

## Technical specifications

Contactor	Type Size	3RT12 64 S10	3RT12 65 S10	3RT12 66 S10
<b>General data</b>				
<b>Permissible mounting position</b> The contactors are designed for operation on a vertical mounting surface.				
<b>Mechanical endurance</b>		Oper- ating cycles	10 million	
<b>Electrical endurance</b>			1)	
<b>Rated insulation voltage <math>U_i</math></b> (degree of pollution 3)		V	1000	
<b>Rated impulse withstand voltage <math>U_{imp}</math></b>		kV	8	
<b>Safe isolation</b> between the coil and the main contacts acc. to EN 60947-1, Appendix N		V	690	
<b>Mirror contacts</b> A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with a NO main contact.			Yes, acc. to EN 60947-4-1, Appendix F	
<b>Permissible ambient temperature</b>		°C	-25 ... +60/+55 with AS-Interface	
		°C	-55 ... +80	
<b>Degree of protection</b> acc. to EN 60947-1, Appendix C			IP00/open, coil assembly IP20	
<b>Touch protection</b> acc. to EN 50274			Finger-safe with cover	
<b>Shock resistance</b>				
Rectangular pulse		g/ms	8.5/5 and 4.2/10	
Sine pulse		g/ms	13.4/5 and 6.5/10	
<b>Conductor cross-sections</b>			2)	
<b>Electromagnetic compatibility (EMC)</b>			3)	
<b>Short-circuit protection</b>				
<b>Main circuit</b>				
Fuse links, gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE				
- Acc. to IEC 60947-4-1/ EN 60947-4-1		• Type of coordination *1* • Type of coordination *2* • Weld-free <sup>4)</sup>	A A A	500 500 400
<b>Auxiliary circuit</b>				
• Fuse links gL/gG DIAZED 5SB, NEOZED 5SE (weld-free protection for $I_k \geq 1$ kA) Or miniature circuit breakers with C characteristic (short-circuit current $I_k$ 400 A)		A	10	

1) For endurance of the main contacts see page 3/19.

2) For conductor cross-sections see page 3/59.

3) For electromagnetic compatibility (EMC) see page 3/12.

4) Test conditions according to IEC 60947-4-1.

# 3RT, 3TB, 3TF Contactors for Switching Motors

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

Contactor	Type Size		3RT12 64 S10	3RT12 65 S10	3RT12 66 S10
<b>Control</b>					
<b>Operating range of the solenoid AC/DC (UC)</b>			0.8 x $U_{s \text{ min}}$ ... 1.1 x $U_{s \text{ max}}$		
<b>Power consumption of the solenoid</b> (when coil is cool and rated range $U_{s \text{ min}}$ ... $U_{s \text{ max}}$ )					
• Conventional operating mechanism					
- AC operation	Closing at $U_{s \text{ min}}$	VA/p.f.	530/0.9		
	Closing at $U_{s \text{ max}}$	VA/p.f.	630/0.9		
	Closed at $U_{s \text{ min}}$	VA/p.f.	6.1/0.9		
	Closed at $U_{s \text{ max}}$	VA/p.f.	7.4/0.9		
- DC operation	Closing at $U_{s \text{ min}}$	W	580		
	Closing at $U_{s \text{ max}}$	W	700		
	Closed at $U_{s \text{ min}}$	W	6.8		
	Closed at $U_{s \text{ max}}$	W	8.2		
• Solid-state operating mechanism					
- AC operation	Closing at $U_{s \text{ min}}$	VA/p.f.	420/0.8		
	Closing at $U_{s \text{ max}}$	VA/p.f.	570/0.8		
	Closed at $U_{s \text{ min}}$	VA/p.f.	4.3/0.8		
	Closed at $U_{s \text{ max}}$	VA/p.f.	5.6/0.8		
- DC operation	Closing at $U_{s \text{ min}}$	W	460		
	Closing at $U_{s \text{ max}}$	W	630		
	Closed at $U_{s \text{ min}}$	W	3.4		
	Closed at $U_{s \text{ max}}$	W	4.2		
<b>PLC control input (EN 61131-2/type 2)</b>			24 V DC/≤ 30 mA power consumption, (operating range 17 ... 30 V DC)		
<b>Operating times</b> (Total break time = Opening delay + Arcing time)					
• Conventional operating mechanism					
- with 0.8 x $U_{s \text{ min}}$ ... 1.1 x $U_{s \text{ max}}$	Closing delay	ms	30 ... 95		
	Opening delay	ms	40 ... 80		
- for $U_{s \text{ min}}$ ... $U_{s \text{ max}}$	Closing delay	ms	35 ... 50		
	Opening delay	ms	50 ... 80		
• Solid-state operating mechanism, actuated via A1/A2					
- with 0.8 x $U_{s \text{ min}}$ ... 1.1 x $U_{s \text{ max}}$	Closing delay	ms	105 ... 145		
	Opening delay	ms	80 ... 100		
- for $U_{s \text{ min}}$ ... $U_{s \text{ max}}$	Closing delay	ms	110 ... 130		
	Opening delay	ms	80 ... 100		
• Solid-state operating mechanism, actuated via PLC input					
- with 0.8 x $U_{s \text{ min}}$ ... 1.1 x $U_{s \text{ max}}$	Closing delay	ms	45 ... 80		
	Opening delay	ms	80 ... 100		
- for $U_{s \text{ min}}$ ... $U_{s \text{ max}}$	Closing delay	ms	50 ... 65		
	Opening delay	ms	80 ... 100		
• Arcing time			ms 10 ... 15		

