



TECHNICAL Practice

TELECOM SOLUTIONS FOR THE 21ST CENTURY

TDR-1

Time Delay Relay

May 18, 2000

Versatile Time Delay Relay



Viking's model **TDR-1** is a time delay relay device designed to be easily configured to fit a wide variety of applications. The **TDR-1** has (2) different modes of operation:

1) In the Time Delay Mode, the **TDR-1** can be programmed to produce one of 8 closure times. The Trigger 1 input can be programmed to accept either a dry contact closure or positive/negative going logic level voltage.

2) The Delay on Operate mode delays an input trigger by a programmed interval. Eight delay times are available, from 1 to 30 seconds.

Features

- 1 Double Pole, Double Throw relay output
- 8 selectable closure times
- DIP switch programming
- Accepts positive or negative going logic level voltage or contact closure
- Selectable time delay
- Screw terminal connections
- LED relay status indicator

<http://www.vikingelectronics.com>

Applications

- Controlled closure times
- Delayed closures
- Convert closures between N/O and N/C

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Made in the U.S.A.

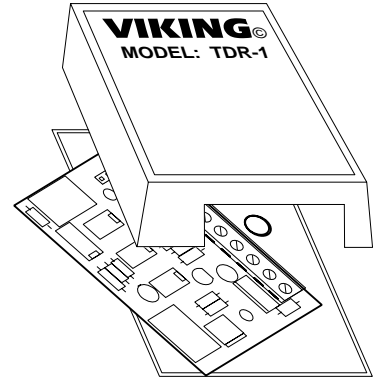
Specifications

Power: 120V AC to 12V DC adapter provided
Dimensions: 74mm x 53mm x 25mm (2.9" x 2.1" x 1.0")
Shipping Weight: 0.4 kg (0.86 lbs)
Environmental: 0° C to 32° C (32° F to 90° F) with 5% to 95% non-condensing humidity
Input: Logic level voltage (+ 5 VDC) or contact closure
Relay: 1A@30VDC, 0.3A@110 VDC, 0.5A@125VAC
Connections: 10 position cage clamp terminal strip

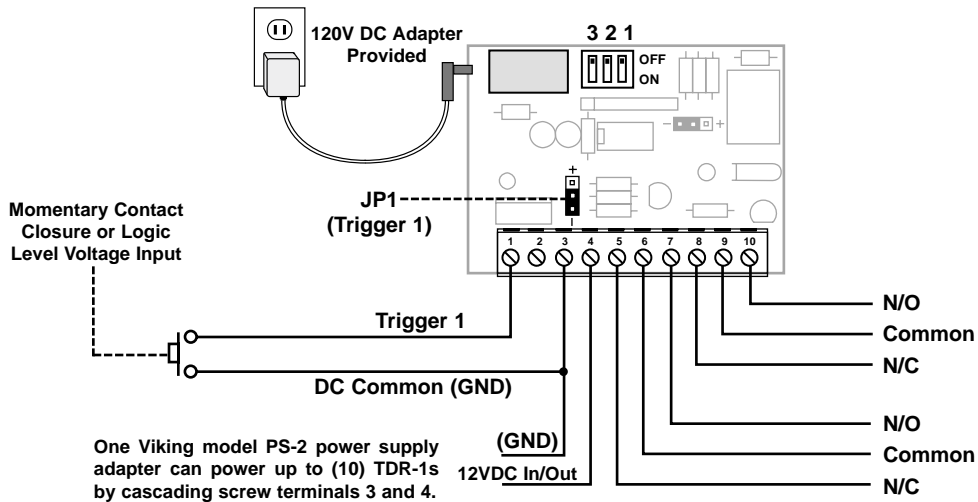
Installation

A. Mounting

1. Remove the cover from the **TDR-1**.
2. Mount the unit on a wall, using either screws or the included foam tape. Make sure there is easy access to the internal terminal block. To facilitate mounting, the internal board of the **TDR-1** can be rotated exposing the two mounting holes in the chassis.
3. Once mounted, swing the board back into position.
4. Wire unit as shown below.
5. Replace the cover, making sure the wires pass through the wiring cutout.



