## New short-body on-delay, signal offdelay, one shot or flicker (re-cycling) timer modes, with 16 ranges, selectable from the front panel

- 4 operation modes
- Timing ranges 0.05 secs to 60 hours
- 16 ranges, front panel selectable
- Indications for time range, operation mode, time up and power on/timing
- DPCO output relay
- New scale ranges for ease of time setting - Instantaneous output with dial set at 0 - Improved resistance to electromagnetic interference
- 48-DIN
- Plug-in 11-pin base
- Sockets available for panel, surface or
 DIN rail mounting
- Approved by standards: UL and CSA


## Options and ordering codes

## TA11-A 24 VAC/DC

TA11-A 100-240VAC

## TA11-A 48-127VDC

## Specifications

Timing ranges (selectable)

| Calibrated range - selected <br> using screw in bottom left <br> corner of front panel | Controlled timing range. Time unit selectable using the screw in the bottom right hand corner of the front panel <br> Time unit: $\mathbf{0 . 1} \mathbf{~ s e c . ~}$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| $0-6$ | $0.05-0.6$ secs. | Time unit: sec. | Time unit: min. | Time unit: hrs. |
| $0-12$ | $0.1-1.2$ | $0.5-6$ secs. | $0.5-6$ mins. | $0.5-6$ hrs. |
| $0-30$ | $0.25-3$ | $2-12$ | $1-12$ | $1-12$ |
| $0-60$ | $0.5-6$ | $5-60$ | $2.5-30$ | $2.5-30$ |


| Repeat accuracy | $\pm 0.3 \%$ at max. setting time |
| :---: | :---: |
| Reset time | 0.1 sec or less |
| Max. switching frequency | 1800 times/hour |
| Allowable ambient temperature | $-10^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ (Avoid ice on timer) |
| Mechanical life | 20 million operations or more |
| Electrical life | 100,000 operations or more at 250 V AC 5A resistive load |
| Allowable operating voltage range | 0.85 to 1.1 times input voltage ( 0.9 to 1.1 at $55^{\circ} \mathrm{C}$ ) |
| Contact ratings | 5 A at 250 V AC resistive load |
| Power consumption | 10 VA at AC, 1W at DC |
| Supply frequency AC types | $50 / 60 \mathrm{~Hz}$ |
| Dielectric strength | $2,000 \mathrm{~V} \mathrm{AC} \mathrm{rms}$.1 min . between current carrying part and non current carrying part |
|  | $2,000 \mathrm{~V}$ AC rms. 1 min . between output contacts and control circuit |
|  | $1,000 \mathrm{~V} \mathrm{AC} \mathrm{rms}$.1 min . between open contacts |
| Insulation resistance | $100 \mathrm{M} \Omega$ or more at 500 V DC megger |
| Vibration | Mechanical durability: 10 to $55 \mathrm{~Hz}, 0.75 \mathrm{~mm}$ double amplitude |
|  | Mechanical durability: 10 to $55 \mathrm{~Hz}, 0.5 \mathrm{~mm}$ double amplitude |
| Shock | Mechanical durability: $500 \mathrm{~m} / \mathrm{s}^{2}$ (Approx. 50G) |
|  | Malfunction durability: $100 \mathrm{~m} / \mathrm{s}^{2}$ (Approx. 10G) |

## Wiring diagram and operating modes

M ode selected by turning the screw in the top left hand corner of the front panel.

CAUTION: Do not touch terminals 5,6 and 7 while power is applied to the timer.

Please see page 109 for timing diagrams

## 1. On-delay

- Turn the mode selector until PO is displayed.
- When power is ON, applying the start signal turns the NO (normally open) timed contact ON after the set time has elapsed.
- For power-on-delay operation, the start signal terminals (2 and 6) must be connected in advance.
- The timer is reset by the removal of power or by applying a reset signal.

3. One-shot momentary actuation OS

- Turn the mode selector until $O S$ is displayed.
- When power is ON, applying the start signal instantly turns the NO timed contact ON and turns it OFF after the set time has elapsed.
- Removing power while the timer is in operation or applying a reset signal resets the timer.


## Dimensions (mm)



Net weight approx 100 g


## 2. Flicker (Repeat cycle) FL

- Turn the mode selector until FL is displayed.
- When power is ON, applying the start signal turns the timed contact ON and OFF repeatedly at the set time intervals.
- The timer is reset by the removal of power or by applying a reset signal.