# 3RT, 3TB, 3TF Contactors for Switching Motors

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




Contactor	Type Size	3RT12 64 S10	3RT12 65 S10	3RT12 66 S10
<b>Main circuit</b>				
<b>AC capacity</b>				
<b>Utilization category AC-1</b>				
<b>Switching resistive loads</b>				
Rated operational currents $I_e$	at 40 °C up to 1000 V A at 60 °C up to 1000 V A	330 300		
Rated power for AC loads <sup>1)</sup> P.f. = 0.95 (at 60 °C)	at 230 V kW 400 V kW 500 V kW 690 V kW 1000 V kW	113 197 246 340 492		
Minimum conductor cross-section for loads with $I_e$	at 40 °C mm <sup>2</sup> at 60 °C mm <sup>2</sup>	185 185		
<b>Utilization category AC-2 and AC-3</b>				
Rated operational currents $I_e$	up to 1000 V A	225	265	300
Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	at 230 V kW 400 V kW 500 V kW 690 V kW 1000 V kW	73 128 160 223 320	85 151 189 265 378	97 171 215 288 428
<b>Thermal load capacity</b>	10 s current <sup>2)</sup> A	1800	2120	2400
<b>Power loss per conducting path</b>	at $I_e/AC-3$ W	9	12	14
<b>Utilization category AC-4 (for <math>I_a = 6 \times I_e</math>)</b>				
Rated operational current $I_e$	up to 690 V A	195	230	280
Rated power for squirrel-cage motors with 50 Hz and 60 Hz	at 400 V kW	110	132	160
• The following applies to a contact endurance of about 200000 operating cycles:				
Rated operational currents $I_e$	up to 690 V A 1000 V A	97 68	115 81	140 98
Rated power for squirrel-cage motors with 50 Hz and 60 Hz	at 230 V kW 400 V kW 500 V kW 690 V kW 1000 V kW	30 55 68 94 95	37 65 81 112 114	45 79 98 138 140
<b>Utilization category AC-6a</b>				
<b>Switching AC transformers</b>				
Rated operational current $I_e$				
• For inrush current n = 20	up to 690 V A	278		
• For inrush current n = 30	up to 690 V A	185		
Rating P				
• For inrush current n = 20	at 230 V kVA 400 V kVA 500 V kVA 690 V kVA 1000 V kVA	111 193 241 332 482		
• For inrush current n = 30	at 230 V kVA 400 V kVA 500 V kVA 690 V kVA 1000 V kVA	74 128 160 221 320		
For deviating inrush current factors x, the power must be recalculated as follows: $P_x = P_{n30} \cdot 30/x$				
<b>Utilization category AC-6b</b>				
<b>Switching low-inductance (low-loss, metallized dielectric) AC capacitors</b>				
Ambient temperature 40 °C				
Rated operational currents $I_e$	up to 500 V A	220		
Rated power for single capacitors or banks of capacitors (minimum inductance of 6 µH between capacitors connected in parallel) at 50 Hz, 60 Hz and	at 230 V kvar 400 V kvar 500 V kvar 690 V kvar	88 152 191 152		
<b>Switching frequency</b>				
<b>Switching frequency z</b> in operating cycles/hour				
Contactors without overload relays	No-load switching frequency h <sup>-1</sup>	2000	2000	
Dependence of the switching frequency z' on the operational current I' and operational voltage U': z' = z · (I <sub>e</sub> /I') · (400 V/U) <sup>1.5</sup> · 1/h	AC-1 h <sup>-1</sup> AC-2 h <sup>-1</sup> AC-3 h <sup>-1</sup> AC-4 h <sup>-1</sup>	800 300 750 250	750 250 750 250	
Contactors with overload relays (mean value)	h <sup>-1</sup>	60	60	

<sup>1)</sup> Industrial furnaces and electric heaters with resistance heating, etc. increased power consumption on heating up taken into account).

