# **SIEMENS**

Data sheet 3RT2016-2AP01

Power contactor, AC-3 9 A, 4 kW / 400 V 1 NO, 230 V AC, 50 / 60 Hz, 3-pole, Size S00 Spring-type terminal



Product brand name	SIRIUS
Product designation	Power contactor
Product type designation	3RT2

General technical data	
Size of contactor	S00
Product extension	
<ul> <li>function module for communication</li> </ul>	No
Auxiliary switch	Yes
Surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	6 kV
<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
maximum permissible voltage for safe isolation	
<ul> <li>between coil and main contacts acc. to EN</li> </ul>	400 V
60947-1	
Protection class IP	
• on the front	IP20
of the terminal	IP20
Shock resistance at rectangular impulse	
• at AC	6,7g / 5 ms, 4,2g / 10 ms

of the contactor typical     of the contactor with added electronics-compatible auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750     Reference code acc. to DIN EN 81346-2     Q  Inbient conditions Installation altitude at height above sea level     maximum     2 000 m  Installation altitude at height above sea level     maximum     2 000 m  Installation altitude at height above sea level     maximum     Operating contacts for main current circuit     3 Number of NO contacts for main contacts     3 Operating voltage     at AC-3 rated value maximum     of AC-3 rated value maximum     oporating current     at AC-1 at 400 V     at ambient temperature 40 °C rated value     at AC-1 up to 690 V at ambient temperature 60 °C rated value     at AC-2 at 400 V rated value     at AC-3 up to 690 V rated value     at AC-5 up to 690 V rated value     at AC-6 up to 200 V rated value     at AC-6 up to 690 V rated value     at AC-6 up to 690 V rated value     at AC-8 up to 690 V rated value     at AC-8 up to 400 V rated value     at AC-8 up to 500 V at current peak n=20 rated     value     au put to 500 V at current peak n=20 rated     value     au put to 500 V at current peak n=20 rated     value     au put to 500 V at current peak n=20 rated     value	Shock resistance with sine pulse	
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• of the contactor with added electronics-compatible auxiliary switch block typical • of the contactor with added auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750  Reference code acc. to DIN EN 81346-2  quintification altitude at height above sea level • maximum  2 000 m  fain circuit  Number of poles for main current circuit  3 Number of NO contacts for main contacts  3 Operating voltage • at AC-3 rated value maximum  690 V  Operating current • at AC-1 at 400 V  — at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 40 °C rated value  • at AC-3  — at 400 V rated value  • at AC-3  — at 400 V rated value  • at AC-3 at 400 V rated value  • at AC-4 at 400 V rated value  • at AC-3 at 400 V rated value  • at AC-4 at 400 V rated value  • at AC-3 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 400 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-6 a  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value	Mechanical service life (switching cycles)	
compatible auxiliary switch block typical  of the contactor with added auxiliary switch block typical  Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750  Reference code acc. to DIN EN 81346-2  Q  Imbient conditions Installation altitude at height above sea level  maximum  2 000 m  fain circuit  Number of poles for main current circuit  3 Number of NO contacts for main contacts  3 Operating voltage  at AC-3 rated value maximum  690 V  Operating current  at AC-1 at 400 V  at ambient temperature 40 °C rated value  at AC-1 at 400 V  rated value  up to 690 V at ambient temperature 60 °C rated value  at AC-2 at 400 V rated value  at AC-3 au 400 V rated value  at AC-3 au 400 V rated value  at AC-3 au to 690 V rated value  5.3 A  at AC-3 au to 400 V rated value  at AC-3 au to 690 V rated value  at AC-3 au to 690 V rated value  at AC-3 au to 400 V rated value  5.3 A  value	of contactor typical	30 000 000
of the contactor with added auxiliary switch block typical Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 Reference code acc. to DIN EN 81346-2 Q Imbient conditions Installation altitude at height above sea level     maximum     2 000 m  Main circuit Number of NO contacts for main current circuit Number of NO contacts for main contacts 3 Operating voltage     at AC-3 rated value maximum Operating current     at AC-1 at 400 V     at ambient temperature 40 °C rated value     at AC-1 — up to 690 V at ambient temperature 60 °C rated value     — up to 690 V at ambient temperature 60 °C rated value     at AC-2 at 400 V rated value     at AC-3 at 400 V rated value     at AC-4 at 400 V rated value     at AC-5 au pt to 690 V rated value     at AC-5a     — up to 230 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value     - up to 500 V at current peak n=20 rated value	of the contactor with added electronics-	5 000 000
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Installation altitude at height above sea level  • maximum  Alin circuit  Number of poles for main current circuit 3 Number of NO contacts for main contacts 3 Operating voltage • at AC-3 rated value maximum  690 V  Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C 22 A rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 — at 400 V rated value • at AC-3 — at 400 V rated value — at 500 V rated value — at 500 V rated value • at AC-4 at 400 V rated value • at AC-5 ap to 690 V rated value • at AC-5 ap to 690 V rated value • at AC-5 ap to 690 V rated value • at AC-5 ap to 690 V rated value • at AC-6a — up to 230 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated 5.3 A	Reference code acc. to DIN EN 81346-2	Q
