Size			**S6**			**S10**			**S12**	
Type			3RT105			3RT1.6			3RT1.7	
3RT10 contactors · 3RT12 vacuum contactors										
Type AC, DC operation			**3RT1054** (p. 3/71 ... 3/73)	**3RT1055**	**3RT1056**	**3RT1064** (p. 3/71 ... 3/73)	**3RT1065**	**3RT1066**	**3RT1075** (p. 3/71 ... 3/73)	**3RT1076**
Type			--	--	--	**3RT1264** (p. 3/135)	**3RT1265**	**3RT1266**	**3RT1275** (p. 3/135)	**3RT1276**
AC-3										
I_e/AC-3/400 V		A	115	150	185	225	265	300	400	500
400 V		**kW**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
230 V		kW	37	45	55	55	75	90	132	160
690 V	3RT10/3RT12	kW	110	132	160	200	250	250	400	400/500
1 000 V	3RT10/3RT12	kW	75	90	90	90/315	132/355	132/400	250/560	250/710
AC-4 (at I_a = 6 x I_e)										
400 V		**kW**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
400 V (200 000 operating cycles)	3RT10/3RT12	kW	29	38	45	54/78	66/93	71/112	84/140	98/161
AC-1 (40 °C, ≤ 690 V)										
I_e	3RT10/3RT12	**A**	**160**	**185**	**215**	**275/330**	**330**	**330**	**430/610**	**610**
3RT14 AC-1 contactors										
Type			**3RT1456**		(p. 4/15, 4/16)	**3RT1466**		(p. 4/15, 4/16)	**3RT1476**	(p. 4/15, 4/16)
I_e/AC-1/40 °C/≤ 690 V		**A**	**275**			**400**			**690**	
Accessories for contactors										
Auxiliary switch blocks	• On front • Lateral		**3RH19, 3RT1926** **3RH19**							(p. 3/97, 3/102) (p. 3/99, 3/100)
Surge suppressors			**3RT1956-1C** (RC element)							(p. 3/104)
Terminal covers			**3RT1956-4EA.**		(p. 3/118)	**3RT1966-4EA.**				(p. 3/118)
Box terminal blocks			**3RT1955-4G, 3RT1956-4G**		(p. 3/116)	**3RT1966-4G**				(p. 3/116)
3RB2 overload relays										
3RB electronic overload relays										
• For standard applications			**3RB2056** 50 ... 200 A **3RB2153** 50 ... 200 A		(p. 7/117, 7/118) (p. 7/119)	**3RB2066** 55 ... 250 A or 160 ... 630 A **3RB2163** 55 ... 250 A or 160 ... 630 A				(p. 7/117, 7/118) (p. 7/119)
• For High-Feature applications			**3RB22, 3RB23 and 3RB24**		(p. 7/128) (p. 7/136)	**3RB22, 3RB23 and 3RB24**				(p. 7/128) (p. 7/136)
			with current measuring module 3RB2956-2TH2 20 ... 200 A		(p. 7/140)	**with current measuring module 3RB2966-2WH2** 63 ... 630 A				(p. 7/140)
3RV10 molded case motor starter protectors										
Molded case motor starter protectors			**3RV1063** 40 ... 200 A		(p. 7/75)	**3RV1073** 160 ... 400 A		(p. 7/75)	**3RV1083** 252 ... 630 A	(p. 7/75)
Reversing contactor assemblies[1]										
Complete units		Type	--							
400 V		**kW**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
Assembly kits/ wiring modules			**3RA1953-2A**		(p. 3/110)	**3RA1963-2A**		(p. 3/110)	**3RA1973-2A**	(p. 3/110)
Mechanical interlocks			**3RA1954-2A**		(p. 3/114)					
Contactor assemblies for star-delta (wye-delta) starting[1]										
Complete units		Type	--							
400 V		**kW**	--							
Assembly kits/ wiring modules			**3RA1953-2B**		(p. 3/112)	**3RA1963-2B**		(p. 3/112)	**3RA1973-2B**	(p. 3/112)

[1] Contactor assemblies for customer assembly:
- Reversing contactor assemblies, see pages 3/168 to 3/170,
- Contactor assemblies for star-delta (wye-delta) starting, see pages 3/185 to 3/190.

Note:

Safety characteristics for contactors, see "Standards and approvals", page 16/6.

