

Delay On Break (Release)

KSDB Digi-Timer

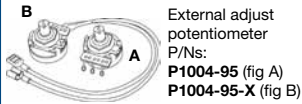
Timing Module



- Fixed or Adjustable
0.1 s ... 1000 m in 6 Ranges
- +/-0.5% Repeat Accuracy
- +/- 5% Factory Calibration
- 12 V DC ... 230 V AC in 6 Ranges
- 1 A Solid State Output
- Encapsulated

Approvals:

Accessories



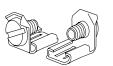
External adjust potentiometer
P/Ns:
P1004-95 (fig A)
P1004-95-X (fig B)



Mounting bracket
P/N: P1023-6



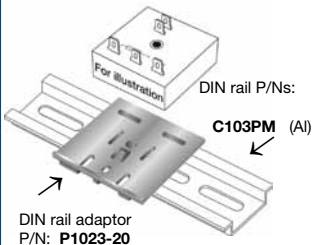
Female quick connect
P/Ns:
P1015-64 (AWG 14/16)
P1015-14 (AWG 18/12)



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



Versa-knob
P/N: P0700-7



DIN rail P/Ns:

C103PM (Al)

DIN rail adaptor
P/N: P1023-20

See accessory pages for specifications.

Description

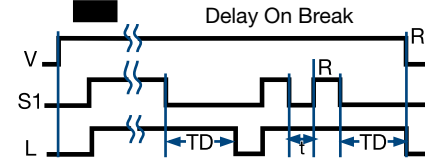
This series is designed for general purpose commercial and industrial applications where a small, cost effective, reliable solid state timer is required. The factory calibration for fixed time delays is within 5% of the target time delay. The repeat accuracy, under stable conditions, is 0.5% of the selected 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 1 A steady and 10 A inrush. The modules are totally solid state and encapsulated to protect the electronic circuitry.

Operation

Input voltage must be applied before and during timing. Upon closure of the initiate switch, the output energizes. The time delay begins when the initiate switch is opened. The output remains energized during timing. At the end of the time delay, the output de-energizes. The output energizes if the initiate switch is closed when input voltage is applied.

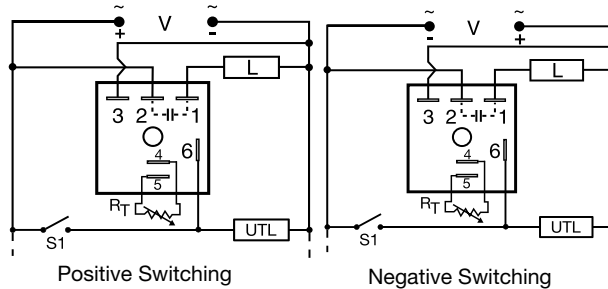
Reset: Reclosing the initiate switch during timing resets the time delay. Loss of input voltage resets the time delay and output.

Function



V = Voltage L = Load S1 = Initiate Switch
R = Reset TD = Time Delay
t = Incomplete Time Delay = Undefined time

Connection



R_T is used when external adjustment is ordered. Dashed lines are internal connections.

UTL = Optional Untimed Load L = Load
S1 = Initiate Switch

Available Models-

KSDB110.1SP
KSDB1120SP
KSDB113SP
KSDB115SP
KSDB211.5S
KSDB231
KSDB315SP
KSDB324N
KSDB331P
KSDB4110S
KSDB4190M
KSDB433

KSDB1110SP
KSDB112SP
KSDB114SP
•KSDB120P
KSDB2115S
•KSDB3115SP
KSDB320N
KSDB330N
KSDB334P
KSDB4120M
•KSDB421
KSDB61150S

KSDB1115SP
KSDB113MP
KSDB115MP
KSDB134P
KSDB220
KSDB314SP
KSDB320P
KSDB330P
KSDB4110M
KSDB4160S
•KSDB431
KSDB631

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Ordering Table

KSDB Series	X Input	X Adjustment	X Time Delay*	X Switching Mode (V DC Only)
	-1 - 12 V DC	-1 - Fixed	-0 - 0.1 ... 10 s	-P - Positive
	-2 - 24 V AC	-2 - External Adjust	-1 - 1 ... 100 s	-N - Negative
	-3 - 24 V DC	-3 - Onboard Adjust	-2 - 10 ... 1000 s	
	-4 - 120 V AC		-3 - 0.1 ... 10 m	
	-5 - 120 V DC		-4 - 1 ... 100 m	
	-6 - 230 V AC		-5 - 10 ... 1000 m	

