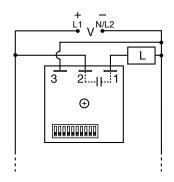


TDUI / TDUIH / TDUIL SERIES





Wiring Diagram



V = Voltage L = Load

Ordering Information

MODEL	INPUT VOLTAGE	TIME DELAY
TDUI3000A	24 to 120VAC	1 - 1023s
TDUIH3002A	12 to 24VDC	0.1 - 102.3m
TDUIL3001A	100 to 240VAC	0.1 - 102.3s
TDUIL3002A	12 to 24VDC	0.1 - 102.3s

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Description

The TDUI Series combines digital timing circuitry with universal voltage operation. Voltages of 24 to 240VAC and 12 to 24VDC are available in three ranges. The TDUI 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 TDUI Series an excellent choice for process control systems and OEM equipment.

Operation (Interval)

Upon application of input voltage, the time delay begins. The output energizes during the time delay. At the end of the time delay, the output de-energizes and remains de-energized until input voltage is removed.

Reset: Removing input voltage resets the time delay and the output.

Features & Benefits

FEATURES	BENEFITS	
Microcontroller based	Repeat Accuracy + / - 0.5%, Setting accuracy + / - 2%	
Compact design	Allows flexiblility for OEM applications	
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	
Wide voltage ranges	Flexibility to handle multiple voltages found in control systems and OEM applications	
DIP switch Adjustment	Provides first time setting accuracy	

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 guick 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.



TDUI / TDUIH / TDUIL SERIES

Specifications

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

Reset Time ≤ 150ms

Time Delay vs Temp.

Repeat Accuracy

Setting Accuracy

& Voltage $\leq \pm 5\%$

Input

24 to 240VAC, 12 to 24VDC ±20% Voltage

≤ 10%

AC Line Frequency 50/60 Hz

 $AC \le 2VA$; $DC \le 1W$ **Power Consumption**

DC Ripple

Output

Type Solid state

NO, closed during timing **Form**

1A steady state, 10A inrush at 60°C Rating Voltage Drop AC ≈ 2.5V @ 1A; DC ≈ 1V @ 1A **OFF State Leakage Current** AC ≈ 5mA @ 230VAC; DC≈ 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

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

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

D 30.7 mm (1.21")

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

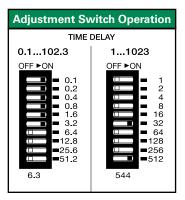
Environmental

Operating/Storage

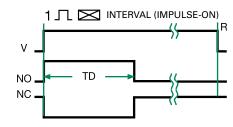
Temperature -40° to 60°C / -40° to 85°C Humidity 95% relative, non-condensing

≈ 2.4 oz (68 g) Weight

Switch Operation



Function Diagram



V = Voltage

NO = Normally **Open Contact**

NC = Normally Closed Contact

TD =Time Delay

R = Reset

= Undefined Time

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

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