3RT2016-2CP04-3MA0

# **Data sheet**



Power contactor, AC-3 9 A, 4 kW / 400 V 2 NO + 2 NC, 230 V AC 50 / 60 Hz, with plugged on varistor, 3-pole, Size S00, Spring type terminal Captive auxiliary switch

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	No
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	0.9 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	0.3 W
<ul> <li>without load current share typical</li> </ul>	4.2 W
insulation voltage	
• of main circuit with degree of pollution 3 rated value	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
<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at AC	10,5g / 5 ms, 6,6g / 10 ms
mechanical service life (switching 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)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-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 %

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77 A 77 5 ) . 4 3 3 A 5 5 6 3 m 13 ) 186

— 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
<ul><li>at 1 current path at DC-3 at DC-5</li></ul>	
— at 24 V rated value	20 A
— at 110 V rated value	0.1 A
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— 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-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
• at AC-3e	
— 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 kW
operating power for approx. 200000 operating cycles	O KW
at AC-4	
at 400 V rated value	2 kW
at 690 V rated value	2.5 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	2 kVA
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	3.6 kVA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	4.6 kVA
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	5.9 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	1.3 kVA
• up to 400 V for current peak value n=30 rated value	2.4 kVA
• up to 500 V for current peak value n=30 rated value	3.1 kVA
• up to 690 V for current peak value n=30 rated value	4 kVA
short-time withstand current in cold operating state	
up to 40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	155 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	111 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	86 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	66 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	55 A; Use minimum cross-section acc. to AC-1 rated value
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
at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
type or voltage or the control supply voltage	/ NO

control supply voltage at AC	
• at 50 Hz rated value	230 V
• at 60 Hz rated value	230 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
• at 50 Hz	27 VA
• at 60 Hz	24.3 VA
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 VA
● at 60 Hz	3.3 VA
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	7 13 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	2
instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	2
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	40.4
at 24 V rated value	10 A
at 48 V rated value     at 60 V rated value	6 A
at 60 V rated value     at 440 V rated value	6 A
at 110 V rated value     at 125 V rated value	3 A
at 125 V rated value     at 230 V rated value	2 A
<ul><li>at 220 V rated value</li><li>at 600 V rated value</li></ul>	1 A
	0.15 A
operational current at DC-13  • at 24 V rated value	6.0
<ul><li>at 24 V rated value</li><li>at 48 V rated value</li></ul>	6 A 2 A
at 48 V rated value     at 60 V rated value	2 A
→ at oo v rateu value	
at 110 V rated value	1 Δ
at 110 V rated value  at 125 V rated value	1 A
• at 125 V rated value	0.9 A
<ul><li>at 125 V rated value</li><li>at 220 V rated value</li></ul>	0.9 A 0.3 A
<ul><li>at 125 V rated value</li><li>at 220 V rated value</li><li>at 600 V rated value</li></ul>	0.9 A 0.3 A 0.1 A
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> contact reliability of auxiliary contacts	0.9 A 0.3 A
at 125 V rated value     at 220 V rated value     at 600 V rated value     contact reliability of auxiliary contacts  UL/CSA ratings	0.9 A 0.3 A 0.1 A
at 125 V rated value at 220 V rated value at 600 V rated value contact reliability of auxiliary contacts  UL/CSA ratings full-load current (FLA) for 3-phase AC motor	0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>contact reliability of auxiliary contacts</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor</li> <li>at 480 V rated value</li> </ul>	0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>contact reliability of auxiliary contacts</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor</li> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul>	0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>contact reliability of auxiliary contacts</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor</li> <li>at 480 V rated value</li> </ul>	0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A

