Technical data

Contactor	Size Type			S3 3RT14 46			
Mechanical endurance			Oper. cycles	10 million			
Electrical endurance AC-1 utilization category at I_e			Oper. cycles	0.5 million			
Rated insulation voltage U_i (pollution degree 3)			V	1000			
Permissible ambient temperature		in operation when stored	°C °C	–25 to +60 –55 to +80			
Degree of protection acc. to IEC 60 947-1 and DIN 40 050				IP 20 (terminal compartment IP 00), coil system IP 40			
Coil voltage tolerance		AC/DC		0.8 to 1.1 x U_s			
Power consumption of the coils (with coil in cold state and 1.0 x U_s)				**Standard design**		**For USA and Canada**	
AC operation			Hz	50	50/60	50	60
	closing p.f.		VA 	270 0.68	298 /274 0.7 / 0.62	218 0.61	232 0.55
	closed p.f.		VA 	22 0.27	27 / 20 0.29/ 0.31	21 0.26	20 0.28
DC operation	closing = closed		W	15			
Operating times at 0.8 to 1.1 x U_s[1] Break time = opening time + arcing time							
AC operation	closing time opening time		ms ms	17 to 90 10 to 25			
DC operation	closing time opening time		ms ms	90 to 230 14 to 20			
Arcing time			ms	10 to 15			
Operating times at 1.0 x U_s[1]							
AC operation	closing time opening time		ms ms	18 to 30 11 to 23			
DC operation	closing time opening time		ms ms	100 to 120 16 to 20			
Shock resistance							
Rectangular pulse	AC and DC operation		*g*/ms	6.8/5 and 4/10			
Sine pulse	AC and DC operation		*g*/ms	10.6/5 and 6.2/10			

Short-circuit protection of contactors without overload relays

Main circuit				
Fuse links, utilization category gL/gG	NH Type of coord. "1"[2]	Type 3NA	A	250
Fuse links, utilization category gR	SITOR Type of coord. "2"[2]	Type 3NE	A	250
Control circuit (short-circuit current $I_k \geq 1$ kA)				
Fuse links, utilization category gL/gG	DIAZED NEOZED	Type 5SB Type 5SE	A A	10 10
Miniature circuit-breaker with C-characteristic			A	10

Operating frequency

Operating frequency *z* in operating cycles per hour			AC operation	DC operation
Contactors without overload relays	No-load operating frequency	1/h	5000	1000
Rated operation	for AC-1 for AC-3	1/h 1/h	650 1000	650 1000

Dependence of the operating frequency z' on the rated operational current and the rated operational voltage:

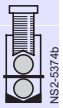
$$z' = z \cdot \frac{I_e}{I'} \cdot \left(\frac{400\,V}{U'}\right)^{1.5}\ 1/h$$

1) The opening times of the NO contacts and the closing times of the NC contacts increase if the contactor coils are protected against voltage peaks (varistor +2 ms to 5 ms, diode assemblies 2 to 6 times).

2) According to excerpt from IEC 60 947-4-1 (VDE 0660 Part 102):
Type of coordination "1":
Destruction of the contactor and the overload relay is permissible. The contactor and/or overload relay must be replaced if necessary.

Type of coordination "2":
No damage can be tolerated to the overload relay, but contact welding on the contactor is permitted if the contacts can be easily separated.