<sup>2)</sup> According to IEC 60947-4-1.  
For rated values for various start-up conditions see Protection Equipment: Overload Relays.

# 3RT, 3TB, 3TF Contactors for Switching Motors

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

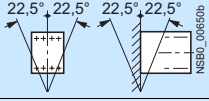
Contactor	Type Size	3RT12 6. S10	
<b>Main conductor cross-sections</b>			
<b>Screw terminals</b>	<b>Main conductors:</b> With 3RT19 66-4G box terminal		<b>Screw terminals</b>
<b>Front clamping point connected</b>  NSB00479	• Finely stranded with end sleeve	mm <sup>2</sup>	70 ... 240
	• Finely stranded without end sleeve	mm <sup>2</sup>	70 ... 240
	• Stranded	mm <sup>2</sup>	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
<b>Rear clamping point connected</b>  NSB00480	• Finely stranded with end sleeve	mm <sup>2</sup>	120 ... 185
	• Finely stranded without end sleeve	mm <sup>2</sup>	120 ... 185
	• Stranded	mm <sup>2</sup>	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
<b>Both clamping points connected</b>  NSB00481	• Finely stranded with end sleeve	mm <sup>2</sup>	Min. 2 x 50, max. 2 x 185
	• Finely stranded without end sleeve	mm <sup>2</sup>	Min. 2 x 50, max. 2 x 185
	• Stranded	mm <sup>2</sup>	Min. 2 x 70, max. 2 x 240
	• AWG cables, solid or stranded	AWG	Min. 2 x 1/0, max. 2 x 500 kcmil
	• Ribbon cable conductors (number x width x thickness)	mm	Max. 2 x (20 x 24 x 0.5)
	• Terminal screws - tightening torque	Nm	M12 (hexagon socket, A/F 5) 20 ... 22 (180 ... 195 lb.in)
	<b>Main conductors:</b> without box terminal/ busbar connection		
	• Finely stranded with cable lug <sup>1)</sup>	mm <sup>2</sup>	50 ... 240
	• Stranded with cable lug <sup>1)</sup>	mm <sup>2</sup>	70 ... 240
	• AWG cables, solid or stranded	AWG	2/0 ... 500 kcmil
	• Connecting bar (max. width)	mm	25
	• Terminal screws - tightening torque	Nm	M12 (hexagon socket, A/F 5) 14 ... 24 (124 ... 210 lb.in)
<b>Screw terminals</b>	<b>Auxiliary conductors:</b>		
	• Solid	mm <sup>2</sup>	2 x (0.5 ... 1.5) <sup>2)</sup> ; 2 x (0.75 ... 2.5) <sup>2)</sup> acc. to IEC 60947; max. 2 x (0.75 ... 4)
	• Finely stranded with end sleeve	mm <sup>2</sup>	2 x (0.5 ... 1.5) <sup>2)</sup> ; 2 x (0.75 ... 2.5) <sup>2)</sup>
	• AWG cables, solid or stranded	AWG	2 x (18 ... 14)
	• Terminal screws - tightening torque	Nm	M3 (PZ 2) 0.8 ... 1.2 (7 ... 10.3 lb.in)

<sup>1)</sup> When connecting cable lugs according to DIN 46234 for conductor cross-sections of 185 mm<sup>2</sup> and more and according to DIN 46235 for conductor cross-sections of 240 mm<sup>2</sup> and more, the 3RT19 66-4EA1 terminal cover must be used to keep the phase clearance.

<sup>2)</sup> If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in the range specified. If identical cross-sections are used, this restriction does not apply.

