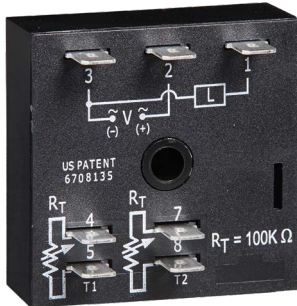
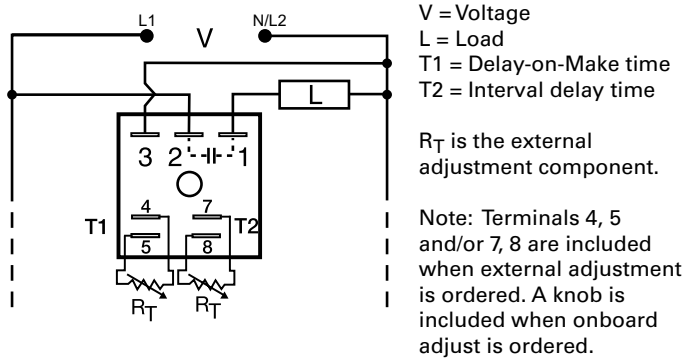


# ESD52233

## Delay-on-Make/Interval



## Wiring Diagram



## Description

The ESD5 Series is an accurate, solid-state, delayed interval timer. It offers a 1A steady, 10A inrush output and is available with adjustable or fixed time delays of 0.1 seconds to 1000 minutes in six ranges. Input voltages of 24, 120, or 230VAC are available. Encapsulation offers protection against shock and vibration. Adjustment options are factory fixed, onboard or externally adjustable. The repeat accuracy, under stable conditions, is 0.1%. The factory calibration of the time delay is  $\pm 5\%$ .

### Operation (Delayed Interval)

Upon application of input voltage, the T1 delay-on-make time delay begins and the output remains de-energized. At the end of this delay, the output energizes and the T2 interval delay begins. At the end of the interval delay period, the output de-energizes.

**Reset:** Removing input voltage resets the output and the time delays, and returns the sequence to the first delay.

## Features & Benefits

FEATURES	BENEFITS
<b>Compact, low cost design measuring 2 in. (50.8mm) square</b>	Allows flexibility for OEM applications and reduces component and labor costs
<b>Microcontroller based</b>	Repeat Accuracy + / - 0.1%, Factory calibration + / - 5%
<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



**P1004-95, P1004-95-X Versa-Pot**  
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.



**P1023-6 Mounting bracket**  
The 90° orientation of mounting slots makes installation/removal of modules quick and easy.



**P0700-7 Versa-Knob**  
Designed for 0.25 in. (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.



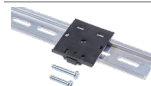
**P1015-64 (AWG 14/16) Female Quick Connect**  
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



**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.



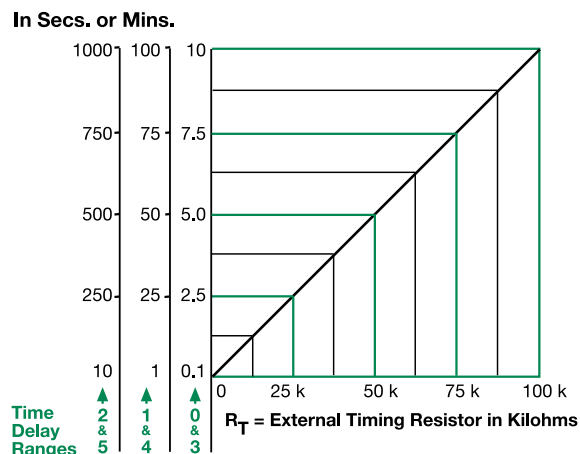
**C103PM (AL) DIN Rail**  
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



**P1023-20 DIN Rail Adapter**  
Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

## ESD52233

### External Resistance vs. Time Delay



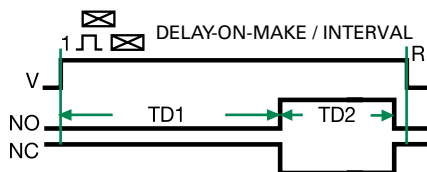
This chart applies to externally adjustable part numbers.

The time delay is adjustable over the time delay range selected by varying the resistance across the  $R_T$  terminals; as the resistance increases the time delay increases.

When selecting an external  $R_T$ , add the tolerances of the timer and the  $R_T$  for the full time range adjustment.

**Examples:** 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohm  $R_T$ . For 1 to 100 S use a 100 K ohm  $R_T$ .

### Function Diagram



V = Voltage  
NO = Normally Open Contact  
NC = Normally Closed Contact  
TD1, TD2 = Time Delay  
R = Reset

### Specifications

#### Time Delay

##### Range

0.1s - 1000m in 6 adjustable ranges or fixed

##### Repeat Accuracy

$\pm 0.1\%$  or 20ms, whichever is greater

##### Tolerance

(Factory Calibration)

$\leq \pm 5\%$

##### Reset Time

$\leq 150\text{ms}$

##### Time Delay vs Temp.

##### & Voltage

$\leq \pm 2\%$

#### Input

##### Voltage

24VAC

##### Tolerance

$\pm 20\%$

##### AC Line Frequency

50/60 Hz

##### Power Consumption

$\leq 2\text{VA}$

#### Output

##### Type

Solid state

##### Rating

1A steady state, 10A inrush at 60°C

##### OFF State Leakage Current

$\approx 5\text{mA}$  @ 230VAC

##### Voltage Drop

$\approx 2.5\text{V}$  @ 1A

#### Protection

##### Circuitry

Encapsulated

##### Dielectric Breakdown

$\geq 2000\text{V RMS}$  terminals to mounting surface

##### Insulation Resistance

$\geq 100\text{ M}\Omega$

#### Mechanical

##### Mounting

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

##### Dimensions

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

**D** 30.7 mm (1.21")

0.25 in. (6.35 mm) male quick connect terminals

#### Termination

#### Environmental

##### Operating/Storage

##### Temperature

-40° to 75°C / -40° to 85°C

##### Humidity

95% relative, non-condensing

##### Weight

$\approx 2.4\text{ oz}$  (68g)