Conductor cross-sections

Contactor	Size Type			S3 3RT14 46		
Screw connections (1 or 2 conductor connections possible)	**Main conductor:** with box terminal (acc. to EN 50 027)			Front terminal connected	Back terminal connected	Both terminals connected
	Finely stranded with end sleeve		mm²	2.5 to 50 	2.5to 50 	max. 2 x 35 
	Finely stranded without end sleeve		mm²	4 to 50	10 to 50	max. 2 x 35
	Solid		mm²	2.5 to 16	2.5 to 16	max. 2 x 16
	Stranded		mm²	4 to 70	10 to 70	max. 2 x 50
	Ribbon cable (no. x width x thickness)		mm	6 x 9 x 0.8	6 x 9 x 0.8	2 x (6 x 9 x 0.8)
	AWG conductor connections		AWG	10 to 2/0	10 to 2/0	max. 2 x 1/0
Connection for drilled copper bars	Max. conductor cross-sections		mm	18 x 10	If bars larger than 12 x 10 mm are connected, a 3RT19 46-4EA1 terminal cover is necessary to comply with the phase clearance	
Without box terminal With cable lugs (1 or 2 conductor connections possible)	Finely stranded with cable lug		mm²	10 to 50	If conductors larger than 25 mm² are connected, a 3RT19 46-4EA1 terminal cover is necessary to comply with the phase clearance	
	Stranded with cable lug		mm²	10 to 70		
	AWG conductor connections, solid or stranded		AWG	7 to 1/0		
	– Terminal screws			M6 (hexagon socket)		
	– Tightening torque		Nm	4 to 6 (36 to 53 lb.in)		
	Auxiliary conductor:					
	Solid		mm²	2 x (0.5 to 1.5); 2 x (0.75 to 2.5) acc. to IEC 60 947; max. 2 x (0.75 to 4)		
	Finely stranded with end sleeve		mm²	2 x (0.5 to 1.5); 2 x (0.75 to 2.5)		
	AWG conductor connections, solid or stranded		AWG	2 x (18 to 14)		
	– Terminal screws			M3		
	– Tightening torque		Nm	0.8 to 1.2 (7 to 10.3 lb.in)		

Load ratings with AC

AC-1 utilization category, switching resistive load						
Rated operational currents I_e	at 40 °C up to 690 V		A	140		
	at 60 °C up to 690 V		A	130		
	at 1000 V		A	50		
Ratings of three-phase loads p.f. = 1 (at 60 °C)	at 230 V		kW	50		
	400 V		kW	86		
	500 V		kW	113		
	690 V		kW	149		
	1000 V		kW	86		
Minimum conductor cross-section with I_e load	at 40 °C		mm²	50		
	at 60 °C		mm²	50		
AC-2 and AC-3 utilization categories With an electrical endurance of 1.3 million operating cycles						
Rated operational current I_e	up to 690 V		A	44		
Ratings of motors with slipring or squirrel-cage rotor at 50 Hz and 60 Hz (at 60 °C)	at 230 V		kW	12.7		
	400 V		kW	22		
	500 V		kW	29.9		
	690 V		kW	38.2		

Load ratings with DC

DC-1 utilization category, switching resistive load L/R ≤ 1 ms)						
Number of conducting paths connected in series				1	2	3
Rated operational currents I_e (at 60 °C)	up to 24 V		A	130	130	130
	60 V		A	80	130	130
	110 V		A	12	130	130
	220 V		A	2.5	13	130
	440 V		A	0.8	2.4	6
	600 V		A	0.48	1.3	3.4
DC-3 and DC-5 utilization categories, shunt and series motors						
Number of conducting paths connected in series				1	2	3
Rated operational currents I_e (at 60 °C)	up to 24 V		A	6	130	130
	60 V		A	3	130	130
	110 V		A	1.25	130	130
	220 V		A	0.35	1.75	4
	440 V		A	0.15	0.42	0.8
	600 V		A	0.1	0.27	0.45
Thermal load	10 s current[1])		A	630		
Power loss per conducting path	at I_e/AC-1		W	12.5		

1) Acc. to VDE 0660 Part 102.

