

# TRU SERIES

## Knob Adjustable Universal Time Delay Relay



8-PIN



11-PIN

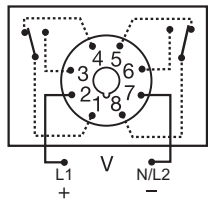
### Description

The TRU Series is a multifunction, knob adjustable, Universal Time Delay Relay. It includes six of the most popular timing functions selected by a slide switch. The time delay is knob adjustable and the time delay range is switch selectable. The repeat accuracy is + 0.1%. Both function and time range can be selected on the top face of the unit. In addition to multifunctioning and multiple time ranges, the TRU Series features universal input voltage; 19 to 264VAC and 19 to 30VDC and full 10A output relay. The TRU Series can directly replace up to 1000 competitive time delay relay models.

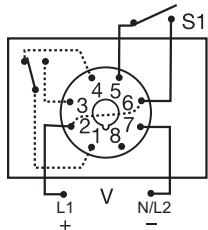
### Operation

A six position slide switch selects delay-on-make, interval, single shot, recycling (ON time first, equal recycle delays), delay-on-break, and retriggerable single shot. 8-pin DPDT base wiring is limited to delay-on-make, interval, and recycling functions. All six functions are available in the 8-pin SPDT and 11-pin DPDT versions.

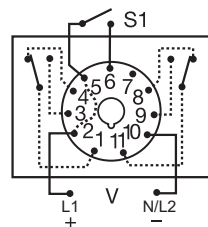
### Wiring Diagram



8-PIN DPDT  
Delay-on-Make  
Interval  
Recycling



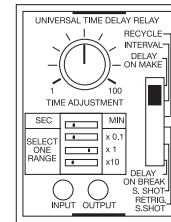
8-PIN SPDT  
Delay-on-Make  
Interval  
Single Shot  
Recycling  
(ON Time First, Equal  
Recycle Delays)  
Delay-on-Break  
Retriggerable Single Shot



11-PIN DPDT  
Delay-on-Make  
Interval  
Single Shot  
Recycling  
(ON Time First, Equal  
Recycle Delays)  
Delay-on-Break  
Retriggerable Single Shot

V = Voltage  
S1 = Initiate Switch

Relay contacts  
are isolated



### Features & Benefits

| FEATURES                              | BENEFITS   |
|---------------------------------------|--|
| <b>Microcontroller based</b>          | Repeat Accuracy +/- 0.1% or +/- 20ms, whichever is greater     |
| <b>6 time ranges (0.1s to 1,000m)</b> | Broad range will satisfy most requirements                     |
| <b>Knob adjustable time delay</b>     | Allows user to fine tune time delay based on application needs |
| <b>Universal input voltage</b>        | Makes it versatile for use in most applications                |
| <b>Multifunction</b>                  | Provides the most common standard timing functions             |
| <b>LED Indicators</b>                 | Provide visual indication of input voltage and relay status    |
| <b>10A isolated output contacts</b>   | Allows control of loads for AC or DC voltages                  |

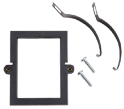
### Ordering Information

| MODEL | INPUT VOLTAGE             | BASE WIRING | FUNCTIONS |
|-------|---------------------------|-------------|-----------|
| TRU1  | 19 to 264VAC; 19 to 30VDC | 8-pin DPDT  | 3         |
| TRU2  | 19 to 264VAC; 19 to 30VDC | 8-pin SPDT  | 6         |
| TRU3  | 19 to 264VAC; 19 to 30VDC | 11-pin DPDT | 6         |

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

# TRU SERIES

## Accessories



**BZ1 Front Panel Mount Kit**  
Provides an easy method of through-the-panel mounting of 8- or 11-pin plug-in timers, flashers, and other controls.



**NDS-8 Octal 8-pin Socket**  
8-pin 35mm DIN rail or surface mount. Rated at 10A @ 300VAC. Surface mounted with two #6 (M 3.5 x 0.6) screws or snaps onto a 35 mm DIN rail. Uses PSC8 hold-down clips.

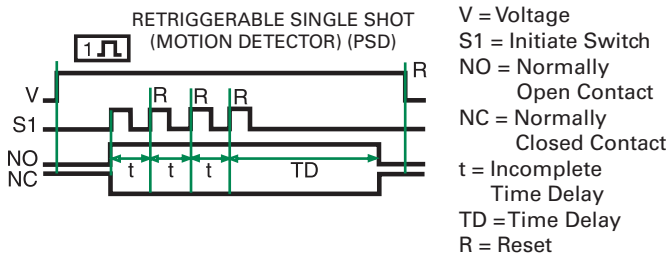


**NDS-11 11-pin Socket**  
11-pin 35mm DIN rail or surface mount. Rated at 10A @ 300VAC. Surface mounted with two #6 (M 3.5 x 0.6) screws or snaps onto a 35 mm DIN rail. Uses PSC11 hold-down clips.



**PSC8 or PSC11 Hold-down Clips**  
Securely mounts plug-in controls in any position. Provides protection against vibration. Use PSC8 with NDS-8 Octal Socket or PSC11 with NDS-11 Socket. Sold in pairs.

## Function Diagram



## Specifications

### Time Delay

Type  
Range  
Switch Selectable

Digital integrated circuitry

0.1s - 1000m in 6 ranges:

- 1) 0.1 - 10s
- 2) 1 - 100s
- 3) 10 - 1000s
- 4) 0.1 - 10m
- 5) 1 - 100m
- 6) 10 - 1000m

### Adjustments Multiplier

4 position DIP switch selects x0.1, x1, x10, and sec. or min. Onboard knob adjustment with 1 - 100 reference dial

### Time Setting

### Two LEDs indicate

- 1) Input voltage applied
  - 2) Output relay status
- ±0.1% or ±20ms, whichever is greater  
≤ 300ms

### Repeat Accuracy Reset Time

### Time Delay vs Temp. & Voltage

±2%

### Input

### Voltage - Universal Input Range

19 to 264VAC and 19 to 30VDC

### AC Line Frequency

50/60Hz

### Output

### Type

Electromechanical relay

### Form

SPDT or DPDT, isolated

### Rating

10A resistive @ 120/240VAC & 28VDC;  
1/3 hp @ 120/240VAC

### Life

Mechanical -  $1 \times 10^7$ ; Electrical -  $1 \times 10^6$

### Protection

### Transient Isolation Voltage

38 joules

### Polarity

≥ 1500V RMS input to output

### Mechanical Mounting

DC units are reversed polarity protected

### Dimensions

Plug-in socket

### Termination

**H** 87.3 mm (3.44"); **W** 60.7 mm (2.39");

### Environmental

**D** 45.2 mm (1.78")

### Operating/Storage Temperature

Octal 8-pin plug-in or magnal 11-pin plug-in

### Weight

-20° to 65°C / -30° to 85°C

≅ 6 oz (170 g)