

A timed perfection



Electronic timer

Type 3RP

Answers for industry.

SIEMENS

Introduction

Siemens offers 3RP15 electronic timers which meet the various control timing requirements of industry. These timers comply with IEC 60 947-5-1 IEC 61 000-6-2/EN 50 081-1 (EMC) Carry CE marking

Range

- ON delay:** **Control supply voltage options -**
Discrete voltages
Universal voltage of 24 to 240V ac/dc
Time ranges - 0.5 -10 sec, 5 - 100 sec
Universal time range of 0.05 sec to 100Hr
- OFF delay:** **Control supply voltage options -**
Discrete voltages
Time ranges - 0.5 - 10 sec, 5 - 100 sec
- Star Delta:** **Control supply voltage options -**
Discrete voltages
Universal voltages of 200 - 240V ac/dc,
380 - 440Vac/dc and 230 - 400V ac/dc
Time ranges - 3 - 60sec with 50 msec changeover delay
- Multifunction:** 1 timer 8 functions (ON delay, OFF delay, ON+OFF delay, Cyclic, Make Contact, Break contact, Pulse shaping, Additive ON delay)
Control supply voltage options -
Universal voltage of 24 - 240V ac/dc
Time ranges - Universal time range - 0.05 sec to 100Hrs

Application

3RP15 electronic timers can be used for all delayed switching applications in control, starting and protection circuits. They are ideal for use in application like machine tools, material handling, process control and motor control.

With multifunction timer, you can configure the same timer as per your application need. Thus one timer is suited for many applications (refer timing diagram)

Benefits

- **Reduction in inventory cost** (upto 80%) due to universal time and universal voltage ON delay timers.
- **High accuracy** ($\leq \pm 1\%$ repeat accuracy & $\leq \pm 5\%$ setting accuracy) and switching reliability.
- **High mechanical endurance** of 30×10^6 operations ensures trouble free operation
- **Integral surge suppression** – No voltage surges during switching makes them ideal for use with electronic circuits
- Clear visual **status indication** through 2 separate LEDs both for actuation of control supply and the change over status.
- High level of Electromagnetic compatibility (EMC) i.e. maximum immunity to interferences.
- **No more failures** of contactors in Star Delta starting during changeover

- **Sleek 22.5mm wide** housing and compact design saves panel space.

Thus 3RP timers ensure unmatched reliability and offer excellent 'Value for Money'

Note

- Changing the time setting ranges and the functions will only be effective when carried out in de-energised (OFF) state.
- Start input B1 or B3 must only be triggered when the supply voltage is applied.
- OFF delay timers are with aux. voltage (refer wiring diagram fig.1). Same potential must be applied to A1 and B1, or A3 and B3.
- With the two-voltage version, only one voltage range must be connected.
- The activation of loads parallel to the start input is not permissible when using AC control voltage (see diagram below).

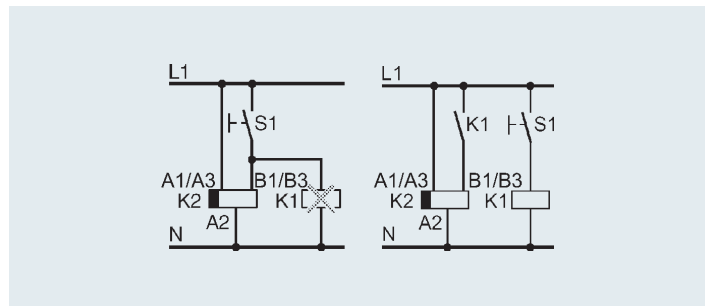
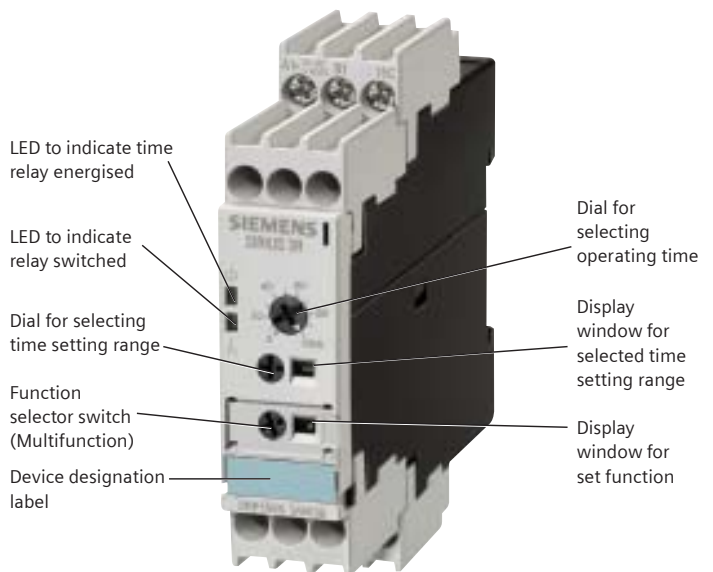