Installation altitude at height above sea level  • maximum  Alin circuit  Number of poles for main current circuit 3 Number of NO contacts for main contacts 3 Operating voltage • at AC-3 rated value maximum  690 V  Operating current • at AC-1 at 400 V — at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C 22 A rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 — at 400 V rated value • at AC-3 — at 400 V rated value — at 500 V rated value — at 500 V rated value • at AC-4 at 400 V rated value • at AC-5 ap to 690 V rated value • at AC-5 ap to 690 V rated value • at AC-5 ap to 690 V rated value • at AC-5 ap to 690 V rated value • at AC-6a — up to 230 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated 5.3 A	Annalistance and additional	
Main circuit  Number of poles for main current circuit  Sumber of NO contacts for main current circuit  3 Number of NO contacts for main current size of the poles of the pol		
Number of poles for main current circuit  Number of NO contacts for main contacts 3 Operating voltage  • at AC-3 rated value maximum 690 V  Operating current  • at AC-1 at 400 V  — at ambient temperature 40 °C rated value  • at AC-1  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  • at AC-2 at 400 V rated value  • at AC-3  — at 400 V rated value  — at 500 V rated value  — at 500 V rated value  • at AC-4 at 400 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 400 V rated value  • at AC-6 up to 230 V at current peak n=20 rated value  — up to 400 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value		2 000 m
Number of poles for main current circuit  Number of NO contacts for main contacts  Operating voltage  • at AC-3 rated value maximum  Operating current  • at AC-1 at 400 V  — at ambient temperature 40 °C rated value  • at AC-1  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  • at AC-2  • at AC-2 at 400 V rated value  • at AC-3  — at 400 V rated value  — at 500 V rated value  — at 500 V rated value  • at AC-4 at 400 V rated value  • at AC-5 au pto 690 V rated value  • at AC-5 au pto 690 V rated value  • at AC-5 bu pto 400 V rated value  • at AC-5bu pto 400 V rated value  • at AC-6a  — up to 230 V at current peak n=20 rated value  — up to 400 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value	- maximum	
Number of NO contacts for main contacts  Operating voltage  • at AC-3 rated value maximum  Operating current  • at AC-1 at 400 V  — at ambient temperature 40 °C rated value  • at AC-1  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  • at AC-2 at 400 V rated value  • at AC-3  — at 400 V rated value  — at 500 V rated value  — at 690 V rated value  — at 690 V rated value  • at AC-4 at 400 V rated value  • at AC-5a up to 690 V rated value  • at AC-5b up to 400 V rated value  • at AC-6a  — up to 230 V at current peak n=20 rated value  — up to 400 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value	Main circuit	
Operating voltage  • at AC-3 rated value maximum  Operating current  • at AC-1 at 400 V  — at ambient temperature 40 °C rated value  • at AC-1  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  • at AC-2 at 400 V rated value  • at AC-2 at 400 V rated value  — at 500 V rated value  — at 500 V rated value  — at 690 V rated value  — at 690 V rated value  — at AC-3 at 400 V rated value  — at AC-4 at 400 V rated value  • at AC-5 au pt o 690 V rated value  • at AC-5b up to 400 V rated value  • at AC-6a  — up to 230 V at current peak n=20 rated value  — up to 400 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated value	·	
at AC-3 rated value maximum     bat AC-1 at 400 V     — at ambient temperature 40 °C rated value     at AC-1     — up to 690 V at ambient temperature 40 °C rated value     — up to 690 V at ambient temperature 60 °C rated value     — up to 690 V at ambient temperature 60 °C rated value     — up to 690 V at ambient temperature 60 °C rated value     • at AC-2 at 400 V rated value     • at AC-3     — at 400 V rated value     — at 500 V rated value     — at 690 V rated value     • at AC-4 at 400 V rated value     • at AC-5 up to 690 V rated value     • at AC-5 up to 690 V rated value     • at AC-6a     — up to 230 V at current peak n=20 rated value     — up to 400 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value     — up to 500 V at current peak n=20 rated value		3
Operating current  • at AC-1 at 400 V — at ambient temperature 40 °C rated value  • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value  • at AC-2 at 400 V rated value  • at AC-3 — at 400 V rated value — at 500 V rated value — at 690 V rated value  • at AC-4 at 400 V rated value  • at AC-5 up to 690 V rated value  • at AC-5 up to 690 V rated value  • at AC-6a — up to 230 V at current peak n=20 rated value — up to 400 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated 5.3 A		999 V
at AC-1 at 400 V — at ambient temperature 40 °C rated value at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value  at AC-2 at 400 V rated value  at AC-3 — at 400 V rated value  at 500 V rated value  - at 690 V rated value  5.7 A  at AC-4 at 400 V rated value  at AC-5a up to 690 V rated value  at AC-5b up to 400 V rated value  at AC-6a — up to 230 V at current peak n=20 rated value  - up to 400 V at current peak n=20 rated value  - up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated value — up to 500 V at current peak n=20 rated		690 V
<ul> <li>at ambient temperature 40 °C rated value</li> <li>at AC-1</li> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> <li>at AC-2 at 400 V rated value</li> <li>at AC-2 at 400 V rated value</li> <li>at AC-3</li> <li>at 400 V rated value</li> <li>-at 500 V rated value</li> <li>-at 690 V rated value</li> <li>at AC-4 at 400 V rated value</li> <li>at AC-5 aup to 690 V rated value</li> <li>at AC-5 up to 690 V rated value</li> <li>at AC-6a</li> <li>up to 230 V at current peak n=20 rated value</li> <li>-up to 400 V at current peak n=20 rated value</li> <li>-up to 500 V at current peak n=20 rated value</li> <li>-up to 500 V at current peak n=20 rated value</li> <li>-up to 500 V at current peak n=20 rated value</li> </ul>	•	
