## **SIEMENS**

Data sheet 3RT2016-2VB41



power contactor, AC-3 9 A, 4 kW / 400 V 1 NO, 24 V DC 0.85-1.85\* US, with diode integrated, 3-pole, size S00, spring-type terminal not expandable with auxiliary switch

product brand name	SIRIUS
product designation	Coupling 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>	1.6 W
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 safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at DC	10,5g / 5 ms, 6,6g / 10 ms
mechanical service life (switching cycles)	
of contactor typical	30 000 000
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 %
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3

operating voltage	000 V
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	22 A
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	22 A
• at AC-1	
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> </ul>	22 A
<ul> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul>	20 A
• at AC-3	
— 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-3e	
— 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     at AC-5 vin to 600 V rated value	8.5 A
at AC-5a up to 690 V rated value     at AC-5b up to 400 V rated value	19.4 A
<ul> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> </ul>	7.4 A
	F 2 A
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	5.3 A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	5.3 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	5.3 A
<ul> <li>— up to 690 V for current peak value n=20 rated value</li> </ul>	5 A
● at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	3.5 A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	3.5 A
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	3.6 A
— up to 690 V for current peak value n=30 rated value	3.3 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm <sup>2</sup>
operational 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
operational 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
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
<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-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	
at AC-4	
<ul><li>at 400 V rated value</li></ul>	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
up to 690 V for current peak value n=20 rated value	5.9 kVA
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	1.3 kVA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	2.4 kVA
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	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
• limited to 60 s switching at zero current maximum	55 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	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	DC
control supply voltage at DC	
• rated value	24 V
operating range factor control supply voltage rated	
value of magnet coil at DC	
initial value	0.85

full-scale value	1.85
design of the surge suppressor	diode
closing power of magnet coil at DC	1.6 W
holding power of magnet coil at DC	1.6 W
closing delay	
• at DC	25 120 ms
opening delay	20 111 120 1110
• at DC	20 80 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	1
instantaneous contact	
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul> <li>at 230 V rated value</li> </ul>	10 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
<ul> <li>at 500 V rated value</li> </ul>	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     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	3,4 4 3,4
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	7.6 A
at 600 V rated value	9 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	1 hp
• for 3-phase AC motor	
— 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
Short-circuit protection	
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)
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted
	, , , , , , , , , , , , , , , , , , , ,

