KSD1 SERIES

Delay-on-Make Timer



Description

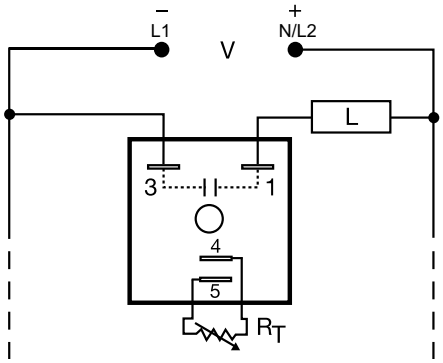
The KSD1 Series features two-terminal, series-connection with the load. The KSD1 Series is an ideal choice for delay-on-make timing applications. This series is designed for general purpose commercial and industrial applications where a small, cost effective, reliable solid-state timer is required. The factory calibration for fixed time delays is within 5% of the target time delay. The repeat accuracy, under stable conditions, is 0.5% of the selected time delay. This series is designed for popular AC and DC voltages. Time delays of 0.1 seconds to 1000 minutes are available in 6 ranges. The output is rated 1A steady and 10A inrush. The modules are totally solid state and encapsulated to protect the electronic circuitry.

Operation (Delay-on-Make)

Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output energizes and remains energized until input voltage is removed.

Reset: Removing input voltage resets the time delay and output.

Wiring Diagram



Load may be connected to terminal 3 or 1.

R_T is used when external adjustment is ordered.

Features & Benefits

FEATURES	BENEFITS
Microcontroller based	Repeat Accuracy + / - 0.5%, + / -5% time delay accuracy
Compact, low cost design	Allows flexiblility for OEM applications
1A Steady solid-state output, 10A inrush	Provides 100 million operations in typical conditions.
Totally solid state and encapsulated	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.

Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY
KSD11120S	12VDC	Fixed	20s
KSD1123	12VDC	External	0.1 - 10m
KSD1230	24VAC	Onboard	0.1 - 10s
KSD1320	24VDC	External	0.1 - 10s
KSD1412S	120VAC	Fixed	2s
KSD14130S	120VAC	Fixed	30s
KSD1420	120VAC	External	0.1 - 10s
KSD16130S	230VAC	Fixed	30s

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

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Accessories

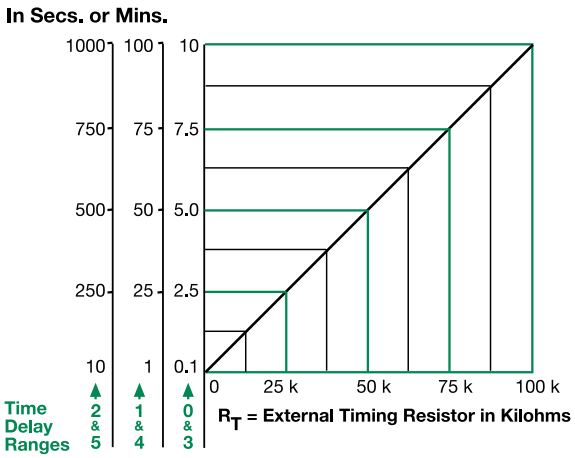


C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



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

External Resistance vs. Time Delay

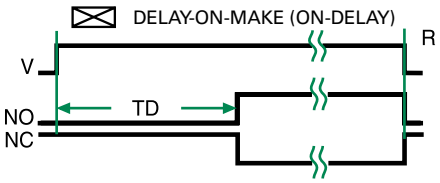


This chart applies to externally adjustable part numbers.
The time delay is adjustable over the time delay range selected by varying the resistance across the R_T terminals; as the resistance increases the tie delay increases.

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 ohn 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
TD = Time Delay
R = Reset
—⌇— = Undefined Time

Specifications

Time Delay

Range	0.1s - 1000m in 6 adjustable ranges or fixed
Repeat Accuracy	±0.5% or 20ms, whichever is greater
Tolerance (Factory Calibration)	≤ ±5%
Recycle Time	≤ 150ms
Time Delay vs. Temperature & Voltage	≤ ±10%

Input

Voltage	24, 120, or 230VAC; 12 or 24VDC
Tolerance	±20%
AC Line Frequency	50/60 Hz

Output

Type	Solid state
Form	NO, open during timing
Maximum Load Current	1A steady state, 10A inrush at 60°C
Minimum Holding Current	≤ 40mA
OFF State Leakage Current	≅ 7mA @ 230VAC
Voltage Drop	≅ 2.5V @ 1A

Protection

Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
Polarity	DC units are reverse polarity protected

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")
Termination	0.25 in. (6.35 mm) male quick connect terminals

Environmental

Operating/Storage Temperature	-40° to 60°C / -40° to 85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.4 oz (68 g)

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