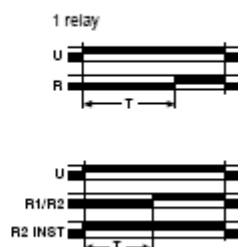# Function Diagram

Multifunction: A, At, B, C, H, Ht, Di, D, Ac, Bw

Function A: Delay on energisation

Single timing cycle which begins on energisation.

The output changes state after timing.

1 relay

2 relays timed or
1 relay timed and 1 instantaneous

Function Ac: Timing after closing and opening of control contact

After energisation, closure of the control contact causes the timing period T to commence and output relay R (or the load) changes state at the end of this interval. When contact C (Y1) opens, relay R resets after a second timing period T. .

1 relay

2 relays timed or
1 relay timed and 1 instantaneous

Function At: Timing on energisation with memory

Provides a cumulative time for contact opening.

The output changes states at the end of the set time.

1 relay

$T = t1 + t2$

2 relays timed or
1 relay timed and 1 instantaneous

$T = t1 + t2$

Function B: Timing on impulse one shot
On pulse (with constant supply)

After energisation; a pulse (≥ 50 ms) or a maintained control contact will cause the output to change state which reverts to the rest position at the end of timing.

1 relay

N.B. : this process enables shortening or lengthening of a signal.

2 relays timed or
1 relay timed and 1 instantaneous

Function Bw: Pulse output (adjustable)

AOutput relay R (or the load) changes state, and remains in the changed-over state for the timing period, both when control contact C (Y1) closes and when it opens.
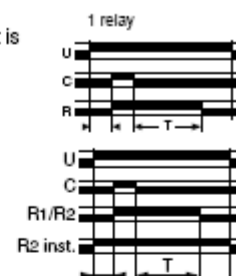
1 relay

2 relays timed or
1 relay timed and 1 instantaneous
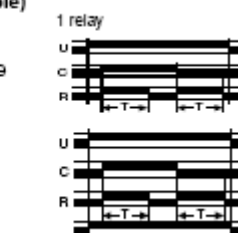
Function C: Timing after impulse
Delay OFF (with constant supply

After energisation, once the control contact is closed the output state changes.
Timing will only begin on the re-opening of this control contact (one shot).
Relay R returns to its initial position at the end of the timing period.

1 relay

2 relays timed or
1 relay timed and 1 instantaneous

Function D or Di: Flip-flop

Repetitive cycle which switches the output alternately between the rest and operating position for equal time bases.
$T1 + T2 = T$ total

Function D: the cycle begins with the output in rest position. Pause start.

1 relay

2 relays timed or
1 relay timed and 1 instantaneous

Function Di: the cycle begins with the output in the operating position. Pulse start.

1 relay

2 relays timed or
1 relay timed and 1 instantaneous

Function H: Timing on energisation
Interval timer - one shot

On energisation, the output changes state, remains in that state for the duration of timing and resets at the end of the single cycle.

1 relay

N.B. This is complementary to function A.

2 relays timed or
1 relay timed and 1 instantaneous

Function Ht : Delay on energisation
with memory

Provides a cumulative time for contact opening.
On energisation, the output changes state, remains in that state for the duration of timing and resets at the end of the single cycle.

1 relay

$T = t1 + t2$

2 relays timed or
1 relay timed and 1 instantaneous

$T = t1 + t2$