## 4. Signal off-delay SF

- Turn the mode selector until SF is displayed.
- When power is ON, applying the start signal instantly turns the NO timed contact ON. Removing the start signal turns the contact OFF after the set time has elapsed.
- Removing power while the timer is in operation or applying a reset signal resets the timer.


## Flush mounting



Note: For flush mounting, an adaptor CTB is required (sold separately)

## Sockets

Surface/ track mounting - screw terminal


Flush mounting - screw terminal


Flush mounting - solder terminal


| Mode No. 1 | Power | 2-7 | $\square$ | Mode No. 5 | Power | 2-7 | $\square$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| On-delay | Start/Gate | 1-4 | $\square$ | Signal on-delay | Start | 1-4 | $\square \quad \square$ |
|  | Reset | 1-3 | $\square \quad \square$ |  | Reset | 1-3 | $\square \quad \square$ |
|  | Output | 6-8 | $\leftrightarrow T \rightarrow \square \rightarrow \leftrightarrow \square^{11+12=T}$ |  | Output | 6-8 | - $\mathrm{T} \rightarrow \square$ |
|  |  | UP | - 1 |  |  | UP | 1 |
|  | DOWN |  | $\cdots$ | DISPLAY DOWN |  |  | $\cdots$ |
| Mode No. 2 | Power | 2-7 | - | Mode No. 6 | Power | 2-7 | $\square \square$ |
| Signal off-delay | Start | 1-4 | $\square \square \square$ | On-delay (power-off pause) | Start/Gate | 1-4 | $\square$ |
|  | Reset | 1-3 | $\xrightarrow[\square]{\square}$ |  | Reset | 1-3 | $\square \square \square$ |
| See notes A and B | Output | 6-8 | $\square \square$ |  | Output | 6-8 |  |
|  | DISPLAY | UP | $\triangle \quad \triangle$ |  | DISPLAY | UP | - $>$ |
|  | DOWN |  | $\checkmark$ | DOWN |  |  |  |
| Mode No. 3 | Power | 2-7 | - | Mode No. 7 | Power | 2-7 | $\square$ |
| Interval (one-shot) | Start | 1-4 | $\square \square \square$ | On-delay | Start/Gate | 1-4 | $\square \square \square \square \square$ |
|  | Reset | 1-3 | $\leftrightarrow \square \square \square$ | integrating | Reset | 1-3 | $\leftrightarrow \square \square^{\square}$ |
| See note A | Output | 6-8 | $\stackrel{+}{+}$ |  | Output | 6-8 |  |
|  |  | UP | $\wedge \wedge$ |  |  | UP | - 1 |
|  | DOWN |  |  | DOWN |  |  |  |
| Mode No. 4 | Power | 2-7 | $\square$ | Mode No. 8 | Power | 2-7 | $\square$ |
| Symmetrical re-cycling | Start/Gate | 1-4 | $\square$ | Asymmetrical | Start/Gate | 1-4 | $\square$ |
|  | Reset | 1-3 | $\square \square \square$ | re-cycling | Reset | 1-3 | $\xrightarrow{\square}$ |
|  | Output | 6-8 |  |  | Output | 6-8 | ${ }_{\mathrm{oft}}$ |
|  |  | UP | 11 |  |  | UP | - |
|  | DISPLAY ${ }^{\text {DOWN }}$ |  |  |  | DISPLAY |  |  |
|  |  |  |  |  |  | WN |  |

Notes: A In modes 2 and 3, after the time is up and the output turns off, a reset signal is not required before another start signal is given. The start signal itself will also effect a reset first.
B In mode 2, if another start signal is applied before timing is up, the elapsed time resets and starts again, without the output turning off. Further, repeated start signals within the elapsed time can prevent the output turning off indefinitely. Therefore, the TDMS can be used in conjunction with IMO sensors to detect that machine shafts have stopped rotating before maintenance is carried out. Contact IMO for details.

## Timer TA11-A



Notes: $T=$ Set time, $T-a=$ Time period within the set time.

- Applying a gate signal pauses the operation, (timing does not continue during a gate signal). Timing will resume at the point where it left, as soon as the gate signal is removed.
- Each signal can be input by short circuiting the relevant terminals.
- Power LED lights up when power is ON, but flickers during timing.


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