SIEMENS

Data sheet 3RT2028-1BF44



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 110 V DC, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S0, removable auxiliary switch

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S0
product extension	
 function module for communication 	No
auxiliary switch	No
power loss [W] for rated value of the current	
 at AC in hot operating state 	9.6 W
 at AC in hot operating state per pole 	3.2 W
 without load current share typical 	5.9 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
 of main circuit rated value 	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 10g / 10 ms
mechanical service life (operating cycles)	
of contactor typical	10 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	
Weight	0.644 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %

Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	221 kg
Global Warming Potential [CO2 eq] during manufacturing	2.65 kg
Global Warming Potential [CO2 eq] during operation	219 kg
Global Warming Potential [CO2 eq] after end of life	-0.639 kg
Main circuit	oloco ng
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
at AC-3e rated value maximum	690 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	50 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	50 A
— up to 690 V at ambient temperature 60 °C rated value	42 A
at AC-3 — at 400 V rated value	38 A
— at 500 V rated value — at 500 V rated value	30 A 32 A
— at 690 V rated value — at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-4 at 400 V rated value	22 A
• at AC-5a up to 690 V rated value	44 A
 at AC-5b up to 400 V rated value 	31.5 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	30.8 A
 up to 400 V for current peak value n=20 rated value 	30.8 A
 up to 500 V for current peak value n=20 rated value 	30.8 A
— up to 690 V for current peak value n=20 rated value	21 A
• at AC-6a	20.5 A
 up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value 	20.5 A
— up to 500 V for current peak value n=30 rated value	21.4 A
— up to 690 V for current peak value n=30 rated value	21 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	12 A
● at 690 V rated value	12 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	20 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
with 2 current paths in series at DC-1 at 24 V rated value.	25 A
— at 24 V rated value — at 60 V rated value	35 A 35 A
— at 100 V rated value — at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1A
— at 600 V rated value	0.8 A
at 000 v rated value	0.071

with 3 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
• at 1 current path at DC-3 at DC-5	LTA
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
with 2 current paths in series at DC-3 at DC-5	0.00 A
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
• at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles at AC-	
at 400 V rated value	6 kW
at 400 V rated value at 690 V rated value	10.3 kW
operating apparent power at AC-6a	IV.O KIY
up to 230 V for current peak value n=20 rated value	12.2 kVA
up to 400 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value	21.3 kVA
up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value	26.6 kVA
up to 690 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value	25 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	8.1 kVA
up to 400 V for current peak value n=30 rated value	14.2 kVA
up to 500 V for current peak value n=30 rated value	18.5 kVA
• up to 690 V for current peak value n=30 rated value	25 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 5 s switching at zero current maximum	341 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	260 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 30 s switching at zero current maximum	199 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	162 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	

	4 500 4 %
• at DC	1 500 1/h
operating frequency	4 000 4/1-
• 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	110 V
operating range factor control supply voltage rated value of	
magnet coil at DC	
• initial value	0.8
• full-scale value	1.1
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	5.9 W
closing delay	
• at DC	50 170 ms
opening delay	
• at DC	15 18 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	2
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	
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	1A
	0.15 A
at 600 V rated value appropriate Surrent at DC-13	0.10 A
operational current at DC-13	6.0
at 48 V rated value	6 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	ribuity switching per roo million (17 V, 1 m/y)
OL/GSA ratings	riedity Switching per 100 million (17 V, 1 m/y)
full-load current (FLA) for 3-phase AC motor	ridally switching per roo million (17 V, 1 m/y)
	34 A
full-load current (FLA) for 3-phase AC motor	
full-load current (FLA) for 3-phase AC motor • at 480 V rated value	34 A
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	34 A
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp]	34 A
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor	34 A 27 A
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value	34 A 27 A 3 hp
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value — at 230 V rated value	34 A 27 A 3 hp
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor	34 A 27 A 3 hp 5 hp

