3RT2018-1AK64-3MA0

Data sheet



power contactor, AC-3e/AC-3, 16 A, 7.5 kW / 400 V, 3-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S00, captive auxiliary switch

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S00
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 	3 W
 at AC in hot operating state per pole 	1 W
without load current share typical	1.7 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 AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 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	0.29 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	39.6 kg
Global Warming Potential [CO2 eq] during manufacturing	1.18 kg
Global Warming Potential [CO2 eq] during operation	38.5 kg
Global Warming Potential [CO2 eq] after end of life	-0.155 kg
Main circuit	0.100 kg
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 	22 A
 at AC-1 — up to 690 V at ambient temperature 40 °C rated 	22 A
value — up to 690 V at ambient temperature 60 °C rated	20 A
value	20 A
at AC-3 — at 400 V rated value	16 A
— at 500 V rated value	12.4 A
— at 690 V rated value	8.9 A
• at AC-3e	3.371
— at 400 V rated value	16 A
— at 500 V rated value	12.4 A
— at 690 V rated value	8.9 A
• at AC-4 at 400 V rated value	11.5 A
• at AC-5a up to 690 V rated value	19.4 A
 at AC-5b up to 400 V rated value 	13.2 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	9.6 A
— up to 400 V for current peak value n=20 rated value	9.6 A
— up to 500 V for current peak value n=20 rated value	9.6 A
 up to 690 V for current peak value n=20 rated value at AC-6a 	8.9 A
— up to 230 V for current peak value n=30 rated value	6.6 A
— up to 400 V for current peak value n=30 rated value	6.4 A
— up to 500 V for current peak value n=30 rated value	6.4 A
— up to 690 V for current peak value n=30 rated value	6.4 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	5.5 A
at 690 V rated value	4.4 A
operational current	
at 1 current path at DC-1 at 24 V reted value.	20 A
— at 24 V rated value	20 A 20 A
— at 60 V rated value— 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
with 2 current paths in series at DC-1	
— at 24 V rated value	20 A
— at 60 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

 with 3 current paths in series at DC-1 	
— at 24 V rated value	20 A
— at 60 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	1.3 A
	TA .
 at 1 current path at DC-3 at DC-5 at 24 V rated value 	20 A
— at 60 V rated value	0.5 A
— at 110 V rated value	0.15 A
with 2 current paths in series at DC-3 at DC-5	0.15 A
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	0.35 A
	0.35 A
with 3 current paths in series at DC-3 at DC-5	20. A
— at 24 V rated value	20 A
— at 60 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	7.5 124
at AC-2 at 400 V rated value	7.5 kW
• at AC-3	A LAM
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 kW
• at AC-3e	A LAM
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value operating power for approx. 200000 operating cycles at AC-	7.5 kW
4	
at 400 V rated value	2.5 kW
at 690 V rated value	3.5 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	3.8 kVA
 up to 400 V for current peak value n=20 rated value 	6.6 kVA
 up to 500 V for current peak value n=20 rated value 	8.3 kVA
• up to 690 V for current peak value n=20 rated value	10.6 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	2.5 kVA
• up to 400 V for current peak value n=30 rated value	4.4 kVA
• up to 500 V for current peak value n=30 rated value	5.5 kVA
• up to 690 V for current peak value n=30 rated value	7.6 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	
 limited to 5 s switching at zero current maximum 	300 A; Use minimum cross-section acc. to AC-1 rated value
	300 A; Use minimum cross-section acc. to AC-1 rated value 169 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	
 limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum 	169 A; Use minimum cross-section acc. to AC-1 rated value
-	169 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 30 s switching at zero current maximum	169 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value 92 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum Iimited to 60 s switching at zero current maximum	169 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value 92 A; Use minimum cross-section acc. to AC-1 rated value
Ilimited to 30 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum no-load switching frequency	169 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value 92 A; Use minimum cross-section acc. to AC-1 rated value 74 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum Iimited to 60 s switching at zero current maximum no-load switching frequency at AC	169 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value 92 A; Use minimum cross-section acc. to AC-1 rated value 74 A; Use minimum cross-section acc. to AC-1 rated value
Imited to 30 s switching at zero current maximum Imited to 60 s switching at zero current maximum Ino-load switching frequency at AC Operating frequency	169 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value 92 A; Use minimum cross-section acc. to AC-1 rated value 74 A; Use minimum cross-section acc. to AC-1 rated value 10 000 1/h

