SIEMENS

Data sheet 3RT2046-1NB30



power contactor, AC-3e/AC-3, 95 A, 45 kW / 400 V, 3-pole, 20-33 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S3 $\,$

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S3
product extension	
 function module for communication 	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	19.8 W
 at AC in hot operating state per pole 	6.6 W
without load current share typical	3.5 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	1 000 V
of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
of main circuit rated value	8 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	10.3g / 5 ms, 6,.g / 10 ms
• at DC	6.7 g / 5 ms, 4g / 10 ms
shock resistance with sine pulse	
• at AC	16.3g / 5 ms, 10.g / 10 ms
• at DC	10.6 g / 5 ms, 6.3 g / 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)	03/01/2017
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 %

number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	1 000 V
at AC-3e rated value maximum	1 000 V
operational current	1 000 1
at AC-1 at 400 V at ambient temperature 40 °C rated	130 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	130 A
value	
— up to 690 V at ambient temperature 60 °C rated	110 A
value • at AC-3	
	05 A
— at 400 V rated value	95 A
— at 500 V rated value	95 A
— at 690 V rated value	78 A
— at 1000 V rated value	30 A
at AC-3e at 400 V retail value.	OF A
— at 400 V rated value	95 A
— at 500 V rated value	95 A
— at 690 V rated value	78 A
— at 1000 V rated value	30 A
at AC-4 at 400 V rated value	80 A
at AC-5a up to 690 V rated value	114 A
 at AC-5b up to 400 V rated value 	95 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	84.4 A
 up to 400 V for current peak value n=20 rated value 	84.4 A
 up to 500 V for current peak value n=20 rated value 	84.4 A
 up to 690 V for current peak value n=20 rated value 	58 A
• at AC-6a	
 up to 230 V for current peak value n=30 rated value 	56.3 A
 up to 400 V for current peak value n=30 rated value 	56.3 A
 up to 500 V for current peak value n=30 rated value 	56.3 A
— up to 690 V for current peak value n=30 rated value	56.3 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	42 A
at 690 V rated value at 690 V rated value	30 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	100 A
— at 60 V rated value	60 A
— at 110 V rated value	9 A
— at 110 v rated value — at 220 V rated value	2 A
	0.6 A
— at 440 V rated value	0.6 A 0.4 A
— at 600 V rated value	U.4 A
with 2 current paths in series at DC-1 at 24 V rated value.	100 A
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	10 A
— at 440 V rated value	1.8 A
— at 600 V rated value	1 A
with 3 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A

— at 220 V rated value	80 A
— at 440 V rated value	4.5 A
— at 600 V rated value	2.6 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	40 A
— at 60 V rated value	6 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.15 A
— at 600 V rated value	0.06 A
with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	7 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.16 A
with 3 current paths in series at DC-3 at DC-5	400 A
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	35 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.35 A
operating power	
 at AC-2 at 400 V rated value 	45 kW
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	75 kW
— at 1000 V rated value	37 kW
• at AC-3e	
— at 230 V rated value	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	75 kW
— at 1000 V rated value	37 kW
operating power for approx. 200000 operating cycles at AC-	
4	
• at 400 V rated value	22 kW
at 690 V rated value	27.4 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	33 kVA
 up to 400 V for current peak value n=20 rated value 	58 kVA
• up to 500 V for current peak value n=20 rated value	73 kVA
• up to 690 V for current peak value n=20 rated value	69 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	22.4 kVA
• up to 400 V for current peak value n=30 rated value	39 kVA
• up to 500 V for current peak value n=30 rated value	48.7 kVA
• up to 690 V for current peak value n=30 rated value	67.3 kVA
short-time withstand current in cold operating state up to	
40 °C	
 limited to 1 s switching at zero current maximum 	1 725 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	1 297 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	946 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	610 A; Use minimum cross-section acc. to AC-1 rated value
limited to 60 s switching at zero current maximum	486 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	1 000 1/h