Assening method		forward and backward by +/- 22.5° on vertical mounting surface
eside-by-side mounting Yes helght 70 mm width 45 mm depth 73 mm required spacing  - with side-by-side mounting - forwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - for grounded parts - for grounded parts - for grounded parts - downwards 10 mm - upwards 10 mm - upwards 10 mm - at the side 6 mm - downwards 10 mm - at the side 6 mm - downwards 10 mm - at the side 6 mm - downwards 10 mm - for live parts - for five parts - for five parts - for man contacts - for main contacts - for main contacts - for main contacts - for suitiliary and control circuit - at contactor for auxiliary contacts - for fire parts - finely stranded with core end processing	fastening method	· ·
e side-by-side mounting         Yes           width         45 mm           dopth         75 mm           required spacing         ************************************	actoring motion	
width         45 mm           depth         73 mm           required spacing         with side-by-side mounting           — forwards         10 mm           — upwards         10 mm           — downwards         10 mm           — for grounded parts         10 mm           — forwards         10 mm           — at the side         6 mm           — at the side         6 mm           — downwards         10 mm           — forwards         10 mm           — forwards         10 mm           — downwards         10 mm           — for main current circuit         spring-loaded terminals           * for main current circuit         spring-loaded terminals           • for main current circuit         spring-loaded terminals           • for availiary and control circuit         spring-loaded terminals           • for availiary contacts         2x (0.5 4 mm²)           - solid or stranded         2x (0.5 4 mm²)	<ul> <li>side-by-side mounting</li> </ul>	Yes
required spacing   with sict-by-side mounting   10 mm   10 m	height	70 mm
e with side-by-side mounting	width	45 mm
• with side-by-side mounting	depth	73 mm
forwards upwards upwards downwards downwards for grounded parts forwards forwards forwards forwards the side downwards at the side downwards the side downwards to file parts forwards downwards downwards downwards downwards downwards forman at the side forman at the side forman current circuit for main contacts  for main contacts for main contacts for main contacts for main contacts for main contacts solid solid or stranded finely stranded with core end processing at AVIG cables for main contacts solid solid or stranded finely stranded with core end processing finely st	required spacing	
- upwards	<ul> <li>with side-by-side mounting</li> </ul>	
downwards at the side of man contects convertable conductor cross-section for main contacts solid or stranded finely stranded without core end processing finely stranded without core end proce	— forwards	10 mm
- at the side	— upwards	10 mm
• for grounded parts  - forwards - upwards - at the side - downwards - for live parts - forwards - upwards - for live parts - forwards - upwards - downwards - for auxiliary and control circuit - for auxiliary and control circuit - at contactor for auxiliary contacts - solid - solid or stranded - 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 processing - finely stranded with core end processing - finely stranded with core end processing - finely stranded with core end processing - finely stranded without core end processing - finely stranded with core end processing - finely stranded with core end processing - finely stranded without core end process	— downwards	10 mm
forwards upwards upwards d the side downwards for live parts forwards forwards forwards forwards forwards upwards forwards upwards forwards upwards downwards for main current circuit sorid downwards for main current circuit solid sorid downwards sorid sorid downwards solid sorid downwards finely stranded with core end processing finely stranded with core end processing finely stranded with ore end processing at AWG cables for main contacts solid solid sorid downwards solid stranded sorid sorid downwards sorid sorid sorid downwards sorid	— at the side	0 mm
- upwards - at the side - downwards • for live parts - forwards - upwards - upwards - downwards - upwards - at the side - downwards - upwards - downwards - at the side - domnowards - at the side - downwards - at the side - at	<ul> <li>for grounded parts</li> </ul>	
- at the side - downwards - 10 mm - 10	— forwards	10 mm
- downwards • for live parts - forwards - upwards - upwards - downwards - at the side - at the side - of man  Connections/ Terminals  type of electrical connection • for auxiliary and control 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 unit core end processing • finely stranded with co	— upwards	10 mm
• for live parts     — forwards     — upwards     — downwards     — at the side     One main current circuit     • at contactor for auxiliary contacts     • of magnet coll     very stranded without core end processing     • finely stranded with core end processing     • finely stranded without core end processing     • finely stranded without core end processing     • finely stranded without core end processing     • for auxiliary contacts      • solid or stranded     • finely stranded without core end processing     • for auxiliary contacts      • solid or stranded     • finely stranded without core end processing     • for auxiliary contacts      • for auxiliar	— at the side	6 mm
forwards upwards upwards downwards at the side for awain current circuit for awain arcent circuit for awain arcent circuit for awain arcent circuit for awain arcent contacts for awain arcent contacts for main contacts for main contacts solid for for awain arcent contacts solid solid conductor cross-sections finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing finely stranded with core end processing finely stranded with core end processing finely stranded with core end processing finely stranded without core end processing finely stranded withou	— downwards	10 mm