# 3RT, 3TB, 3TF Contactors for Switching Motors

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

Contactor	Type Size		3RT12 75 S12	3RT12 76 S12
<b>General data</b>				
<b>Permissible mounting position</b> The contactors are designed for operation on a vertical mounting surface.				
<b>Mechanical endurance</b>			Operat- ing cycles	10 million
<b>Electrical endurance</b>				1)
<b>Rated insulation voltage <math>U_i</math></b> (degree of pollution 3)			V	1000
<b>Rated impulse withstand voltage <math>U_{imp}</math></b>			kV	8
<b>Safe isolation</b> between the coil and the main contacts acc. to EN 60947-1, Appendix N			V	690
<b>Mirror contacts</b> A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with a NO main contact.				Yes, acc. to EN 60947-4-1, Appendix F
<b>Permissible ambient temperature</b>				
During operation			°C	-25 ... +60/+55 with AS-Interface
During storage			°C	-55 ... +80
<b>Degree of protection</b> acc. to EN 60947-1, Appendix C				IP00/open, coil assembly IP20
<b>Touch protection</b> acc. to EN 50274				Finger-safe with cover
<b>Shock resistance</b>				
Rectangular pulse			g/ms	8.5/5 and 4.2/10
Sine pulse			g/ms	13.4/5 and 6.5/10
<b>Conductor cross-sections</b>				2)
<b>Electromagnetic compatibility (EMC)</b>				3)
<b>Short-circuit protection</b>				
<b>Main circuit</b>				
Fuse links, gL/gG				
LV HRC 3NA, DIAZED 5SB, NEOZED 5SE				
- acc. to IEC 60947-4-1/ EN 60947-4				
• Type of coordination "1"			A	800
• Type of coordination "2"			A	800
• Weld-free <sup>4)</sup>			A	500
<b>Auxiliary circuit</b>				
• Fuse links gL/gG			A	10
DIAZED 5SB, NEOZED 5SE				
(weld-free protection for $I_k \geq 1$ kA)				
or miniature circuit breakers with C characteristic				
(short-circuit current $I_k < 400$ A)				

1) See endurance of the main contacts on page 3/19.

2) See conductor cross-sections on page 3/63.

3) See Electromagnetic Compatibility (EMC) on page 3/12.

4) Test conditions according to IEC 60947-4-1.

# 3RT, 3TB, 3TF Contactors for Switching Motors

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

Contactor	Type Size		3RT12 75 S12	3RT12 76 S12
<b>Control</b>				
<b>Operating range of the solenoid</b>	AC/DC (UC)		0.8 x $U_{s \min}$ ... 1.1 x $U_{s \max}$	
<b>Power consumption of the solenoid</b> (when coil is cool and rated range $U_{s \min}$ ... $U_{s \max}$ )				
• Conventional operating mechanism				
- AC operation	Closing at $U_{s \min}$	VA/p.f.	700/0.9	
	Closing at $U_{s \max}$	VA/p.f.	830/0.9	
	Closed at $U_{s \min}$	VA/p.f.	7.6/0.9	
	Closed at $U_{s \max}$	VA/p.f.	9.2/0.9	
- DC operation	Closing at $U_{s \min}$	W	770	
	Closing at $U_{s \max}$	W	920	
	Closed at $U_{s \min}$	W	8.5	
	Closed at $U_{s \max}$	W	10	
• Solid-state operating mechanism				
- AC operation	Closing at $U_{s \min}$	VA/p.f.	560/0.8	
	Closing at $U_{s \max}$	VA/p.f.	750/0.8	
	Closed at $U_{s \min}$	VA/p.f.	5.4/0.8	
	Closed at $U_{s \max}$	VA/p.f.	7/0.8	
- DC operation	Closing at $U_{s \min}$	W	600	
	Closing at $U_{s \max}$	W	800	
	Closed at $U_{s \min}$	W	4	
	Closed at $U_{s \max}$	W	5	
<b>PLC control input</b> (EN 61131-2/type 2)			24 V DC/≤ 30 mA power consumption, (operating range 17 ... 30 V DC)	
<b>Operating times</b> (Total break time = Opening delay + Arcing time)				
• Conventional operating mechanism				
- with 0.8 x $U_{s \min}$ ... 1.1 x $U_{s \max}$	Closing delay	ms	45 ... 100	
	Opening delay	ms	60 ... 100	
- for $U_{s \min}$ ... $U_{s \max}$	Closing delay	ms	50 ... 70	
	Opening delay	ms	70 ... 100	
• Solid-state operating mechanism, actuated via A1/A2				
- with 0.8 x $U_{s \min}$ ... 1.1 x $U_{s \max}$	Closing delay	ms	120 ... 150	
	Opening delay	ms	80 ... 100	
- for $U_{s \min}$ ... $U_{s \max}$	Closing delay	ms	125 ... 150	
	Opening delay	ms	80 ... 100	
• Solid-state operating mechanism, actuated via PLC input				
- with 0.8 x $U_{s \min}$ ... 1.1 x $U_{s \max}$	Closing delay	ms	60 ... 90	
	Opening delay	ms	80 ... 100	
- for $U_{s \min}$ ... $U_{s \max}$	Closing delay	ms	65 ... 80	
	Opening delay	ms	80 ... 100	
• Arcing time				
		ms	10 ... 15	
<b>Main circuit</b>				
<b>AC capacity</b>				
<b>Utilization category AC-1</b>				
<b>Switching resistive loads</b>				
Rated operational currents $I_e$	at 40 °C up to 1000 V	A	610	
	at 60 °C up to 1000 V	A	550	
Rated power for AC loads <sup>1)</sup> P.f. = 0.95 (at 60 °C)	at 230 V	kW	208	
	400 V	kW	362	
	500 V	kW	452	
	690 V	kW	624	
	1000 V	kW	905	
Minimum conductor cross-section for loads with $I_e$	At 40 °C	mm <sup>2</sup>	2 x 185	
	At 60 °C	mm <sup>2</sup>	2 x 185	
<b>Utilization category AC-2 and AC-3</b>				
Rated operational currents $I_e$	up to 1000 V	A	400	500
Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	at 230 V	kW	132	164
	400 V	kW	231	291
	500 V	kW	291	363
	690 V	kW	400	507
	1000 V	kW	578	728
<b>Thermal load capacity</b>	10 s current <sup>2)</sup>	A	3200	4000
<b>Power loss per conducting path</b>	at $I_e$ /AC-3	W	21	32