Technical data

Contactor	Size (for S00, see page 3/58) Type			**S0** **3RT13 25/26**	**S2** **3RT13 36**	**S3** **3RT13 44**	**S3** **3RT13 46**
Mechanical endurance			Oper. cycles	10 million			
Electrical endurance at I_e/AC-1			Oper. cycles	approx. 0.5 mill.			
Rated insulation voltage U_i (pollution degree 3)			V	690	690	1000	1000
Permissible ambient temperature		in operation when stored	°C °C	–25 to +60 –55 to +80			
Degree of protection acc. to IEC 60 947-1 and DIN 40 050		terminal compartment		IP 20	IP 20 IP 00	IP 20 IP 00	IP 20 IP 00
Power consumption of the coils (with coil in cold state and 1.0 x U_s)							
AC operation			Hz	50 50/60	50 50/60	50 50/60	50 50/60
	closing p.f.		VA	61 64/63 0.82 0.82/0.74	127 127/160 0.82 0.82/0.85	270 298/274 0.68 0.72/0.62	270 298/274 0.68 0.72/0.62
	closed p.f.		VA	7.8 8.4/6.8 0.24 0.24/0.28	13.5 13.5/14.2 0.34 0.34/0.37	22 27/20 0.27 0.29/0.31	22 27/20 0.27 0.29/0.31
DC operation	closing = closed		W	5.6	11.5	15	15
Coil voltage tolerance				0.8 to 1.1 x U_s			
Operating times at 0.8 to 1.1 x U_s Break time = opening time + arcing time							
AC/DC operation	closing time		ms	6 to 30/ 30 to 90	4 to 35/ 50 to 110	20 to 50/ 110 to 200	20 to 60/ 110 to 200
AC/DC operation	opening time		ms	13 to 25/ 13 to 40	10 to 30/ 15 to 30	10 to 25/ 14 to 20	10 to 25/ 14 to 20
Arcing time			ms	10 to 15	10 to 15	10 to 15	10 to 15

Short-circuit protection of contactors without overload relays

Main circuit

Fuse links, utilization category gL/gG NH Type 3NA, DIAZED Type 5SB, NEOZED Type 5SE – acc. to IEC 60 947-4/ EN 60 947-4-1 (VDE 0660 Part 102)						
	Type of coord. "1"[1])		A	63	160	250	250
	Type of coord. "2"[1])		A	35	63	125	160
	Weld-free		A	16	50	63	100

1) According to excerpt from IEC 60 947-4 (VDE 0660 Part 102):
Type of coordination "1":
Destruction of the contactor and the overload relay is permissible. The contactor and/or overload relay must be replaced if necessary.

Type of coordination "2":
No damage can be tolerated to the overload relay, but contact welding on the contactor is permitted if the contacts can be easily separated.

Load ratings with AC

Contactor	Size (for S00, see page 3/58) Type			S0 3RT13 25/26	S2 3RT13 36	S3 3RT13 44	S3 3RT13 46
AC-1 utilization category, switching resistive load							
Rated operational currents I_e (at 40 °C)	up to 690 V		A	33/40	60	100	140
Ratings of three-phase loads p.f. = 0.95 (at 40 °C)	at 230 V		kW	12.5/15	22	37	53
	400 V		kW	22/26	39	65	92
Minimum conductor cross-section with I_e load	at 40 °C		mm²	10/10	16	50	50
AC-2 and AC-3 utilization categories							
Rated operational currents I_e (at 60 °C)	at 400 V		A	17/25	26	–	–
Ratings of motors with slipring or squirrel-cage rotor at 50 Hz and 60 Hz	at 230 V		kW	4/5,5	5.5	–	–
	400 V		kW	7.5/11	11	–	–

