## **SIEMENS**

Data sheet 3RT2535-1AP60



power contactor, AC-3, 35 A, 18.5 kW / 400 V, 4-pole, 220 V AC, 50 Hz / 240 V, 60 Hz, main contacts: 2 NO + 2 NC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
General technical data	
size of contactor	S2
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state per pole</li> </ul>	2.2 W
<ul> <li>without load current share typical</li> </ul>	6.9 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	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	11.8g / 5 ms, 7.4g / 10 ms
shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2014
Weight	1.14 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-40 +70 °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	2
number of NC contacts for main contacts	2
operational current	
• at AC-1 up to 690 V	
— at ambient temperature 40 °C rated value	60 A
— at ambient temperature 60 °C rated value	55 A
• at AC-2 at AC-3 at 400 V	
— per NO contact rated value	35 A
per NC contact rated value	35 A
minimum cross-section in main circuit at maximum AC-1 rated	16 mm²
value	
operational current	
at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1A
at 1 current path at DC-3 at DC-5	
— at 24 V per NC contact rated value	35 A
— at 24 V per NO contact rated value	35 A
— at 110 V per NC contact rated value	1.25 A
— at 110 V per NO contact rated value	2.5 A
— at 220 V per NC contact rated value	0.5 A
— at 220 V per NO contact rated value  — at 220 V per NO contact rated value	1A
·	0.045 A
— at 440 V per NC contact rated value	
— at 440 V per NO contact rated value	0.1 A
with 2 current paths in series at DC-3 at DC-5	
— at 24 V per NC contact rated value	55 A
— at 24 V per NO contact rated value	55 A
<ul> <li>— at 110 V per NC contact rated value</li> </ul>	12.5 A
— at 110 V per NO contact rated value	25 A
<ul> <li>— at 220 V per NC contact rated value</li> </ul>	2.5 A
<ul> <li>— at 220 V per NO contact rated value</li> </ul>	5 A
<ul> <li>at 440 V per NC contact rated value</li> </ul>	0.135 A
— at 440 V per NO contact rated value	0.27 A
operating power at AC-2 at AC-3	
<ul> <li>at 230 V per NC contact rated value</li> </ul>	11 kW
<ul> <li>at 230 V per NO contact rated value</li> </ul>	11 kW
<ul> <li>at 400 V per NC contact rated value</li> </ul>	18.5 kW
• at 400 V per NO contact rated value	18.5 kW
short-time withstand current in cold operating state up to	
40 °C	546 A: Use minimum cross-section acc. to AC 1 reted value
Iimited to 1 s switching at zero current maximum	546 A; Use minimum cross-section acc. to AC-1 rated value
Ilmited to 5 s switching at zero current maximum	443 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 10 s switching at zero current maximum	334 A; Use minimum cross-section acc. to AC-1 rated value
Ilimited to 30 s switching at zero current maximum	241 A; Use minimum cross-section acc. to AC-1 rated value
Ilmited to 60 s switching at zero current maximum	196 A; Use minimum cross-section acc. to AC-1 rated value
power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor	2.2 W
power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor	2.2 W
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
at AC-1 maximum	1 200 1/h

type of voltage of the control supply voltage	AC		
control supply voltage at AC			
• at 50 Hz rated value	220 V		
at 60 Hz rated value	240 V		
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		
apparent pick-up power of magnet coil at AC	212 VA		
● at 60 Hz	212 VA		
inductive power factor with closing power of the coil	0.67		
● at 60 Hz	0.67		
apparent holding power of magnet coil at AC	18.5 VA		
● at 60 Hz	18.5 VA		
inductive power factor with the holding power of the coil	0.37		
● at 60 Hz	0.37		
closing delay			
• at AC	10 80 ms		
opening delay			
• at AC	10 18 ms		
arcing time	10 20 ms		
control version of the switch operating mechanism	AC		
Auxiliary circuit			
number of NC contacts for auxiliary contacts instantaneous contact	1		
number of NO contacts for auxiliary contacts instantaneous contact	1		
operational current at AC-12 maximum	10 A		
operational current at AC-15			
at 230 V rated value	6 A		
at 400 V rated value	3 A		
• at 500 V rated value	2 A		
at 690 V rated value	1 A		
operational current at DC-12			
at 24 V rated value	10 A		
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		
operational current at DC-13			
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 125 V rated value	0.9 A		
at 220 V rated value	0.3 A		
at 600 V rated value	0.1 A		
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)		
UL/CSA ratings			
yielded mechanical performance [hp]			
• for 3-phase AC motor at 460/480 V rated value	20 hp		
contact rating of auxiliary contacts according to UL	A600 / P600		
Short-circuit protection			
design of the fuse link			
for short-circuit protection of the main circuit			
with type of coordination 1 required	gG: 125 A (690 V, 100 kA)		
with type of coordination in required  - with type of assignment 2 required	gG: 63A (690V, 100kA)		
for short-circuit protection of the auxiliary switch required	fuse gG: 10 A		
Installation/ mounting/ dimensions			
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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	114 mm
width	75 mm
depth	130 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	50 mm
— at the side	10 mm
— downwards	50 mm
• for live parts	30 111111
— forwards	0 mm
— backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	10 mm
Connections/ Terminals	
type of electrical connection	across to the description of
for main current circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (1 35 mm²), 1x (1 50 mm²)
solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)
finely stranded with core end processing	2x (1 25 mm²), 1x (1 35 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)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross section for main contacts	18 1
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	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	





Confirmation





<u>KC</u>

General Product Approval	Test Certificates	Marine / Shipping	
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Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping

other











Confirmation

Railway

Dangerous goods

Environment

Special Test Certificate

<u>Transport Information</u>

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=3RT2535-1AP60

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2535-1AP60

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AP60

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

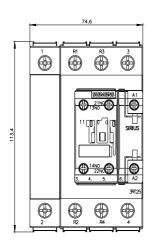
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2535-1AP60&lang=en

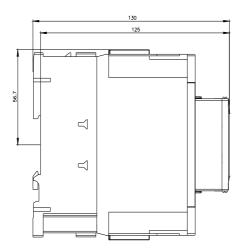
Characteristic: Tripping characteristics, I²t, Let-through current

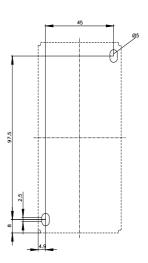
 $\underline{\text{https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AP60/char}}$ 

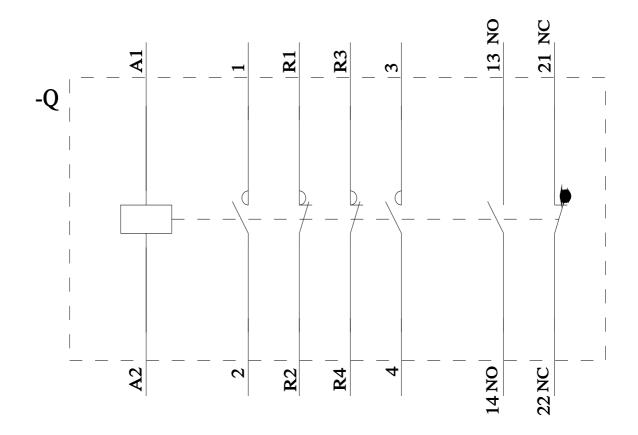
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2535-1AP60&objecttype=14&gridview=view1









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