100	4 000 4/1
• at DC	1 000 1/h
operating frequency	200 41
• at AC-1 maximum	900 1/h
• at AC-2 maximum	350 1/h
• at AC-3 maximum	850 1/h
at AC-3e maximum	850 1/h
at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
at 50 Hz rated value	20 33 V
at 60 Hz rated value	20 33 V
control supply voltage at DC	
rated value	20 33 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
	1.1
full-scale value operating range factor control supply voltage rated value of	1.1
magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.8 1.1
design of the surge suppressor	with varistor
inrush current peak	6.5 A
duration of inrush current peak	50 μs
locked-rotor current mean value	3.2 A
locked-rotor current peak	6.5 A
duration of locked-rotor current	150 ms
holding current mean value	75 mA
apparent pick-up power of magnet coil at AC	
● at 50 Hz	151 VA
• at 60 Hz	151 VA
apparent holding power of magnet coil at AC	
● at 50 Hz	3.5 VA
● at 60 Hz	3.5 VA
closing power of magnet coil at DC	76 W
holding power of magnet coil at DC	2.7 W
closing delay	
• at AC	50 70 ms
• at DC	50 70 ms
opening delay	
• at AC	38 57 ms
• at DC	38 57 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	6 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A

For short-circuit protection of the auxiliary switch required G: 10 A (500 V, 1 kA) Installation/ mounting/ dimensions mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface		
	• at 220 V rated value	1 A
10 A 12 AV rated value	at 600 V rated value	0.15 A
• at 48 V rated value	operational current at DC-13	
• at 10 V rated value	• at 24 V rated value	10 A
earl 110 V rated value	• at 48 V rated value	2 A
• at 129 V rated value • at 220 V rated value • at 220 V rated value • at 220 V rated value • at 200 V rated value • at 200 V rated value • at 200 V rated value • at 300 V rated value • at 300 V rated value • at 300 V rated value • at 300 V rated value • at 300 V rated value • at 200 V rated value • at 300 V rated value • at 300 V rated value • at 300 V rated value • at 57500 V rated value • for short-circuit protection of the auxiliary switch required gG: 250 A (500 V, 100 kA), abl: 100 A (500 V, 100 kA), BS88: 220 A (415 V, kA) • 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	• at 60 V rated value	2 A
• at 220 V rated value	• at 110 V rated value	1 A
e. at 800 V rated value	• at 125 V rated value	0.9 A
Contact reliability of auxiliary contacts	at 220 V rated value	0.3 A
Tull-add current (FLA) for 3-phase AC motor	• at 600 V rated value	0.1 A
Tuil-load current (FLA) for 3-phase AC motor at 480 V rated value 96 A at 800 V rated value 77 A yielded mechanical performance (Inp) of or single-phase AC motor — at 110/120 V rated value 20 hp at 230 V rated value 20 hp — at 220 V rated value 30 hp — at 220/230 V rated value 30 hp — at 800/80 V rated value 75 hp — at 800/80 V rated value 75 hp — at 800/80 V rated value 75 hp — at 875/600 V rated value 75 hp — at 875/600 V rated value 75 hp — at 900/260 V rated value 75 hp — ontact rating of auxiliary contacts according to UL Short-circuit protection design of the flus link of or short-circuit protection of the main circuit — with type of assignment 2 required 40 kg of or short-circuit protection of the auxiliary switch required 96: 100 A (890 V, 100 kA), aM: 160 A (890 V, 100 kA), BS88: 200 A (415 V, kA) of or short-circuit protection of the auxiliary switch required 96: 100 A (890 V, 100 kA), aM: 100 A (890 V, 100 kA), BS88: 125 A (415 V, kA) of side-by-side mounting firstillation/mounting/dimensions height 140 mm width 70 mm depth 152 mm required spacing with side-by-side mounting ownwards 10 mm ownwards 10 m	contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
• at 480 V rated value 96 A 1600 V rated value 77 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 20 hp • for 3-phase AC motor — at 200/208 V rated value 30 hp — at 220/230 V rated value 75 hp — at 460/480 V rated value 75 hp — at 675/600 V rated value 75 hp — at 675/600 V rated value 75 hp — with 51/40 per of coordination 1 required 96 (250 A (680 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) — with hype of assignment 2 required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the main circuit — with hype of assignment 2 required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the main circuit • with side by-side mounting surface can be tilted forward a series and snap-on mounting surface. • side-by-side mounting • with side-by-side mounting • of mounting surface 20 mm • of mounting surface 20 mm • of mounting sur	UL/CSA ratings	
• at 480 V rated value 96 A 1600 V rated value 77 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 20 hp • for 3-phase AC motor — at 200/208 V rated value 30 hp — at 220/230 V rated value 75 hp — at 460/480 V rated value 75 hp — at 675/600 V rated value 75 hp — at 675/600 V rated value 75 hp — with 51/40 per of coordination 1 required 96 (250 A (680 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) — with hype of assignment 2 required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the main circuit — with hype of assignment 2 required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required 96 (360 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the main circuit • with side by-side mounting surface can be tilted forward a series and snap-on mounting surface. • side-by-side mounting • with side-by-side mounting • of mounting surface 20 mm • of mounting surface 20 mm • of mounting sur	full-load current (FLA) for 3-phase AC motor	