at AC-1  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 60 °C 20 A rated value  • at AC-2 at 400 V rated value  • at AC-3  — at 400 V rated value  — at 500 V rated value  — at 690 V rated value  • at AC-4 at 400 V rated value  • at AC-5a up to 690 V rated value  • at AC-5b up to 400 V rated value  • at AC-6a  — up to 230 V at current peak n=20 rated value  — up to 400 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — 5.3 A		22.4
- up to 690 V at ambient temperature 40 °C rated value  - up to 690 V at ambient temperature 60 °C rated value  • at AC-2 at 400 V rated value  • at AC-3  - at 400 V rated value  - at 500 V rated value  - at 690 V rated value  - at 690 V rated value  • at AC-4 at 400 V rated value  • at AC-5a up to 690 V rated value  • at AC-5b up to 400 V rated value  • at AC-6a  - up to 230 V at current peak n=20 rated value  - up to 500 V at current peak n=20 rated  value  - up to 500 V at current peak n=20 rated  value  - up to 500 V at current peak n=20 rated  5.3 A	·	22 A
rated value  — up to 690 V at ambient temperature 60 °C rated value  • at AC-2 at 400 V rated value  • at AC-3  — at 400 V rated value  — at 500 V rated value  — at 690 V rated value  — at 690 V rated value  • at AC-4 at 400 V rated value  • at AC-5a up to 690 V rated value  • at AC-5b up to 400 V rated value  • at AC-6a  — up to 230 V at current peak n=20 rated value  — up to 400 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  5.3 A		22.4
rated value  • at AC-2 at 400 V rated value  • at AC-3  — at 400 V rated value  — at 500 V rated value  — at 690 V rated value  • at AC-4 at 400 V rated value  • at AC-5a up to 690 V rated value  • at AC-5b up to 400 V rated value  • at AC-6a  — up to 230 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  value  — up to 500 V at current peak n=20 rated  5.3 A		22 A
<ul> <li>at AC-2 at 400 V rated value</li> <li>at AC-3</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> <li>6.7 A</li> <li>at AC-4 at 400 V rated value</li> <li>at AC-5a up to 690 V rated value</li> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> <li>— up to 230 V at current peak n=20 rated value</li> <li>— up to 400 V at current peak n=20 rated value</li> <li>— up to 500 V at current peak n=20 rated value</li> <li>— up to 500 V at current peak n=20 rated value</li> <li>— up to 500 V at current peak n=20 rated value</li> <li>— up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> </ul>	— up to 690 V at ambient temperature 60 °C	20 A
<ul> <li>at AC-3</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> <li>6.7 A</li> <li>at AC-4 at 400 V rated value</li> <li>8.5 A</li> <li>at AC-5a up to 690 V rated value</li> <li>19.4 A</li> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> <li>— up to 230 V at current peak n=20 rated value</li> <li>— up to 400 V at current peak n=20 rated value</li> <li>— up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> </ul>	rated value	
<ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>at AC-4 at 400 V rated value</li> <li>at AC-5a up to 690 V rated value</li> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> <li>up to 230 V at current peak n=20 rated value</li> <li>up to 400 V at current peak n=20 rated value</li> <li>up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> </ul>	• at AC-2 at 400 V rated value	9 A
- at 500 V rated value 7.7 A  - at 690 V rated value 6.7 A  • at AC-4 at 400 V rated value 8.5 A  • at AC-5a up to 690 V rated value 19.4 A  • at AC-5b up to 400 V rated value 7.4 A  • at AC-6a  - up to 230 V at current peak n=20 rated value - up to 400 V at current peak n=20 rated value  - up to 500 V at current peak n=20 rated  - up to 500 V at current peak n=20 rated  - 5.3 A  - 5.3 A	• at AC-3	
<ul> <li>at 690 V rated value</li> <li>at AC-4 at 400 V rated value</li> <li>at AC-5a up to 690 V rated value</li> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> <li>up to 230 V at current peak n=20 rated value</li> <li>up to 400 V at current peak n=20 rated value</li> <li>up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> </ul>	— at 400 V rated value	9 A
<ul> <li>at AC-4 at 400 V rated value</li> <li>at AC-5a up to 690 V rated value</li> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> <li>up to 230 V at current peak n=20 rated value</li> <li>up to 400 V at current peak n=20 rated value</li> <li>up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> </ul>	— at 500 V rated value	7.7 A
<ul> <li>at AC-5a up to 690 V rated value</li> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> <li>up to 230 V at current peak n=20 rated value</li> <li>up to 400 V at current peak n=20 rated value</li> <li>up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> </ul>	— at 690 V rated value	6.7 A
<ul> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> <li>up to 230 V at current peak n=20 rated value</li> <li>up to 400 V at current peak n=20 rated value</li> <li>up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> </ul>	• at AC-4 at 400 V rated value	8.5 A
<ul> <li>at AC-6a  — up to 230 V at current peak n=20 rated value  — up to 400 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated  5.3 A  6.5 A  6.6 A  6.7 A  6.7 A  6.8 A  6.9 A</li></ul>	• at AC-5a up to 690 V rated value	19.4 A
<ul> <li>up to 230 V at current peak n=20 rated value</li> <li>up to 400 V at current peak n=20 rated value</li> <li>up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> <li>5.3 A</li> <li>5.3 A</li> </ul>	• at AC-5b up to 400 V rated value	7.4 A
value  — up to 400 V at current peak n=20 rated value  — up to 500 V at current peak n=20 rated 5.3 A  5.3 A	• at AC-6a	
<ul> <li>up to 400 V at current peak n=20 rated</li> <li>value</li> <li>up to 500 V at current peak n=20 rated</li> <li>5.3 A</li> <li>5.3 A</li> </ul>	— up to 230 V at current peak n=20 rated	5.3 A
value  — up to 500 V at current peak n=20 rated  5.3 A	value	
— up to 500 V at current peak n=20 rated 5.3 A		5.3 A
The state of the s		504
	<ul><li>— up to 500 V at current peak n=20 rated value</li></ul>	5.3 A

