

Dedicated
timers

Delay On Break (Release) KRDB Digi-Timer Time Delay Relay

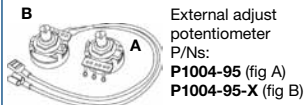


10
YEAR
WARRANTY

- Compact Time Delay Relay
- Microcontroller Circuitry, +/-0.5% Repeat Accuracy
- Isolated 10 A SPDT Output Contacts
- Onboard or External Adjustment or Fixed Time Delay
- Delays from 100 ms ... 1000 m in 6 Ranges
- Input Voltages from 12... 230 V in 5 Ranges
- +/-5% Factory Calibration

Approvals:

Accessories



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



Versa-knob
P/N: P0700-7



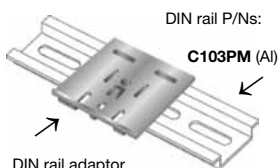
Mounting bracket
P/N: P1023-6



Female quick connect
P/Ns:
P1015-64 (AWG 14/16)
P1015-13 (AWG 10/12)



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



DIN rail P/Ns:
C103PM (Al)

DIN rail adaptor
P/N: P1023-20

See accessory pages for specifications.

Description

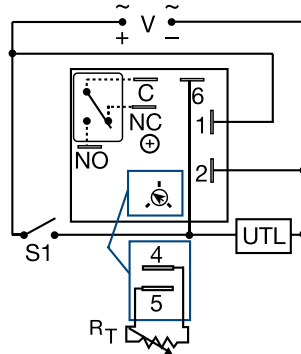
The KRDB Series is a compact time delay relay measuring only 2 in. (50.8 mm) square. Its microcontroller timing circuit provides excellent repeat accuracy and stability. Encapsulation protects against shock, vibration, and humidity. The KRDB Series is a cost effective approach for OEM applications that require small size, isolation, reliability, and long life.

Operation

Input voltage must be applied before and during timing. Upon closure of the initiate switch, the output relay 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 will energize 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.

Connection



V = Voltage S1 = Initiate Switch
C = Common, Transfer Contact NO = Normally Open
NC = Normally Closed UTL = Untimed Load

A knob is supplied for adjustable units. The untimed load is optional. Relay contacts are isolated. Dashed lines are internal connections.

Available Models-

KRDB111.8S	KRDB1110S	KRDB1115S
KRDB111S	KRDB112.5S	KRDB1120M
KRDB1130M	KRDB115M	KRDB1160M
KRDB120	KRDB121	KRDB124
KRDB125	KRDB213S	KRDB2160S
KRDB217S	KRDB220	KRDB221
KRDB222	KRDB224	KRDB3110M
KRDB31120S	KRDB415S	•KRDB420
•KRDB421	•KRDB422	KRDB424
KRDB425		

Don't see what you need? Call us for a minimum quantity and price quote!

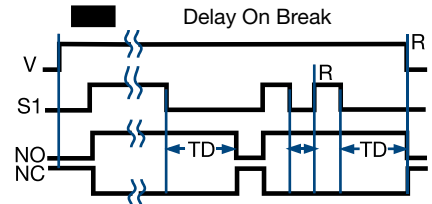
Ordering Table

KRDB Series	X Input	X Adjustment	X Time Delay *
	-1 - 12 V DC	-1 - Fixed	-0 - 0.1 ... 10 s
	-2 - 24 V AC/DC	-2 - Onboard Adjustment	-1 - 1 ... 100 s
	-4 - 120 V AC	-3 - External Adjustment	-2 - 10 ... 1000 s
	-5 - 110 V DC		-3 - 0.1 ... 10 m
	-6 - 230 V AC		-4 - 1 ... 100 m
			-5 - 10 ... 1000 m

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

Example P/N: KRDB421 = 120 V AC; Onboard adjust from 1 to 100 seconds
KRDB610.5S = 230 V AC; Fixed at 0.5 seconds

