

3RP1/3RP2 Time relays – electronic 3RP20 Time relays in the SIRIUS design, 45 mm

Function	Contact elements	Time range	Control supply voltage	Order No.	List Price \$
8 functions	1 CO (changeover contact)	0.05 s–100 h	AC DC 24 100–127 V AC	3RP2005-□AQ30	
8 functions	1 CO	0.05 s–100 h	AC DC 24 200–240 V AC	3RP2005-□AP30	
On delay	1 CO	0.05 s–100 h	AC DC 24 100–127 V AC	3RP2025-□AQ30	
On delay	1 CO	0.05 s–100 h	AC DC 24 200–240 V AC	3RP2025-□AP30	
16 functions	2 CO	0.05 s–100 h	24–240 V AC DC	3RP2005-□BW30	

3RP1/3RP2 Time relays – electronic 3RP15 Time relays in an industrial housing, 22.5 mm

8 functions	1 CO (changeover contact)	0.05 s–100 h	12 V DC	3RP1505-□AA40	
8 functions	1 CO	0.05 s–100 h	AC DC 24 100–127 V AC	3RP1505-□AQ30	
8 functions	1 CO	0.05 s–100 h	AC DC 24 200–240 V AC	3RP1505-□AP30	
8 functions	1 CO	0.05 s–100 h	24–240 V AC DC	3RP1505-□AW30	
8 functions	2 CO	0.05 s–100 h	24–240 V AC DC	3RP1505-□RW30 <sup>1)</sup>	
16 functions	2 CO	0.05 s–100 h	AC DC 24 100–127 V AC	3RP1505-□BQ30	
16 functions	2 CO	0.05 s–100 h	AC DC 24 200–240 V AC	3RP1505-□BP30	
16 functions	2 CO	0.05 s–100 h	24–240 V AC DC	3RP1505-□BW30	
16 functions	2 CO	0.05 s–100 h	400–440 V AC	3RP1505-1BT20 <sup>2)</sup>	
On delay	1 CO	0.5–10 s	AC DC 24 100–127 V AC	3RP1511-□AQ30	
On delay	1 CO	0.5–10 s	AC DC 24 200–240 V AC	3RP1511-□AP30	
On delay	1 CO	1.5–30 s	AC DC 24 100–127 V AC	3RP1512-□AQ30	
On delay	1 CO	1.5–30 s	AC DC 24 200–240 V AC	3RP1512-□AP30	
On delay	1 CO	5–100 s	AC DC 24 100–127 V AC	3RP1513-□AQ30	
On delay	1 CO	5–100 s	AC DC 24 200–240 V AC	3RP1513-□AP30	
On delay	1 CO	0.05 s–100 h	AC DC 24 100–127 V AC	3RP1525-□AQ30	
On delay	1 CO	0.05 s–100 h	AC DC 24 200–240 V AC	3RP1525-□AP30	
On delay	2 CO	0.05 s–100 h	42–48 60 V AC DC	3RP1525-□BR30	
On delay	2 CO	0.05 s–100 h	AC DC 24 100–127 V AC	3RP1525-□BQ30	
On delay	2 CO	0.05 s–100 h	AC DC 24 200–240 V AC	3RP1525-□BP30	
On delay	2 CO	0.05 s–100 h	24–240 V AC DC	3RP1525-□BW30	
On delay, 2-wire	1 NO contact, solid-state	0.05–240 s	24–66 V AC DC	3RP1527-□EC30	
On delay, 2-wire	1 NO contact, solid-state	0.05–240 s	90–240 V AC DC	3RP1527-□EM30	
Off delay with auxiliary voltage	1 CO	0.5–10 s	AC DC 24 100–127 V AC	3RP1531-□AQ30	
Off delay with auxiliary voltage	1 CO	0.5–10 s	AC DC 24 200–240 V AC	3RP1531-□AP30	
Off delay with auxiliary voltage	1 CO	1.5–30 s	AC DC 24 100–127 V AC	3RP1532-□AQ30	
Off delay with auxiliary voltage	1 CO	1.5–30 s	AC DC 24 200–240 V AC	3RP1532-□AP30	
Off delay with auxiliary voltage	1 CO	5–100 s	AC DC 24 100–127 V AC	3RP1533-□AQ30	
Off delay with auxiliary voltage	1 CO	5–100 s	AC DC 24 200–240 V AC	3RP1533-□AP30	
Off delay without auxiliary voltage	1 CO	0.05–600 s	24 V AC DC	3RP1540-□AB31	
Off delay without auxiliary voltage	1 CO	0.05–600 s	100–127 V AC DC	3RP1540-□AJ31	
Off delay without auxiliary voltage	1 CO	0.05–600 s	200–240 V AC DC	3RP1540-□AN31	
Off delay without auxiliary voltage	1 CO	0.05–600 s	24–240 V AC DC	3RP1540-□AW31	
Off delay without auxiliary voltage	2 CO	0.05–600 s	24 V AC DC	3RP1540-□BB31	
Off delay without auxiliary voltage	2 CO	0.05–600 s	100–127 V AC DC	3RP1540-□BJ31	
Off delay without auxiliary voltage	2 CO	0.05–600 s	200–240 V AC DC	3RP1540-□BN31	
Off delay without auxiliary voltage	2 CO	0.05–600 s	24–240 V AC DC	3RP1540-□BW31	
Clock-pulse relay	1 CO	0.05 s–100 h	42–48 60 V AC DC	3RP1555-□AR30	
Clock-pulse relay	1 CO	0.05 s–100 h	AC DC 24 100–127 V AC	3RP1555-□AQ30	
Clock-pulse relay	1 CO	0.05 s–100 h	AC DC 24 200–240 V AC	3RP1555-□AP30	
Star delta with run-on function	3 x 1 NO contact	1–20 s, 30–600 s (run-on)	AC DC 24 100–127 V AC	3RP1560-□SQ30	
Star delta with run-on function	3 x 1 NO contact	1–20 s, 30–600 s (run-on)	AC DC 24 200–240 V AC	3RP1560-□SP30	
Star delta	1 NO contact + 1 NO contact	1–20 s	AC DC 24 100–127 V AC	3RP1574-□NQ30	
Star delta	1 NO contact + 1 NO contact	1–20 s	AC DC 24 200–240 V AC	3RP1574-□NP30	
Star delta	1 NO contact + 1 NO contact	3–60 s	AC DC 24 100–127 V AC	3RP1576-□NQ30	
Star delta	1 NO contact + 1 NO contact	3–60 s	AC DC 24 200–240 V AC	3RP1576-□NP30	