<ul><li>— up to 690 V at current peak n=20 rated value</li></ul>	5 A
● at AC-6a	
— up to 230 V at current peak n=30 rated value	3.5 A
— up to 400 V at current peak n=30 rated value	3.5 A
<ul><li>— up to 500 V at current peak n=30 rated value</li></ul>	3.6 A
<ul><li>— up to 690 V at current peak n=30 rated value</li></ul>	3.3 A
Minimum cross-section in the main circuit	
• at maximum AC-1 rated value	4 mm²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	4.1 A
• at 690 V rated value	3.3 A
Operating current	
• at 1 current path at DC-1	
— at 24 V rated value	20 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.7 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	20 A
— at 440 V rated value	1.3 A
— at 600 V rated value	1 A
Operating current	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	20 A

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— at 110 V rated value	0.35 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A
— at 600 V rated value	0.2 A
Operating power	
● at AC-1	
— at 230 V rated value	7.5 kW
— at 230 V at 60 °C rated value	7.5 kW
— at 400 V rated value	13 kW
— at 400 V at 60 °C rated value	13 kW
— at 690 V rated value	22 kW
— at 690 V at 60 °C rated value	22 kW
• at AC-2 at 400 V rated value	4 kW
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	5.5 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2 kW
• at 690 V rated value	2.5 kW
Thermal short-time current limited to 10 s	72 A
Power loss [W] at AC-3 at 400 V for rated value of	0.7 W
the operating current per conductor	
No-load switching frequency	
• at AC	10 000 1/h
Operating frequency	
at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
<ul><li>at AC-3 maximum</li><li>at AC-4 maximum</li></ul>	750 1/h 250 1/h
• at AC-4 maximum	
at AC-4 maximum  Control circuit/ Control	250 1/h
at AC-4 maximum  Control circuit/ Control  Type of voltage of the control supply voltage	250 1/h
at AC-4 maximum  Control circuit/ Control  Type of voltage of the control supply voltage  Control supply voltage at AC	250 1/h AC
at AC-4 maximum  Control circuit/ Control  Type of voltage of the control supply voltage  Control supply voltage at AC      at 50 Hz rated value	250 1/h  AC  230 V

● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
Apparent pick-up power of magnet coil at AC	
● at 50 Hz	27 V·A
● at 60 Hz	24.3 V·A
Inductive power factor with closing power of the coil	
● at 50 Hz	0.8
● at 60 Hz	0.75
Apparent holding power of magnet coil at AC	
● at 50 Hz	4.2 V·A
● at 60 Hz	3.3 V·A
Inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
● at 60 Hz	0.25
Closing delay	
• at AC	9 35 ms
Opening delay	
• at AC	3.5 14 ms
Arcing time	10 15 ms
Control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
Number of NO contacts for auxiliary contacts	
• instantaneous contact	1
Operating current at AC-12 maximum	10 A

Auxiliary circuit	Auxiliary circuit		
Number of NO contacts for auxiliary contacts			
• instantaneous contact	1		
Operating current at AC-12 maximum	10 A		
Operating current at AC-15			
• at 230 V rated value	10 A		
● at 400 V rated value	3 A		
● at 500 V rated value	2 A		
● at 690 V rated value	1 A		
Operating 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		
Operating 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	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	7.6 A
• at 600 V rated value	9 A
Yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	1 hp
<ul> <li>for three-phase AC motor</li> </ul>	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp
Contact rating of auxiliary contacts according to UL	A600 / Q600

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# Design of the fuse link

- for short-circuit protection of the main circuit
  - with type of coordination 1 required

gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A

(415V,80kA)

— with type of assignment 2 required

gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A

(415V, 80kA)

• for short-circuit protection of the auxiliary switch

required

gG: 10 A (500 V, 1 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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
<ul> <li>Side-by-side mounting</li> </ul>	Yes
Height	70 mm
Width	45 mm
Depth	73 mm
Required spacing	
<ul><li>with side-by-side mounting</li></ul>	
— forwards	10 mm
— upwards	10 mm

— downwards	10 mm
— at the side	0 mm
for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm

Connections/Terminals	
Type of electrical connection	
for main current circuit	spring-loaded terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>	spring-loaded terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (0.5 4 mm²)
<ul><li>— single or multi-stranded</li></ul>	2x (0,5 4 mm²)
— finely stranded with core end processing	2x (0.5 2.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>at AWG conductors for main contacts</li> </ul>	2x (20 12)
Connectable conductor cross-section for main contacts	
• solid	0.5 4 mm²
• stranded	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
<ul> <li>finely stranded without core end processing</li> </ul>	0.5 2.5 mm²
Connectable conductor cross-section for auxiliary contacts	
• single or multi-stranded	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
• finely stranded without core end processing	0.5 2.5 mm²
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 4 mm²)
— finely stranded with core end processing	2x (0.5 2.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
• at AWG conductors for auxiliary contacts	2x (20 12)