yelded mechanical performance [hp] • for single-phase AC motor — at 1101/20 / trated value — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — 30 hp — at 2200/208 V rated value — at 278/00 V rated value — at 460/480 V rated value — at 478/00 V rated value — at 578/00 V rated value — other for short-circuit protection of the main circuit — with type of coordination 1 required — with type of coordination 1 required — with type of assignment 2 required gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) — with type of assignment 2 required gG: 10 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 200 A (415 V, kA) **Iso' rotation possible on vertical mounting surface; can be tilted forward is backward by 4-125' on vertical mounting surface; can be tilted forward is backward by 4-125' on vertical mounting surface; can be tilted forward is backward by 4-125' on vertical mounting surface; can be tilted forward is backward by 4-125' on vertical mounting surface; can be tilted forward is backward by 4-125' on vertical mounting surface; can be tilted forward is backward by 4-125' on vertical mounting surface; can be tilted forward in the surface of the sur	at 480 V rated value	96 A
For single-phase AC motor	• at 600 V rated value	77 A
For single-phase AC motor	yielded mechanical performance [hp]	
- at 110/120 V rated value - at 230 V rated value - at 230 V rated value - 20 hp - at 230 V rated value - 30 hp - at 200/208 V rated value - 30 hp - at 220/209 V rated value - 30 hp - 35 hp		
For 3-phase AC motor	•	10 hp
		·
- at 200/208 V rated value 30 hp - at 220/230 V rated value 30 hp - at 420/230 V rated value 75 hp - at 460/480 V rated value 75 hp - at 460/480 V rated value 75 hp - at 575/600 V rated value 76 hp - at 575/600 V rated value 89 hp - at 675/600 V rated value 89 hp - at 675/600 V rated value 89 hp - at 575/600 V rated value 89 hp - at 675/600 V rated value 89 hp		
- at 220/230 V rated value 75 hp 75	·	30 hp
- at 460/480 V rated value 75 hp at 575/600 V rated value 75 hp 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 assignment 2 required 8, 26 (160 N, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) • for short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required installation/mounting/ dimensions mounting position fastening method • side-by-side mounting with side-by-side mounting owith side-by-side mounting - forwards — downwards — downwards — downwards — of or grounded parts — forwards — at the side — downwards — downwards — odownwards — odownwards — odownwards — odownwards — of powards —		
- at 575/600 V rated value contact rating of auxillary contacts according to UL A600 / P600 Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required 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 a (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, kA) GG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, kA) For a vith side of switch switch required • for a (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, kA) For a vith side on vith switch switch required • for a (690 V, 100 kA), aM: 100 A (69		·
contact rating of auxillary 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 Installation/ mounting/ dimensions mounting position ***Passive and snap-on mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface; can be tilted forward a short sh		
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, kA) — with type of assignment 2 required gG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, kA) • for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, kA) Installation/mounting/dimensions mounting position #-/180" rotation possible on vertical mounting surface; can be tilted forward a backward by +/- 22.5" on vertical mounting surface; can be tilted forward a backward by +/- 22.5" on vertical mounting surface; can be tilted forward a backward by +/- 22.5" on vertical mounting surface; can be tilted forward a backward by +/ 22.5" on vertical mounting surface; can be tilted forward a backward by +/ 22.5" on vertical mounting surface; can be tilted forward a backward by +/ 22.5" on vertical mounting surface; can be tilted forward a backward by +/ 22.5" on vertical mounting surface; can be tilted forward a backward by +/		
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 — with type of assignment 2 required — for short-circuit protection of the auxiliary switch 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 state mounting dimensions — screw and snap-on well all according surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5° on vertical mounting surface; can be titled forward abackward by +/- 22.5°		A000 / F000
• for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required — of or short-circuit protection of the auxiliary switch required — of short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions — mounting position — side-by-side mounting — side-by-side mounting — of side-by-side mounting — of with side-by-side mounting — of wards — upwards — upwards — upwards — upwards — upwards — upwards — of or grounded parts — of ownwards — at the side — downwards — of live parts — forwards — upwards — ownwards — of live parts — forwards — upwards — of live parts — forwards — upwards — of live parts — forwards — upwards — ownwards — of live parts — forwards — upwards — ownwards — ow		