Rated control supply voltages for 3RT10 contactors, possible on request (change of the 10th and 11th digits of the Article No.)

Delivery time on request

Rated control supply voltage	**Contactor type**	**3RT105.-.A, 3RT106.-.A, 3RT107.-.A**	Rated control supply voltage	**Contactor type**	**3RT105.-.N, 3RT106.-.N, 3RT107.-.N**	**3RT105.-.P, 3RT105.-.S, 3RT106.-.P, 3RT106.-.S, 3RT107.-.P, 3RT107.-.S**
$U_{s\ min} \cdots U_{s\ max}$	**Sizes**	**S6 to S12**	$U_{s\ min} \cdots U_{s\ max}$	**Sizes**	**S6 to S12**	
Sizes S6 to S12						
AC/DC operation (50/60 Hz AC or DC) and operating range 0.8 x $U_{s\ min}$ ... 1.1 x $U_{s\ max}$						
Standard operating mechanism			**Solid-state operating mechanism**			
23 ... 26 V AC/DC		B3	21 ... 27.3 V AC/DC		B3	--
42 ... 48 V AC/DC		D3	96 ... 127 V AC/DC		F3	F3
110 ... 127 V AC/DC		F3	200 ... 277 V AC/DC		P3	P3
200 ... 220 V AC/DC		M3				
220 ... 240 V AC/DC		P3				
240 ... 277 V AC/DC		U3				
380 ... 420 V AC/DC		V3				
440 ... 480 V AC/DC		R3				
500 ... 550 V AC/DC		S3				
575 ... 600 V AC/DC		T3				

Overview

Vacuum contactors

Standards

IEC/EN 60947-1,
IEC/EN 60947-4-1,
IEC/EN 60947-5-1 (auxiliary switches)

The SIRIUS 3RT12 and 3TF68/3TF69 vacuum contactors are suitable for use in any climate. They are finger-safe according to IEC 60529. Terminal covers may have to be fitted onto the connecting bars, depending on the configuration with other devices (see pages 3/118 and 3/139).

Connection methods

The vacuum contactors are available with screw terminals (box terminals).

Contact reliability

If voltages ≤ 110 V and currents ≤ 100 mA are to be switched, the auxiliary contacts of the vacuum contactors or 3RH contactor relays should be used as they guarantee a high level of contact reliability.

These auxiliary contacts are particularly suitable for solid-state circuits with currents ≥ 1 mA at a voltage ≥ 17 V.

Short-circuit protection

For short-circuit protection of the vacuum contactors with or without overload relays, refer to the Manuals and Configuration Manuals, see "More information" on page 3/127.

Electromagnetic compatibility (EMC)

The contactors with solid-state operating mechanism comply with the international standards IEC/EN 60947-1 and IEC/EN 60947-4-1.

These contactors have been developed for environment A.

Note:

Environment A refers to private low-voltage or industrial networks/locations/plants, including high-grade sources of interference.

Environment A corresponds to devices of Class A with CISPR 11, EN 55011.

Note:

In connection with converters, the control cables must be routed separately from the load cables to the converter.

Motor protection

For protection against overload, 3RB2 electronic overload relays (see page 7/117 onwards) can be mounted on the vacuum contactors. These must be ordered separately.

Ratings of three-phase motors

The quoted rating (in kW) refers to the output power on the motor shaft (according to the nameplate).

The power rating specifications of the vacuum contactors in kW are guide values for 4-pole standard motors at 50 Hz AC and specified voltage (e.g. 400 V). The specific starting and rated data of the motor to be switched are decisive when it comes to selecting the right devices, and the motor current, motor protection device and the permissible contactor current according to the utilization category must be aligned with each other when doing so.

Surge suppression

The vacuum contactors can be retrofitted with varistors for damping opening overvoltages in the coil.

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (varistor +2 to 5 ms)

Vacuum contactors are basically unsuitable for switching DC voltage.

SIRIUS 3RT12 vacuum contactors, 3-pole, 110 to 250 kW

AC/DC operation

The contactors can be operated with AC (50 to 60 Hz) as well as with DC.