at 1101/20 V rated value		
* 10		·
at 200/280 V rated value at 200/280 V rated value 3 hp at 460/490 V rated value 5 hp at 575600 V rated value 7.5 hp 7.5 hp		1 hp
	•	
at 480/480 V rated value		
— at 575/900 V rated value  contact rating of auxillary contacts according to U.  Short-circuit protection  design of the fuse link  - with type of coordination 1 required — with type of assignment 2 required — with type of assignment 2 required gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 35A (415V.80kA) gives 20A (890V.100kA), alm: 16A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 16A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 16A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm: 20A (890V.100kA), alm: 20A (890V.100kA), BS88: 20A (415V.80kA) gives 20A (890V.100kA), alm:	— at 220/230 V rated value	·
contact rating of auxiliary contacts according to UL  Short-circuit protection design of the fuse link  • 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  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for wards 10 mm  • for wards	<ul> <li>at 460/480 V rated value</li> </ul>	5 hp
Short-circuit protection   dosign of the fuse link   or short-circuit protection of the main circuit   with type of coordination 1 required   with type of assignment 2 required   gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)   gG: 20A (590V,100kA), aM: 16A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 16A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 16A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 16A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 16A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 16A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 16A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 20A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 20A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 20A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 20A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 20A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 20A (690V,100kA), BS88: 20A (415V,80kA)   gG: 20A (590V,100kA), aM: 20A (690V,100kA), aM:		·
design of the fuse link  I or short-circuit protection of the main circuit		A600 / Q600
• for short-circuit protection of the main circuit      — with type of accordination 1 required     — with type of assignment 2 required     — with type of assignment 2 required     — to for short-circuit protection of the auxiliary switch     • forwards      • forward and backward by 4- 22.5° on vertical mounting surface:     • safe-by-side mounting     • forward and backward by 4- 22.5° on vertical mounting surface:     • safe-by-side mounting     • forward and backward by 4- 22.5° on vertical mounting surface:     • safe-by-side mounting     • forward and backward by 4- 22.5° on vertical mounting surface:     • safe-by-side mounting     • for min     • safe-by-side mounting     • for grounded parts     • for grounded parts     • for for grounded parts     • for for grounded parts     • for live parts     • for live parts     • for five parts     • for for live parts     • for main current circuit     • for auxiliary and control circuit     • for main current circuit     • for mai	Short-circuit protection	
- with type of assignment 2 required - with type of assignment 2 required - with type of assignment 2 required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit protection of the auxiliary switch required - for short-circuit spring the short protection of the auxiliary switch required - for short-circuit spring the short protection of the auxiliary switch required - for short-circuit spring the short protection of the auxiliary switch required - for short-circuit spring the short protection of the auxiliary switch required - for short-circuit spring the short protection of the auxiliary switch required - for short-circuit spring the short protection of the auxiliary switch required - for short-circuit spring-loaded terminals sprin		
with type of assignment 2 required 80kA)  • for short-circuit protection of the auxiliary switch required Installation/ mounting foliaments  mounting position	<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
• for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position      • side-by-side mounting     • with side-by-side mounting     • forwards     • forwards     • forman     • powards     • forman     • forwards     • forman     • forman current circuit     • for awaiting and control circuit     • for main current circuit     • for main contacts     • solid     • solid     • solid or stranded     • finely stranded with core end processing     • finely stranded without core end processing     • finely stranded with core end processing     • finely stranded without core end pro	<ul> <li>— with type of coordination 1 required</li> </ul>	
required    Installation/mounting/dimensions	<ul> <li>— with type of assignment 2 required</li> </ul>	
#   #   #   #   #   #   #   #   #   #		gG: 10 A (500 V, 1 kA)
fastening method screw and shape-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 side-by-side mounting width depth required spacing  • with side-by-side mounting — forwards — upwards — upwards — at the side — downwards — the side — for grounded parts — forwards — the side — downwards — to mm — upwards — the side — downwards — the side — downwards — to mm — the side — downwards — to fire parts — forwards — upwards — to fire parts — forwards — the side — downwards — to fire parts — forwards — the side — downwards — to fire parts — forwards — the side — downwards — to fire parts — forwards — the side — downwards — the side — downwards — of mm — at the side — for main current circuit • for auxiliary and control circuit • for main current circuit • a contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • solid • stranded • finely stranded without core end processing • finely stranded without core end p	Installation/ mounting/ dimensions	
Side-by-side mounting   Yes	mounting position	
e side-by-side mounting         Yes           height width         70 mm           width         45 mm           depth         121 mm           required spacing         • with side-by-side mounting           • of nowards         10 mm           — upwards         10 mm           — downwards         10 mm           — at the side         0 mm           • for grounded parts         10 mm           — forwards         10 mm           — upwards         10 mm           — downwards         10 mm           — of mailitiary and control circuit         spring-loaded terminals           • for mailitury and control circuit         spring-loaded terminals           • at contactor for auxiliary contacts         Spr	fastening method	
Neight   45 mm   45		· · · · · · · · · · · · · · · · · · ·
width     45 mm       depth     121 mm       required spacing     • with side-by-side mounting       • with side-by-side mounting     10 mm       — forwards     10 mm       — downwards     10 mm       — at the side     0 mm       • for grounded parts     10 mm       — forwards     10 mm       — at the side     6 mm       — downwards     10 mm       • for live parts     10 mm       — forwards     10 mm       — upwards     10 mm       — downwards     10 mm       — at the side     6 mm       Connections/ Terminals       type of electrical connection     6 mm       • for main current circuit     spring-loaded terminals       • for main current circuit     spring-loaded terminals       • for main contacts     Spring-type terminals       • for main contacts     Spring-type terminals       • for main contacts     2x (0.5 4 mm²)       — solid     2x (0.5 2.5 mm²)       • for wide and the conductor cross-section for main contacts     2x (20 12)       • solid     0.5 2.5 mm²       • finely stranded with core end processing     0.5 2.5 mm²       • finely stranded with core end processing     0.5 2.5 mm²       • finely stranded with core en		
