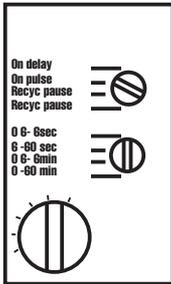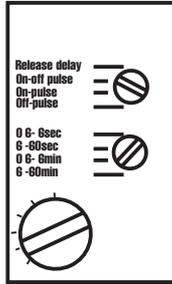# RS
Instruction Leaflet

Multi-function timers

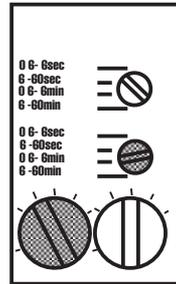### RS stock no. 341-373, 341-389 & 341-395

A range of multi-function timers for control applications. The timers snap-fit onto symmetric DIN rail and may be housed in enclosures for modular equipment (DIN 43 880).
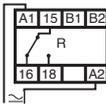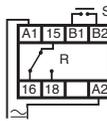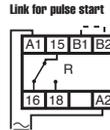

341-373

341-389

341-395

Supply

Supply

Supply

Functions

*On delay
*On pulse (1)
*Symmetrical
 Recycler-
 Pause or pulse start

*Release delay
*On pulse (2)
*Off pulse
*On-Off pulse

*Asymmetrical
 recycler-
 pause start
*Asymmetrical
 Recycler-
 pulse start

Notes

Terminals B1 and B2 are not galvanically separated from the supply input A1 and A2.
'On pulse (2)' is also known as 'On pulse (constant supply)'.
'Release delay' is also known as 'Off delay (constant supply)'.

See overleaf for full descriptions.

Function diagrams for 341-389

release delay

The supply is connected permanently to the timer. A switch 'S' is used to control the timer function (refer to wiring diagram). When 'S' is closed the output relay 'R' is energised. The timing period is initiated when 'S' is opened 'R' remains energised until the time set has elapsed.
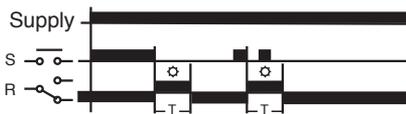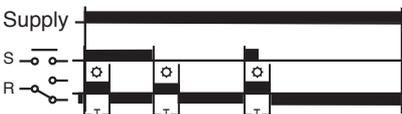
on pulse (2)

The supply is connected permanently to the timer. A switch 'S' is used to control the timer function (refer to wiring diagram). When 'S' is closed, the output relay 'R' will energise and time out irrespective of whether 'S' is opened before or after the set time has elapsed. To re-energise 'R' switch must be opened and then re-closed.

off pulse

The supply is connected permanently to the timer. A switch 'S' is used to control the timer function (refer to wiring diagram). Closing 'S' has no effect on the output relay 'R'. This relay energises and times out when 'S' is opened. If 'S' is pulsed during the time-out period it will have no effect on 'R'.
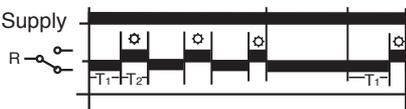
on-off pulse

The supply is connected permanently to the timer. A switch 'S' is used to control the timer function (refer to wiring diagram). The output relay 'R' is triggered by opening or closing 'S'. Once 'R' is triggered the time-out period cannot be interrupted by changing the state of 'S'.

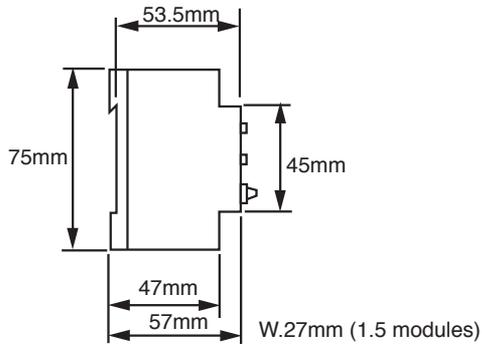## Function diagrams for 341-395

asymmetrical recycler

Pause Start:

When the supply is connected and the set pause time has elapsed, the output relay 'R' is energised. 'R' remains energised for the set pulse time period. The sequence repeats until the supply is interrupted.

T_1 = pause time, T_2 = pulse time

Figure 1 **Dimensions**

53.5mm

75mm

45mm

47mm

57mm

W.27mm (1.5 modules)

Function diagrams for 341-373
### on delay

Supply

R

T   T

The timing period starts when the supply is connected. After elapse of time set, the output relay 'R' is energised. When the supply is interrupted 'R' is de-energised. If this occurs before the time set has elapsed, the timer resets.

on pulse (1)

Supply

R

T   T
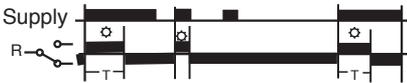
When the supply is connected the output relay 'R' is energised and the timing period starts. After elapse of time set, 'R' is de-energised. If the supply is interrupted before the set time has elapsed, 'R' is de-energised.

symmetrical recycler

Pause Start:

Supply

R

T T T   T T
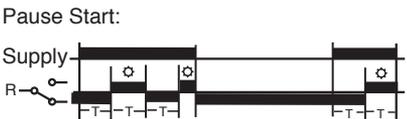
When the supply is connected the timer starts working with pause and pulse intervals of equal length, starting with a pause or pulse dependent on timer setting.

Pause Start:

Supply

R

T T T   T

Pulse Start: (Link terminals B1 and B2)

Supply

R

T_1 T_2 T_1 T_2
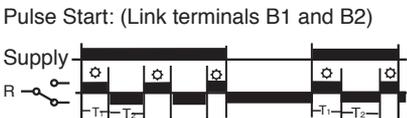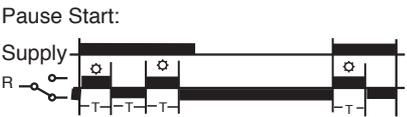
When the supply is connected the output relay 'R' is energised for the set pulse time period. 'R' then de-energises for the set pause time period. The sequence repeats until the supply is interrupted.

T_1 = pulse time, T_2 = pause time

4

Time setting

A 4-position selector switch on the front of the timer enables any one of the time ranges to be selected. Exact adjustment is made using the larger adjustment knob, scaled 1-6. On timer 341-395 a separate set of controls is provided for 'pulse' and 'pause'.

Linearity between individual time ranges permits accurate setting of long time periods (6-60 min.range) by initially setting a up shorter time period, eg 30 minutes setting may be achieved by selecting the 6-60 sec. range, adjusting to 30 seconds using a stopwatch and finally re-setting the time range to 6-60 min. leaving the adjustment knob at the same set point.

Technical specifications

Supply voltage
   nominal   12.0-240V $\sim$ or $=$
   max./min. limits   10.5-265V $\sim$ or $=$

Timer accuracy
  (constant conditions)   0.5% of full range
  Temperature effect   0.15% °C
  Ambient temperature range   -20°C to +60C
  Reset time   100 ms max.
  Setting accuracy   + -10%

Relay contacts   S.P.D.T.
  Material   Silver cadmium oxide
  Maximum ratings   8.0A, 240V $\sim$ (cos Ø = 1)
                          6.5A, 240V $\sim$ (cos Ø = 0.7)

Terminals   Screw type with self-lifting clamp, shrouded
                          for finger and back of hand protection (VDE 0106).
                          Max. conductor size $4mm^2$.

Electrical life 1×10^5 ops. (tested at 220V $\sim$ with an 8A resistive load).

Duty cycle   100% to IEC 255-0-20 class 1c.

LED indication   Indication on front of timer for output relay energised (shown as ✿ in function diagrams).