a at AC 3a mayim:	750 1/h
at AC-3e maximum at AC-4 maximum	750 1/h
at AC-4 maximum Control circuit/ Control	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	44014
• at 50 Hz rated value	110 V
at 60 Hz rated value	120 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	36 VA
● at 60 Hz	36 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.8
● at 60 Hz	0.8
apparent holding power of magnet coil at AC	
• at 50 Hz	5.9 VA
• at 60 Hz	5.9 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.24
• at 60 Hz	0.24
closing delay	
• at AC	9 35 ms
opening delay	
• at AC	4 15 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
design of the auxiliary switch	on the front, non-detachable
number of NC contacts for auxilian, contacts instantaneous	2
number of NC contacts for auxiliary contacts instantaneous contact	2
	2
contact number of NO contacts for auxiliary contacts instantaneous	
number of NO contacts for auxiliary contacts instantaneous contact	2
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum	2
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15	2 10 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value	2 10 A 6 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value	2 10 A 6 A 3 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value	2 10 A 6 A 3 A 2 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value	2 10 A 6 A 3 A 2 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value	2 10 A 6 A 3 A 2 A 1 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value • at 110 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A
contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value • at 110 V rated value • at 115 V rated value • at 125 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A 1 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 125 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 600 V rated value • at 24 V rated value • at 25 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value • at 18 V rated value • at 24 V rated value • at 25 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A 6 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 24 V rated value • at 25 V rated value • at 25 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A 6 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15	2 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A 6 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A