required spacing  with side-by-side mounting — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — upwards — 10 mm — orwards — 10 mm — orwards — 10 mm — orwards — upwards — 10 mm — upwards — 10 mm — orwards — 10 mm — orwards — upwards — orwards — upwards — downwards — 10 mm — orwards — or		
required spacing  with side-by-side mounting  — forwards — upwards — downwards — downwards — at the side of grounded parts — forwards — upwards — 10 mm  of or grounded parts — forwards — upwards — 10 mm  of or five parts — at the side — downwards — 10 mm  of or live parts — for live parts — for live parts — forwards — upwards — 10 mm  of or live parts — forwards — 10 mm  of or live parts — forwards — upwards — 10 mm  of or live parts — for surds — the side  connections/ Terminals  type of electrical connection  of or auxiliary and control circuit of or auxiliary and control circuit of or auxiliary and control circuit of main current circuit of magnet coil  type of connectable conductor cross-sections of magnet coil  type of connectable conductor cross-sections of magnet coil  type of stranded — solid — solid of stranded — finely stranded without core end processing of at AWG cables for main contacts  solid  stranded  of hipely stranded with core end processing of inely stranded with core end processing of stranded of finely stranded with core end processing of stranded of finely stranded with core end processing of finely stranded without core end processing		
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>10 mm</li> <li>downwards</li> <li>10 mm</li> <li>at the side</li> <li>o mm</li> <li>for grounded parts</li> <li>for grounded parts</li> <li>upwards</li> <li>upwards</li> <li>at the side</li> <li>6 mm</li> <li>downwards</li> <li>10 mm</li> <li>for live parts</li> <li>for live parts</li> <li>upwards</li> <li>upwards</li> <li>10 mm</li> <li>odownwards</li> <li>10 mm</li> <li>upwards</li> <li>downwards</li> <li>10 mm</li> <li>downwards</li> <li>at the side</li> <li>6 mm</li> </ul> Connections/ Terminals Type of electrical connection <ul> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Spring-loaded terminals</li> <li>et connectable conductor cross-sections</li> <li>for main contacts</li> <li>Spring-type terminals</li> </ul> Type of connectable conductor cross-sections <ul> <li>for main contacts</li> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>solid</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stran</li></ul>	•	121 mm
forwards upwards 10 mm downwards at the side 0 mm at the side 0 mm		
- upwards - downwards - at the side 0 mm  • for grounded parts - forwards - upwards - at the side 10 mm - upwards - upwards - at the side 6 mm - downwards 10 mm • for live parts - forwards - forwards 10 mm • for live parts - forwards 10 mm - at the side - downwards 10 mm - upwards 10 mm - upwards 10 mm - at the side - downwards 10 mm - at the side - forwards - upwards 10 mm - at the side - forman contacts - at the side - for main current circuit • for auxiliary and control circuit • for auxiliary and control circuit • of magnet coil  type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing - at AWG cables for main contacts - solid - solid - solid - solid or stranded - finely stranded without core end processing - at AWG cables for main contacts - solid - solid - solid - solid - solid - solid - finely stranded without core end processing - at AWG cables for main contacts - solid - s		40
- downwards - at the side		
- at the side  • for grounded parts  - forwards  - upwards  - at the side  - downwards  • for live parts  - forwards  10 mm  • for live parts  - forwards  10 mm  • for live parts  - downwards  10 mm  - downwards  10 mm  - downwards  - upwards  - downwards  - at the side  Connections/ Terminals  type of electrical connection  • for main current circuit  • at contactor for auxiliary and control circuit  • of magnet coil  type of connectable conductor cross-sections  • for main contacts  - solid  - solid or stranded  - finely stranded with core end processing  • at AWG cables for main contacts  • solid  • stranded  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • stranded  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • stranded  • finely stranded with core end processing  • finely stranded without core end processing	·	
• for grounded parts  — forwards — upwards — at the side — downwards — 10 mm  • for live parts — forwards — upwards — upwards — 10 mm  • for live parts — forwards — upwards — upwards — 10 mm — upwards — 10 mm — upwards — 10 mm — upwards — at the side — 6 mm   Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit • for auxiliary and control circuit • of magnet coil  type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing • at AVVG cables for main contacts  • solid • stranded • finely stranded with core end processing connectable conductor cross-section for main contacts  • solid • stranded • finely stranded with core end processing of inely stranded with core end processing • finely stranded without core end processing		
- forwards		0 mm
- upwards - at the side - downwards • for live parts  - fornwards - for wards - upwards - downwards - downwards - downwards - downwards - downwards - at the side - downwards - at the side - domnections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coll  type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts • solid • stranded • finely stranded with core end processing • finely stranded without core end processing	•	
- at the side		
- downwards • for live parts - forwards - upwards - upwards - downwards - at the side  Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - solid or stranded with core end processing • at AWG cables for main contacts • stranded • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • solid • stranded • stranded • finely stranded with core end processing • finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded without core end processing	·	
• for live parts — forwards — upwards — downwards — at the side  Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded without core end processing • at AWG cables for main contacts  • stranded • stranded • stranded • stranded • finely stranded with core end processing • finely stranded without core end processing		
forwards upwards upwards downwards at the side at the side  Connections/ Terminals  type of electrical connection  for main current circuit for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil  type of connectable conductor cross-sections  for main contacts solid solid solid or stranded finely stranded with core end processing finely stranded without core end processing at AWG cables for main contacts  solid solid solid solid solid or stranded finely stranded without core end processing finely stranded without core end processing at AWG cables for main contacts solid		10 mm
- upwards - downwards - at the side  Connections/ Terminals  type of electrical connection  • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections  • for main contacts  - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts  • solid • at Conductor cross-sections  • for main contacts  - solid - solid or stranded - finely stranded without core end processing • at AWG cables for main contacts  • solid • stranded • stranded • finely stranded with core end processing • finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded without core end processing	·	40