- with type of coordination 1 required - with type of assignment 2 required - with type of assignment 2 required - of ro short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of ros short-circuit protection of the auxiliary switch required - of short-circuit protection on the sufficient of short-circuit protec	-	
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 mounting position #/-180" rotation possible on vertical mounting surface; can be tilted forward abackward by +/- 22.5" on vertical mounting surface; can be tilted forward abackward by +/- 22.5" on vertical mounting surface; can be tilted forward abackward by +/- 22.5" on vertical mounting surface fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 607" Yes 140 mm width 70 mm depth required spacing with side-by-side mounting — forwards — upwards — odownwards — at the side — of mm for grounded parts — forwards — upwards — upwards — of mm — downwards — at the side — 10 mm — downwards — of rile parts — forwards — upwards — of rile parts — forwards — upwards — upwards — of mm — downwards — of mm — downwards — at the side — ownwards — of mm — downwards — of rile parts — forwards — upwards — upwards — upwards — upwards — to mm — downwards — to mm — to mm — downwards — to mm — to mm — downwards — the side — ownwards — to mm — the side — ownwards — at the side — ownwards — at the side — ownwards — the side — ownwards — the side — ownwards — at the side — ownwards — the side — ownwards — the side — ownwards	·	O 050 A (000 M 400 LA) M 400 A (000 M 400 LA) B000 000 A (445 M 00
with type of assignment 2 required of or short-circuit protection of the auxiliary switch required for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method oide-by-side mounting height width depth required spacing owith side-by-side mounting forwards upwards downwards for grounded parts forwards upwards upwards at the side of or grounded parts forwards upwards upwards upwards the side of or grounded parts forwards upwards upwards upwards upwards the side of or grounded parts forwards upwards upwards upwards upwards the side of or grounded parts forwards upwards uthe side downwards of or live parts forwards upwards up	— with type of coordination 1 required	
Installation/ mounting/ dimensions mounting position ##-180° rotation possible on vertical mounting surface; can be tilted forward a backward by #-22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 607° side-by-side mounting Yes height ##-180° rotation possible on vertical mounting surface; can be tilted forward a screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 607° for 607° ###-180° required snap-on mounting onto 35 mm DIN rail according to DIN EN 607° ###-180° required snap-on mounting onto 35 mm DIN rail according to DIN EN 607° ###-180° required snap-on mounting onto 35 mm DIN rail according to DIN EN 607° ###-180° required snap-on mounting onto 35 mm DIN rail according to DIN EN 607° ###-180° required snap-on mounting onto 35 mm DIN rail according to DIN EN 607° ####-180° required snap-on mounting onto 35 mm DIN rail according to DIN EN 607° #####-180° required snap-on mounting onto 35 mm DIN rail according to DIN EN 607° ####################################	— with type of assignment 2 required	gG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, 80
mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface; can be tilted forward a backward by +/- 22.5° on vertical mounting surface; can be tilted forward by +/- 22.5° on vertical mounting surface; can be tilted forwards as the side and surface; can be tilted forward by +/- 22.5° on vertical mounting surface; can be tilted forwards and backward by +/- 22.5° on vertical mounting surface; can be tilted forwards and backward by +/- 22.5° on vertical mounting surface; can be tilted forward be now. ### A full ** **Pack *** *** **Pack *** *** *** **Pack *** *** *** *** *** *** *** *** *** *	• for short-circuit protection of the auxiliary switch required	aG: 10 A (500 V 1 kA)
fastening method screw and snap-on mounting surface serew and snap-on mounting onto 35 mm DIN rail according to DIN EN 607* side-by-side mounting height 140 mm width 70 mm depth 152 mm required spacing with side-by-side mounting - forwards - upwards - downwards - at the side of or grounded parts - forwards - upwards - upwards - the side of or grounded parts - forwards - at the side - downwards - the side - for forwards - at the side - downwards - the side - downwards - upwards - upwards - forwards - upwards - the side - downwards - upwards	- for short-ordait protection of the auxiliary switch required	gg. 10 A (300 V, 1 KA)
e side-by-side mounting height idth width idepth ide		gg. 10 A (300 V, 1 M)
height 140 mm width 70 mm depth 152 mm required spacing Tequired spacing • with side-by-side mounting 20 mm — forwards 20 mm — upwards 10 mm — at the side 0 mm • for grounded parts 20 mm — upwards 10 mm — at the side 10 mm — downwards 10 mm • for live parts 20 mm — ownwards 20 mm — upwards 10 mm — downwards 10 mm — at the side 10 mm — at the side 10 mm — at the side 10 mm	Installation/ mounting/ dimensions	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
