

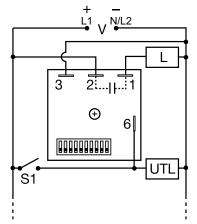
## TDUB SERIES

## Delay-on-Break Timer





## **Wiring Diagram**



V = Voltage UTL = Optional Untimed Load S1 = Initiate Switch L = Timed Load

## Ordering Information

MODEL	INPUT VOLTAGE RANGE	TIME RANGE
TDUB3000A	24 to 120VAC	1-1023s
TDUB3002A	12 to 24VDC	1-1023s
TDUBH3002A	12 to 24VDC	0.1-102.3m
TDUBH3001A	100 to 240VAC	0.1-102.3m
TDUBL3002A	12 to 24VDC	0.1-102.3s

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## **Description**

The TDUB Series combines digital timing circuitry with universal voltage operation. Voltages of 24 to 240VAC and 12 to 24VDC are available in three ranges. The TDUB Series offers DIP switch selectable time delays ranging from 0.1 seconds to 102.3 minutes in three ranges. Its 1A rated output, ability to operate on multiple voltages, and wide range of switch selectable time delays make the TDUB Series an excellent choice for process control systems and OEM equipment.

#### Operation (Delay-on-Break)

Input voltage must be applied before and during timing. Upon closure of the initiate switch, the output energizes. The time delay begins when the initiate switch is opened (trailing edge triggered). The output remains energized during timing. At the end of the time delay, the output de-energizes. The output will energize if the initiate switch is closed when input voltage is applied.

Reset: Reclosing the initiate switch during timing resets the time delay. Loss of input voltage resets the time delay and output.

### **Features & Benefits**

FEATURES	BENEFITS	
Dip Switch Timing Adjustment	Provides setting accuracy of +/-2%	
User selectable time delay	Timing settings are switch selectable 0.1s - 102.3m in three ranges for added flexibility	
1A steady, 10A inrush solid-state output	Provides 100 million operations in typical conditions.	
Totally solid state and encapsulated	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity.	

### **Accessories**



P1015-13 (AWG 10/12), P1015-64 (AWG 14/16), P1015-14 (AWG 18/22) Female Quick Connect These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



**P1015-18 Quick Connect to Screw Adapter** Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.



**C103PM (AL) DIN Rail** 35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



#### P1023-20 DIN Rail Adapter Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.



## TDUB SERIES

### **Specifications**

Repeat Accuracy

#### **Time Delay**

**Range\*** 0.1 - 102.3s in 0.1s increments 1 - 1023s in 1s increments

0.1 - 102.3m in 0.1m increments ±0.5% or 20ms, whichever is greater ≤ ±2% or 20ms, whichever is greater

Setting Accuracy  $\leq \pm 2\%$  0 Reset Time  $\leq 150 \text{ms}$  Initiate Time  $\leq 20 \text{ms}$ 

Time Delay vs. Temperature

& Voltage  $\leq \pm 5\%$ 

Input

**Voltage/Tolerance** 24 to 240VAC, 12 to 24VDC /±20%

 $\begin{array}{lll} \textbf{AC Line Frequency/DC Ripple} & 50/60~\text{Hz}~\text{/} \le 10\% \\ \textbf{Power Consumption} & AC \le 2VA;~DC \le 1W \\ \end{array}$ 

Output

Type Solid state

Form N0, closed before and during timing Rating 1A steady state, 10A inrush at  $60^{\circ}$ C Voltage Drop AC  $\cong$  2.5V @ 1A; DC  $\cong$  1V @ 1A Off State Leakage Current AC  $\cong$  5mA @ 230VAC; DC  $\cong$  1mA

Protection

**Circuitry** Encapsulated

**Dielectric Breakdown** ≥ 2000V RMS terminals to mounting surface

Insulation Resistance  $\geq 100 \text{ M}\Omega$ 

**Polarity** DC units are reverse polarity protected

Mechanical

**Mounting** Surface mount with one #10 (M5 x 0.8) screw

**Dimensions H** 50.8 mm (2"); **W** 50.8 mm (2");

**D** 30.7 mm (1.21")

**Termination** 0.25 in. (6.35 mm) male quick connect

terminals

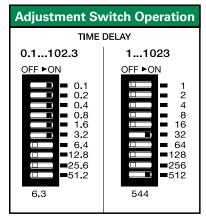
#### **Environmental**

Operating/Storage

Temperature -40° to 60°C /-40° to 85°C Humidity 95% relative, non-condensing

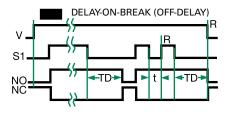
Weight  $\approx 2.4 \text{ oz } (68 \text{ g})$ 

## **Adjustment Switch Operation**



Add the value of switches in the ON position for the total time delay.

## **Function Diagram**



<sup>\*</sup>For CE approved applications, power must be removed from the unit when a switch position is changed.

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