

## RS PRO Timer Relays

- RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

## Product Description

- Multifunction timer relay for universal use in automation, control and regulation or in house installations
- Universal supply voltage AC/DC 12 – 240 V
- Noiseless switching output
- Comfortable and well-arranged function and time-range setting by rotary switches.
- Time scale 0.1 s - 10 days divided into 10 ranges:  
s - 1 s / 1 s - 10 s / 0.1 min - 1 min / 1 min - 10 min / 0.1 hrs - 1 h / 1 h - 10 hrs / 0.1 day - 1 day / 1 day - 10 days / only ON / only OFF)
- Output contact: 1× static contactless output (triac) 1.5 A, switches
- potential A1
- Multifunction red LED flashes or shines depending on the operating states

## Power supply

<b>Supply terminals:</b>	A1-A2
<b>Supply voltage*:</b>	AC/DC 12 – 240 V (AC 50-60 Hz)
<b>Consumption (max.):</b>	3 VA/0.7 W
<b>Supply voltage tolerance:</b>	-15 %; +10 %
<b>Supply terminals:</b>	A1-A2

## Time circuit

<b>Number of functions:</b>	10
<b>Time ranges:</b>	0.1 s – 10 days
<b>Time setting:</b>	rotary switch and potentiometer
<b>Time deviation:</b>	5 % – mechanical setting
<b>Repeat accuracy:</b>	0.2 % – set value stability
<b>Temperature coefficient:</b>	0.01 %/°C, at = 20 °C (0.01 %/°F, at = 68 °F)

## Output

<b>Contact type:</b>	1× static contactless output (triac)
<b>Current rating:</b>	1.5 A/AC1
<b>Breaking capacity:</b>	375 VA/AC1
<b>Inrush current:</b>	60 A/< 10 ms
<b>Switching voltage:</b>	250 V AC
<b>Power dissipation (max.):</b>	1.4 W
<b>Voltage drop across switch:</b>	max. 0.9 V/I <sub>max</sub> .
<b>Load to terminal B1:</b>	Yes/I <sub>max</sub> . 1.5 A
<b>Electrical lifetime (AC1):</b>	100.000.000 ops.

## Control

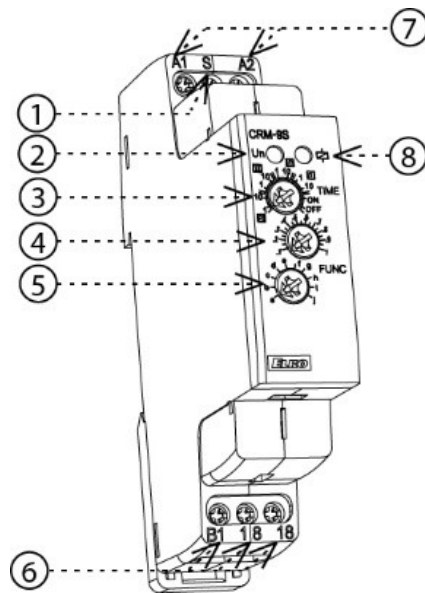
<b>Control terminals:</b>	A1-S
<b>Load between S-A2:</b>	Yes
<b>Impulse length:</b>	min. 25 ms/max. unlimited
<b>Reset time:</b>	max. 150 ms

## Other information

<b>Operating temperature:</b>	−20 °C .. +55 °C
<b>Storage temperature:</b>	−30 °C .. +70 °C
<b>Operating position:</b>	any
<b>Mounting:</b>	DIN rail EN 60715
<b>Protection degree:</b>	IP40 front panel/IP20 terminals
<b>Overvoltage category:</b>	III.
<b>Pollution degree:</b>	2
<b>Cross-wire section – solid/ stranded with ferrule (mm²):</b>	max. 1× 2.5, 2× 1.5/ max. 1× 2.5 (AWG 12)
<b>Dimensions:</b>	90 × 17.6 × 64 mm (3.5" × 0.7" × 2.5")
<b>Weight:</b>	55 g (1.95 oz)
<b>Standards:</b>	EN 61812-1

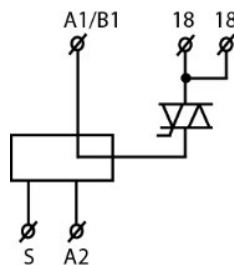
\* Load can only be connected to AC voltage, see connection diagram 2.

## Description

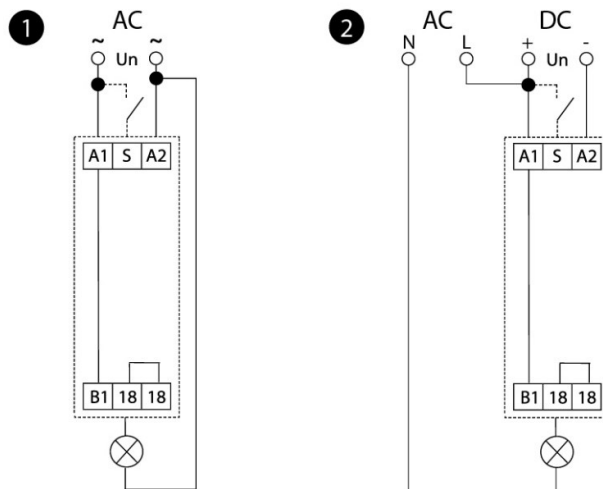


1. Control input (S)
2. Supply voltage indication
3. Time range setting
4. Fine time setting
5. Function setting
6. Output contact (B1-18-18)
7. Supply voltage terminals
8. Indication of operating states