Example P/N: **KSDB420** Fixed – **KSDB110.1SP**

* If Fixed Delay is selected, insert delay [0.1 ... 1000] followed by (S) sec. or (M) min.

Delay On Break (Release)

KSDB Digi-Timer

Timing Module

Dedicated
timers

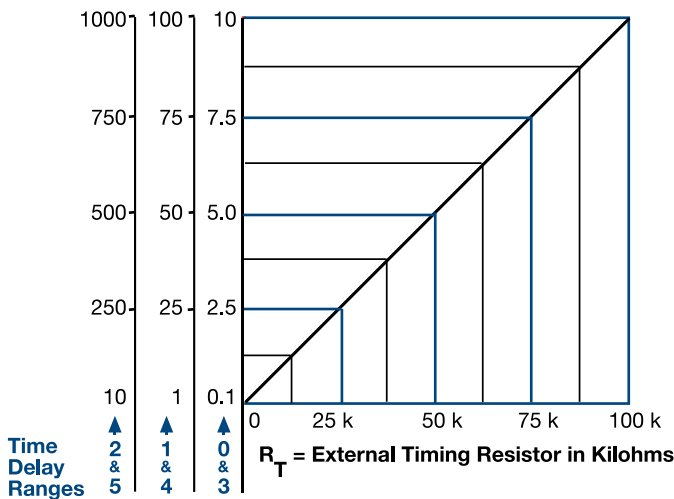
Technical Data

Time Delay Range Repeat Accuracy Tolerance (Factory Calibration) Reset Time Initiate Time Time Delay vs. Temperature & Voltage	0.1 s ... 1000 m in 6 adjustable ranges or fixed +/-0.5 % or 20 ms, whichever is greater ≤ +/-5% ≤ 150 ms ≤ 20 ms ≤ +/-10%
Input Voltage Tolerance Power Consumption Line Frequency DC Ripple	12, 24, or 120 V DC; 24, 120, or 230 V AC +/-20% AC ≤ 2 VA; DC ≤ 2 W 50 ... 60 Hz ≤ 10 %
Output Type Form Maximum Load Current OFF State Leakage Current Voltage Drop DC Operation	Solid state Normally Open, closed before & during timing 1 A steady state, 10 A inrush at 60°C AC ≅ 5 mA at 230 V AC; DC ≅ 1 mA AC ≅ 2.5 V at 1 A; DC ≅ 1 V at 1 A Positive or negative switching
Protection Circuitry Dielectric Breakdown Insulation Resistance Polarity	Encapsulated ≥ 2000 V RMS terminals to mounting surface ≥ 100 MΩ DC units are reverse polarity protected
Mechanical Mounting Package Termination	Surface mount with one #10 (M5 x 0.8) screw 2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7mm) 0.25 in. (6.35 mm) male quick connect terminals
Environmental Operating / Storage Temperature Humidity Weight	-40°C ... +60°C / -40°C ... +80°C 95% relative, non-condensing ≅ 2.4 oz (68 g)

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External Resistance vs Time Delay

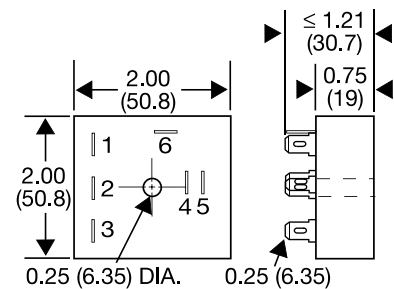
In Secs. or Mins.



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 .

Mechanical View

Fixed & External Adjust



Onboard Adjust

