

# Accessories and Spare Parts

## For 3RT, 3RH Contactors and Contactor Relays

### Accessories for 3RT, 3RH contactors and contactor relays

#### Additional load module

- Size S00 for plugging onto the front side of the contactors with and without auxiliary switch block

#### Coupling links for mounting on contactors of sizes S0 to S3

##### DC operation

IEC 60947 and EN 60947

The coupling link is suitable for use in any climate. It is finger-safe according to EN 50274. The terminal designations comply with EN 50005.

System-compatible operation with 24 V DC, operating range 17 V to 30 V.

Low power consumption in conformity with the technical specifications of the solid-state systems. A LED indicates the switching state.

##### Surge suppression

The 3RH19 24-1GP11 coupling link has an integrated surge suppressor (varistor) for the contactor coil being switched.

##### Mounting

The 3RH19 24-1GP11 coupling link is mounted directly on the contactor coil.

#### Solder pin adapters

The solder pin adapters for the size S00 contactors are available in two versions:

- Solder pin adapter for contactors with one integrated auxiliary contact
- Solder pin adapter for contactors with mounted 4-pole auxiliary switch block

#### Screw adapters

Plug-on adapters improve the accessibility of the screw fixing for size S0 contactors. As a result it is possible to position the screwdriver vertically even when using insulated screwdrivers or power screwdrivers.

Optionally the adapters can be rotated through 90° before mounting.

#### Sealable covers for sizes S00 to S12

When contactors and contactor relays are used in safety-oriented applications, it must be ensured that it is impossible to operate the contactors manually.

For SIRIUS contactors there are sealable covers available for this purpose as accessories; these prevent accidental manual operation. These are transparent molded-plastic caps with a bracket that enables the contactor to be sealed.

## Technical specifications

### Technical specifications according to EN 61812-1 (VDE 0435 Part 2021)

Contactor	Type		<b>3RT19 26-3A</b> <b>Mechanical latching block for the 3RT1. 2. and 3RT1. 3. contactors</b>
<b>Rated insulation voltage <math>U_i</math></b> (degree of pollution 3)		V	690
<b>Mechanical endurance</b> (operating cycles)	with 3RT1. 2 with 3RT1. 3		3 million 50000
<b>Permissible ambient temperature</b>	During operation	°C	-25 ... +60
	During storage	°C	-50 ... +80
<b>Degree of protection</b> according to EN 60947-1/EN 60947-1, Appendix C			IP20
<b>Operating range of the magnetic coil</b> at AC 50/60 Hz and DC			0.85 ... 1.1 x $U_s$
<b>Power consumption of the coils of the unlocking magnet</b> (for cold coil and 1.0 x $U_s$ ) AC and DC operation		W	Approx. 4
<b>Command duration for de-energizing</b> <ul style="list-style-type: none"><li>• AC operation</li><li>• DC operation</li></ul>		ms	18 ... 31
		ms	18 ... 26
<b>Conductor cross-sections</b> <ul style="list-style-type: none"><li>• Solid</li><li>• Finely stranded with end sleeve</li></ul>	mm <sup>2</sup>		2 x (0.5 ... 2.5); 1 x 4
	AWG		2 x 14; 1 x 12
	mm <sup>2</sup>		2 x (0.5 ... 2.5); 1 x 2.5
	AWG		2 x 14; 1 x 12
<b>Tightening torque for terminal screws</b>	Nm		0.8 ... 1.1
	lb.in		7 ... 9.5

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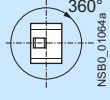
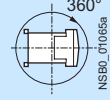
### Accessories for 3RT, 3RH contactors and contactor relays