all 400450 V rated value 25 bp contact rating of suciliary contacts according to UL A600 / Q500 Short-circular protection of the main circuit 4 or with byte of conditation 1 required 9 cm with byte of assignment 2 required 9 cm with bit of a		
contact rating of auxillary contacts according to UL A600 / 0800 A60	— at 460/480 V rated value	25 hp
Short-circuit protection design of the fuse link	— at 575/600 V rated value	25 hp
design of the fuse link * for short-Sized protection of the main circuit - with type of acodination 1 required - with type of assignment 2 required and backward by **/ 22.5* on vertical mounting surface; can be titled forward and backward by **/ 22.5* on vertical mounting surface; - starting method - starting m		A600 / Q600
or short-incurt protection of the main circuit	Short-circuit protection	
	design of the fuse link	
- with type of assignment 2 required	 for short-circuit protection of the main circuit 	
* of refort-circuit protection of the auxiliary switch required installation/ mounting/ dimensions mounting position **1.58" rotation possible on vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to vertical mounting surface, can be titled forward and backward by **2.25 to mm* **With side-by-side mounting surface, can be titled forward and backward by **2.25 to mm* **Ownwards** **In min ** **In min *** **In min **	 — with type of coordination 1 required 	gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)
Installations/ mounting / dimensions	 — with type of assignment 2 required 	gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA)
mounting position ##180° rotation possible on vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or vertical mounting surface; can be titled forward and backward by 4°, 22° or well and surface and su	for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
backward by +*2.25" on vertical mounting surface serve and snap-on mounting onto 35 mm DIN rail according to DIN EN 80715 height vidth	Installation/ mounting/ dimensions	
Might 45 mm 45 mm 46 m	mounting position	
Width 48 mm 151 mm required spacing with side-by-side mounting - forwards 10 mm - forwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - for grounded parts - for grounded parts - forwards 10 mm - downwards - downwards 10 mm - downwards 10 mm - downwards - downwards 10 mm - downwards	fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
depth	height	85 mm
required spacing • with side-by-side mounting — forwards — upwards — the side — downwards — the side — on m • for grounded parts — for grounded parts — downwards — upwards — 10 mm • for grounded parts — downwards — 10 mm — at the side — downwards — 10 mm • for live parts — forwards — for live parts — forwards — upwards — the side — downwards — the side — downwards — the side — formain current circuit • for auxiliary and control circuit • for main current circuit • for famin control circuit • for famin control circuit • for famin controls • for famin controls • for famin controls • for famin controls — solid — solid or stranded — finely stranded with core end processing • for AWG 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 • solid or stranded • finely stranded with core end processing • for fauxiliary contacts • for auxiliary contacts • for auxiliary contacts • for for auxiliary contacts • for	width	45 mm
	depth	151 mm
forwards upwards	required spacing	
- upwards	 with side-by-side mounting 	
- downwards - at the side	— forwards	10 mm
- at the side	— upwards	10 mm
• for grounded parts - forwards - chowards - at the side - downwards - to live parts - forwards - upwards - forwards - upwards - downwards - downwards - downwards - to lime - at the side - forwards - forwards - forwards - forwards - forwards - for main current circuit - for auxiliary and control circuit - for auxiliary and control circuit - for auxiliary contacts - for main current circuit - for auxiliary contacts - for main contacts - solid - solid - solid or stranded - finely stranded with core end processing - for AWC cables for main contacts - solid - sfinely stranded with core end processing - for for WC cables for main contacts - solid - sinely stranded with core end processing - for favior contacts - solid - sinely stranded with core end processing - for favior contacts - solid - sinely stranded with core end processing - for favior contacts - solid - sinely stranded with core end processing - for auxiliary contacts - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or s	— downwards	10 mm
	— at the side	0 mm
- upwards	 for grounded parts 	
- at the side	— forwards	10 mm
- downwards • for live parts - forwards - upwards - upwards - downwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • of or auxiliary and control circuit • at contactor for auxiliary contacts • of majnet coil - solid - 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 • 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	— upwards	10 mm
• for live parts — forwards — upwards — upwards — downwards — at the side Connections/ Torminals type of electrical connection • for main current circuit • at contactor for auxiliary contacts — solid — 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 • 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 • for maunical conductor cross-sections • for auxiliary contacts • solid or stranded • finely stranded with core end processing • for maxiliary contacts • solid or stranded • finely stranded with core end processing • for maxiliary contacts • solid or stranded • finely stranded with core end processing • for maxiliary contacts • solid or stranded • finely stranded with core end processing • for maxiliary contacts • solid or stranded • finely stranded with core end processing • for maxiliary contacts • solid or stranded • finely stranded with core end processing • for maxiliary contacts • solid or stranded • finely stranded with core end process	— at the side	6 mm
forwards 10 mm	— downwards	10 mm
- upwards	for live parts	
- downwards - at the side Connections/Terminals type of electrical connection • for main current 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 • 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 • for auxiliary contacts • solid or stranded • finely stranded with core end processing • for auxiliary contacts • solid or stranded • for auxiliary contacts • for main contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for auxiliary contacts	— forwards	10 mm
- at the side 6 mm Connections/Terminals	— upwards	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 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 • for AWG cables for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for of or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts • for auxiliary contacts • for of or sind contacts • for auxiliary contacts • for for with core end processing • for for with core end processing • for for with core end processing • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for main contacts • for main contacts • for main contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for auxiliary contacts	— downwards	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 or stranded — finely stranded with core end processing • 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 with core end processing • solid • stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts • for auxiliary contacts — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts • for auxiliary contacts • for or wind cable conductor cross-sections • for for wind cable conductor cross-sections • for for wind cable conductor cross-section • for main contacts • for main contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for auxiliary contacts	— at the side	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 • finely stranded with core end processing • for nexible conductor cross-section for auxiliary contacts • solid • solid or stranded • finely stranded with core end processing • for AWG 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 • 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 • for auxiliary contacts	Connections/ Terminals	
• 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 • for auxiliary contacts • solid • stranded • finely stranded with core end processing • for auxiliary contacts • solid • finely stranded with core end processing • for auxiliary contacts • solid or stranded • finely stranded with core end processing • for auxiliary contacts • solid or stranded • for auxiliary contacts • solid or stranded • for auxiliary contacts • for auxiliary contacts • solid or stranded • for auxiliary contacts • for auxiliary contacts • solid or stranded • for auxiliary contacts	type of electrical connection	
