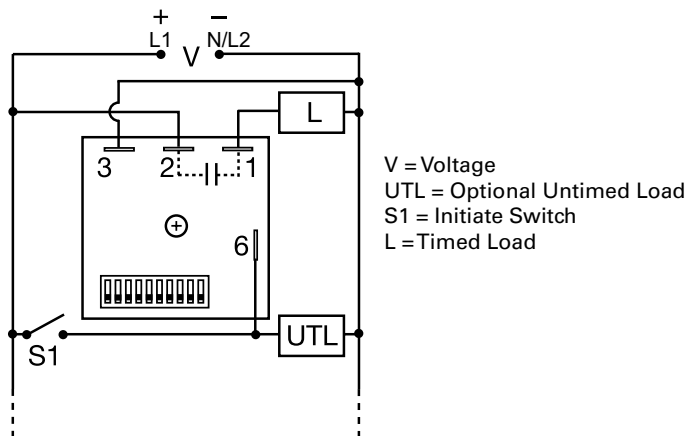


## TDUB SERIES

### Delay-on-Break Timer



### Wiring Diagram



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

### Accessories



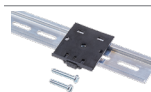
**P1015-13** (AWG 10/12), **P1015-64** (AWG 14/16), **P1015-14** (AWG 18/22) **Female Quick Connect**  
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



**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.

### 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

If you don't find the part you need, call us for a custom product 800-843-8848

## TDUB SERIES

### Specifications

#### Time Delay

<b>Range*</b>	0.1 - 102.3s in 0.1s increments 1 - 1023s in 1s increments 0.1 - 102.3m in 0.1m increments
<b>Repeat Accuracy</b>	±0.5% or 20ms, whichever is greater
<b>Setting Accuracy</b>	≤ ±2% or 20ms, whichever is greater
<b>Reset Time</b>	≤ 150ms
<b>Initiate Time</b>	≤ 20ms

#### Time Delay vs. Temperature & Voltage

≤ ±5%

#### Input

<b>Voltage/Tolerance</b>	24 to 240VAC, 12 to 24VDC ±20%
<b>AC Line Frequency/DC Ripple</b>	50/60 Hz / ≤ 10%
<b>Power Consumption</b>	AC ≤ 2VA; DC ≤ 1W

#### Output

<b>Type</b>	Solid state
<b>Form</b>	NO, closed before and during timing
<b>Rating</b>	1A steady state, 10A inrush at 60°C
<b>Voltage Drop</b>	AC ≅ 2.5V @ 1A; DC ≅ 1V @ 1A
<b>Off State Leakage Current</b>	AC ≅ 5mA @ 230VAC; DC ≅ 1mA

#### Protection

<b>Circuitry</b>	Encapsulated
<b>Dielectric Breakdown</b>	≥ 2000V RMS terminals to mounting surface
<b>Insulation Resistance</b>	≥ 100 MΩ
<b>Polarity</b>	DC units are reverse polarity protected

#### Mechanical

<b>Mounting</b>	Surface mount with one #10 (M5 x 0.8) screw
<b>Dimensions</b>	<b>H</b> 50.8 mm (2"); <b>W</b> 50.8 mm (2"); <b>D</b> 30.7 mm (1.21")
<b>Termination</b>	0.25 in. (6.35 mm) male quick connect terminals

#### Environmental

<b>Operating/Storage Temperature</b>	-40° to 60°C / -40° to 85°C
<b>Humidity</b>	95% relative, non-condensing
<b>Weight</b>	≅ 2.4 oz (68 g)

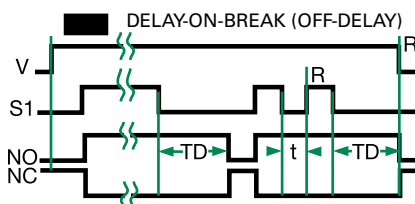
\*For CE approved applications, power must be removed from the unit when a switch position is changed.

### Adjustment Switch Operation

Adjustment Switch Operation	
TIME DELAY	
0.1...102.3	1...1023
OFF ► ON	OFF ► ON
0.1	1
0.2	2
0.4	4
0.8	8
1.6	16
3.2	32
6.4	64
12.8	128
25.6	256
51.2	512
6.3	544

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

### Function Diagram



V = Voltage  
S1 = Initiate Switch  
NO = Normally Open Contact  
NC = Normally Closed Contact  
TD = Time Delay  
t = Incomplete Time Delay  
R = Reset  
— = Undefined Time

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