

TIMING RELAYS



- 20 Time Ranges and 10 Timing Functions
- Time Delays from 0.1 sec to 600 hrs
- Space-Saving, Compact Package
- High Repeat Accuracy of $\pm 0.2\%$
- LED Indication
- 2 Form C DPDT Delayed Output Contacts
- 10 A Contact Rating

The TR Series Timing Relays are designed to meet most timing requirements by offering more flexibility in range of input voltage, timing range and functionality. Use a rotary switch to choose from 20 selectable time ranges from 0.1 second to 600 hours. We offer both a power triggered and signal triggered model—each with expanded operation modes. There is a green LED to indicate when power is ON and an orange LED when output is ON.

SPECIFICATION

Contact Configuration: 2 Form C, DPDT (delayed output)

Allowable Voltage/Current: 240 Vac, 30 Vdc/10 A

Max Permissible Operating Frequency: 1800 cycles per hour

Rated Resistive Load: 10 A, 240 Vac/30 Vdc

Rated Inductive Load: 7 A, 240 Vac/30 Vdc

Horsepower Rating: $\frac{1}{8}$ hp 120 Vac, $\frac{1}{8}$ hp 240 Vac

Electrical Life: 500,000 operations min (resistive)

Mechanical Life: 50,000,000 operations minimum

Operation System: Solid-state CMOS circuit

Time Range: 0.1 sec to 600 hours

Coil Rating: 100-240 Vac

Triggering: By signal

Pollution Degree: 2 (IE60664-1)

Overvoltage Category: III (IE60664-1)

Rated Operational Voltage:

100 to 240 Vac (50/60 Hz)

Voltage Tolerance: 85 to 264 Vac (50/60 Hz)

Input OFF Voltage: Rated Voltage x 10% minimum

Ambient Operating Temperature: -20 to 65°C (-4 to 149°F)

Reset Time: 100 mS maximum

Repeat Error: $\pm 0.2\%$, ± 20 mS

Voltage Error: $\pm 0.2\%$, ± 20 mS

Temperature Error: $\pm 0.5\%$, ± 20 mS

Setting Error: $\pm 10\%$ maximum

Insulation Resistance: 100 M Ω minimum (500 Vdc)

Dielectric Strength Between Power and Output Terminals: 2000 Vac, 1 minute

Dielectric Strength Between Contacts of Different Poles: 2000 Vac, 1 minute

Dielectric Strength Between Contacts of Same Pole: 1000 Vac, 1 minute

Vibration Resistance: 10 to 55 Hz

amplitude 0.5 mm; 2 hrs in each of 3 axes

Shock Resistance: 10 G (operating extremes), 40 G (damage limits 3x in each of 3 axes)

Power Consumption (Approx):

6.5 VA @ 120 Vac/60 Hz, 11.6 VA @

240 Vac/60 Hz

Dimensions: 40 H x 36 W x 77.9 mm D

(1.58 x 1.42 x 3.07")

Weight: 89 g (3 oz)

TRFP240AC, \$140, shown larger than actual size.



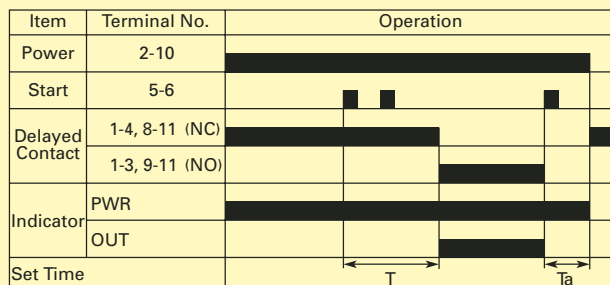
D3PA3, \$8, shown smaller than actual size.