Two types of solenoid operation are available:
- Standard operating mechanism with economy circuit for AC and DC operation (switchover from closing coil to holding coil), version 3RT12..-.A
- Solid-state operating mechanism, version 3RT12..-.N

Withdrawable coils

For simple coil replacement, e.g. if the application is replaced, the solenoid coil can be pulled out upwards after the release mechanism has been actuated and can be replaced by any other coil of the same size.

Vacuum interrupters

In contrast to the 3RT10 contactors – the main contacts operate in air under atmospheric conditions – the contact gaps of the 3RT12 vacuum contactors are contained in hermetically enclosed vacuum interrupters. Neither arcs nor arcing gases are produced. The particular benefit of 3RT12 vacuum contactors, however, is that their electrical endurance is at least twice as long as that of 3RT10 contactors. They are therefore particularly well suited to frequent switching in inching/mixed operation, e.g. in crane control systems.

Auxiliary contact complement

The 3RT12 vacuum contactors of sizes S10 to S12 are supplied with laterally mounted auxiliary switch blocks. These can be fitted with up to eight lateral auxiliary contacts (identical auxiliary switch blocks for S10 and S12). Of these, no more than four are permitted to be NC contacts.

3TF6 vacuum contactors, 3-pole, 335 to 450 kW

Main contacts

Contact erosion indication with 3TF68/3TF69 vacuum contactors: The contact erosion of the vacuum interrupters can be checked during operation with the help of three white double slides on the contactor base. If the distance indicated by one of the double slides is < 0.5 mm while the contactor is in the closed position, the vacuum interrupter must be replaced. To ensure maximum reliability, it is recommended to replace all three vacuum interrupters simultaneously.

SIRIUS 3RT12 and 3TF6 vacuum contactors

		SIRIUS vacuum contactors		Vacuum contactors	
Type		3RT126	3RT127	3TF68	3TF69
Size		S10	S12	14	
General data (continued)					
Permissible ambient temperature					
• During operation	°C	-25 ... +60		-25 ... +55[1]	
• During storage	°C	-55 ... +80		-55 ... +80	
Degree of protection acc. to IEC 60529					
• On front		IP00 (IP20 with box terminal/cover)		[2][3]	
• Connecting terminal		IP00 (for higher degree of protection, use additional terminal covers)			
Touch protection acc. to IEC 60529		Finger-safe for vertical touching from the front with cover			
Shock resistance					
• Rectangular pulse					
- AC operation	*g*/ms	8.5/5 and 4.2/10		8.1/5 and 4.7/10	9.5/5 and 5.7/10
- DC operation	*g*/ms	8.5/5 and 4.2/10		9/5 and 5.7/10	8.6/5 and 5.1/10
• Sine pulse					
- AC operation	*g*/ms	13.4/5 and 6.5/10		12.8/5 and 7.4/10	13.5/5 and 7.8/10
- DC operation	*g*/ms	13.4/5 and 6.5/10		14.4/5 and 9.1/10	13.5/5 and 7.8/10
Electromagnetic compatibility (EMC)		See page 3/126			
Short-circuit protection					
Main circuit					
Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC/EN 60947-4-1					
• Type of coordination "1"	A	500	800	1 000	1 250
• Type of coordination "2"	A	500	800	500	630
• Weld-free (test conditions acc. to IEC 60947-4-1)	A	400	500	400	500
Auxiliary circuit					
Short-circuit test					
• Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA)	A	10			
• Miniature circuit breaker with C characteristic (short-circuit current $I_k \leq 400$ A)	A	10			
Short-circuit protection for contactors with overload relays		See Configuration Manual for load feeders			

[1] For ambient temperatures > 55 °C, only 3TF6.33-.Q..-Z A02 contactors (= without connection of the main current path circuits) can be used. Then, derating is also possible with these contactors:
- AC-1: I_e = 782 A, 644 operating cycles/h;
- AC-3: Operating range 0.85 to 1.05 x U_s, 460 operating cycles/h, mech. endurance 5 million operating cycles, lateral clearance 10 mm.

[2] The following applies for 3TF6.-.C..:
- IP00 without cover (the connecting bar is reached directly from the front)
- IP00 with cover for conductor entry
- IP20 on the front plate with cover.

[3] The following applies for 3TF6.-.Q../-.D..:
- IP00 without box terminal (the connecting bar, series resistor and the 3TC44 reversing contactor are reached directly from the front)
- IP00 with box terminal (the series resistor and the 3TC44 reversing contactor are reached directly).