Load ratings with DC

			S0 3RT13 25/26				S2 3RT13 36				S3 3RT13 44				S3 3RT13 46			
DC-1 utilization category, switching resistive load (L/R ≤ 1 ms)																		
Rated operational currents I_e (at 40 °C)																		
Number of conducting paths connected in series			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
up to 24 V		A	35	35	35	35	50	50	50	50	70	70	70	70	80	80	80	80
60 V		A	20	35	35	35	23	45	45	45	23	70	70	70	60	80	80	80
110 V		A	4.5	35	35	35	4.5	45	45	45	4.5	70	70	70	9	80	80	80
220 V		A	1	5	35	35	1	5	45	45	1	5	70	70	2	10	80	80
440 V		A	0.4	1	2.9	2.9	0.4	1	2.9	2.9	0.4	1	2.9	2.9	0.6	1.8	4.5	4.5
DC-3 and DC-5 utilization categories, shunt and series motors (L/R ≤ 15 ms)																		
Rated operational currents I_e (at 40 °C)																		
Number of conducting paths connected in series			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
up to 24 V		A	20	35	35	35	20	45	45	45	20	70	70	70	20	80	80	80
60 V		A	2	35	35	35	2	45	45	45	2	70	70	70	2.3	80	80	80
110 V		A	0.75	7	35	35	0.75	7	45	45	0.75	9.4	70	70	0.9	80	80	80
220 V		A	0.2	1	3.5	3.5	0.2	1	3.5	3.5	0.2	1	3.5	3.5	0.26	1.3	3.5	3.5
440 V		A	0.09	0.27	0.6	0.6	0.09	0.3	0.6	0.6	0.09	0.27	0.5	0.6	0.11	0.3	0.6	0.6

Technical data

Contactor	Size (for S00, see page 3/58) Type			**S0** **3RT15 26**		**S2** **3RT15 35**	
Mechanical endurance			Oper. cycles	10 million			
Electrical endurance at I_e/AC-1			Oper. cycles	approx. 0.5 million			
Rated insulation voltage U_i (pollution degree 3)			V	690			
Permissible ambient temperature		in operation when stored	°C °C	–25 to +60 –55 to +80			
Degree of protection acc. to IEC 60 947-1 and DIN 40 050				IP 20		IP 20 (term. compartment IP 00)	
Power consumption of the coils (with coil in cold state and 1.1 x U_s)							
AC operation			Hz	50	50/60	50	50/60
	closing p.f.		VA	61 0.82	64 /63 0.82/ 0.74	127 0.82	127 /160 0.82/ 0.85
	closed p.f.		VA	7.8 0.24	8.4 / 6.8 0.24/ 0.28	13.5 0.34	13.5 / 14.2 0.34/ 0.37
DC operation	closing = closed		W	5.6		11.5	
Coil voltage tolerance				0.8 to 1.1 x U_s			
Operating times at 0.8 to 1.1 x U_s Break time = opening time + arcing time							
AC/DC operation	closing time		ms	6 to 30/30 to 90		4 to 35/50 to 110	
AC/DC operation	opening time		ms	13 to 25/13 to 40		10 to 30/15 to 30	
Arcing time			ms	10 to 15		10 to 15	

Short-circuit protection of contactors without overload relays

Main circuit				
Fuse links, utilization category gL/gG NH Type 3NA, DIAZED Type 5SB, NEOZED Type 5SE – acc. to IEC 60 947-1/ EN 60 947-4-1 (VDE 0660 Part 102)				
	Type of coord. "1" [1]	A	63	160
	Type of coord. "2" [1]	A	35	80
	Weld-free	A	16	50

1) According to excerpt from IEC 60 947-4-1 (VDE 0660 Part 102):
Type of coordination "1":
Destruction of the contactor and the overload relay is permissible. The contactor and/or overload relay must be replaced if necessary.

Type of coordination "2":
No damage can be tolerated to the overlaod relay, but contact welding on the contactor is permitted if the contacts can be easily separated.

