

SLIM LINE DIN RAIL MODULAR MULTI VOLTAGE, MULTI TIME RANGE, MULTI FUNCTION TIMER

PRODUCT GROUP
B

TYPE: MINI-1M (spco)

FEATURES

- Din rail mounted
- Modern modular design
- Width 18mm (1 module)
- SPCO output
- Multi voltage 24-250VAC/DC
- Multi time range 0.1 sec to 10 days
- 8 selectable functions
- Dual LED indication
- Low power consumption
- UKCA & CE marked



DESIGNED & MANUFACTURED IN THE UK

DESCRIPTION & MODE OF OPERATION

An attractive modern designed multi "everything" timer in a Din rail mounted modular style housing of 1 module width (18mm). The housing is of the same profile and design style as the Foxtam larger "UNI" modular range, thus achieving a cohesive family appearance. A selector switch is provided to select eight different time ranges from 0.1 sec to 10 days, fine time setting on a selected range is then achieved via a percentage potentiometer. A further selector is then used to select one of eight different functions. A green supply on LED is featured along with a red LED to indicate relay output status. All terminal details and the function selection information, along with the UKCA & CE mark is clearly marked on the sides of the housing.

On functions utilising the trigger input "S", this input should preferably be clean. However, within reason small loads can be connected between "S" & "A2", such as relay coils or indicator lights.

SPECIFICATIONS

Timing:
 Time ranges: 0.1sec to 10 days
 Repeat accuracy: $\pm 0.5\%$ of set value
 Reset time: Max 100mSec

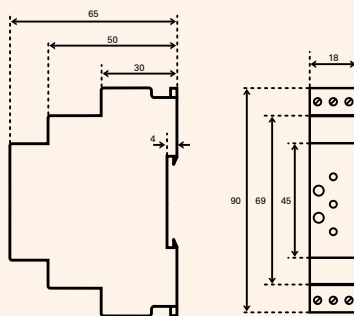
Relay outputs:
 Output contacts: 8Amps/250V AC1
 Max breaking capacity: 2000VA
 Mechanical life: 30 Million ops
 Electrical life: 200K ops at max rated load

Supply voltage:
 Supply voltage: 24-250V AC/DC
 Max power consumption: 5VA / 2.8W
 Insulation: 2.5KV 50Hz impulse

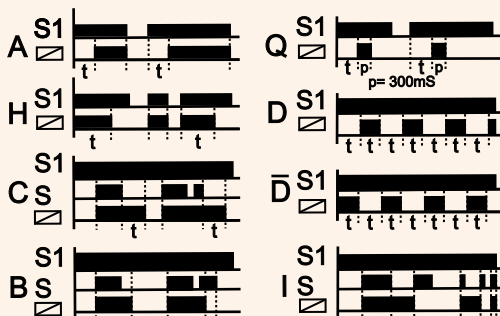
Trigger Input (S):
 Max consumption: 5mA
 Min input time: 25mSec
 Max input time: Continuous

General:
 Operating temperature: -20°C to +65°C
 Storage temperature: -20°C to +65°C
 Max cable size: 2.5mm
 UKCA & CE marked: Yes
 In accordance with: EN61000-6-1: 2007
 EN61000-6-3: 2007
 EN61010-1: 2002
 Housing material: Polycarbonate, Auto extinguishable to UL94 V-0

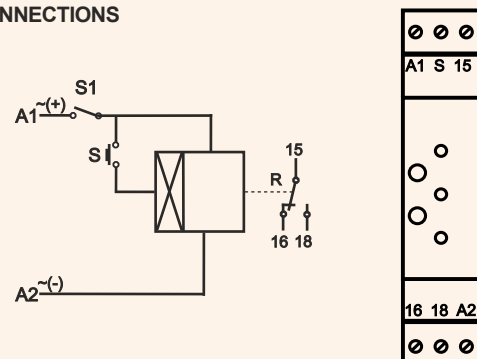
DIMENSIONS



FUNCTIONS



CONNECTIONS



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TYPE: MINI-1M (spco)

■ TIME RANGES

Position 1:	0.1 - 1 sec	Position 5:	10 - 100 mins
Position 2:	1 - 10 secs	Position 6:	1 - 10 hr
Position 3:	10 - 100 secs	Position 7:	10 - 100 hrs
Position 4:	1 - 10 mins	Position 8:	1 - 10 days

■ TIMING FUNCTIONS

Function A: On delay - initiated by supply on terminals A1 & A2, which commences timing, the relay contacts energise after the timing period. Removal of the supply after timing has been completed and the relay contacts will de-energise, if removal of the supply is before timing has been completed the remaining time will be cancelled.

Function H: Interval timer - initiated by supply on terminals A1 & A2. Relay contacts energise immediately on connection of the supply. On completion of timing relay contacts de-energise. If the supply is removed during the timing period the relay contacts will de-energise immediately.

Function C: Delay off with trigger input (trailing edge) - a permanent supply is required at all times on terminals A1 & A2, however this is not the controlling factor. The controlling factor is a trigger input from A1 onto terminal S. On an input being made to terminal S the relay contacts energise, on removal of the trigger input (trailing edge) the relay contacts time to de-energise. If the trigger input is reinstated after timing has commenced it will immediately cancel any remaining delay time and the trigger will need to be removed again for timing to commence once again. If the supply on terminals A1 & A2 is removed at any point when the relay contacts are energised irrespective of what state the trigger input is at, the relay contacts will de-energise. If the trigger input to terminal S is present before the connection of the supply to terminals A1 & A2, when the supply is connected the relay contacts will immediately energise and as above removal of S will commence timing.

Function B: Single shot timer / delay off with trigger input (leading edge) - as function "C" but the relay contacts energise and timing commences on the immediate input to terminal S (leading edge). Also

unlike function "C" if the trigger is still present after timing has been completed this will not have any effect, in all circumstances the trigger will need to be removed and reinstated for the function to happen again. If the trigger input to terminal S is present before the connection of the supply to terminals A1 & A2, when the supply is connected the relay contacts will immediately energise and timing commences.

Function Q: Delayed pulse (once only) - initiated by supply on terminals A1 & A2. The relay contacts will energise (pulse) briefly after the timing period and then de-energise. For the function to happen again the supply will have to be removed and re-connected. If the supply is removed before the pulse the set time will be cancelled. The pulse length is fixed at 300 mSec.

Function D: Flasher (pause first) - initiated by supply on terminals A1 & A2. Timing commences to energise relay contacts and then times to de-energise relay contacts. This cycle continues so long as the supply is connected. The time period on both energisation and de-energisation will be the same. If the supply is removed at any point within the cycle any remaining time will be cancelled and if the relay contacts are energised they will de-energise.

Function \bar{D} : Flasher (pulse first) - exactly as function "D" but on the connection of the supply to terminals A1 & A2 the relay contacts immediately energise and then time to de-energise.

Function I: Latching relay "pulse on, pulse off." via trigger input - a permanent supply is required at all times on terminals A1 & A2, however this is not the controlling factor. The controlling factor is a trigger input from A1 onto terminal S. On an input being made to terminal S the relay contacts will immediately energise, on a new trigger input the relay contacts will immediately de-energise. In brief the unit works as a "pulse on, pulse off" relay.