			SIRIUS vacuum contactors		Vacuum contactors	
Type			3RT126	3RT127	3TF68	3TF69
Size			S10	S12	14	
Control						
Solenoid coil operating range		AC/DC	0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$			
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)						
			Standard operating mechanism			
• AC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		VA	530/630	700/830	--	
- P.f.			0.9		--	
- Closed at $U_{s\,min}$/$U_{s\,max}$		VA	6.1/7.4	7.6/9.2	--	
- P.f.			0.9		--	
• DC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		W	580/780	770/920	--	
- Closed at $U_{s\,min}$/$U_{s\,max}$		W	6.8/8.2	8.5/10	--	
			Solid-state operating mechanism			
• AC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		VA	420/570	560/750	1 200/1 850	600/950
- P.f.			0.8		1	0.98
- Closed at $U_{s\,min}$/$U_{s\,max}$		VA	5.5/8.5	5.6/9	13.5/49	12.9/30.6
- P.f.			0.5/0.4		0.15	0.31
• AC operation for 3TF68/3TF69..-**Q**						
- Closing at $U_{s\,min}$		VA	--		1 000	1 150
- P.f.			--		0.99	
- Closed at $U_{s\,min}$		VA	--		11	
- P.f.			--		1	
• DC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		W	460/630	600/800	--	
- Closed at $U_{s\,min}$/$U_{s\,max}$		W	2.8/3.4	3/3.6	--	
• DC economy circuit [1]						
- Closing at $U_{s\,min}$		W	--		1 010	960
- Closed at $U_{s\,min}$		W	--		28	20.6
PLC control input acc. to IEC 61131-2			Type 2		--	
• Rated voltage		V DC	24		--	
• Operating range		V DC	17 ... 30		--	
• Power consumption		mA	≤ 30		--	
Operating times (Total break time = Opening delay + Arcing time)					(Values apply to cold and warm coil)	
			Standard operating mechanism			
• For 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	30 ... 95	45 ... 100	--	
- Opening delay		ms	40 ... 80	60 ... 100	--	
• For $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	35 ... 50	50 ... 70	--	
- Opening delay		ms	50 ... 80	70 ... 100	--	
			Solid-state operating mechanism, actuated via A1/A2		(Values in brackets apply to contactors with reduced operating times)	
• AC operation at 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	105 ... 145	120 ... 150	70 ... 120 (22 ... 65)	80 ... 120
- Opening delay		ms	80 ... 100		70 ... 100	70 ... 80
• AC operation for 3TF68/3TF69..-**Q** at $U_{s\,min}$ (including reversing contactor)						
- Closing delay		ms	--		35 ... 90	45 ... 160
- Opening delay		ms	--		65 ... 90	30 ... 80
• AC operation at $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	110 ... 130	125 ... 150	80 ... 100 (30 ... 45)	85 ... 100
- Opening delay		ms	80 ... 100		70 ... 100	70
			Solid-state operating mechanism, actuated via PLC input			
• For 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	45 ... 80	60 ... 90	--	
- Opening delay		ms	80 ... 100		--	
• DC economy circuit for 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	--		76 ... 110	86 ... 280
- Opening delay		ms	--		50	19 ... 25
• For $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	50 ... 65	65 ... 80	--	
- Opening delay		ms	80 ... 100		--	
• DC economy circuit for $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	--		80 ... 90	90 ... 125
- Opening delay		ms	--		50	19 ... 25
Arcing time		ms	10 ... 15		10 ... 15	10
Minimum command duration	Standard	ms	--		120	
For closing	Reduced make-time	ms	--		90	--
Minimum interval time between two ON commands		ms	--		100	300

[1] At 24 V DC; for further voltages, deviations of up to ± 10 % are possible.