Load ratings with AC

Contactor / Size / Type			S0 3RT15 26	S2 3RT15 35
AC-1 utilization category, switching resistive load				
Rated operational currents I_e (at 40 °C)	up to 690 V	A	40	55
Ratings of three-phase loads p.f. = 0.95 (at 40 °C)	at 230 V	kW	15	20
	400 V	kW	26	36
Minimum conductor cross-section with I_e load	at 40 °C	mm²	10	16
AC-2 and AC-3 utilization categories				
Rated operational currents I_e (at 60 °C)	up to 400 V	A	25	40
Ratings of motors with slipring or squirrel-cage rotor at 50 Hz and 60 Hz and	at 230 V	kW	5.5	9.5
	400 V	kW	11	18.5

Load ratings with DC

DC-1 utilization category, switching resistive load (L/R ≤ 1 ms)						
Rated operational current I_e (at 60 °C)						
Number of conducting paths connected in series			1	2	1	2
	up to 24 V	A	35	35	55	55
	60 V	A	20	35	23	45
	110 V	A	4.5	35	4.5	45
	220 V	A	1	5	1	5
	440 V	A	0.4	1	0.4	1
	600 V	A	0.25	0.8	0.25	0.8
DC-3 and DC-5 utilization categories, shunt and series motors (L/R ≤ 15 ms)						
Rated operational current I_e (at 60 °C)						
Number of conducting paths connected in series			1	2	1	2
	up to 24 V	A	20	35	35	80
	60 V	A	5	35	6	45
	110 V	A	2.5	15	2.5	25
	220 V	A	1	3	1	5
	440 V	A	0.09	0.27	0.1	0.27
	600 V	A	0.06	0.16	0.06	0.16

3RT16 Capacitor Contactors

SIRIUS 3R

Technical data

All technical data not mentioned in the table below is identical to that of the 3RT10 26 contactors for size S0, to that of the 3RT10 36 contactors for size S2 and to that of the 3RT10 45 contactors for size S3.

Contactor	Size Type		**S0** **3RT16 26**	**S2** **3RT16 36**	**S3** **3RT16 46**
Capacitor rating for operational voltage	230 V 50/60 Hz 400 V 50/60 Hz 525 V 50/60 Hz 690 V 50/60 Hz	kvar kvar kvar kvar	8.5 15 20 25	14 25 32 32	29 50 65 65
Auxiliary contacts mounted (unassigned)			1 NO		
Additional auxiliary contacts mountable (laterally)			2 NC, 2 NO or 1 NO + 1 NC		
Coil voltage tolerance			0.85 to 1.1 x U_s		
Max. operating frequency		1/h	180	100	100
Electrical endurance		Oper. cycles	> 100 000		
Ambient temperature		°C	60	55	55
Specifications			IEC 60 947/EN 60 947 (VDE 0660)		

3RT10 Coupling Relays (Interface) for Switching Motors

SIRIUS 3R

Technical data

All technical data not mentioned in the table below is identical to that of the 3RT10 contactors for switching motors listed on page 3/44 onwards.
The 3RT10 1. coupling relays cannot be extended with auxiliary switch blocks.
Two single-pole auxiliary switch blocks can be mounted onto the 3RT10 2. coupling relays (see accessories on page 3/19).

Contactor	Size Type			**S00** **3RT10 1.-1HB4.**	**S00** **3RT10 1.-1JB4.**	**S00** **3RT10 1.-1KB4.**	**S0** **3RT10 2.-1KB40**
Mechanical endurance			Oper. cycles	30 million	30 million	30 million	10 million
Coil voltage tolerance				0.7 to 1.25 x U_s ≙ 17 V to 30 V			
Power consumption of the coil							
(with coil in cold state)	at U_s 17 V		W	1.2	1.2	1.2	2.1
	24 V		W	2.3	2.3	2.3	4.2
closing = closed	30 V		W	3.6	3.6	3.6	6.6
Permissible residual current of the electronics (with 0 signal)			mA	< 10 mA x $\left(\frac{24\ V}{U_s}\right)$	< 10 mA x $\left(\frac{24\ V}{U_s}\right)$	< 10 mA x $\left(\frac{24\ V}{U_s}\right)$	< 6 mA x $\left(\frac{24\ V}{U_s}\right)$
Surge suppression in the coil				no surge suppression	with diode	with varistor	with varistor
Operating times of the coupling relays							
Closing	at 17 V	Closing time	NO ms	40 to 120	40 to 120	40 to 120	93 to 270
		Opening time	NC ms	30 to 70	30 to 70	30 to 70	83 to 250
	at 24 V	Closing time	NO ms	30 to 60	30 to 60	30 to 60	64 to 87
		Opening time	NC ms	20 to 40	20 to 40	20 to 40	55 to 78
	at 30 V	Closing time	NO ms	20 to 50	20 to 50	20 to 50	53 to 64
		Opening time	NC ms	15 to 30	15 to 30	15 to 30	45 to 56
Opening	at 17 V to 30 V	Closing time	NO ms	7 to 17	40 to 60	7 to 17	18 to 19
		Opening time	NC ms	22 to 30	60 to 70	22 to 30	24 to 25