- upwards	for live parts	
downwards at the side 6 mm   Connections/ Terminals  type of electrical connection  • for main current circuit spring-loaded terminals • at contactor for auxiliary and control circuit spring-loaded terminals • at contactor for auxiliary contacts • of magnet coil Spring-type terminals • for connectable conductor cross-sections • for main contacts solid Spring-type terminals • for main contacts solid Spring-type terminals  • for main contacts solid Spring-type terminals • for main contacts solid Spring-type terminals • for main contacts solid Spring-type terminals  • solid Spring-type terminals  • 2x (0.5 4 mm²) x (0.5 4 mm²) x (0.5 2.5 mm²) x (0.5 2.5 mm²) x (0.5 2.5 mm²) x (0.5 2.5 mm²) x (0.5 4 mm² x (0.5	— forwards	10 mm
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 0 — solid 0 — solid 0 — finely stranded with core end processing • at AVVG cables for main contacts • solid • stranded • finely stranded with core end processing • for auxiliary contacts  — solid or stranded • finely stranded with core end processing • for auxiliary contacts  — solid or stranded • finely stranded with core end processing • for auxiliary contacts  — for auxiliary contacts • for auxiliary contacts • for fauxiliary contacts • for auxiliary conta	— upwards	10 mm
type of electrical connection  • for main current circuit • at contactor 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 • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • for on auxiliary contacts  - solid or stranded - finely stranded with core end processing • for one conductor cross-sections • for auxiliary contacts  - for finely stranded with core end processing • at AWG cables for auxiliary contacts  - for main contacts • for or auxiliary contacts	— downwards	10 mm
type of electrical connection  • for main current circuit  • for auxiliary and control 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 our cend processing — finely stranded without core end processing • stranded • sinely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • solid • stranded • sinely stranded without core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for or auxiliary contacts  • for for main contacts • for or auxiliary contacts  product function		6 mm
• 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     • solid or stranded with core end processing     • finely stranded with core end processing     • finely stranded without core end processing     • finely stranded without core end processing     • finely stranded without core end processing     • finely stranded with core end processing     • finely stranded without core end processing     • finely stranded with core end processing     • finely stranded with core end processing     • finely stranded with core end processing     • finely stranded without core end processing     • finely stranded with core end processing     • all AWG cables for auxiliary contacts   AWG number as coded connectable conductor cross section  • for main contacts • for auxiliary contacts      • for of auxiliary contacts		
of or auxiliary and control circuit     of or auxiliary contacts     of magnet coil  type of connectable conductor cross-sections     of main contacts	type of electrical connection	
of a contactor for auxiliary contacts     of magnet coil  type of connectable conductor cross-sections     of main contacts	for main current circuit	spring-loaded terminals
type of connectable conductor cross-sections  • for main contacts  — solid — solid 0 2x (0.5 4 mm²) 2x (0.5 4 mm²) 2x (0.5 2.5 mm²) • tor main contacts — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for main contacts  • solid • stranded • finely stranded with core end processing • finely stranded without core end processing • finely stranded with core end processing • finely stranded without core end processing • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts		
• for main contacts  - solid  - solid or stranded  - finely stranded with core end processing  • at AWG cables for main contacts  - solid  - solid or stranded without core end processing  • at AWG acables for main contacts  - solid  - solid  - solid  - finely stranded without core end processing  • at AWG acables for main contacts  - solid  - stranded  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • for auxiliary contacts  - solid or stranded  - finely stranded without core end processing  • for auxiliary contacts  - solid or stranded  - finely stranded without core end processing  • for auxiliary contacts  - solid or stranded  - finely stranded without core end processing  • type of connectable conductor cross-sections  • for auxiliary contacts  - solid or stranded  - finely stranded without core end processing  • at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross-section  • for main contacts  • for auxiliary contacts  - for auxiliary contacts	-	
• for main contacts  - solid - solid or stranded - finely stranded with core end processing - finely stranded without core end processing - at AWG cables for main contacts - solid - stranded - finely stranded without core end processing - at AWG cables for main contacts - solid - stranded - stranded - stranded - stranded - finely stranded with core end processing - finely stranded with core end processing - finely stranded without core end processing - solid or stranded - solid or strande - solid or strande - solid or st		Spring-type terminals
- solid - solid or stranded 2x (0.5 4 mm²) 2x (0.5 4 mm²) - finely stranded with core end processing 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm² 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm² 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm² 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm² 2x (0.5 2.5 mm²) 2x (0.5 .		
