

Delay On Make - Normally Closed KSD4 Digi-Timer Timing Module



Description

The KSD4 Digi-Timer offers a delay-on-make function with normally closed solid state output. It incorporates C/MOS digital circuitry to provide long delays, long life, and superb accuracy.

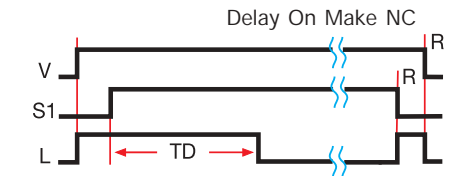
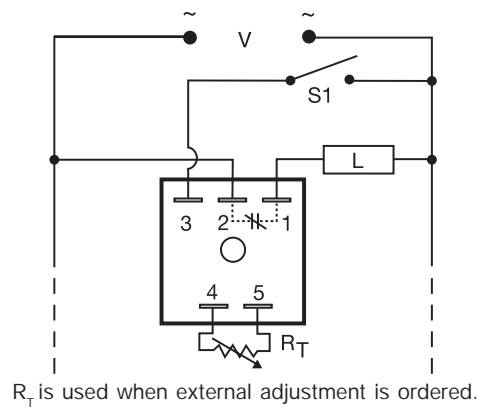
Operation

Upon application of input voltage, the load is energized immediately. When the initiate switch is closed, the time delay begins. At the end of the time delay, the load is de-energized.

Reset: When the initiate switch is reopened, the load is again energized and the time delay is reset. Removing input voltage resets the time delay.

- Load Energized Prior To and During Time Delay
- Fixed or Adjustable Delays from 0.1 s ... 500 min
- 24 ... 230 V AC
- +/-0.5% Repeat Accuracy
- +/-10% Stability over Voltage and Temperature

■ Approvals:



V = Voltage S1 = Initiate Switch L = Load
R = Reset TD = Time Delay
—||— = Undefined time

Ordering Table

| KSD4 Series | X Input | X Adjustment | X Time Delay* | |
|-------------|---------------|----------------------|--------------------|---|
| | -2 - 24 V AC | -1 - Fixed | -0 - 0.1 ... 10 s | *If Fixed Delay is selected, insert delay [0.1 ... 1000] followed by (S) secs. or [0.1 ... 500] (M) mins. |
| | -4 - 120 V AC | -2 - External Adjust | -1 - 1 ... 100 s | |
| | -6 - 230 V AC | | -2 - 10 ... 1000 s | |
| | | | -3 - 0.1 ... 10 m | |
| | | | -4 - 1 ... 100 m | |
| | | | -5 - 5 ... 500 m | |

Example P/N: **KSD4421**
Fixed - **KSD4410.5S**

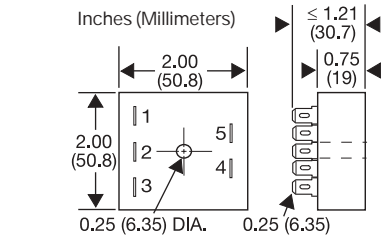
RT Selection Chart

| Desired Time Delay* | | | | | RT | |
|---------------------|-----|---------|-----|-----|-----|--------|
| Seconds | | Minutes | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | Megohm |
| 0.1 | 1 | 10 | 0.1 | 1 | 5 | 0.0 |
| 1 | 10 | 100 | 1 | 10 | 50 | 0.1 |
| 2 | 20 | 200 | 2 | 20 | 100 | 0.2 |
| 3 | 30 | 300 | 3 | 30 | 150 | 0.3 |
| 4 | 40 | 400 | 4 | 40 | 200 | 0.4 |
| 5 | 50 | 500 | 5 | 50 | 250 | 0.5 |
| 6 | 60 | 600 | 6 | 60 | 300 | 0.6 |
| 7 | 70 | 700 | 7 | 70 | 350 | 0.7 |
| 8 | 80 | 800 | 8 | 80 | 400 | 0.8 |
| 9 | 90 | 900 | 9 | 90 | 450 | 0.9 |
| 10 | 100 | 1000 | 10 | 100 | 500 | 1.0 |

* When selecting an external R_T add at least 20% for tolerance of unit and the R_T .

Technical Data

| | |
|--------------------------------------|---|
| Time Delay | |
| Type | Digital integrated circuitry |
| Range | 0.1 s ... 500 m in 6 adjustable ranges or fixed |
| Repeat Accuracy | +/-0.5% or 16 ms, whichever is greater |
| Tolerance (Factory Calibration) | ≤ +/-10% |
| Recycle Time | 300 ms |
| Time Delay vs. Temperature & Voltage | ≤ +/-10% |
| Input | |
| Voltage | 24, 120, or 230 V AC |
| Tolerance | +/-20% |
| Line Frequency | 50 ... 60 Hz |
| Output | |
| Type | Solid state |
| Form | Normally Closed, closed during timing |
| Maximum Load Current | 1 A steady state, 10 A inrush at 55°C |
| Minimum Holding Current | ≤40 mA |
| Voltage Drop | ≅ 2.5 V at 1 A |
| Protection | |
| Circuitry | Encapsulated |
| Dielectric Breakdown | ≥ 2000 V RMS terminals to mounting surface |
| Insulation Resistance | ≥ 100 MΩ |
| Mechanical | |
| Mounting | Surface mount with one #10 (M5 x 0.8) screw |
| Package | 2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm) |
| Termination | 0.25 in. (6.35 mm) male quick connect terminals |
| Environmental | |
| Operating Temperature | -40°C ... +60°C |
| Storage Temperature | -40°C ... +85°C |
| Humidity | 95% relative, non-condensing |
| Weight | ≅ 2.4 oz (68 g) |



Accessories

Mounting bracket
P/N: P1023-6

External adjust potentiometer
P/Ns:
P1004-16 (fig A)
P1004-16-X (fig B)

Female quick connect
P/N:
P1015-64(AWG 14/16)

Plug-on adjustment module
P/N:
VTP(X)(X)

Quick connect to screw adaptor
P/N: P1015-18

Versa-knob
P/N: P0700-7

DIN rail adaptor
P/N: P1023-20

DIN rail P/Ns:
C103PM (Al)
17322005 (Steel)

| Time Delay | VTP P/N |
|-------------------|---------|
| 0 - 0.1 ... 10 s | VTP2C |
| 1 - 1 ... 100 s | VTP2G |
| 2 - 10 ... 1000 s | VTP2K |
| 3 - 0.1 ... 10 m | VTP2N |
| 4 - 1 ... 100 m | VTP2P |
| 5 - 5 ... 500 m | VTP2R |

See accessory pages at the end of this section.