Fig.1

Mounting

3RP electronic timers are suitable for snap mounting onto 35 mm standard DIN rails. Accessory for mounting 3RP timers on base plate is available and can be ordered separately.




Layout

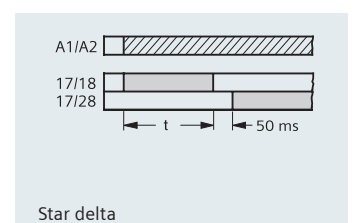
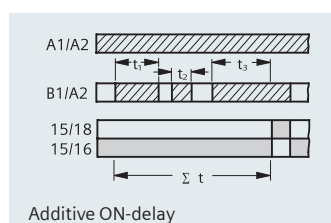
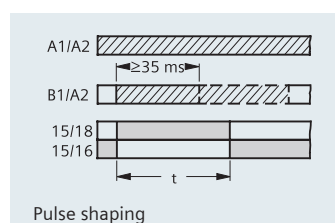
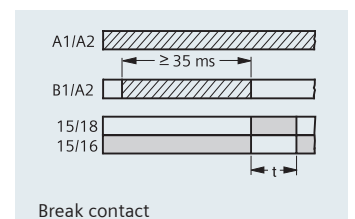
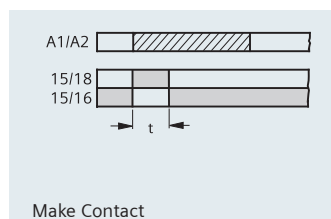
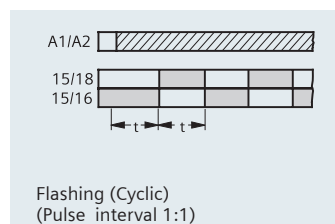
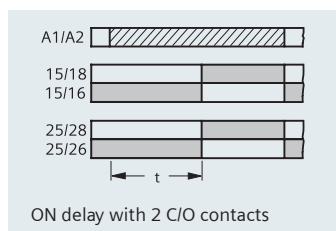
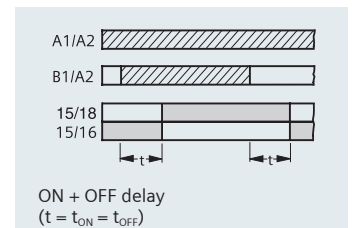
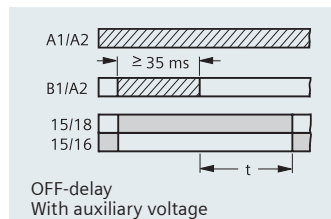
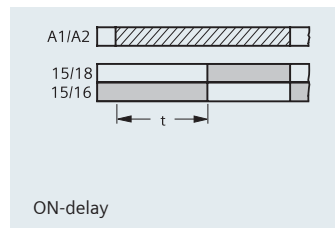