 at contactor for auxiliary contacts of magnet coil Screw-type terminals Screw-type terminals type of connectable conductor cross-sections for main contacts — solid — solid or stranded — solid or stranded with core end processing for AWG cables for main contacts solid 1 10 mm² stranded finely stranded with core end processing 1 10 mm² stranded finely stranded with core end processing finely stranded with core end processing multiple stranded with core end processing 1 10 mm² connectable conductor cross-section for auxiliary contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) ye for auxiliary contacts for auxiliary contacts for AWG cables for auxiliary contacts aux (0.5 1.5 mm²), 2x (0.75 2.5 mm²) xe (20 16), 2x (18 14) AWG number as coded connectable conductor cross section for main contacts for main contacts for auxiliary contacts 	for main current circuit	screw-type terminals
of magnet coil type of connectable conductor cross-sections of main contacts — solid — solid conductor stranded — solid conductor cross-sections — solid conductor stranded — solid conductor stranded — solid conductor cross-sections — solid conductor cross-section for main contacts — finely stranded with core end processing — solid conductor cross-section for main contacts — solid conductor cross-section for main contacts — solid conductor cross-section for auxiliary contacts — solid conductor cross-section for auxiliary contacts — solid or stranded conductor cross-section for auxiliary contacts — solid or stranded with core end processing connectable conductor cross-sections — finely stranded with core end processing connectable conductor cross-sections — for auxiliary contacts — solid or stranded conductor cross-sections — finely stranded with core end processing connectable conductor cross-sections — for auxiliary contacts — solid or stranded conductor cross-sections — finely stranded with core end processing conductor cross-sections — for auxiliary contacts conductor cross-sections — for main contacts conductor cross-section — for main contacts — for main contacts — for main contacts — for auxiliary contacts — for main contacts — for main contacts — for auxiliary contacts — for main contacts	 for auxiliary and control circuit 	screw-type terminals
type of connectable conductor cross-sections of or main contacts - solid - solid or stranded - finely stranded with core end processing of the stranded of the stranded - solid - solid - solid or stranded - finely stranded with core end processing of the stranded - solid - stranded - solid - stranded - solid - stranded - solid or stranded - so	 at contactor for auxiliary contacts 	Screw-type terminals
• for main contacts — solid — solid or stranded — finely stranded with core end processing • for 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 • solid or stranded • finely stranded with core end processing • 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 • solid or stranded • for auxiliary contacts • for main contacts • for main contacts • for auxiliary contacts • for aux	of magnet coil	Screw-type terminals
solid	type of connectable conductor cross-sections	
- solid or stranded - finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • finely stranded with core end processing • solid • stranded • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • 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 auxiliary contacts • for AWG cables for auxiliary contacts • for AWG cables 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 main contacts • for main contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts	 for main contacts 	
- finely stranded with core end processing • for AWG cables for main contacts 2x (16 12), 2x (14 8) connectable conductor cross-section for main contacts • solid • stranded • finely stranded with 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 type of connectable conductor cross-sections • for auxiliary contacts - solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) type of connectable conductor cross-sections • for AWG cables for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 4x (20 16), 2x (18 14) AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 20 14	— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
of raw Grables for main contacts connectable conductor cross-section for main contacts osolid	— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
connectable conductor cross-section for main contacts • solid • 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 with core end processing type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) — finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 20 14	 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
 solid stranded finely stranded with core end processing 1 10 mm² finely stranded with core end processing 1 10 mm² connectable conductor cross-section for auxiliary contacts solid or stranded finely stranded with core end processing finely stranded with core end processing for auxiliary contacts solid or stranded finely stranded with core end processing for AWG cables for auxiliary contacts for AWG cables for auxiliary contacts for AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts 16 8 for auxiliary contacts 16 8 for auxiliary contacts 20 14 	for AWG cables for main contacts	2x (16 12), 2x (14 8)
 stranded finely stranded with core end processing connectable conductor cross-section for auxiliary contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts solid or stranded for auxiliary contacts for all stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) for AWG cables for auxiliary contacts for AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts 16 8 for auxiliary contacts 20 14 	connectable conductor cross-section for main contacts	
 finely stranded with core end processing connectable conductor cross-section for auxiliary contacts solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts solid or stranded solid or stranded finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) for AWG cables for auxiliary contacts 2x (20 1.5 mm²), 2x (0.75 2.5 mm²) for AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts 16 8 for auxiliary contacts 20 14 	• solid	1 10 mm²
connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts - for main contacts - for auxiliary con	• stranded	1 10 mm²
 solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid or stranded — finely stranded with core end processing — for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts 16 8 for auxiliary contacts 20 14 	finely stranded with core end processing	1 10 mm²
• finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing • for 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 auxiliary contacts • for auxiliary contacts • for one auxiliary contacts • for auxiliary contacts	connectable conductor cross-section for auxiliary contacts	
type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)	solid or stranded	0.5 2.5 mm²
 for auxiliary contacts — solid or stranded — solid or stranded — finely stranded with core end processing of or AWG cables for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross section of or main contacts of or auxiliary contacts 16 8 of or auxiliary contacts 20 14 	finely stranded with core end processing	0.5 2.5 mm²
 — solid or stranded — finely stranded with core end processing ● for AWG cables for auxiliary contacts ■ for main contacts ■ for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross section ■ for main contacts ■ for auxiliary contacts 20 14 	**	
— finely stranded with core end processing of for AWG cables for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross section of for main contacts of or auxiliary contacts 20 14	 for auxiliary contacts 	
 ◆ for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross section ◆ for main contacts ★ for auxiliary contacts 20 14 	— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 20 14	 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
section	for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
• for auxiliary contacts 20 14		
• for auxiliary contacts 20 14	• for main contacts	16 8
·	for auxiliary contacts	20 14
	Safety related data	