Technical data acc. to IEC 61 812-1/DIN VDE 0435 Part 2021

Type				Solid-state time-delay blocks with semiconductor output 3RT19 .6-2C 2D	Solid-state time-delay auxilary switch blocks 3RT19 .6-2E 2F 2G
Rated insulation voltage Pollution degree 3 Overvoltage category III acc. to DIN VDE 0110			AC V	250	250
Coil voltage tolerance				0.8 to 1.1 x U_s 0.95 to 1.05 times rated frequency	0.85 to 1.1 x U_s 0.95 to 1.05 times rated frequency
Ratings Power consumption at AC 230 V, 50 Hz			W VA	1 1	2 4
Rated operational currents I_e					
AC-140, DC-13			A	0.3 for 3RT19 16 0.5 for 3RT19 26	– –
AC-15 at AC 230 V, 50 Hz			A	–	3
DC-13 at 24 V			A	–	1
DC-13 at 110 V			A	–	0.2
DC-13 at 230 V			A	–	0.1
DIAZED fuse protection Utilization category		gL/gG	A	–	4
Operating frequency with I_e load, AC 230 V with 3RT1016 contactor load, AC 230 V			1/h 1/h	2500 2500	2500 5000
Recovery time			ms	50	150
Minimum ON-period			ms	35	200 (with OFF-delay)
Residual current			mA	≤ 5	–
Voltage drop switched through			V	≤ 3.5	–
Short-time current-carrying capacity			A	10 (up to 10 ms)	–
Setting accuracy referred to upper limit of scale				≤ ± 15%	≤ ± 15%
Repeat accuracy				≤ ± 1%	≤ ± 1%
Mechanical endurance		operating cycles		100 x 10^6	30 x 10^6
Permissible ambient temperature	in operation when stored		°C °C	–25 to +60 –40 to +85	–25 to +60 –40 to +85
Degree of protection acc. to IEC 60 529				IP 40 terminals IP 20	IP 40 terminals IP 20
Conductor connection	solid		mm^2	2 x (0.5 to 1.5) 2 x (0.75 to 4)	2 x (0.5 to 1.5) 2 x (0.75 to 4)
	finely stranded with end sleeve		mm^2	2 x (0.5 to 2.5)	2 x (0.5 to 2.5)
	solid or stranded		AWG	2 x (18 to 14)	2 x (18 to 14)
Terminal screw				M3	M3
Tightening torque			Nm	0.8 to 1.2	0.8 to 1.2
Permissible mounting position				any	any
Shock resistance Half sine acc. to IEC 60 068-2-27			*g*/ms	15/11	15/11
Vibration resistance acc. to IEC 60 068-2-6			Hz/mm	10 to 55/0.35	10 to 55/0.35
EMC tests	basic specification			EN 50 081-1; EN 50 082-2	EN 50 081-1; EN 50 082-2
Surge suppression				varistor integrated in time-delay relay	–

3RA13 Reversing Contactor Assemblies

Technical data

The technical data is identical to that of the 3RT10 .. contactors listed on page 3/54 onwards.
The ⓒUL and ⓤL approvals only apply to the complete contactor assemblies and not to the components for customer assembly.