Technical data

Type		3RP15 05 3RP15 31 3RP15 33	3RP15 11 3RP15 13 3RP15 25	3RP15 76
Rated insulation voltage (Pollution degree 3) Overvoltage category III acc. to DIN VDE 0110	V AC	300		
Permissible ambient temperature	during operation during storage	°C °C	-25 to +60 -40 to +80	
Mechanical endurance	operating cycles	30 x 10 ⁶		
Rated operational currents I_e AC-15 at 230 V AC, 50 Hz DC-13 at 24 V DC-13 at 110 V DC-13 at 230 V	A A A A	3 1 0.2 0.1		
Control voltage tolerance	V Hz	0.85 - 1.1 x U _s for AC 50/60Hz; 0.8 - 1.25 x U _s for 24VDC 0.95 to 1.05 x rated frequency		
Operating frequency at rated current I _e , 230 V AC	1/h	2500		
Setting accuracy referred to upper limit of scale Repeat accuracy		< ±5% < ±1%		
Recovery time Minimum ON period	ms ms	150 35	– –	150 –
Degree of protection	cover terminals	IP 40 IP 20		
Rated power Power consumption at 230 V AC, 50 Hz	W VA	2 6		
Rated control fuse - Utilization category gL/gG	A	4		
Permissible mounting position		any		
Conductor cross-sections – main / auxiliary conductors	solid finely stranded with end sleeve solid or stranded AWG conductors terminal screw tightening torque	mm ² mm ² AWG Nm	1x(0.5-4), 2x(0.5-2.5) 1x(0.5-2.5), 2x(0.5-1.5) 2x(20-14) M3 0.8 to 1.2	

Timing Diagrams

-  time relay energized
-  contact closed
-  contact open

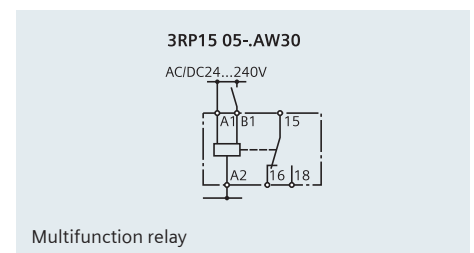
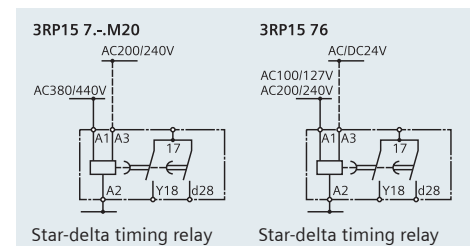
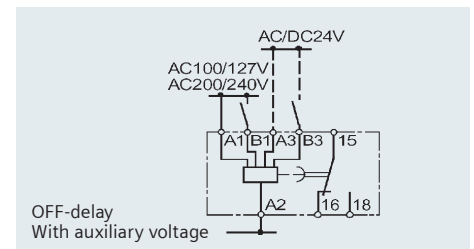
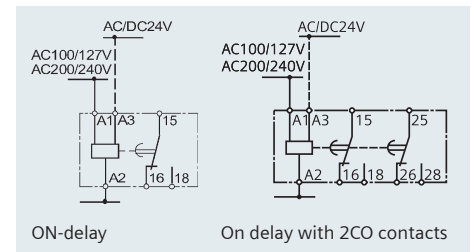