SIRIUS 3RT12 and 3TF6 vacuum contactors

			SIRIUS vacuum contactors					Vacuum contactors	
Type			3RT1264	3RT1265	3RT1266	3RT1275	3RT1276	3TF68	3TF69
Size			S10			S12		14	
Rated data of the main contacts									
Load rating with AC									
Utilization category AC-1 Switching resistive loads									
• Rated operational currents I_e	- At 40 °C up to 690 V		330			610		700	910
	- At 40 °C up to 1 000 V	A	330			610		--	
	- At 55 °C up to 690 V	A	--					630	850
	- At 55 °C up to 1 000 V	A	--					450	800
	- At 60 °C up to 1 000 V	A	300			550		--	
• Rated power for AC loads[1] with p.f. = 0.95			At 60 °C			At 60 °C		At 55 °C	At 55 °C
	- At 230 V	kW	113			208		240	323
	- At 400 V	kW	197			362		415	558
	- At 500 V	kW	246			452		545	735
	- At 690 V	kW	340			624		720	970
	- At 1 000 V	kW	492			905		780	1 385
• Minimum conductor cross-section for loads with I_e	- At 40 °C	mm^2	185			2 x 185		2 x 240	$I_e \geq 800$ A: 2 x 60 x 5 (copper busbars)
	- At 55 °C	mm^2	--					2 x 185	$I_e < 800$ A: 2 x 240
	- At 60 °C	mm^2	185			2 x 185		--	
Utilization categories AC-2 and AC-3									
• Rated operational currents I_e	- Up to 690 V	A	--					630	820
	- Up to 1 000 V	A	225	265	300	400	500	435	580
• Rated power for slipring or squirrel-cage motors at 50 Hz and 60 Hz	- At 230 V	kW	73	85	97	132	164	200	260
	- At 400 V	kW	128	151	171	231	291	347	450
	- At 500 V	kW	160	189	215	291	363	434	600
	- At 690 V	kW	223	265	288	400	507	600	800
	- At 1 000 V	kW	320	378	428	578	728	600	800
Thermal load capacity, 10 s current		A	1 800	2 120	2 400	3 200	4 000	5 040	7 000
Power loss per conducting path at I_e/AC-3		W	9	12	14	21	32	45	70
Utilization category AC-4 (for $I_a = 6 \times I_e$)									
Maximum values:									
• Rated operational current I_e	- Up to 690 V	A	195	230	280	350	430	610	690
• Rated power for squirrel-cage motors with 50 Hz and 60 Hz	- At 400 V	kW	110	132	160	200	250	355	400
The following applies to a contact endurance of about 200 000 operating cycles:									
• Rated operational currents I_e	- Up to 690 V	A	97	115	140	175	215	300	360
	- Up to 1 000 V	A	68	81	98	123	151	210	250
• Rated power for squirrel-cage motors with 50 Hz and 60 Hz	- At 230 V	kW	30	37	45	56	70	97	110
	- At 400 V	kW	55	65	79	98	122	168	191
	- At 500 V	kW	68	81	98	124	153	210[2]	250[2]
	- At 690 V	kW	94	112	138	172	212	278[2]	335[2]
	- At 1 000 V	kW	95	114	140	183	217	290[2]	350[2]
Switching frequency									
Switching frequency *z* in operating cycles/hour									
Contactors without overload relays									
• No-load switching frequency	- AC/DC	1/h	Standard operating mechanism: 2 000, Solid-state operating mechanism: 1 000					--	
	- AC	1/h	--					2 000	1 000
	- DC	1/h	--					1 000	
• Switching frequency *z* during rated operation[3]	- I_e/AC-1 at 400 V	1/h	800	750				700	
	- I_e/AC-2 at 400 V	1/h	300	250				200	
	- I_e/AC-3 at 400 V	1/h	750					500	
	- I_e/AC-4 at 400 V	1/h	250					150	
Contactors with overload relays									
• Mean value		1/h	60					15	

1) Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

2) Max. permissible rated operational current I_e/AC-4 = I_e/AC-3 up to 500 V, for reduced contact endurance and reduced switching frequency.

3) Dependence of the switching frequency z' on the operational current I' and operational voltage U': $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

		SIRIUS vacuum contactors		Vacuum contactors	
Type		3RT126.	3RT127.	3TF68	3TF69
Size		S10	S12	14	
Conductor cross-sections					
Main conductors (1 or 2 conductors can be connected)		Screw terminals			
With mounted box terminals	Type	3RT1966-4G		--	
• Terminal screws		M12 (hexagon socket, A/F 5)		--	
- Tightening torque	Nm	20 ... 22 (180 ... 195 lb.in)		--	
Front clamping point connected					
					