- solid or stranded - finely stranded with core end processing - finely stranded without core end processing - at AWG cables for main contacts  2x (0.5 2.5 mm²) 2x (20 12)  connectable conductor cross-section for main contacts - solid - stranded - finely stranded with core end processing - finely stranded with core end processing - finely stranded without core end processing - finely stranded without core end processing - finely stranded with core end processing - finely stranded without core end processing - finely stranded without core end processing - finely stranded with core end processing - finely stranded without core end processing - solid or stranded - finely stranded without core end processing - finely stranded without core end processing - solid or stranded - finely stranded without core end processing - solid or stranded - finely stranded without core end processing - solid or stranded - finely stranded without core end processing - solid or stranded - finely stranded without core e		
- finely stranded with core end processing - finely stranded without core end processing • at AWG cables for main contacts  • solid • stranded • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts  - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  • at AWG cables for auxiliary contacts  • for main contacts • for main contacts • for main contacts • for main contacts • for main contacts • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts • for auxiliary contacts  • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts		
- finely stranded without core end processing  • at AWG cables for main contacts  connectable conductor cross-section for main contacts  • solid • stranded • finely stranded with core end processing • finely stranded without core end processing • solid or stranded • finely stranded without core end processing • finely stranded without core end processing • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • for auxiliary contacts  - solid or stranded - finely stranded with core end processing • for auxiliary contacts  - solid or stranded - finely stranded with core end processing - finely stranded with core end processing - finely stranded without core end processing - for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for main contacts • for auxiliary contacts  20 12  Safety related data  product function		
• at AWG cables for main contacts  connectable conductor cross-section for main contacts  • solid • stranded • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • finely stranded without core end processing • for auxiliary contacts  - solid or stranded - finely stranded with core end processing • for auxiliary contacts  - solid or 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 • at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts  20 12  AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts  20 12  Safety related data  product function		
connectable conductor cross-section for main contacts  • solid • stranded • finely stranded with core end processing • finely stranded without core end processing connectable conductor cross-section for auxiliary contacts  • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts  • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts  - solid or stranded - finely stranded without core end processing - solid or 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 - at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts  - for auxiliary contacts  20 12  Safety related data  product function		
contacts  • solid • stranded • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • finely stranded without core end processing • for auxiliary contacts  - solid or stranded - finely stranded with core end processing • for auxiliary contacts  - solid or stranded - finely stranded with core end processing • for auxiliary contacts  2x (0,5 4 mm²)  - finely stranded with core end processing • at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts  20 12 • for auxiliary contacts  Safety related data  product function		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>finely stranded without core end processing</li> <li>o.5 2.5 mm²</li> <li>connectable conductor cross-section for auxiliary contacts</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>for auxiliary contacts</li> <li>solid or stranded</li> <li>for auxiliary contacts</li> <li>for auxiliary contacts</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>at AWG cables for auxiliary contacts</li> <li>at AWG number as coded connectable conductor crosssection</li> <li>for main contacts</li> <li>for auxiliary contacts</li> <li>20 12</li> <li>for auxiliary contacts</li> <li>20 12</li> </ul> Safety related data product function		
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</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>for auxiliary contacts</li> <li>solid or stranded</li> <li>for auxiliary contacts</li> <li>for linely stranded with core end processing</li> <li>for stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables for auxiliary contacts</li> <li>at AWG number as coded connectable conductor cross section</li> <li>for main contacts</li> <li>for main contacts</li> <li>for auxiliary contacts</li> <li>20 12</li> <li>for auxiliary contacts</li> </ul> Safety related data product function		0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</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>for auxiliary contacts</li> <li>solid or stranded</li> <li>for auxiliary contacts</li> <li>for linely stranded with core end processing</li> <li>for stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables for auxiliary contacts</li> <li>at AWG number as coded connectable conductor cross section</li> <li>for main contacts</li> <li>for main contacts</li> <li>for auxiliary contacts</li> <li>20 12</li> <li>for auxiliary contacts</li> </ul>	stranded	0.5 4 mm²