- downwards - at the side  Connections/ Terminals  type of electrical connection  • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections  • for main contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts  • solid • stranded • stranded • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded with core end processing • finely stranded without core end processing		
Type of electrical connection  In or main current circuit  In or main contacts  In or	•	
type of electrical connection  • for main current circuit spring-loaded terminals  • at contactor for auxiliary contacts Spring-type terminals  • of main contacts  • of main contacts  • of magnet coil Spring-type terminals  type of connectable conductor cross-sections  • for main contacts  — solid — solid or stranded — finely stranded with core end processing — in the stranded without core end processing  • at AWG cables for main contacts  • solid  • solid  • solid  • at AWG cables for main contacts  • solid • stranded • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded without core end processing		
type of electrical connection  • for main current circuit  • for auxiliary and control circuit  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main contacts  — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts  • solid • stranded • stranded • finely stranded with core end processing  • solid • stranded • finely stranded with core end processing • at AWG cables for main contacts  • solid • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded without core end processing		6 mm
• for main current circuit     • for auxiliary and control circuit     • at contactor for auxiliary contacts     • of magnet coil      **Spring-type terminals**  **Type of connectable conductor cross-sections**      • for main contacts      • solid     • solid or stranded     • finely stranded without core end processing     • at AWG cables for main contacts      • solid     • solid     • solid     • stranded     • finely stranded with core end processing     • at AWG cables for main contacts      • solid     • stranded     • finely stranded with core end processing     • solid     • stranded     • finely stranded with core end processing     • solid     • stranded     • finely stranded with core end processing     • stranded     • finely stranded with core end processing     • finely stranded without core end processing	Connections/ Terminals	
<ul> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Spring-type terminals</li> <li>2x (0.5 4 mm²)</li> <li>2x (0.5 4 mm²)</li> <li>2x (0.5 4 mm²)</li> <li>2x (0.5 2.5 mm²)</li> <li>2x (0.5 2.5 mm²)</li> <li>2x (20 12)</li> </ul> connectable conductor cross-section for main contacts <ul> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>	type of electrical connection	
<ul> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Spring-type terminals</li> <li>type of connectable conductor cross-sections</li> <li>for main contacts</li> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> <li>at AWG cables for main contacts</li> <li>at AWG cables for main contacts</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>of inely stranded with core end processing</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>		
<ul> <li>of magnet coil</li> <li>Spring-type terminals</li> <li>type of connectable conductor cross-sections <ul> <li>for main contacts</li> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables for main contacts</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>2x (0.5 2.5 mm²)</li> <li>2x (20 12)</li> </ul> </li> <li>connectable conductor cross-section for main contacts</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>		spring-loaded terminals
type of connectable conductor cross-sections  • for main contacts  — solid — solid or stranded — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for main contacts  • solid • stranded • stranded • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded without core end processing	<ul> <li>at contactor for auxiliary contacts</li> </ul>	Spring-type terminals
<ul> <li>for main contacts  — solid  — solid or stranded  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  — the finely stranded without core end processing  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)  2x (20 12)  connectable conductor cross-section for main contacts  — solid  — stranded  — stranded  — the finely stranded with core end processing  — tinely stranded without core end processing  — the finely stranded without core end processing  — solid  — stranded  — stranded  — the finely stranded without core end processing  — the finely stranded without core end processing  — solid  — solid  — solid  — solid  — solid  — stranded  — stranded  — the finely stranded without core end processing  — the finely stranded without core end processing  — solid  — stranded  —</li></ul>	of magnet coil	Spring-type terminals
<ul> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> <li>— finely stranded without core end processing</li> <li>— at AWG cables for main contacts</li> <li>■ at AWG cables for main contacts</li> <li>■ solid</li> <li>■ stranded</li> <li>■ stranded</li> <li>■ finely stranded with core end processing</li> <li>■ finely stranded without core end processing</li> <li>■ finely stranded without core end processing</li> <li>■ finely stranded without core end processing</li> <li>■ 5 2.5 mm²</li> <li>■ 5 2.5 mm²</li> <li>■ 5 2.5 mm²</li> <li>■ 6 2.5 mm²</li> <li>■ 6 2.5 mm²</li> <li>■ 6 2.5 mm²</li> </ul>	type of connectable conductor cross-sections	
<ul> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> <li>— at AWG cables for main contacts</li> <li>■ oslid</li> <li>— stranded</li> <li>— stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul>	• for main contacts	
<ul> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> <li>• at AWG cables for main contacts</li> <li>• solid</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> </ul>	— solid	2x (0.5 4 mm²)
<ul> <li>finely stranded without core end processing</li> <li>at AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>5 2.5 mm²</li> <li>0.5 2.5 mm²</li> <li>0.5 2.5 mm²</li> </ul>	<ul><li>— solid or stranded</li></ul>	2x (0,5 4 mm²)
<ul> <li>at AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>5 2.5 mm²</li> <li>0.5 2.5 mm²</li> </ul>	<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)
connectable conductor cross-section for main contacts  • solid  • stranded  • finely stranded with core end processing  • finely stranded without core end processing	<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>contacts</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>0.5 2.5 mm²</li> <li>0.5 2.5 mm²</li> </ul>	at AWG cables for main contacts	2x (20 12)
<ul> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>1.5 4 mm²</li> <li>2.5 mm²</li> <li>1.5 2.5 mm²</li> <li>2.5 mm²</li> </ul>		
<ul> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>0.5 2.5 mm²</li> <li>0.5 2.5 mm²</li> </ul>		0.5 4 3
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>0.5 2.5 mm²</li> <li>0.5 2.5 mm²</li> </ul>		
• finely stranded without core end processing 0.5 2.5 mm²		
connectable conductor cross-section for auxiliary		0.5 2.5 mm²
	connectable conductor cross-section for auxiliary	