B. Wiring



Programming

A. Trigger Inputs

Referring to the diagram in **Installation**, section **B**, configure shunt **JP1** to set up the trigger input for the proper input polarity. For a positive going input, put the shunt on the (+) side. For a negative going input or dry contact closure, leave the shunt on the (-) side (factory default).

B. Time Delay Relay Mode

Choose the DIP switch setting for the desired activation time using the diagram shown to the right.

Note: See section "A. Trigger Inputs" to set proper input polarity.

Switch 1	Switch 2	Switch 3	Trigger 1
OFF	OFF	OFF	.5 sec
OFF	OFF	ON	1 sec
OFF	ON	OFF	2 sec
OFF	ON	ON	4 sec
ON	OFF	OFF	7 sec
ON	OFF	ON	10 sec
ON	ON	OFF	15 sec
ON	ON	ON	20 sec

C. Delay on Operate Mode

To put the **TDR-1** into the "Delay on Operate Mode", strap Trigger 2 to ground by wiring terminal 2 to terminal 3. Refer to the diagram to the right to set the dip switches for the desired delay time.

Note: See section "A. Trigger Inputs" to set proper input polarity.

Switch 1	Switch 2	Switch 3	Trigger 1
OFF	OFF	OFF	1 sec
OFF	OFF	ON	2 sec
OFF	ON	OFF	4 sec
OFF	ON	ON	7 sec
ON	OFF	OFF	10 sec
ON	OFF	ON	15 sec
ON	ON	OFF	20 sec
ON	ON	ON	30 sec

Control Relay Contacts Remotely



RC-2A

The **RC-2A** Remote Controller provides single remote relay operation from any standard Touch Tone telephone. The controller is designed to be installed either locally or remotely. For local installations the **RC-2A** can be installed in series on any analog line, such as **Viking's** Doorboxes.

For off-premise applications, the **RC-2A** can be installed on a line shared by a key system, PABX, single line phone or on a dedicated line. The **RC-2A** will answer C.O. lines or analog PABX/KSU station ports (after the programmable number of rings) and allow remote relay operation. A field programmable security code may

also be programmed to prevent unauthorized usage. For more information, retrieve **Fax Back Document 160**.

Control up to 3 Relay Contacts Remotely

The **RC-3** Remote Controller provides remote relay operation for up to 3 relays from any Touch Tone telephone. The controller is designed to be installed either locally or remotely. For local installations the **RC-3** can be installed in series on any analog line, such as **Viking's** Doorboxes.

For off-premise applications, the **RC-3** can be installed on a line shared by a key system, PABX, single line phone or on a dedicated line. The **RC-3** will answer C.O. lines or analog PABX/KSU station ports (after programmable number of rings) and allow remote relay operation. A field programmable security code can also be programmed to prevent unauthorized usage. Three **RC-3's** may be cascaded to provide up to 9 relay closures from a single line. For more information on the **RC-3**, retrieve **Fax Back Document 165**.



RC-3

Loop and Ring Detect Relay Closure



LDB-2

The **LDB-2** Ring/Loop Detector monitors an analog phone line for ringing or an in-use condition. A built-in relay can be activated when either of these conditions are detected. This is ideal for monitoring line status or for providing a visual indication of such.

When monitoring for ring, an internal pot can be adjusted to allow the relay closure to stay on steady, or follow standard ring cadence.

The **LDB-2** comes complete with a 12 VDC power adapter, and can also provide 12V DC power through its auxiliary 12V DC output terminals. For more information on the **LDB-2**, retrieve **Fax Back Document 408**.

Product Support Line...715.386.8666

Fax Back Line...715.386.4345

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