Function



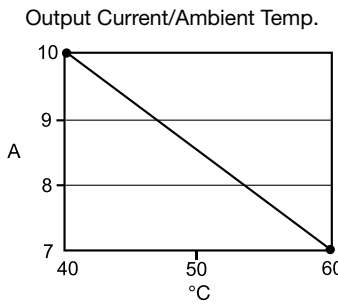
V = Voltage S1 = Initiate Switch R = Reset
NO = Normally Open NC = Normally Closed
TD = Time Delay — = Undefined time

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Technical Data

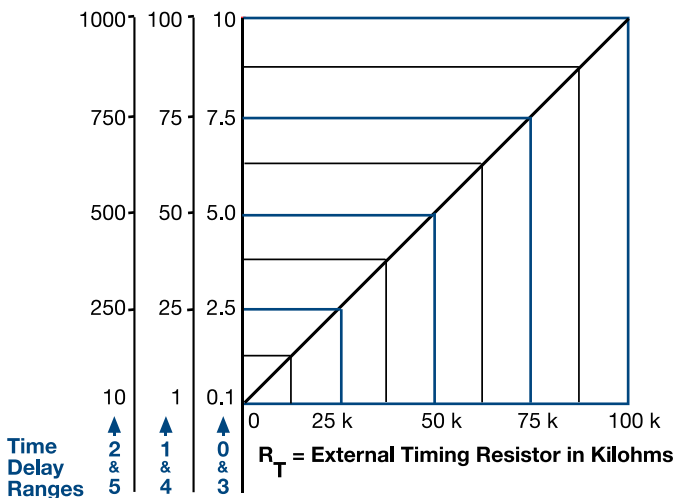
Time Delay	
Type	Microcontroller with watchdog circuitry
Range	0.1 s ... 1000 m in 6 adjustable ranges or fixed
Repeat Accuracy	+/-0.5% or 20 ms, whichever is greater
Tolerance (Factory Calibration)	≤ +/-5%
Recycle Time	≤ 150 ms
Initiate Time	≤ 40 ms
Time Delay vs. Temperature & Voltage	≤ +/-5%
Input	
Voltage	12, 24, 110 V DC; 24, 120 or 230 V AC
Tolerance	12 V DC & 24 V DC/AC: -15% ... +20% 110 V DC, 120 or 230 V AC: -20% ... +10%
AC Line Frequency/DC Ripple	50 ... 60 Hz / ≤ 10%
Power Consumption	AC ≤ 2 VA; DC ≤ 2 W
Output	
Type	Isolated relay contacts
Form	Single pole double throw (SPDT)
Rating (at 40°C)	10 A resistive at 125 V AC 5 A resistive at 230 V AC & 28 V DC; 1/4 hp at 125 V AC 250 V AC
Max. Switching Voltage	Mechanical -- 1×10^7 ; Electrical -- 1×10^5
Life (Operations)	
Protection	
Circuitry	Encapsulated
Isolation Voltage	≥ 1500 V RMS input to output
Insulation Resistance	≥ 100 MΩ
Polarity	DC units are reverse polarity protected
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/Storage Temperature	-40°C ... +60°C / -40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.6 oz (74 g)



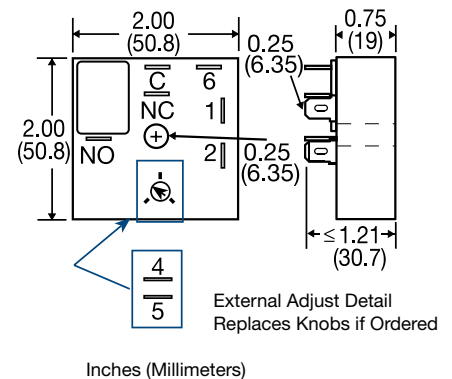
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External Resistance vs Time Delay

In Secs. or Mins.



Mechanical View



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 .