

## TC810N1013(CDN), TC810R1024(CDN)

### Control and Relay Modules with FlashScan®

#### General

**TC810N1013(CDN) Control Module:** The TC810N1013(CDN) Addressable Control Module provides Honeywell intelligent fire alarm control panels a circuit for Notification Appliances (horns, strobes, speakers, etc.). Addressability allows the TC810N1013(CDN) to be activated, either manually or through panel programming, on a select (zone or area of coverage) basis.

**TC810R1024(CDN) Relay Module:** The TC810R1024(CDN) Addressable Relay Module provides the system with a dry-contact output for activating a variety of auxiliary devices, such as fans, dampers, control equipment, etc. Addressability allows the dry contact to be activated, either manually or through panel programming, on a select basis.

FlashScan® (U.S. Patent 5,539,389) is a communication protocol that greatly enhances the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of other designs.

#### Features

- Built-in type identification automatically identifies these devices to the control panel.
- Internal circuitry and relay powered directly by two-wire SLC loop. The TC810N1013(CDN) module requires power (for horns, strobes, etc.), or audio (for speakers).
- Integral LED “blinks” green each time a communication is received from the control panel and turns on in steady red when activated.
- LED blink may be deselected globally (affects all devices).
- High noise immunity (EMF/RFI).
- The TC810N1013(CDN) may be used to switch 24-volt NAC power, audio (up to 70.7 Vrms).
- Wide viewing angle of LED.
- SEMS screws with clamping plates for wiring ease.
- Direct-dial entry of address 01– 159 for FlashScan loops, 01 – 99 for CLIP mode loops.
- Speaker, and audible/visual applications may be wired for Class B or A (Style Y or Z).

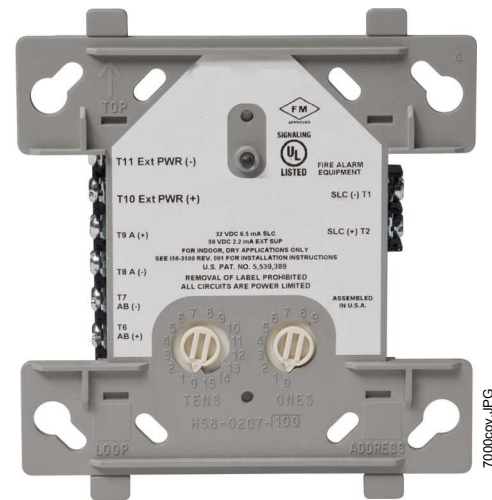
#### Applications

The TC810N1013(CDN) is used to switch 24 VDC audible/visual power, high-level audio (speakers). The TC810R1024(CDN) may be programmed to operate dry contacts for applications such as door holders or Air Handling Unit shutdown, and to reset four-wire smoke detector power.

**NOTE:** Refer to the SLC Manual (PN 95-7675 (51932)) for details regarding releasing applications with the TC810N1013(CDN).

#### Construction

- The face plate is made of off-white heat-resistant plastic.
- Controls include two rotary switches for direct-dial entry of address (01-159).



TC810N1013

- The TC810N1013(CDN) is configured for a single Class B (Style Y) or Class A (Style Z) Notification Appliance Circuit.
- The TC810R1024(CDN) provides two Form-C dry contacts that switch together.

#### Operation

Each TC810N1013(CDN) or TC810R1024(CDN) uses one of 159 possible module addresses on a SLC loop (99 on CLIP loops). It responds to regular polls from the control panel and reports its type and status, including the open/normal/short status of its Notification Appliance Circuit (NAC). The LED blinks with each poll received. On command, it activates its internal relay. The TC810N1013(CDN) supervises Class B (Style Y) or Class A (Style Z) notification or control circuits.

Upon code command from the panel, the TC810N1013(CDN) will disconnect the supervision and connect the external power supply in the proper polarity across the load device. The disconnection of the supervision provides a positive indication to the panel that the control relay actually turned ON. The external power supply is always relay isolated from the communication loop so that a trouble condition on the external power supply will never interfere with the rest of the system.

Rotary switches set a unique address for each module. The address may be set before or after mounting. The built-in TYPE CODE (not settable) will identify the module to the control panel, so as to differentiate between a module and a sensor address.