contacts	
<ul> <li>solid or stranded</li> </ul>	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
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul><li>— solid or stranded</li></ul>	2x (0,5 4 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	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 cables for auxiliary contacts</li> </ul>	2x (20 12)
AWG number as coded connectable conductor cross	
section	
for main contacts	20 12
for auxiliary contacts	20 12
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
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 y
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
suitability for use	
<ul> <li>safety-related switching OFF</li> </ul>	Yes
Certificates/ approvals	

# **General Product Approval**





Confirmation



<u>KC</u>



Functional

EMC Safety/Safety of Declaration of Conformity Test Certificates

Machinery



Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

### Marine / Shipping













Marine / Shipping

other





Confirmation



# Confirmation

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=3RT2016-2CP04-3MA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-2CP04-3MA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2CP04-3MA0

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

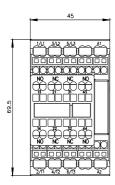
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2016-2CP04-3MA0&lang=en

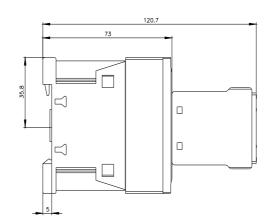
Characteristic: Tripping characteristics, I2t, Let-through current

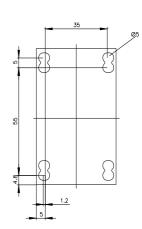
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2CP04-3MA0/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-2CP04-3MA0&objecttype=14&gridview=view1







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6/2/2022