product function	
 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947-5-1 	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Approvals Certificates	

CE EG-Konf.

General Product Approval



Confirmation





<u>KC</u>

General Product Approval

EMV

Functional Saftey

Test Certificates

Marine / Shipping

EAC



Type Examination Certificate

Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping









Miscellaneous

other

Confirmation

Railway

Dangerous goods

Environment

Special Test Certificate

Transport Information



Environmental Confirmations

Further informatior

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2028-1BF44

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2028-1BF44}$

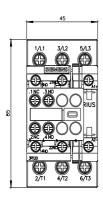
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1BF44

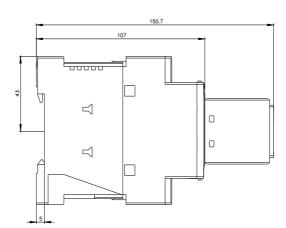
 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ EPLAN\ macros,\ ...)$

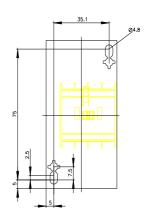
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-1BF44&lang=en

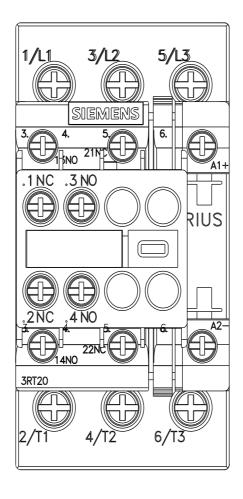
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT20

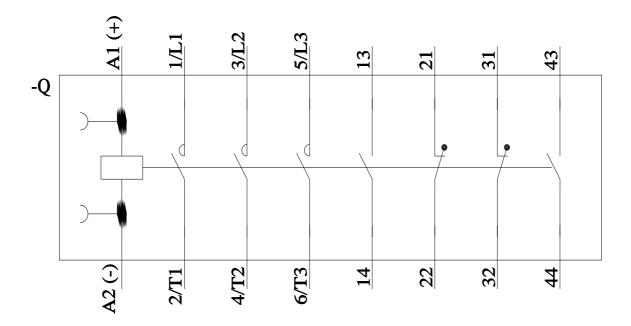
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1BF44&objecttype=14&gridview=view1











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