Selection and ordering data

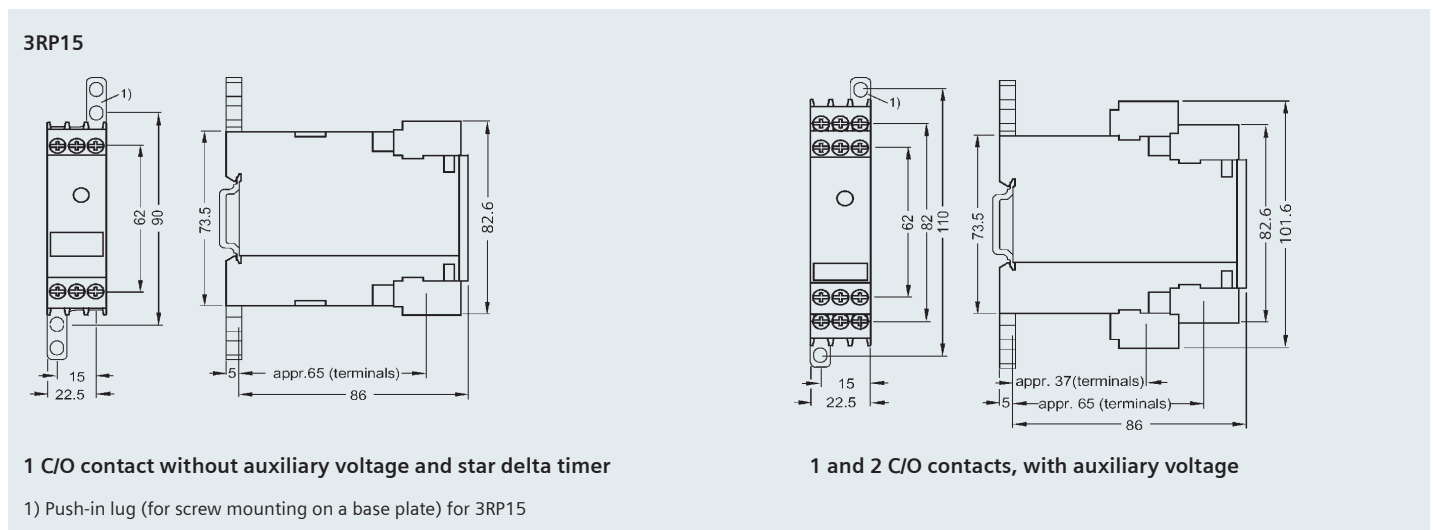
Time range	Control Voltage		Auxiliary contacts	Type
	AC (50/60Hz)	DC		
ON Delay timers				
0.5 - 10 sec	24/100-127	24	1 C/O	3RP15 11-1AQ30 8K
	24/200-240	24	1 C/O	3RP15 11-1AP30 8K
5 - 100 sec	24/100-127	24	1 C/O	3RP15 13-1AQ30 8K
	24/200-240	24	1 C/O	3RP15 13-1AP30 8K
0.05sec to 100Hrs (15 time setting ranges)	24/100-127	24	1 C/O	3RP15 25-1AQ30 8K
	24/200-240	24	1 C/O	3RP15 25-1AP30 8K
	24 - 240	24 - 240	2 C/O	3RP15 25-1BW30 8K
OFF Dealy timers				
0.5 - 10 sec	24/100-127	24	1 C/O	3RP15 31-1AQ30 8K
	24/200-240	24	1 C/O	3RP15 31-1AP30 8K
5 - 100 sec	24/100-127	24	1 C/O	3RP15 33-1AQ30 8K
	24/200-240	24	1 C/O	3RP15 33-1AP30 8K
Multifunction timer ¹⁾				
0.05sec to 100Hrs (15 time setting ranges)	24 - 240	24 - 240	1 C/O	3RP15 05-1AW30 8K
Label set - 8 functions	On delay, Off delay, On+Off delay, flashing, pulse make contact, pulse break contact, pulse shaping and additive ON delay			3RP19 01-0A 8K
Star Delta timers				
3 - 60 sec	24/100-127	24	1NO inst. & 1NO delayed	3RP15 76-1NQ30 8K
	24/200-240	24		3RP15 76-1NP30 8K
	200-240/380-440V AC			3RP15 76-1NM20 8K
	230-400V AC			3RP15 76-1NP20 8K
Accessory				
Push-in lug (for screw mounting on a base plate) for 3RP15				3RP19 03 8K

1) Please order label set alongwith multifunction timer (one per timer)

Wiring diagrams



Dimensions



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