3RA14 Contactor Assemblies
for Star-Delta Starting

Technical data
acc. to IEC 60 947-4-1 and VDE 0660 Part 102

Short-circuit protection with fuses for motor feeders with short-circuit currents up to 50 kA and 690 V.
For thermally delayed overload relays, see Part 4.

Ratings	Size of contactors K1-K3-K2	Rated motor current	Overload relay	Setting range	Permissible short-circuit fuses for starters, comprising contactor assemblies and overload relays					
				(the overload relays must be set to 0.58 times the rated motor current)	Single or double infeed[2]) Fuse links NH DIAZED NEOZED Utilization cat. gL/gG		NH TYP 3ND Utilization cat. aM	ⓤL-listed fuses CLASS K5	British Standard fuses BS88	
					Type of coord.[1]) "1"	"2"	"2"		"1"	"2"
kW		A	Type	A	A	A	A	A	A	A
5.5	S00-S00-S00	12	3RU11 16-1HB0	5.5 to 8	35	20	10	30	35	20
7.5	S00-S00-S00	17	3RU11 16-1JB0	7 to 10	35	20	16	40	35	20
11	S0-S0-S0	25	3RU11 26-4AB0	11 to 16	63	25	20	60	63	25
15	S0-S0-S0	32	3RU11 26-4BB0	14 to 20	100	35	20	80	100	35
18.5	S0-S0-S0	40	3RU11 26-4DB0	20 to 25	100	35	20	100	100	35
22	S2-S2-S0	50	3RU11 36-4EB0	22 to 32	125	63	35	125	125	63
30	S2-S2-S0	65	3RU11 36-4FB0	28 to 40	125	63	50	150	125	63
37	S2-S2-S2	80	3RU11 36-4GB0	36 to 45	125	63	50	175	125	63
45	S2-S2-S2	86	3RU11 36-4HB0	40 to 50	160	80	50	200	160	80
55	S3-S3-S2	115	3RU11 46-4KB0	57 to 75	250	125	63	300	250	125
75	S3-S3-S2	150	3RU11 46-4LB0	70 to 90	250	160	80	350	250	160

1) According to IEC 60 947-4 -1 (VDE 0660 Part 102):
Type of coordination "1":
Destruction of the contactor and the overload relay is permissible. The contactor and/or overload relay must be replaced if necessary.

Type of coordination "2":
No damage can be tolerated to the overload relay, but contact welding on the contactor is permitted if the contacts can be easily separated.

2) The maximum rated motor current must not be exceeded.

All technical data not mentioned in the table below is identical to that of the individual 3RT contactors and the 3RU time-delay relays.