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

2) According to IEC 60947-4-1.  
For rated values for various start-up conditions see Protection Equipment: Overload Relays.




# 3RT, 3TB, 3TF Contactors for Switching Motors

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

Contactor	Type Size		3RT12 75 S12	3RT12 76 S12
<b>Main circuit</b>				
<b>AC capacity</b>				
<b>Utilization category AC-4</b> (for $I_a = 6 \times I_e$ )				
Rated operational current $I_e$	up to 690 V	A	350	430
Rated power for squirrel-cage motors with 50 Hz and 60 Hz	at 400 V	kW	200	250
• The following applies to a contact endurance of about 200000 operating cycles:				
Rated operational currents $I_e$	690 V	A	175	215
	1000 V	A	123	151
Rated power for squirrel-cage motors with 50 Hz and 60 Hz	at 230 V	kW	56	70
	400 V	kW	98	122
	500 V	kW	124	153
	690 V	kW	172	212
	1000 V	kW	183	217
<b>Utilization category AC-6a</b>				
<b>Switching AC transformers</b>				
Rated operational current $I_e$				
• For inrush current $n = 20$	up to 690 V	A	419	
• For inrush current $n = 30$	up to 690 V	A	279	
Rating $P$				
• For inrush current $n = 20$	at 230 V	kVA	167	
	400 V	kVA	290	
	500 V	kVA	363	
	690 V	kVA	501	
	1000 V	kVA	726	
• For inrush current $n = 30$	at 230 V	kVA	111	
	400 V	kVA	193	
	500 V	kVA	241	
	690 V	kVA	332	
	1000 V	kVA	482	
For deviating inrush current factors $x$ , the power must be recalculated as follows: $P_x = P_{n,30} \cdot 30/x$				
<b>Utilization category AC-6b</b>				
<b>Switching low-inductance (low-loss, metallized dielectric) AC capacitors</b>				
Ambient temperature 40 °C				
Rated operational currents $I_e$	up to 500 V	A	407	
Rated power for single capacitors or banks of capacitors (minimum inductance of 6 $\mu$ H between capacitors connected in parallel) at 50 Hz, 60 Hz and	at 230 V	kvar	162	
	400 V	kvar	282	
	500 V	kvar	352	
	690 V	kvar	282	
<b>Switching frequency</b>				
<b>Switching frequency <math>z</math></b> in operating cycles/hour				
Contactors without overload relays	No-load switching frequency	$h^{-1}$	2000	
Dependence of the switching frequency $z'$ on the operational current $I'$ and operational voltage $U$ : $z' = z \cdot (I_e/I') \cdot (400 V/U)^{1.5} \cdot 1/h$	AC-1	$h^{-1}$	700	
	AC-2	$h^{-1}$	250	
	AC-3	$h^{-1}$	750	
	AC-4	$h^{-1}$	250	
Contactors with overload relays (mean value)		$h^{-1}$	60	