Contactor	Type		3RT19 .6-2C Solid-state time-delay blocks with semiconductor output	3RT19 .6-2D	3RT19 .6-2L	3RT19 .6-2E	3RT19 .6-2F	3RT19 .6-2G Solid-state time-delay auxiliary switch blocks
<b>Rated insulation voltage <math>U_i</math></b> Degree of pollution 3 Overvoltage category III according to DIN VDE 0110	V AC		250		300			250
<b>Operating range of excitation</b>			0.8 ... 1.1 x $U_s$ , 0.95 ... 1.05 times rated frequency		0.85 ... 1.1 x $U_s$ , 0.95 ... 1.05 times rated frequency			
<b>Rated power</b>	W		1					2
Power consumption at 230 V AC, 50 Hz	VA		1		4			
<b>Rated operational currents <math>I_e</math></b> • AC-140, DC-13	A		0.3 for 3RT19 16					--
	A		0.3 for 3RT19 26					--
• AC-15, 230 V, 50 Hz	A		--		3			
• DC-13, 24 V	A		--		1			
• DC-13, 110 V	A		--		0.2			
• DC-13, 230 V	A		--		0.1			
<b>DIAZED protection</b> gL/gG operational class	A		--		4			
<b>Switching frequency</b> for load • With $I_e$ 230 V AC • With 3RT10 16 contactor, 230 V AC	h <sup>-1</sup> h <sup>-1</sup>		2500 2500		5000			
<b>Recovery time</b>	ms		50		150			
<b>Minimum ON period</b>	ms		35		35 (OFF-delay with auxiliary voltage)		200 (with OFF-delay)	
<b>Residual current</b>	Max.	mA	5		--			
<b>Voltage drop</b> with conducting output	Max.	VA	3.5		--			
<b>Short-time loading capacity</b>	Up to 10 ms	A	10		--			
<b>Setting accuracy</b> with reference to upper limit of scale	Typ.	%	±15					
<b>Repeat accuracy</b>	Max.	%	±1					
<b>Mechanical endurance</b>		Oper- ating cycles	100 x 10 <sup>6</sup>		10 x 10 <sup>6</sup>			
<b>Permissible ambient temperature</b>								
	During operation	°C	-25 ... +60					
	During storage	°C	-40 ... +80					
<b>Degree of protection</b> acc. to EN 60947-1, Appendix C • Cover • Terminals			IP40 IP20					
<b>Conductor connections</b> • Solid • Finely stranded with end sleeve • AWG conductors, solid or stranded • Terminal screw - Tightening torque	mm <sup>2</sup> mm <sup>2</sup> AWG Nm		2 x (0.5 ... 1.5), 2 x (0.75 ... 4) 2 x (0.5 ... 2.5) 2 x (18 ... 14) M3 0.8 ... 1.2					
<b>Permissible mounting position</b>			Any					
<b>Shock resistance</b> Half-sine according to IEC 60068-2-27	g/ms		15/11					
<b>Vibration resistance</b> according to IEC 60068-2-6	Hz/mm		10 ... 55/0.35					
<b>EMC tests</b>	Basic specification		IEC 61000-6-4		IEC 61000-6-2; IEC 61000-6-4		IEC 61000-6-4	
<b>Overvoltage protection</b>			Varistor integrated in timing relay				--	

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## For 3RT, 3RH Contactors and Contactor Relays

### Accessories for 3RT, 3RH contactors and contactor relays

Versions		3RT19 16-2BE01 OFF-delay devices	3RT19 16-2BK01	3RT19 16-2BL01
Connectable contactor sizes Caution! Only contactors and contactor relays with DC operation can be connected.				
<ul style="list-style-type: none"> <li>• DC supply</li> <li>• AC supply</li> </ul> Type		S00 ... S3 -- 3RT10 ...-1BB4., 3RH1. ...-1BB40	S00/S0 S00/S0 3RT10 1.-1BF4, 3RT10 2.-1BF4, 3RH1. ...-1BF40	S00/S0 S00/S0 3RT10 1.-1BM4./1BP4., 3RT10 2.-1BM4./1BP4., 3RH1. ...-1BM40/1BP40
Permissible mounting position				
Rated control supply voltage $U_s$ Operating range	V	24 (DC) 0.9 ... 1.1 $U_s$	110 (UC)	220/230 (UC)
Rated frequency/ies with AC supply $f$	Hz $\pm 5\%$	--	50/ 60	50/ 60
Ambient temperature permissible:				
• During storage $T_u$	°C	-40 ... +80		
• During operation				
- Side-by-side mounting without distance $T_u$	°C	-25 ... +50		
- Series-mounting with 5 mm distance $T_u$	°C	-25 ... +60		
OFF-delay <sup>1)</sup> (minimum times at $U_{sp} = 0.9 \times U_s$ , $T_{sp} = 20^\circ\text{C}$ )		Note: In practice the mean value is 1.5 times the minimum time.		
• S00 $t_{off} >$	ms	250	130	600
• S0 $t_{off} >$	ms	150	100	400
• S2 (only for DC supply) $t_{off} >$	ms	90	--	--
• S3 (only for DC supply) $t_{off} >$	ms	70	--	--
Installed capacity C 3RT19 16-2B.01 Capacitor voltage	$\mu\text{F}$ V	2000 35	68 180	68 350
ON-delay (Maximum at $U_{sp} = 0.9 \times U_s$ , $T_{sp} = 20^\circ\text{C}$ )		Note: The total ON-delay = Contactor make-time + $t_{on}$		
• S00 $t_{on} <$	ms	10	60	200
• S0 $t_{on} <$	ms	10	80	250
Mechanical endurance In million operating cycles		30		
Endurance, electrical approx. In million operating cycles		>1		
Switching frequency $z$ max. (at $T_u = 60^\circ\text{C}$ )	$\text{h}^{-1}$	300		
Power loss $P_v$ max. approx.	W	0.4	0.5	1
Surge suppression		With varistor, integrated		
Conductor cross-sections $U_{sp}$ = Coil voltage $T_{sp}$ = Coil temperature		2)		

<sup>1)</sup> Doubling the delay time can be achieved by doubling the capacitance.  
Commercially available capacitors can be used, which can be connected to terminals C+ and Z-.