design of the fuse link * for short-circuit protection of the main circuit with type of coordination 1 required with type of coordination 2 required with type of coordination 2 required with type of coordination 2 required 2 required with type of coordination 3 required 2 required with type of coordination 3 required 3 requir		
For single-phase AC motor	at 600 V rated value	11 A
at 110/120 V rated value	yielded mechanical performance [hp]	
- at 220 V rated value	 for single-phase AC motor 	
• for 3-phase AC motor — at 200208 V rated value — at 200208 V rated value — at 200208 V rated value — at 400480 V rated value — at 57500 V rated value	— at 110/120 V rated value	1 hp
at 200208 V rated value	— at 230 V rated value	2 hp
at 220/220 V rated value	• for 3-phase AC motor	
= at 460469 V rated value	— at 200/208 V rated value	3 hp
at 579600 V rated value	 — at 220/230 V rated value 	5 hp
According of auxiliary contacts according to U.	 — at 460/480 V rated value 	10 hp
Short-circuit protection design of the fuse link - with type of coordination 1 required - with type of assignment 2 required - with side of the function of the auxiliary switch required backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface; can be tilted forward and backward by y +2.25° on vertical mounting surface;	— at 575/600 V rated value	10 hp
design of the fuse link * for short-circuit protection of the main circuit with type of coordination 1 required with type of coordination 2 required with type of coordination 2 required with type of coordination 2 required 2 required with type of coordination 3 required 2 required with type of coordination 3 required 3 requir	contact rating of auxiliary contacts according to UL	A600 / Q600
• for short-directip protection of the main circuit — with type of coordination if required 96: 50A (690V,100KA), aM: 25A (690V,100KA), BS88: 50A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 10A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 10A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), aM: 20A (690V,100KA), BS88: 25A (415V,80KA) 96: 25A (690V,100KA), aM: 20A (690V,100KA), aM: 2	Short-circuit protection	
— 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 position	design of the fuse link	
with type of assignment 2 required	 for short-circuit protection of the main circuit 	
* for short-circuit protection of the auxiliary switch required installation mounting dimensions mounting position ***/-180* rotation possible on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting surface; can be tilted forward and backward by 4/- 22.5* on vertical mounting sur	 — with type of coordination 1 required 	gG: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA)
Installation/ mounting position	 — with type of assignment 2 required 	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
mounting position	• for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
Sasening method	Installation/ mounting/ dimensions	
Sasening method		
height 58 mm depth 45 mm depth 117 mm required spacing ************************************		backward by +/- 22.5° on vertical mounting surface
width 45 mm depth 117 mm required spacing 117 mm e with side-by-side mounting 10 mm — forwards 10 mm — downwards 10 mm — at the side 0 mm • forgrounded parts 10 mm — upwards 10 mm — at the side 6 mm — downwards 10 mm — forwards 10 mm — forwards 10 mm — upwards 10 mm — downwards 10 mm — downwards 10 mm — downwards 10 mm — at the side 6 mm Ownections? Terminals 10 mm Or or availiary and control circuit screw-type terminals sof or availiary and control circuit screw-type terminals • for main current circ	fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
March Marc	height	58 mm
vwith side-by-side mounting	width	45 mm
	depth	117 mm
forwards 10 mm upwards 10 mm downwards 10 mm downwards 10 mm at the side 0 mm for grounded parts forwards 10 mm upwards 10 mm at the side 6 mm downwards 10 mm at the side 6 mm downwards 10 mm at the side 6 mm downwards 10 mm forwards 10 mm upwards 10 mm upwards 10 mm upwards 10 mm upwards 10 mm downwards 5 mm downwards 5 mm downwards 10 mm downwards 10 mm downwards 10 mm downwards 5 mm downwards 5 mm downwards 10 mm downwards 5 mm side 5 mm solid control circuit 5 screw-type terminals 5 screw-type ter	required spacing	
upwards downwards downwards downwards downwards downwards downwards downwards downwards forowards upwards downwards downwa	with side-by-side mounting	
- downwards - at the side 0 0 mm • for grounded parts - forwards	— forwards	10 mm
	— upwards	10 mm
• for grounded parts — forwards — upwards — at the side — downwards — 10 mm • for live parts — forwards — upwards — 10 mm • for live parts — forwards — upwards — 10 mm — downwards — 10 mm — downwards — 10 mm — at the side — downwards — 10 mm — at the side — forman contections — at the side — for main current circuit — for auxiliary and control circuit — so 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 — 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 — stranded with core end processing — stranded — stranded — stranded with core end processing — stranded wi	— downwards	10 mm
- forwards 10 mm 10 mm - upwards 10 mm - upwards 10 mm - at the side 6 mm - downwards 10 mm - for live parts 10 mm - forwards 10 mm - upwards 10 mm - upwards 10 mm - at the side 6 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 - at the side 6 mm - downwards 10 mm - at the side 8 mm - downwards 10 mm - at the side 8 mm - downwards 10 mm - at the side 9 mm - downwards 10 mm - at the side 9 mm - downwards 10 mm - at the side 9 mm - downwards 10 mm - at the side 9 mm - downwards 10 mm - at the side 9 mm - downwards 10 mm - at the side 9 mm - at the side	— at the side	0 mm
- upwards - at the side - downwards 10 mm • for live parts - forwards 10 mm - upwards 10 mm - upwards 10 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm - downwards 10 mm - at the side 6 mm Connections/ Terminals type of electrical connection • for auxiliary and control 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 - soli	 for grounded parts 	
- at the side	— forwards	10 mm
− downwards • for live parts − forwards − upwards − upwards − downwards − downwards − at the side − at the side − formactions/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil − solid − solid − solid − solid or stranded − finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • Stranded • finely stranded with core end processing • Stranded • finely stranded with core end processing • Stranded • finely stranded with core end processing • Stranded • finely stranded with core end processing • Stranded • finely stranded with core end processing • Solid or stranded • 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 • Sol	— upwards	10 mm
• for live parts — forwards — upwards — downwards — at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • 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 0.5 4 mm² • finely stranded with core end processing 0.5 2.5 mm² type of connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing 0.5 2.5 mm² type of connectable conductor cross-sections	— at the side	6 mm
- forwards 10 mm 1	— downwards	10 mm
- upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • at 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 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 0.5 4 mm² • finely stranded with core end processing 10.5 4 mm² • solid or stranded • finely stranded with core end processing 10.5 2.5 mm² 10.5 4 mm²	for live parts	
- downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • 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 type of connectable conductor cross-sections	— forwards	10 mm
- at the side 6 mm Connections/ Terminals type of electrical connection • for main current circuit screw-type terminals • for auxiliary and control circuit screw-type terminals • at contactor for auxiliary contacts Screw-type terminals • of magnet coil 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 • finely stranded with core end processing • finely stranded with core end processing • 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	— 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 • 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	— 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 • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections	— at the side	6 mm
 for main current circuit for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil Screw-type terminals for main contacts for main contacts solid solid or stranded finely stranded with core end processing solid solid finely stranded with core end processing finely stranded with core end processing solid solid solid solid solid solid solid solid stranded finely stranded with core end processing solid stranded solid stranded solid or stranded with core end processing solid or stranded with core end processing solid or stranded solid or str	Connections/ Terminals	
 for main current circuit for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil Screw-type terminals for main contacts for main contacts solid solid or stranded finely stranded with core end processing solid solid for AWG cables for main contacts solid solid solid finely stranded with core end processing solid solid solid solid 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 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 <li< td=""><td></td><td></td></li<>		
 for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil Screw-type terminals type of connectable conductor cross-sections for main contacts solid solid or stranded finely stranded with core end processing solid tyne of connectable conductor cross-sections of main contacts x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² x (0.5 1,5 mm²), 2x (0.75 2,5 mm²), 2x 4 mm² x (0.5 1.5 mm²), 2x (0.75 2,5 mm²), 2x 4 mm² x (20 16), 2x (18 14), 2x 12 connectable conductor cross-section for main contacts solid stranded finely stranded with core end processing x (25 4 mm² x (26 15 mm²) x (27 15 mm²) x (28 15 mm²) x (28 15 mm²) x (29 16) x (20 16) x (· ·	screw-type terminals
 at contactor for auxiliary contacts of magnet coil Screw-type terminals type of connectable conductor cross-sections for main contacts — solid — solid or stranded — finely stranded with core end processing for AWG cables for main contacts a solid b for AWG cables for main contacts connectable conductor cross-section for main contacts a solid a stranded b stranded connectable conductor cross-section for auxiliary contacts a solid or stranded with core end processing b finely stranded with core end processing connectable conductor cross-section for auxiliary contacts a solid or stranded b finely stranded with core end processing connectable conductor cross-section for auxiliary contacts a solid or stranded b finely stranded with core end processing connectable conductor cross-sections 		
of magnet coil type of connectable conductor cross-sections of or main contacts	•	
type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — 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 • 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 • 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 connectable conductor cross-sections	•	
 for main contacts — solid — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • 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 • solid or stranded • finely stranded with core end processing 		
- solid - solid - solid or stranded - 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 - stranded - stranded - sinely stranded with core end processing - solid or stranded - solid o		
- solid or stranded - finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing 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 type of connectable conductor cross-sections		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
 finely stranded with core end processing for AWG cables for main contacts 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 finely stranded conductor cross-sections 		
 for AWG cables for main contacts 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 0.5 4 mm² connectable conductor cross-section for auxiliary contacts finely stranded with core end processing finely stranded with core end processing 2x (20 16), 2x (18 14), 2x 12 0.5 4 mm² finely stranded with core end processing 0.5 4 mm² finely connectable conductor cross-sections 		
connectable conductor cross-section for main contacts • solid • stranded • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing 0.5 4 mm² connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing 0.5 4 mm² • finely stranded with core end processing type of connectable conductor cross-sections		
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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 0.5 4 mm² 0.5 4 mm² 0.5 2.5 mm² type of connectable conductor cross-sections		0.5 4 mm²
 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 		
connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections 0.5 4 mm² 0.5 2.5 mm²		
 solid or stranded finely stranded with core end processing type of connectable conductor cross-sections 0.5 2.5 mm² 0.5 2.5 mm²	·	5.0 2.0 Hilli
• finely stranded with core end processing 0.5 2.5 mm² type of connectable conductor cross-sections	-	0.5 4 mm²
type of connectable conductor cross-sections		
	· · · · · · · · · · · · · · · · · · ·	0.0 2.0 IIIII
	for auxiliary contacts	

— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 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), 2x 12
AWG number as coded connectable conductor cross section	
 for main contacts 	20 12
 for auxiliary contacts 	20 12
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	
General Product Approval	



Confirmation







<u>KC</u>

General Product Approval

EMV

Functional Saftey

Test Certificates

Marine / Shipping





Type Examination Certificate Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping











Miscellaneous

other

other Railway Environment

Confirmation

Confirmation

Special Test Certificate



Environmental Confirmations

Further information

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=3RT2018-1AK64-3MA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-1AK64-3MA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AK64-3MA0

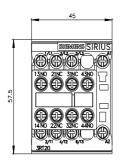
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2018-1AK64-3MA0&lang=en

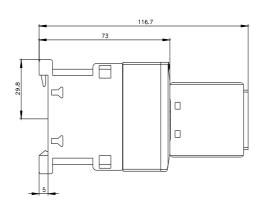
Characteristic: Tripping characteristics, I2t, Let-through current

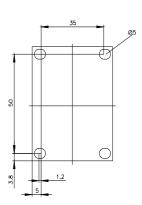
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AK64-3MA0/char

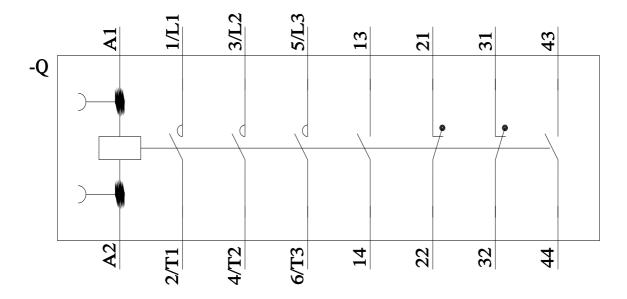
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2018-1AK64-3MA0&objecttype=14&gridview=view1









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