● at AC-1 up to 690 V <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C rated value</li> <li>— at ambient temperature 60 °C rated value</li> </ul> </li> <li>● at AC-2 at AC-3 at 400 V <ul style="list-style-type: none"> <li>— per NO contact rated value</li> <li>— per NC contact rated value</li> </ul> </li> </ul>	18 A 16 A 9 A 9 A
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm <sup>2</sup>
<b>operational current</b>	
<ul style="list-style-type: none"> <li>● <b>at 1 current path at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> </ul> </li> <li>● <b>with 2 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> </ul> </li> <li>● <b>at 1 current path at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V per NC contact rated value</li> <li>— at 24 V per NO contact rated value</li> <li>— at 110 V per NC contact rated value</li> <li>— at 110 V per NO contact rated value</li> <li>— at 220 V per NC contact rated value</li> <li>— at 220 V per NO contact rated value</li> </ul> </li> <li>● <b>with 2 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V per NC contact rated value</li> <li>— at 24 V per NO contact rated value</li> <li>— at 110 V per NC contact rated value</li> <li>— at 110 V per NO contact rated value</li> </ul> </li> </ul>	16 A 2.1 A 0.8 A 0.6 A 16 A 12 A 1.6 A 0.8 A 16 A 16 A 0.075 A 0.15 A 0.375 A 0.75 A 16 A 16 A 0.175 A 0.35 A
operating power at AC-2 at AC-3	
<ul style="list-style-type: none"> <li>● at 230 V per NC contact rated value</li> <li>● at 230 V per NO contact rated value</li> <li>● at 400 V per NC contact rated value</li> <li>● at 400 V per NO contact rated value</li> </ul>	2.2 kW 2.2 kW 4 kW 4 kW
<b>short-time withstand current in cold operating state up to 40 °C</b>	
<ul style="list-style-type: none"> <li>● limited to 1 s switching at zero current maximum</li> <li>● limited to 5 s switching at zero current maximum</li> <li>● limited to 10 s switching at zero current maximum</li> <li>● limited to 30 s switching at zero current maximum</li> <li>● limited to 60 s switching at zero current maximum</li> </ul>	110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 86 A; Use minimum cross-section acc. to AC-1 rated value 66 A; Use minimum cross-section acc. to AC-1 rated value 54 A; Use minimum cross-section acc. to AC-1 rated value
<b>power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor</b>	0.3 W
<b>power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor</b>	0.3 W
<b>no-load switching frequency</b>	
<ul style="list-style-type: none"> <li>● at AC</li> <li>● at DC</li> </ul>	10 000 1/h 10 000 1/h
<b>operating frequency</b>	
<ul style="list-style-type: none"> <li>● at AC-1 maximum</li> </ul>	1 000 1/h

Control circuit/ Control	
<b>type of voltage of the control supply voltage</b>	AC
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	110 V
• at 60 Hz rated value	120 V
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	31.7 VA
• at 60 Hz	31.7 VA
<b>inductive power factor with closing power of the coil</b>	0.81
• at 60 Hz	0.81
<b>apparent holding power of magnet coil at AC</b>	4.8 VA
• at 60 Hz	4.8 VA
<b>inductive power factor with the holding power of the coil</b>	0.25
• at 60 Hz	0.25
<b>closing delay</b>	
• at AC	9 ... 35 ms
<b>opening delay</b>	
• at AC	4 ... 15 ms
<b>arcing time</b>	10 ... 15 ms
<b>residual current of the electronics for control with signal &lt;0&gt;</b>	
• at AC at 230 V maximum permissible	0.003 A
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	0
number of NO contacts for auxiliary contacts instantaneous contact	0
operational current at AC-12 maximum	10 A
<b>operational current at AC-15</b>	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
<b>operational current at DC-12</b>	
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
<b>operational current at DC-13</b>	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 220 V rated value	0.3 A
• at 600 V rated value	0.1 A
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor at 230 V rated value	1 hp
• for 3-phase AC motor at 460/480 V rated value	5 hp
<b>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
Short-circuit protection	
<b>design of the fuse link</b>	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 35 A (690 V, 100 kA)
— with type of coordination 2 required	gG: 20 A (690 V, 100 kA)
Installation/ mounting/ dimensions	
<b>mounting position</b>	+/-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
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
<b>height</b>	57.5 mm
<b>width</b>	45 mm
<b>depth</b>	73 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>● with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>● for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— at the side 6 mm</li> <li>— downwards 0 mm</li> </ul> </li> <li>● for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 6 mm</li> </ul> </li> </ul>	
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	
<ul style="list-style-type: none"> <li>● for main current circuit screw-type terminals</li> <li>● for auxiliary and control circuit screw-type terminals</li> <li>● at contactor for auxiliary contacts Screw-type terminals</li> <li>● of magnet coil Screw-type terminals</li> </ul>	
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>● for main contacts <ul style="list-style-type: none"> <li>— solid 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup></li> <li>— solid or stranded 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup></li> <li>— finely stranded with core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</li> </ul> </li> <li>● for AWG cables for main contacts 2x (20 ... 16), 2x (18 ... 14), 2x 12</li> </ul>	
<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 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup></li> <li>— solid or stranded 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup></li> <li>— finely stranded with core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</li> </ul> </li> <li>● for AWG cables for auxiliary contacts 2x (20 ... 16), 2x (18 ... 14), 2x 12</li> </ul>	
<b>AWG number as coded connectable conductor cross section for main contacts</b>	20 ... 12
<b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>	20 ... 12
<b>Safety related data</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>● mirror contact according to IEC 60947-4-1 Yes; with 3RH29</li> <li>● positively driven operation according to IEC 60947-5-1 No</li> </ul>	
Electrical Safety	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	EMV



**Test Certificates**      **Maritime application**

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



**Maritime application**      **other**      **Railway**



[Miscellaneous](#)



[Confirmation](#)

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**Environment**



[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=3RT2516-1AK60>

**Cax online generator**

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-1AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1AK60>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2516-1AK60&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2516-1AK60&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1AK60/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2516-1AK60&objecttype=14&gridview=view1>





