



power contactor, AC-3, 12 A, 5.5 kW / 400 V, 4-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, main contacts: 2 NO + 2 NC, spring-loaded terminal, size: S00

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
<b>General technical data</b>	
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 per pole	0.5 W
• without load current share typical	1.7 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 auxiliary 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
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (operating cycles)	
• 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
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
Weight	0.255 kg
<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 %
<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>	22 A 20 A 12 A 9 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 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>	20 A 2.1 A 0.8 A 0.6 A 20 A 12 A 1.6 A 0.8 A 20 A 20 A 0.075 A 0.15 A 0.375 A 0.75 A 20 A 20 A 0.175 A 0.35 A
<b>operating power at AC-2 at AC-3</b>	
<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 3 kW 4 kW 5.5 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>	125 A; Use minimum cross-section acc. to AC-1 rated value 123 A; Use minimum cross-section acc. to AC-1 rated value 96 A; Use minimum cross-section acc. to AC-1 rated value 74 A; Use minimum cross-section acc. to AC-1 rated value 61 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>	0.5 W
<b>power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor</b>	0.5 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>	43 VA
• at 50 Hz	43 VA
• at 60 Hz	43 VA
<b>inductive power factor with closing power of the coil</b>	0.8
• at 50 Hz	0.77
• at 60 Hz	0.77
<b>apparent holding power of magnet coil at AC</b>	6.5 VA
• at 50 Hz	6.5 VA
• at 60 Hz	6.5 VA
<b>inductive power factor with the holding power of the coil</b>	0.25
• at 50 Hz	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	0.004 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	2 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 assignment 2 required		gG: 20 A (690 V, 100 kA)
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 50022	
height	70 mm	
width	45 mm	
depth	73 mm	
required spacing		
• with side-by-side mounting		
— forwards	0 mm	
— backwards	0 mm	
— upwards	0 mm	
— downwards	0 mm	
— at the side	0 mm	
• for grounded parts		
— forwards	0 mm	
— backwards	0 mm	
— upwards	0 mm	
— at the side	6 mm	
— downwards	0 mm	
• for live parts		
— forwards	0 mm	
— backwards	0 mm	
— upwards	0 mm	
— downwards	0 mm	
— at the side	6 mm	
Connections/ Terminals		
type of electrical connection		
• for main current circuit	spring-loaded terminals	
• for auxiliary and control circuit	spring-loaded terminals	
• at contactor for auxiliary contacts	Spring-type terminals	
• of magnet coil	Spring-type terminals	
type of connectable conductor cross-sections for main contacts		
• solid	2x (0.5 ... 4 mm²)	
• solid or stranded	2x (0,5 ... 4 mm²)	
• finely stranded with core end processing	2x (0.5 ... 2.5 mm²)	
• finely stranded without core end processing	2x (0.5 ... 2.5 mm²)	
type of connectable conductor cross-sections		
• for auxiliary contacts		
— solid	2x (0.5 ... 4 mm²)	
— solid or stranded	2x (0,5 ... 4 mm²)	
— finely stranded with core end processing	2x (0.5 ... 2.5 mm²)	
— finely stranded without core end processing	2x (0.5 ... 2.5 mm²)	
• for AWG cables for auxiliary contacts	2x (20 ... 12)	
AWG number as coded connectable conductor cross section for main contacts	20 ... 12	
Safety related data		
product function		
• mirror contact according to IEC 60947-4-1	Yes; with 3RH29	
• positively driven operation according to IEC 60947-5-1	No	
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	
Approvals Certificates		
General Product Approval		EMV



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#### Marine / Shipping

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#### Railway



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#### Environment



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#### 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=3RT2517-2AK60>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2517-2AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-2AK60>

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

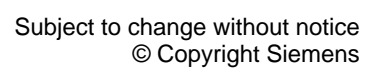
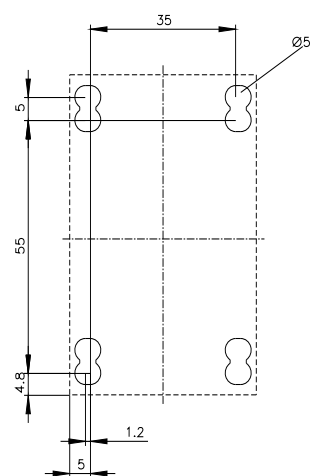
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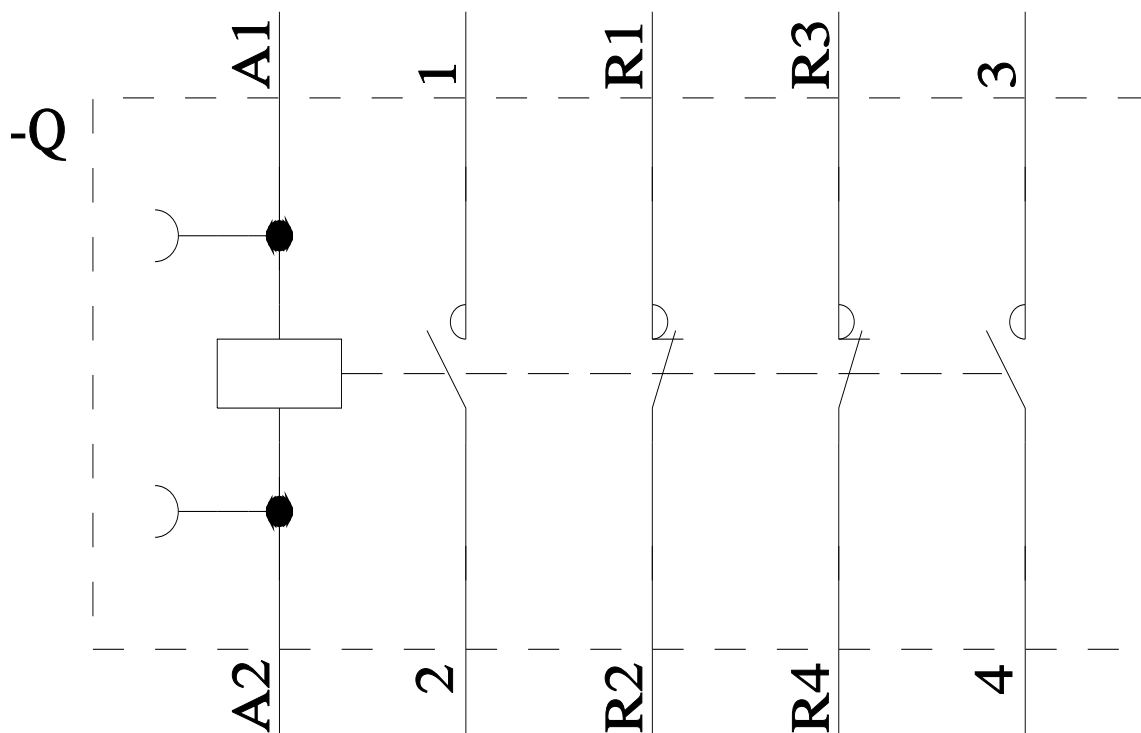
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-2AK60/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2517-2AK60&objecttype=14&gridview=view1>





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