width 70 mm depth 152 mm required spacing • with side-by-side mounting — forwards 20 mm — upwards 10 mm — downwards 10 mm — at the side 0 mm • for grounded parts — forwards 20 mm — upwards 10 mm — at the side 10 mm — at the side 10 mm — at the side 20 mm — upwards 20 mm — upwards 10 mm — at the side 10 mm — downwards 10 mm • for live parts — forwards 20 mm — upwards 10 mm — at the side 10 mm — at the side 10 mm — at the side 10 mm — upwards 10 mm — upwards 10 mm — downwards 10 mm — at the side 10 mm — downwards 10 mm — at the side 10 mm	Installation/ mounting/ dimensions mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
depth 152 mm required spacing • with side-by-side mounting — forwards — upwards — upwards — upwards — downwards — downwards — at the side • for grounded parts — forwards — upwards — upwards — upwards — at the side — downwards — at the side — for live parts — forwards — upwards — up	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — upwards — 10 mm • for grounded parts — forwards — upwards — upwards — at the side — downwards — at the side — downwards — for live parts — forwards — upwards — upwards — upwards — 10 mm • for live parts — forwards — upwards — 10 mm — at the side Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes
with side-by-side mounting — forwards — upwards — upwards — at the side • for grounded parts — forwards — upwards — upwards — upwards — upwards — upwards — upwards — at the side — upwards — upwards — at the side — downwards • for live parts — forwards — upwards — upwards — upwards — the side — downwards — the side — upwards	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm
forwards 20 mm upwards 10 mm downwards 10 mm at the side 0 mm ■ for grounded parts forwards 20 mm upwards 10 mm at the side 10 mm downwards 10 mm downwards 10 mm ■ for live parts forwards 20 mm upwards 10 mm ■ for live parts 20 mm upwards 10 mm at the side 10 mm downwards 10 mm downwards 10 mm downwards 10 mm at the side 10 mm at the side 10 mm	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm
- upwards 10 mm - downwards 0 mm - at the side 0 mm • for grounded parts - forwards 20 mm - upwards 10 mm - at the side 10 mm - at the side 10 mm - downwards 10 mm • for live parts - forwards 20 mm - upwards 10 mm - at the side 10 mm - at the side 10 mm - forwards 10 mm - at the side 10 mm - downwards 10 mm - downwards 10 mm - at the side 10 mm Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm
- downwards 10 mm - at the side 0 mm • for grounded parts - forwards 20 mm - upwards 10 mm - at the side 10 mm - downwards 10 mm - downwards 10 mm • for live parts - forwards 20 mm - upwards 10 mm - at the side 10 mm - to	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm
- downwards 10 mm - at the side 0 mm • for grounded parts - forwards 20 mm - upwards 10 mm - at the side 10 mm - downwards 10 mm • for live parts - forwards 20 mm - upwards 10 mm - at the side 10 mm • for live parts - forwards 20 mm - upwards 10 mm - at the side 10 mm Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm
at the side • for grounded parts forwards upwards upwards at the side downwards • for live parts forwards upwards upwards upwards upwards upwards upwards downwards downwards at the side Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm
 for grounded parts — forwards — upwards — at the side — downwards for live parts — forwards — upwards — upwards — upwards — downwards — at the side 10 mm — at the side Connections/ Terminals type of electrical connection 	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm
forwards 20 mm upwards 10 mm at the side 10 mm downwards 10 mm for live parts forwards 20 mm upwards 10 mm downwards 10 mm downwards 10 mm downwards 10 mm at the side 10 mm Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
 — upwards — at the side — downwards • for live parts — forwards — upwards — upwards — downwards — downwards — at the side 10 mm Connections/ Terminals type of electrical connection 	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
- at the side 10 mm - downwards 10 mm	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm 10 mm 0 mm
 — downwards ● for live parts — forwards — upwards — downwards — at the side 10 mm Connections/ Terminals type of electrical connection 	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 10 mm 10 mm 0 mm 0 mm
● for live parts — forwards — upwards — upwards — downwards — at the side Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm 0 mm 0 mm
— forwards 20 mm — upwards 10 mm — downwards 10 mm — at the side 10 mm Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm 0 mm 10 mm 10 mm 10 mm
- upwards 10 mm - downwards 10 mm - at the side 10 mm Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm 0 mm 10 mm 10 mm 10 mm
- downwards 10 mm - at the side 10 mm Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
— at the side 10 mm Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
Connections/ Terminals type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
type of electrical connection	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
• for main current circuit screw-type terminals	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm
• for auxiliary and control circuit screw-type terminals	Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes 140 mm 70 mm 152 mm 20 mm 10 mm