Starters	Sizes / Type			S.. - S.. - S.. 3RA.. ..	00-00-00 14 15	00-00-00 14 16	0-0-0 14 23	0-0-0 14 25	2-2-0 14 34	2-2-2 14 35	2-2-2 14 36	3-3-2 14 44	3-3-2 14 45
Mechanical endurance			Oper. cycles	3 million									
Short-circuit protection without overload relay				For short-circuit protection with overload relay, see Part 4.									
Maximum rated current of the fuse													
Main circuit[1]													
Fuse links, utilization category gL/gG													
NH Type 3NA, DIAZED Type 5SB, NEOZED Type 5SE													
Single or double infeed													
– acc. to IEC 60 947-4-1/	Type of coord. "1"[1]		A		35	35	63	100	125	125	160	250	250
DIN VDE 0660 Part 102	Type of coord. "2"[1]		A		20	20	25	35	63	63	80	125	160
Control circuit													
Fuse links, utilization category gL/gG			A		10,								
DIAZED Type 5SB, NEOZED Type 5SE			A		6[2]) if the auxiliary contact of the overload relay is connected in the contactor coil circuit								
(short-circuit current $I_k \geq 1$ kA)													
Miniature circuit-breaker with C-characteristic			A		10,								
			A		6[2]) if the auxiliary contact of the overload relay is connected in the contactor coil circuit								
Size of contactors	Line	K1	Type 3RT		10 15	10 17	10 24	10 26	10 34	10 35	10 36	10 44	10 45
	Delta	K3	Type 3RT		10 15	10 17	10 24	10 26	10 34	10 35	10 36	10 44	10 45
	Star	K2	Type 3RT		10 15	10 15	10 24	10 24	10 26	10 34	10 34	10 35	10 36
Unassigned auxiliary contacts of the contactors	See circuit diagrams of the control circuit on page 3/93.												
Load rating with AC-3 utilization category Reversing time up to 10 s													
Rated operational current		at 400 V	A		12	17	25	40	65	80	86	115	150
		500 V	A		8.7	11.3	20.8	31.2	55.4	69.3	86	112.6	138.6
		690 V	A		6.9	9	20.8	22.5	53.7	69.3	69.3	98.7	138.6
Ratings		at 230 V	kW		3.3	4.7	7.2	12	20.4	25.5	27.8	37	49
of three-phase motors		400 V	kW		5.8	8.2	12.5	21	35	44	48	65	85
at 50 Hz and		500 V	kW		5.3	6.9	13	20.5	38	48	60	80	98
		690 V	kW		5.8	7.5	18	20.4	51	66	67	97	136
		1000 V	kW		–	–	–	–	–	–	–	–	–
Operating frequency with overload relay			1/h		15	15	15	15	15	15	15	15	15
Load rating with AC-3 utilization category Reversing time up to 15 s													
Rated operational current		at 400 V	A		12	17	25	31	44	57	67	97	106
		500 V	A		8.7	11.3	20.8	31	44	57	67	97	106
		690 V	A		6.9	9	20.8	22.5	44	57	67	97	106
Ratings		at 230 V	kW		3.3	4.7	7.2	9.4	13.8	18.2	21.6	32	35
of three-phase motors		400 V	kW		5.8	8.2	12.5	16.3	24	31.6	38	55	60
at 50 Hz and		500 V	kW		5.3	6.9	13	20.4	30	40	47	69	75
		690 V	kW		5.8	7.5	18	20.4	42	55	65	95	104
		1000 V	kW		–	–	–	–	–	–	–	–	–
Operating frequency with overload relay			1/h		15	15	15	15	15	15	15	15	15
Load rating with AC-3 utilization category Reversing time up to 20 s													
Rated operational current		at 400 V	A		12	17	25	28	39	51	57	85	92
		500 V	A		8.7	11.3	20.8	28	39	51	57	85	92
		690 V	A		6.9	9	20.8	22.5	39	51	57	85	92
Ratings		at 230 V	kW		3.3	4.7	7.2	8.5	12.2	16.3	18.4	28	30
of three-phase motors		400 V	kW		5.8	8.2	12.5	14.7	21.3	28	32	48	52
at 50 Hz and		500 V	kW		5.3	6.9	13	18.4	26.7	35	40	60	65
		690 V	kW		5.8	7.5	18	20.4	37	49	55	83	90
		1000 V	kW		–	–	–	–	–	–	–	–	–
Operating frequency with overload relay			1/h		15	15	15	15	15	15	15	15	15

1) According to IEC 60 947-4-1 (VDE 0660 Part 102):
Type of coordination "1":
Destruction of the contactor and the overload relay is permissible. The contactor and/or overload relay must be replaced if necessary.

Type of coordination "2":
No damage can be tolerated to the overload relay, but contact welding on the contactor is permitted if the contacts can be easily separated.

2) Up to $I_k \leq 0.5$ kA; ≤ 260 V.