# 3RT, 3TB, 3TF Contactors for Switching Motors

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

Contactor	Type Size	3RT12 7. S12				
<b>Conductor cross-sections</b>						
<b>Screw terminals</b>		<b>Main conductors:</b> With 3RT19 66-4G box terminal				<b>Screw terminals</b>
<b>Front clamping point connected</b> 	• Finely stranded with end sleeve	mm <sup>2</sup>	70 ... 240			70 ... 240
	• Finely stranded without end sleeve	mm <sup>2</sup>	70 ... 240			
<b>Rear clamping point connected</b> 	• Stranded	mm <sup>2</sup>	95 ... 300			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			
	• Finely stranded with end sleeve	mm <sup>2</sup>	120 ... 185			
<b>Both clamping points connected</b> 	• Finely stranded without end sleeve	mm <sup>2</sup>	120 ... 185			120 ... 185
	• Stranded	mm <sup>2</sup>	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			
	• Terminal screws - tightening torque	Nm	M12 (hexagon socket, A/F 5)			20 ... 22 (180 ... 195 lb.in)
	<b>Main conductors:</b> without box terminal/busbar connection					
	• Finely stranded with cable lug <sup>1)</sup>	mm <sup>2</sup>	50 ... 240			
	• Stranded with cable lug <sup>1)</sup>	mm <sup>2</sup>	70 ... 240			
<b>Screw terminals</b>	• AWG cables, solid or stranded	AWG	2/0 ... 500 kcmil			2/0 ... 500 kcmil
	• Connecting bar (max. width)	mm	25			
	• Terminal screws - tightening torque	Nm	M10 x 30 (hexagon socket, A/F 17)			
			14 ... 24 (124 ... 240 lb.in)			
<b>Auxiliary conductors:</b>						
	• Solid	mm <sup>2</sup>	2 x (0.5 ... 1.5) <sup>2)</sup> ; 2 x (0.75 ... 2.5) <sup>2)</sup> acc. to IEC 60947; max. 2 x (0.75 ... 4)			2 x (0.5 ... 1.5) <sup>2)</sup> ; 2 x (0.75 ... 2.5) <sup>2)</sup>
	• Finely stranded with end sleeve	mm <sup>2</sup>				
	• AWG cables, solid or stranded	AWG	2 x (18 ... 14)			2 x (18 ... 14)
	• Terminal screws - tightening torque	Nm	M3 (PZ 2)			
			0.8 ... 1.2 (7 ... 10.3 lb.in)			

<sup>1)</sup> When connecting cable lugs to DIN 46234, the 3RT19 66-4EA1 terminal cover must be used for conductor cross-sections of 240 mm<sup>2</sup> and more as well as DIN 46235 for conductor cross-sections of 185 mm<sup>2</sup> and more to keep the phase clearance.

<sup>2)</sup> If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in the range specified. If identical cross-sections are used, this restriction does not apply.

Contactor	Type Size	3RT12 64 S10					3RT12 65 S10	3RT12 66 S10	3RT12 75 S12	3RT12 76 S12		
<b>CSA and UL rated data</b>												
<b>Rated insulation voltage</b>		V AC	600					600				
<b>Uninterrupted current, at 40 °C</b>		Open and enclosed	A					330				540
<b>Maximum horsepower ratings</b> (CSA and UL approved values)												
Rated power for induction motors at 60 Hz			at 200 V	hp	60	75	100	125	150	150		
			230 V	hp	75	100	125	150	200	200		
			460 V	hp	150	200	250	300	400	400		
			575 V	hp	200	250	300	400	500	500		
<b>Short-circuit protection</b>												
	CLASS L fuse	kA	10	18	18	18	18	30	30	30		
	Circuit breakers acc. to UL 489	A	700	800	800	800	1200	1200	1200	1200		
		A	500	700	900	1000	1000	1200	1200	1200		
<b>NEMA/EEMAC ratings</b>												
Uninterrupted current		NEMA/EEMAC size	hp	--	--	5	--	--	6	6		
	Open	A	--	--	300	--	--	600	600	600		
	Enclosed	A	--	--	270	--	--	540	540	540		
Rated power for induction motors at 60 Hz			at 200 V	hp	--	--	75	--	150	150		
			230 V	hp	--	--	100	--	200	200		
			460 V	hp	--	--	200	--	400	400		
			575 V	hp	--	--	200	--	400	400		
<b>Overload relays</b>		Type	3RB20 66					3RB20 66				