 at contactor for auxiliary contacts 	Screw-type terminals
 of magnet coil 	Screw-type terminals
type of connectable conductor cross-sections for main contacts	
 finely stranded with core end processing 	2x (2.5 35 mm²), 1x (2.5 50 mm²)
connectable conductor cross-section for main contacts	
• solid	2.5 16 mm²
• stranded	6 70 mm²
 finely stranded with core end processing 	2.5 50 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.5 2.5 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
type of connectable conductor cross-sections	
 for auxiliary contacts 	
— solid or stranded	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 	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross section	
• for main contacts	10 2
 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
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	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 a
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

Certificates/ approvals

suitability for use

General Product Approval

• safety-related switching on

• safety-related switching OFF



Confirmation





<u>KC</u>



Functional

EMC Safety/Safety of Machinery

Declaration of Conformity Test Certificates

No

Yes



Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













other Railway Dangerous Good Environment

Environmental Confirmations

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RT2046-1NB30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2046-1NB30

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-1NB30

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

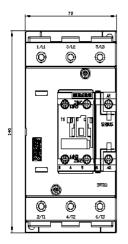
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2046-1NB30&lang=en

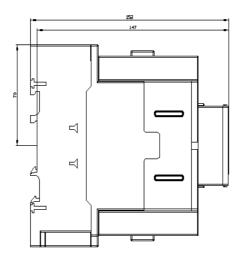
Characteristic: Tripping characteristics, I2t, Let-through current

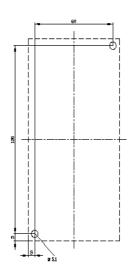
https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-1NB30/char

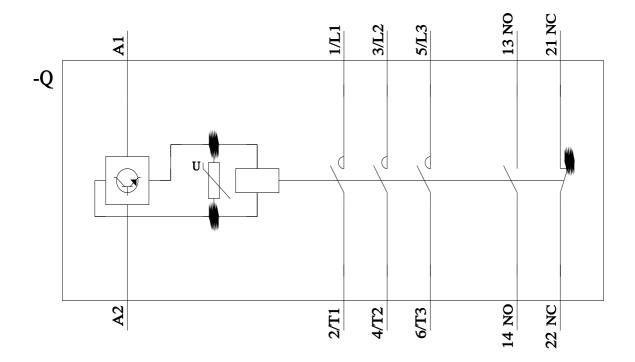
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2046-1NB30&objecttype=14&gridview=view1









last modified: 2/10/2023 🖸