#### Specifications for TC810N1013(CDN)

**Normal operating voltage:** 15 to 32 VDC.

**Maximum current draw:** 6.5 mA (LED on).

**Average operating current:** 350  $\mu$ A direct poll, 375  $\mu$ A group poll with LED flashing, 485  $\mu$ A Max. (LED flashing, NAC shorted.)

**Maximum NAC Line Loss:** 4 VDC.

**External supply voltage (between Terminals T10 and T11):** Maximum (NAC): Regulated 24 VDC; Maximum (Speakers): 70.7 V RMS, 50W.

**Drain on external supply:** 1.7 mA maximum using 24 VDC supply; 2.2 mA Maximum using 80 VRMS supply.

**Max NAC Current Ratings:** For class B wiring system, the current rating is 3A; For class A wiring system, the current rating is 2A.

**Temperature range:** 32°F to 120°F (0°C to 49°C).

**Humidity range:** 10% to 93% non-condensing.

**Dimensions:** 4.5" (114.3 mm) high x 4" (101.6 mm) wide x 1.25" (31.75 mm) deep. Mounts to a 4" (101.6 mm) square x 2.125" (53.975 mm) deep box.

**Accessories:** SMB500 Electrical Box; CB500 Barrier

## Specifications for TC810R1024(CDN)

**Normal operating voltage:** 15 to 32 VDC.

**Maximum current draw:** 6.5 mA (LED on).

**Average operating current:** 230 µA direct poll; 255 µA group poll.

**EOL resistance:** not used.

**Temperature range:** 32°F to 120°F (0°C to 49°C).

**Humidity range:** 10% to 93% non-condensing.

**Dimensions:** 4.5" (114.3 mm) high x 4" (101.6 mm) wide x 1.25" (31.75 mm) deep. Mounts to a 4" (101.6 mm) square x 2.125" (53.975 mm) deep box.

**Accessories:** SMB500 Electrical Box; CB500 Barrier

## Agency Listings and Approvals

In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL:** S470
- **ULC:** S7567 (CDN version only)
- **FM Approved**
- **CSFM:** 7300-1130:0218
- **MEA:** 2-02-E
- **FDNY:** COA #6060, #6076

## Contact Ratings for TC810R1024(CDN)

Current Rating	Maximum Voltage	Load Description	Application
3 A	30 VDC	Resistive	Non-Coded
2 A	30 VDC	Resistive	Coded
.9 A	110 VDC	Resistive	Non-Coded
.9 A	125 VDC	Resistive	Non-Coded
.5 A	30 VDC	Inductive (L/R=5ms)	Coded
1 A	30 VDC	Inductive (L/R=2ms)	Coded
.3 A	125 VAC	Inductive (PF=0.35)	Non-Coded
1.5 A	25 VAC	Inductive (PF=0.35)	Non-Coded
.7 A	70.7 VAC	Inductive (PF=0.35)	Non-Coded
2 A	25 VAC	Inductive (PF=0.35)	Non-Coded

**NOTE:** Maximum (Speakers): 70.7 V RMS, 50 W

## Product Line Information

**NOTE:** "CDN" suffix indicates ULC Listed model.

**TC810N1013(CDN):** Intelligent Addressable Control Module.

**TC810R1024(CDN):** Intelligent Addressable Relay Module.

**A2143-20:** Capacitor, required for Class A (Style Z) operation of speakers.

**SMB500:** Optional Surface-Mount Backbox.

**CB500:** Control Module Barrier — required by UL for separating power-limited and non-power limited wiring in the same junction box as TC810N1013(CDN).

**NOTE:** For installation instructions, see the following documents:

- TC810N1013(CDN) Installation document I56-3800.
- TC810R1024(CDN) Installation document I56-3802.
- Honeywell SLC Wiring Manual, document 95-7675 (51932).

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

FlashScan® is a registered trademark of Honeywell International Inc.

©2011 by Honeywell International Inc. All rights reserved. Unauthorized use of this document is strictly prohibited.

## Automation and Control Solutions

Honeywell International Inc.  
1985 Douglas Drive North  
Golden Valley, MN 55422  
www.honeywell.com

Honeywell Limited-Honeywell Limitée  
35 Dynamic Drive  
Scarborough, Ontario M1V 4Z9

74-3995-4 Rev. 2-11  
February 2011  
Made in the U.S.A.  
© U.S. Registered Trademark  
© 2011 Honeywell International Inc.  
Page 2 of 2



74-3995-4

# Honeywell