<ul> <li>finely stranded without core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>for auxiliary contacts</li> <li>solid or stranded</li> <li>for auxiliary contacts</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 stranded without core end processing</li> <li>at AWG cables for auxiliary contacts</li> <li>at AWG number as coded connectable conductor cross section</li> <li>for main contacts</li> <li>for auxiliary contacts</li> <li>20 12</li> <li>for auxiliary contacts</li> <li>at AWG related data</li> <li>product function</li> </ul>	finely stranded with core end processing	
connectable conductor cross-section for auxiliary contacts  • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts  - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - finely stranded without core end processing - finely stranded without core end processing - finely stranded without core end processing - at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for main contacts • for auxiliary contacts  • for auxiliary contacts		
osolid or stranded ofinely stranded with core end processing ofinely stranded without core end processing of finely stranded without core end processing of or auxiliary contacts of or auxiliary contacts  — solid or stranded — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing — finely stranded without core end processing at AWG cables for auxiliary contacts  ■ at AWG cables for auxiliary contacts  of or main contacts of or main contacts of or auxiliary contacts  ■ for auxiliary contacts ■ for auxiliary conta		
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>type of connectable conductor cross-sections</li> <li>for auxiliary contacts</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 auxiliary contacts</li> <li>at AWG number as coded connectable conductor cross section</li> <li>for main contacts</li> <li>for auxiliary contacts</li> <li>20 12</li> <li>for auxiliary contacts</li> <li>for auxiliary contacts</li> <li>for auxiliary contacts</li> <li>product function</li> </ul>		
<ul> <li>finely stranded without core end processing</li> <li>type of connectable conductor cross-sections         <ul> <li>for auxiliary contacts</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 auxiliary contacts</li> </ul> </li> <li>AWG number as coded connectable conductor cross section         <ul> <li>for main contacts</li> <li>for auxiliary contacts</li> </ul> </li> <li>20 12</li> <li>for auxiliary contacts</li> <li>20 12</li> <li>for auxiliary contacts</li> <li>for auxiliary contacts</li> <li>for auxiliary contacts</li> </ul>	<ul> <li>solid or stranded</li> </ul>	0.5 4 mm²
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with core end processing — finely stranded without core end processing 2x (0.5 2.5 mm²) — finely stranded without core end processing 2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)  2x (20 12)  AWG number as coded connectable conductor cross section  • for main contacts • for auxiliary contacts 20 12  • for auxiliary contacts 20 12  Safety related data  product function	<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>
• for auxiliary contacts     — solid or stranded     — finely stranded with core end processing     — finely stranded without core end processing     — finely stranded without core end processing     — at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section     • for main contacts     • for auxiliary contacts 20 12  Safety related data  product function  2x (0,5 4 mm²) 2x (0.5 2.5 mm²) 2x (20 12)  2x (20 12)	finely stranded without core end processing	0.5 2.5 mm²
- solid or stranded - finely stranded with core end processing - finely stranded without core end processing - finely stranded without core end processing • at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts  20 12  Safety related data  product function	type of connectable conductor cross-sections	
- finely stranded with core end processing - finely stranded without core end processing • at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts  20 12  Safety related data  product function	<ul> <li>for auxiliary contacts</li> </ul>	
— finely stranded without core end processing	<ul><li>— solid or stranded</li></ul>	2x (0,5 4 mm²)
at AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section      for main contacts     for auxiliary contacts     for auxiliary contacts     product function      at AWG cables for auxiliary contacts     20 12     20 12  20 12	<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)
AWG number as coded connectable conductor cross section  • for main contacts • for auxiliary contacts 20 12  • for auxiliary contacts 20 12  Safety related data  product function	<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
• for main contacts • for auxiliary contacts 20 12 • for auxiliary contacts 20 12  Safety related data  product function	at AWG cables for auxiliary contacts	2x (20 12)
for main contacts		
• for auxiliary contacts  20 12  Safety related data  product function		20 42
product function		
product function	·	ZU 1Z
Thirtor contact according to ILO 00077-7-1		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>





Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

## Marine / Shipping













Marine / Shipping other Dangerous Good



Confirmation



<u>Transport Information</u>

## **Further information**

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=3RT2016-2VB41

Cax online generator

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2VB41

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2016-2VB41\&lang=en}}$ 

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2VB41/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-2VB41&objecttype=14&gridview=view1

last modified: 6/2/2022 🖸