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	70 ... 240		--	
• Finely stranded without end sleeve	mm^2	70 ... 240		--	
• Stranded	mm^2	95 ... 300		--	
• AWG cables, solid or stranded	AWG	3/0 ... 600 kcmil		--	
• Ribbon cable conductors (number x width x thickness)	mm	Min. 6 x 9 x 0.8; max. 20 x 24 x 0.5		--	
Rear clamping point connected					
					
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	120 ... 185		--	
• Finely stranded without end sleeve	mm^2	120 ... 185		--	
• Stranded	mm^2	120 ... 240		--	
• AWG cables, solid or stranded	AWG	250 ... 500 kcmil		--	
• Ribbon cable conductors (number x width x thickness)	mm	Min. 6 x 9 x 0.8; max. 20 x 24 x 0.5		--	
Both clamping points connected					
					
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	Min. 2 x 50, max. 2 x 185		--	
• Finely stranded without end sleeve	mm^2	Min. 2 x 50, max. 2 x 185		--	
• Stranded	mm^2	Min. 2 x 70, max. 2 x 240		--	
• AWG cables, solid or stranded	AWG	Min. 2 x 2/0, max. 1 x 500 kcmil		--	
• Ribbon cable conductors (number x width x thickness)	mm	Max. 2 x (20 x 24 x 0.5)		--	
Cable lug connection					
• Finely stranded with cable lug[1]	mm^2	50 ... 240		--	
• Stranded with cable lug[1]	mm^2	70 ... 240		--	
• AWG cables, solid or stranded	AWG	2/0 ... 500 kcmil		--	
• Terminal screws		M10 x 30 (A/F 17)		--	
- Tightening torque	Nm	14 ... 24 (124 ... 210 lb.in)		--	
Busbar connections					
• Finely stranded with cable lug	mm^2	--		50 ... 240	
• Stranded with cable lug	mm^2	--		70 ... 240	50 ... 240
• Solid or stranded	AWG	--		2/0 ... 500 MCM	2/0 ... 500 MCM
• Connecting bar (max. width)	mm	25		50	60 ($U_e \leq$ 690 V), 50 (U_e > 690 V)
• Terminal screws		--		M10 x 30	M12 x 40
- Tightening torque	Nm	--		14 ... 24	20 ... 35
	lb.in	--		124 ... 210	177 ... 310
With box terminal (see page 3/139)					
• Connectable laminated copper bars		--		Yes	
• Width	mm	--		15 ... 25	15 ... 38
• Max. thickness	mm	--		1 x 26 or 2 x 11	1 x 46 or 2 x 18
• Terminal screw		--		A/F 6 (hexagon socket)	A/F 8 (hexagon socket)
• Tightening torque	Nm	--		25 ... 40 (221 ... 354 lb.in)	35 ... 50 (266 ... 443 lb.in)
Auxiliary conductors (1 or 2 conductors connectable)					
• Solid	mm^2	2 x (0.5 ... 1.5)[2]; 2 x (0.75 ... 2.5)[2] acc. to IEC 60947; max. 2 x (0.75 ... 4)		2 x (0.5 ... 1)[2]/2 x (1 ... 2.5)[2]	
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)[2]; 2 x (0.75 ... 2.5)[2]		2 x (0.5 ... 1)[2], 2 x (0.75 ... 2.5)[2]	
• Pin-end connector to DIN 46231	mm^2	--		2 x (1 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (18 ... 14)		2 x (18 ... 12)	
• Terminal screws		M3 (Pozidriv size 2)		--	
- Tightening torque	Nm	0.8 ... 1.2 (7 ... 10.3 lb.in)		0.8 ... 1.4 (7 ... 12 lb.in)	

1) When connecting cable lugs according to DIN 46234 for conductor cross-sections larger than 240 mm^2 and according to DIN 46235 for conductor cross-sections larger than 185 mm^2, the 3RT1966-4EA1 terminal cover is required to maintain phase separation, see page 3/118.