<sup>1)</sup> Positively-driven and hard-gold-plated relay contacts

<sup>2)</sup> This device is only available with screw terminals

Screw terminal  1  
Cage Clamp terminal  2

### 3RP20/3RP15/7PV

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

Type		3RP20 05 3RP20 25	3RP15 05 3RP15 31 3RP15 32 3RP15 33	3RP15 11 3RP15 12 3RP15 13 3RP15 25 3RP15 55	3RP15 40	3RP15 60	3RP15 74 3RP15 76	3RP15 27	
<b>Rated insulation voltage</b> Pollution degree 3 Overvoltage category III acc. to DIN VDE 0110	AC V	300; 500 for 3RP15 05-1BT20							
<b>Working range of excitation</b> 1)		0.85 to 1.1 x $U_s$ for AC; 0.8 to 1.25 x $U_s$ for DC 0.95 to 1.05 x rated frequency							
<b>Rated power</b> Power consumption at 230 V AC, 50 Hz	W VA	1 4	2 6	2 6	2 2 <sup>2)</sup>	2 6	2 6	1 1	
<b>Rated operational current <math>I_e</math></b> AC-15 at AC 230 V, 50 Hz AC-14; DC-13 DC-13 at 24 V DC-13 at 48 V DC-13 at 60 V DC-13 at 110 V DC-13 at 230 V	A	3 <sup>3)</sup> – 1 0.45 0.35 0.2 0.1						– 0.01 to 0.6 – – – – –	
<b>Required DIAZED fuse</b> 4) Utilisation category	g/L/gG A	4							
<b>Operating frequency</b> • when loaded with $I_e$ AC 230 V • when loaded with 3RT10 16 contactor, AC 230 V	1/h 1/h	2500 5000							
<b>Recovery time</b>	ms	150 <sup>5)</sup>				300	150	50	
<b>Minimum ON period</b>	ms	35	35 <sup>6)</sup>	–	200 <sup>7)</sup>	–			
<b>Off-state current</b> with non-conducting output	mA								≤5
<b>Voltage drop</b> with conducting output	V								≤3.5
<b>Short-time loading capacity</b>	A								10 (up to 10 ms)
<b>Setting accuracy</b> referred to upper limit of scale		typical ± 5 %							
<b>Repeat accuracy</b>		≤ v ± 1 %							
<b>Mechanical endurance</b>	operating cycles	30 x 10 <sup>6</sup>							100 x 10 <sup>6</sup>
<b>Permissible ambient temperature</b>	in operation when stored	°C °C	–25 to +60 –40 to +85						
<b>Degree of protection</b> acc. to EN 60 529		cover IP 40 terminals IP 20							
<b>Conductor cross-sections</b>	<b>Main conductors, auxiliary conductors</b>								
• Screw connection (to connect 1 or 2 conductors for standard screwdriver size 2 and Pozidriv 2)	solid	mm <sup>2</sup>	2 x (0.5 to 1.5) 2 x (0.75 to 4)	1 x (0.5 ... 4) 2 x (0.5 ... 2.5)					
	finely stranded with end sleeve	mm <sup>2</sup>	2 x (0.5 to 2.5)	1 x (0.5 ... 2.5) 2 x (0.5 ... 1.5)					
	solid or stranded AWG conductors	AWG	2 x (18 to 14)	2 x (20 ... 14)					
	terminal screw		M 3	M 3.5					
• Cage Clamp connection (1 or 2 wire connection; for 22.5 mm time-delay relay use screwdriver with blade width 3 mm or 8WA2 803 opening tool)	solid	mm <sup>2</sup>	2 x (0.25 to 2.5)	2 x (0.25 ... 1.5)					
	finely stranded	mm <sup>2</sup>	2 x (0.25 to 1)	2 x (0.25 ... 1)					
	• with end sleeve	mm <sup>2</sup>	2 x (0.25 to 1)	2 x (0.25 ... 1)					
	• without end sleeve	mm <sup>2</sup>	2 x (0.25 to 1.5)	2 x (0.25 ... 1.5)					
	solid or stranded AWG conductors	AWG	2 x (24 to 14)	2 x (24 ... 16)					