<sup>2)</sup> See 3RT10 1 contactors, Page 3/23.

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## For 3RT, 3RH Contactors and Contactor Relays

### Accessories for 3RT, 3RH contactors and contactor relays

Contactor	Type	3RT19 26-2P. Pneumatic delay block <sup>1)</sup>	
General data			
Mechanical endurance	in million operating cycles	5	
Electrical endurance at $I_e$	in million operating cycles	1	
Rated insulation voltage $U_i$ (degree of pollution 3)	V	690	
Permissible ambient temperature	During operation	°C	-25 ... +60
	During storage	°C	-50 ... +80
Rated operational currents $I_e$ according to utilization categories EN 60947			
• AC-12 • AC-15/AC-14 at $U_e$		A	10
	up to 230/220 V	A	6
	400/380 V	A	4
	500 V	A	2.5
	690/660 V	A	1.5
• DC-13 at $U_e$	24 V	A	4
	48 V	A	2
	110 V	A	0.7
	220 V	A	0.3
	440 V	A	0.15
Conductor cross-sections			
• Solid, stranded	mm <sup>2</sup>	2 x 0.5 ... 2.5 <sup>2)</sup> or 2 x 2.5 ... 4 <sup>2)</sup>	
• Finely stranded with end sleeve	mm <sup>2</sup>	2 x 0.5 ... 2.5	
• AWG conductors	AWG	2 x 22 ... 12	
• Tightening torque of the terminal screws	Nm	0.8 ... 1.1	
Time delay			
• Accuracy		±10 %	
CSA and UL rated data			
• Rated voltage	V AC	600	
• Switching capacity		A 600, Q 600	

1) For size S0.  
In addition to the pneumatic delay block, no other auxiliary contacts are permitted.

2) If two different conductor cross-sections are connected at one clamping point, then the two cross-sections must lie within the range quoted.  
If identical cross-sections are used, this restriction does not apply.

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Contactors		Type	3RH19 24 Coupling links for mounting on contactors according to IEC 60947/EN 60947		3TX7 090
General data					
Rated insulation voltage $U_i$ (degree of pollution 3)		V	300		
Safe isolation between the coil and the contacts according to EN 60947-1, Appendix N		V AC	Up to 300		
Degree of protection according to EN 60947-1, Appendix C <ul style="list-style-type: none"><li>• Connections</li><li>• Enclosures</li></ul>			IP20 IP40		
Permissible ambient temperature <ul style="list-style-type: none"><li>• During operation</li><li>• During storage</li></ul>		°C °C	-25 ... +60 -40 ... +80		
Conductor cross-section <ul style="list-style-type: none"><li>• Solid</li><li>• Finely stranded with end sleeve</li><li>• Terminal screws</li></ul>		mm <sup>2</sup> mm <sup>2</sup>	2 x (0.5 ... 2.5) 2 x (0.5 ... 1.5) M3		
Short-circuit protection (weld-free protection at $I_k \geq 1$ kA) Fuse links, gL/gG operational class LV HRC 3NA, DIAZED 5SB, NEOZED 5SE		A	6		
Control side					
Rated control supply voltage $U_s$		V DC	24		
Operating range		V DC	17 ... 30		
Power consumption at $U_s$		W	0.5		
Nominal current input		mA	20		
Release voltage		V	≥ 4		
Function display			Yellow LED		
Protection circuit			Varistor		
Load side					
Mechanical endurance		in million operating cycles	20		
Electrical endurance at $I_e$		in million operating cycles	0.1		
Switching frequency		Operating cycles	h <sup>-1</sup>	5000	
Make-time			ms	Approx. 7	
Break-time			ms	Approx. 4	
Bounce time			ms	Approx. 2	
Contact material			AgSnO		
Switching voltage			V AC/DC	24 ... 250	
Permissible residual current of the electronics (for 0 signal)			mA	2.5	
Rated operational current <sup>1)</sup> Continuous thermal current $I_{th}$			A	6	
Rated operational currents $I_e$ according to utilization categories EN 60947					
• AC-15	- at 24 V		A	3	
	- at 110 V		A	3	
	- at 230 V		A	3	
• DC-13	- at 24 V		A	1	
	- at 110 V		A	0.2	
	- at 230 V		A	0.1	
Switching current with resistive load to EN 60255 (relay standard) and EN 60947					
• AC-12	- at 24 V		A	6	
	- at 110 V		A	6	
	- at 230 V		A	6	
• DC-12	- at 24 V		A	6	
	- at 110 V		A	0.3	
	- at 230 V		A	0.2 <sup>1)</sup>	

<sup>1)</sup> Capacitive loads can result in micro-weldings on the contacts.