## Symbol

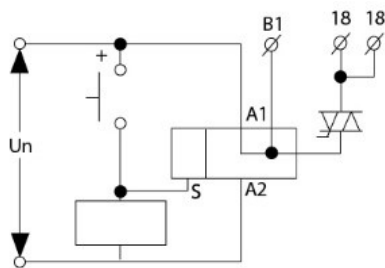


## Connection



### Possibility to connect load onto controlling input:

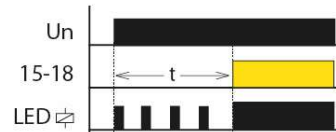
It is possible to connect the load (e.g.: contactor) between terminals S-A2, without any interruption of correct relay function.



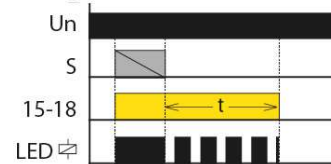
## Description

Signaling examples:

Function **a**



Function **e**



## Functions



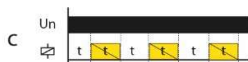
### ON DELAY

When the input voltage  $U$  is applied, timing delay  $t$  begins. Relay contacts  $R$  change state after time delay is complete. Contacts  $R$  return to their shelf state when input voltage  $U$  is removed. Trigger switch is not used in this function.



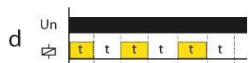
### INTERVAL ON

When input voltage  $U$  is applied, relay contacts  $R$  change state immediately and timing cycle begins. When time delay is complete, contacts return to shelf state. When input voltage  $U$  is removed, contacts will also return to their shelf state. Trigger switch is not used in this function.



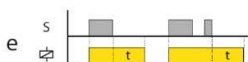
### FLASHER - OFF first

When input voltage  $U$  is applied, time delay  $t$  begins. When time delay  $t$  is complete, relay contacts  $R$  change state for time delay  $t$ . This cycle will repeat until input voltage  $U$  is removed. Trigger switch is not used in this function.



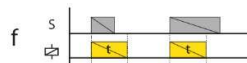
### FLASHER - ON first

When input voltage  $U$  is applied, relay contacts  $R$  change state immediately and time delay  $t$  begins. When time delay  $t$  is complete, contacts return to their shelf state for time delay  $t$ . This cycle will repeat until input voltage  $U$  is removed. Trigger switch is not used in this function.



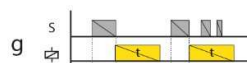
### OFF DELAY

Input voltage  $U$  must be applied continuously. When trigger switch  $S$  is closed, relay contacts  $R$  change state. When trigger switch  $S$  is opened, delay  $t$  begins. When delay  $t$  is complete, contacts  $R$  return to their shelf state. If trigger switch  $S$  is closed before time delay  $t$  is complete, then time is reset. When trigger switch  $S$  is opened, the delay begins again, and relay contacts  $R$  remain in their energized state. If input voltage  $U$  is removed, relay contacts  $R$  return to their shelf state.



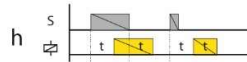
### SINGLE SHOT

Upon application of input voltage  $U$ , the relay is ready to accept trigger signal  $S$ . Upon application of the trigger signal  $S$ , the relay contacts  $R$  transfer and the preset time  $t$  begins. During time-out, the trigger signal  $S$  is ignored. The relay resets by applying the trigger switch  $S$  when the relay is not energized.



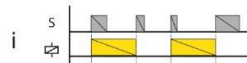
### SINGLE SHOT falling edge

Upon application of input voltage  $U$ , the relay is ready to accept trigger signal  $S$ . Upon application of the trigger signal  $S$ , the relay contacts  $R$  transfer and the preset time  $t$  begins. At the end of the preset time  $t$ , the relay contacts  $R$  return to their normal condition unless the trigger switch  $S$  is opened and closed prior to time out  $t$  (before preset time elapses). Continuous cycling of the trigger switch  $S$  at a rate faster than the preset time will cause the relay contacts  $R$  to remain closed. If input voltage  $U$  is removed, relay contacts  $R$  return to their shelf state.



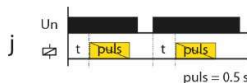
### ON/OFF DELAY

Input voltage  $U$  must be applied continuously. When trigger switch  $S$  is closed, time delay  $t$  begins. When time delay  $t$  is complete, relay contacts  $R$  change state and remain transferred until trigger switch  $S$  is opened. If input voltage  $U$  is removed, relay contacts  $R$  return to their shelf state.



### MEMORY LATCH

Input voltage  $U$  must be applied continuously. Output changes state with every trigger switch  $S$  closure. If input voltage  $U$  is removed, relay contacts  $R$  return to their shelf state.



### PULSE GENERATOR

Upon application of input voltage  $U$ , a single output pulse of 0.5 seconds is delivered to relay after time delay  $t$ . Power must be removed and reapplied to repeat pulse. Trigger switch is not used in this function.