2) If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

SIRIUS 3RT12 and 3TF6 vacuum contactors

		SIRIUS vacuum contactors					Vacuum contactors	
Type		3RT1264	3RT1265	3RT1266	3RT1275	3RT1276	3TF68	3TF69
Size		S10			S12		14	
SIRIUS and UL rated data								
Rated insulation voltage	V AC	600					600	
Uninterrupted current at 40 °C, open and enclosed	A	330			540		630	820
Maximum horsepower ratings (from SIRIUS and UL approved values)								
• Rated power for three-phase motors at 60 Hz								
- At 200 V	hp	60	75	100	125	150	231	290
- At 230 V	hp	75	100	125	150	200	266	350
- At 460 V	hp	150	200	250	300	400	530	700
- At 575 V	hp	200	250	300	400	500	664	860
NEMA/EEMAC ratings								
SIZE	hp	--					6	7
• Uninterrupted current								
- Open	A	--					600	820
- Enclosed	A	--					540	810
• Rated power for three-phase motors at 60 Hz								
- At 200 V	hp	--					150	--
- At 230 V	hp	--					200	300
- At 460 V	hp	--					400	600
- At 575 V	hp	--					400	600
Short-circuit protection[1]	kA	10	18			30	100	
• CLASS L fuse	A	600	700	800	1 000	1 200	1 600	
• Circuit breakers acc. to UL 489	A	500	700	800	1 000	1 200	On request[1]	

1) For more information about short-circuit values, e.g. for protection against short-circuit currents, see Certificate of Compliance for the individual devices.

For the selection and dimensioning of load feeders, see UL Configuration Manual and the UL guide "Industrial Control Panels and Electrical Equipment of Industrial Machinery for North America".

Selection and ordering data

SIRIUS 3RT12 vacuum contactors, 3-pole, 110 ... 250 kW

AC/DC operation

- Operating mechanism with integrated coil circuit (varistor)
- For screw fixing
- Auxiliary and control conductors: Screw terminals
- Main conductors: Busbar connections

3RT1264-6AF36

3RT127.-6N.36

Size	Rated data AC-2 and AC-3, t_u: Up to 60 °C					AC-1, t_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s 50/60 Hz AC or DC	SD	**Screw terminals**		PU (UNIT, SET, M)	PS*	PG
	Operational current I_e up to	Rating of three-phase motors at 50 Hz and				Operational current I_e up to					Article No.	Price per PU			
	1 000 V	230 V	**400 V**	500 V	690 V	1 000 V									
	A	kW	**kW**	kW	kW	A	NO	NC	V	d					
Standard operating mechanism with economy circuit for AC and DC operation (switchover from closing coil to holding coil)															
S10	225	55	**110**	160	200	330	2	2	110 ... 127	5	**3RT1264-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1264-6AP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	110 ... 127	2	**3RT1265-6AF36**		1	1 unit	41B
									220 ... 240	5	**3RT1265-6AP36**		1	1 unit	41B
	300	90	**160**[1]	200	250	330	2	2	110 ... 127	2	**3RT1266-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1266-6AP36**		1	1 unit	41B
S12	400	132	**200**	250	400	610	2	2	110 ... 127	5	**3RT1275-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1275-6AP36**		1	1 unit	41B
	500	160	**250**[1]	355	500	610	2	2	110 ... 127	5	**3RT1276-6AF36**		1	1 unit	41B
									220 ... 240	5	**3RT1276-6AP36**		1	1 unit	41B
Solid-state operating mechanism															
With 24 V DC control signal input e.g. for control by PLC															
S10	225	55	**110**	160	200	330	2	2	96 ... 127	5	**3RT1264-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1264-6NP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	96 ... 127	5	**3RT1265-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1265-6NP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	96 ... 127	5	**3RT1266-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1266-6NP36**		1	1 unit	41B
S12	400	132	**200**	250	400	610	2	2	96 ... 127	5	**3RT1275-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1275-6NP36**		1	1 unit	41B
	500	160	**250**	355	500	610	2	2	96 ... 127	5	**3RT1276-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1276-6NP36**		1	1 unit	41B

[1] When using 3RT12.6-6**A**... vacuum contactors with IE3/IE4 motors from 8.5 times the starting current, use the versions with solid-state operating mechanism 3RT12.6-6**N**....
For more information about dimensioning and configuring, see page 3/7.

Other voltages according to page 3/75 on request.

For an overview of the 3RT12 vacuum contactors with mountable accessories, see pages 3/14 and 3/16.

The accessories for the 3RT1 vacuum contactors correspond to those for the basic units of the 3RT1 contactors, see from page 3/76 onwards.

For spare parts, see page 3/140.

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate