

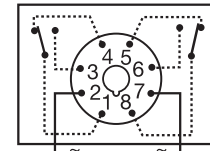
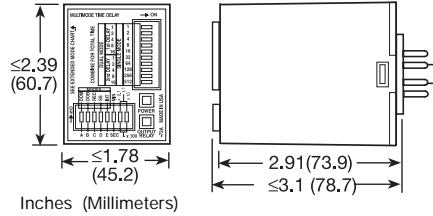
Multifunction TRDU Series Time Delay Relay



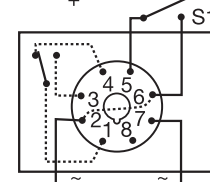
- Microcontroller +/-0.1% Repeat Accuracy
- Multifunction - 21 Timing Functions
- Multirange - 0.1 s ... 1,705 h in 8 Ranges
- Switch Selectable Modes, Time Delay, & Ranges
- AC and DC Input Voltages are Available
- 10 A, Isolated SPDT or DPDT Output Contacts

Description

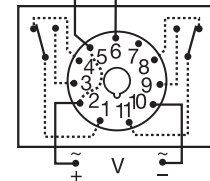
The TRDU Series is a versatile universal time delay relay with 21 selectable single and dual functions. The dual functions replace up to three timers required to accomplish the same function. Both the function and the timing range are selectable with switches located on the face of the unit. Two LED's indicate input voltage and output status. This device offers full 10 A isolated relay output contacts in either SPDT or DPDT. The TRDU replaces hundreds of part numbers, thereby, reducing your stock inventory requirements.



8 Pin DPDT



8 Pin SPDT



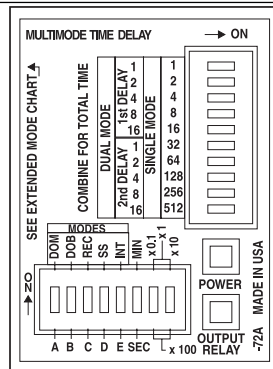
11 Pin DPDT

Relay contacts are isolated. Dashed lines are internal connections.
 V = Voltage S1 = Initiate Switch

Ordering Table

TRDU Series	X Input	X Base Connection
	- 12D - 12 V DC	-1 - 8 pin DPDT *
	- 24A - 24 V AC/DC	-2 - 8 pin SPDT
	-120A - 120 V AC	-3 - 11 pin DPDT
	-230A - 230 V AC	*Limited to Nine Operating Functions

Example P/N: TRDU120A2



21 Functions
 Five switches are provided to set one of 10 single or 11 dual modes of operation.

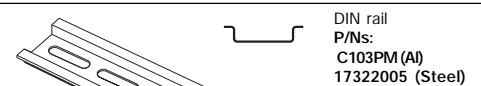
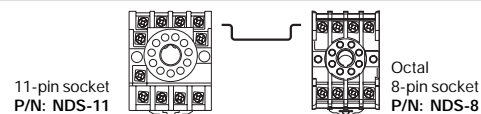
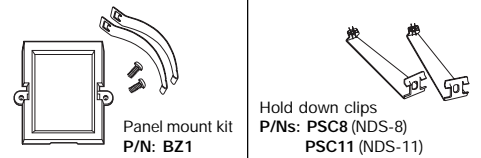
- Single Functions-
- * Delay on Make
 - * Delay on Break
 - * Recycle (ON Time First, Equal Recycle Delays)
 - * Single Shot
 - * Interval
 - Trailing Edge Single Shot
 - Inverted Single Shot
 - Inverted Delay on Break
 - Accumulative Delay on Make
 - Retriggerable Single Shot (Motion Detector)
- Dual Functions -
- * Delay on Make/Delay on Break
 - * Delay on Make/Recycle (ON Time First, Equal Recycle Delays)
 - * Delay on Make/Interval
 - Delay on Make/Single Shot
 - * Interval/Recycle (ON Time First, Equal Recycle Delays)
 - Delay on Break/Recycle (ON Time First, Equal Recycle Delays)
 - Single Shot/Recycle (ON Time First, Equal Recycle Delays)
 - * Recycle - Both Times Adjust. (ON Time First)
 - * Recycle - Both Times Adjust. (OFF Time First)
 - * Interval/Delay on Make
 - Accumulative Delay on Make/Interval
- *9 Functions in 8-PIN DPDT UNITS

Technical Data

Time Delay	Microcontroller
Type	Microcontroller
Range: Switch Selectable**	SINGLE FUNCTIONS: 0.1 s ... 1,705 h in 8 Ranges DUAL FUNCTIONS: 0.1 s ... 3,100 m each in 8 ranges
Adjustments	Three switches are provided to set secs/mins & multipliers of x0.1, x1, x10, or x100
Setting Accuracy	+/-1% or 50 ms, whichever is greater
Repeat Accuracy	+/-0.1% or 16 ms, whichever is greater
Timing Functions	Five switches are provided to set one of twenty-one single or dual functions
Reset Time	≤ 50 ms
Initiate Time	120 V AC: 75 ms
Time Delay vs. Temperature & Voltage	+/-1%
Indication	
Two LED's indicate	1) Input voltage applied; 2) Output relay status
Input	
Voltage	12 V DC, 24 V AC/DC, 120 V AC, or 230 V AC
Tolerance	12 V DC & 24 V DC/AC: -15% ... +20% 120 & 230 V AC: -20% ... +10%
Frequency	50 ... 60 Hz
Power Consumption	≤ 3 W; 12 V DC - ≤ 2 W
Output	
Type	Electromechanical relay
Form	SPDT or DPDT
Rating	10 A resistive at 28 V DC; 10 A resistive at 240 V AC 1/3 hp at 120 & 240 V AC
Life	Mechanical - 1×10^7 ; Full Load - 1×10^6
Protection	
Isolation Voltage	≤ 1500 V RMS input to output
Polarity	DC units are reverse polarity protected
Mechanical	
Mounting	Plug-in socket
Package	3.1 x 2.39 x 1.78 in. (78.7 x 60.7 x 45.2 mm)
Termination	Octal plug (8 Pin) or Magnal plug (11 Pin)
Environmental	
Operating Temperature	-20°C ... +65°C
Storage Temperature	-40°C ... +85°C
Weight	$\cong 5.8$ oz (164 g)

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

Accessories



See accessory pages at the end of this section.