OPERATION

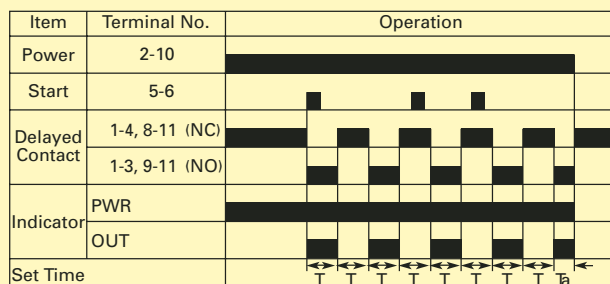
A: ON-Delay (Signal Start)

When a preset time has elapsed after the start input turned on while power is on, the NO output contact goes on



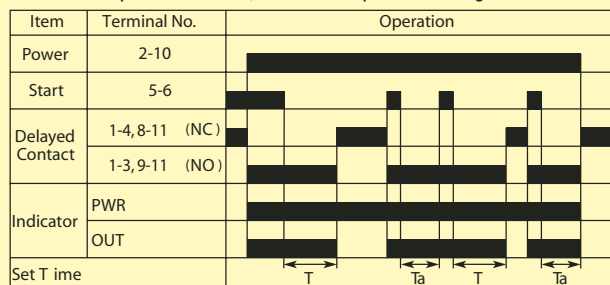
C: Cycle (Signal Start, ON First)

When the start input turns on while power is on the NO contact goes on. The output oscillates at a preset cycle (Duty Ratio 1:1).



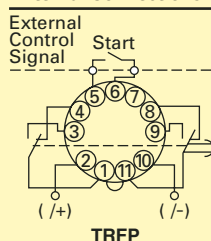
E: Signal OFF-Delay

When power is turned on while the start input is on, the NO output contact goes on. When a preset time has elapsed after the start input turned off, the NO output contact goes off.



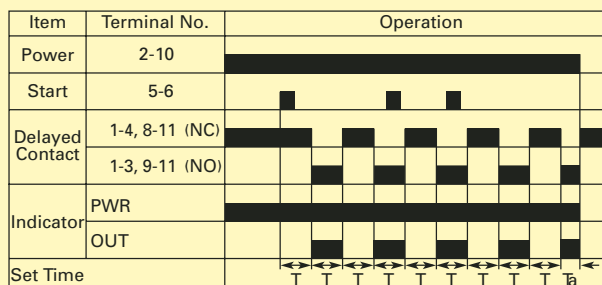
Note: T=Set Time, T_a=Shorter Than Set Time

Internal Connections



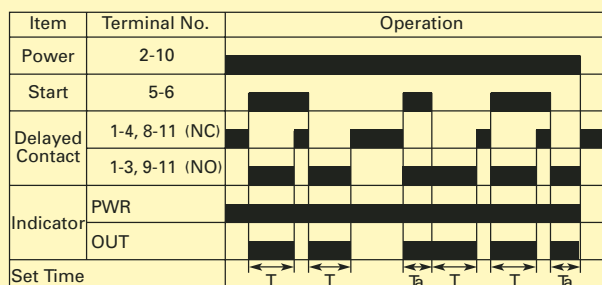
B: Cycle (Signal Start, OFF First)

When the start input turns on while power is on, the output oscillates at a preset cycle (Duty Ratio 1:1), starting while the NO contact off.



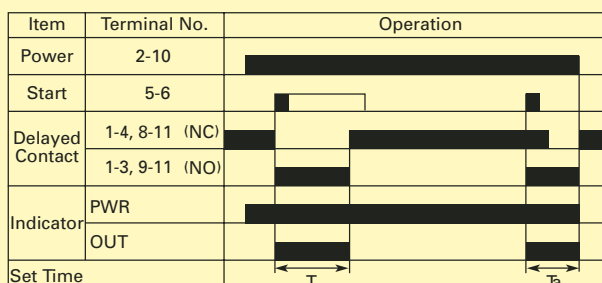
D: Signal ON/OFF-Delay

When the start input turns on while power is on, the NO output contact goes on. When a preset time has elapsed while the start input remains on, the output contact goes off. When the start input turns off, the NO contact goes on again. When a preset time has elapsed after the start input turned off, the NO contact goes off



F: One-Shot (Signal Start)

When the start input turns on while power is on, the NO output contact goes on. When a preset time has elapsed, the output contact goes off.



To Order (Specify Model Number)

MODEL NO.	PRICE	DESCRIPTION
TRFP240AC	\$140	Timing relay, 100-240 Vac coil voltage, signal triggered
D3PA3	8	11-pin octal socket

Comes with installation guide.

Ordering Example: TRFP240AC, timing relay, with D3PA3 socket, \$140 + 8 = \$148

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