1) If nothing else is stated.

2) Maximum inrush current 1 A/100 ms.

3) For 3RP15 05-R: NC contact →  $I_e = 1$  A

4) Without any welds acc. to IEC 60 947-5-1.

5) With 3RP15 05-.BW30/ .AW30/ .RW30 and 3RP15 25-.BW30, 10 to 250 ms, voltage-dependent.

6) Minimum ON period with 3RP15 00-.BW30, 150 ms until instantaneous contact has switched.

7) For correct operation, observe minimum ON period.

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

Type	3RP20 05 3RP20 25	3RP15 05 3RP15 31 3RP15 32 3RP15 33	3RP15 11 3RP15 12 3RP15 13 3RP15 25 3RP15 55	3RP15 40	3RP15 60	3RP15 74 3RP15 76	3RP15 27
<b>Permissible mounting position</b>	any						
<b>Shock resistance</b> Half sine acc. to IEC 60 068-2-27	g/ms	15/11					
<b>Vibration performance acc. to IEC 60 068-2-6</b>	Hz/mm	10-55 / 0.35					
<b>EMC tests</b> acc. to basic specification	IEC 61 000-6-2 / EN 50 081-1						

Type	7PV33 48	7PV41 48	7PV43 48
<b>Rated insulation voltage</b> Overvoltage category C acc. to DIN VDE 0110	AC V	250	
<b>Working range of excitation</b>	+ 10 ... - 15 %	24 V: - 15 ... + 30 % 115/230 V: - 15 ... + 10 %	
<b>Rated power</b> Power consumption at AC 230 V, 50 Hz	W VA	1 11	
<b>Rated operational current <math>I_e</math></b> AC-1 at AC 230 V, 50 Hz	A	8	
<b>Operating frequency</b> • when loaded with $I_e$ , AC 230 V • when loaded with 3RT10 16 contactor, AC 230 V	1/h 1/h	600	
<b>Recovery time</b>	ms	50	100
<b>Minimum ON period</b>	ms	50	100
<b>Setting accuracy</b> with reference to upper limit of scale		± 0.03 %, ± 10 ms	± 10 %
<b>Repeat accuracy</b>		± 0.03 %, ± 10 ms	± 2 %
<b>Mechanical endurance</b> operating cycles		5 x 10 <sup>6</sup>	2 x 10 <sup>7</sup>
<b>Permissible ambient temperature</b> in operation when stored	°C °C	- 10 ... +60 - 30 ... +70	- 20 ... +60 - 25 ... +70
<b>Degree of protection</b> acc. to EN 60 529		IP 65	IP 50
<b>Permissible mounting position</b>		any	