AWG number as coded connectable conductor cross	
section	
• for main contacts	20 12
• for auxiliary contacts	20 12

Safety related data	
B10 value	
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	1 000 000
Proportion of dangerous failures	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	40 %
• with high demand rate acc. to SN 31920	73 %
Failure rate [FIT]	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	100 FIT
Product function	
<ul> <li>Mirror contact acc. to IEC 60947-4-1</li> </ul>	Yes; with 3RH29
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Protection against electrical shock	finger-safe
Suitability for use	
<ul> <li>safety-related switching on</li> </ul>	No
<ul> <li>safety-related switching OFF</li> </ul>	No

Certificates/approvals

# **General Product Approval**

Functional Safety/Safety of Machinery







KC

ERC

Type Examination
Certificate

### **Declaration of Conformity**

#### **Test Certificates**

# Marine / Shipping



Miscellaneous

Type Test Certificates/Test Report

Special Test Certificate





# Marine / Shipping















Confirmation

# other



# Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2016-2AP01

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-2AP01

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2AP01

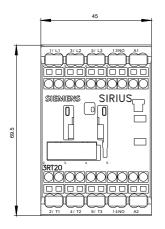
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2016-2AP01&lang=en

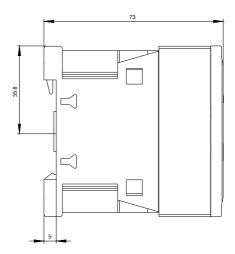
Characteristic: Tripping characteristics, I2t, Let-through current

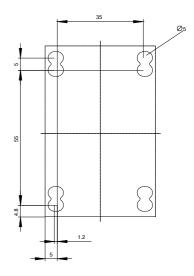
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2AP01/char

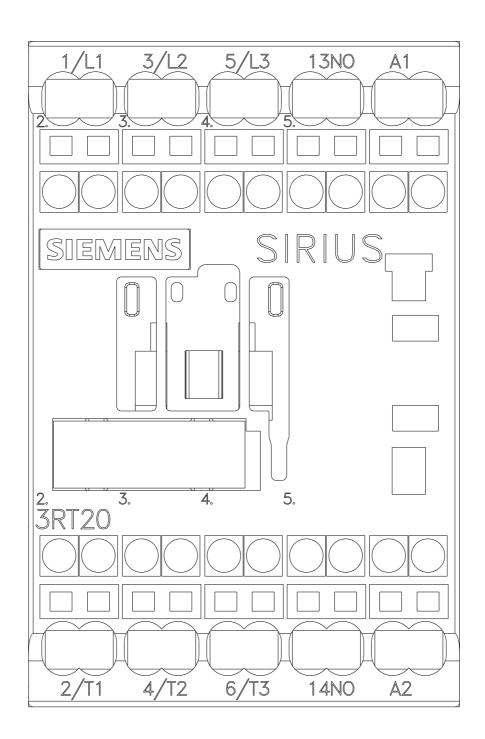
Further characteristics (e.g. electrical endurance, switching frequency)

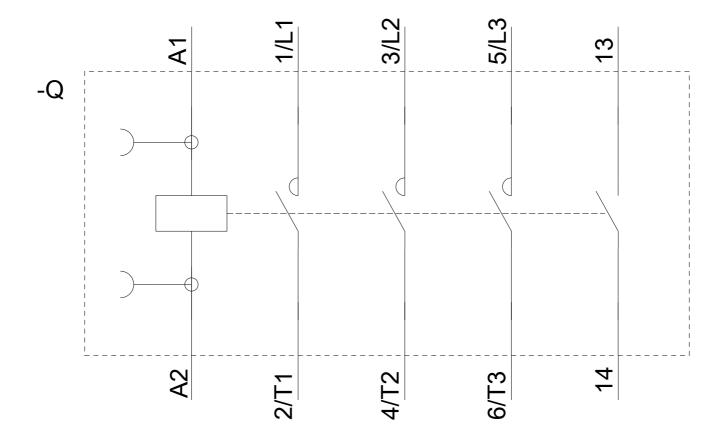
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-2AP01&objecttype=14&gridview=view1











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