TR-B501-WHITE, TR-B501-IV, and TR-B501-BL 4" Plug-in Detector Bases

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SPECIFICATIONS

Base Diameter:	4.0" (10.2 cm)
Base Height:	0.74" (18.8 mm)
Operating Temperature Range:	Refer to the applicable sensor's operating temperature range provided in the sensor's installation manual.
Electrical Ratings – includes base and detector	
Operating Voltage:	15 to 32 VDC
Standby Current:	150 µA
Listing: UL268	

BEFORE INSTALLING

Please read the *System Smoke Detectors Application Guide*, which provides detailed information on detector spacing, placement, zoning, wiring, and special applications.Observe guidelines for NFPA 72.

NOTICE: This manual should be left with the owner/user of this equipment.

IMPORTANT: Use only with compatible UL-listed detector heads for proper system function. The detector used with this base must be tested and main-tained regularly following requirements of NFPA 72 (depending on location). The detector should be cleaned at least once a year.

GENERAL DESCRIPTION

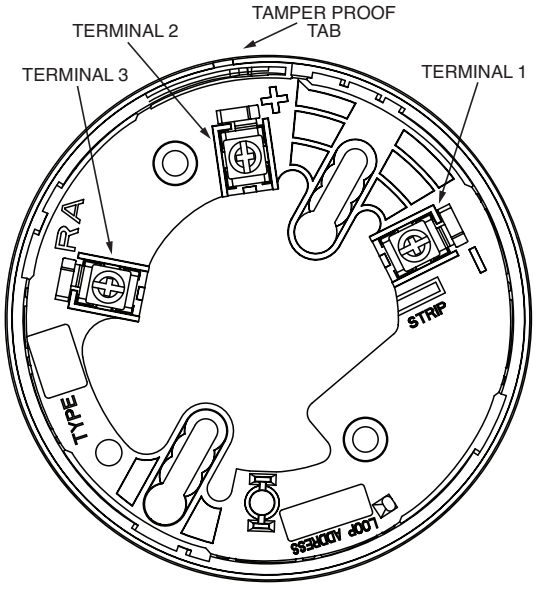
The TR-B501-WHITE, TR-B501-IV, and TR-B501-BL are plug in detector bases intended for use in an intelligent system with screw terminals provided for power (+ and –), and remote annunciator connections. Communication takes place over the power lines (+ and –).

BASE TERMINALS

No. Function

1 Power (–), Remote Annunciator (–)
2 Power (+)
3 Remote Annunciator (+)

FIGURE 1. TERMINAL LAYOUT



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MOUNTING

This detector base mounts directly to 4" (10.2 cm) square with plaster ring, 3½" (8.9 cm) octagon, 50 mm, 60 mm, and 70 mm centers.

INSTALLATION AND WIRING GUIDELINES (SEE FIGURE 2)

All wiring must be installed in compliance with all applicable local codes and any special requirements of the local authority having jurisdiction. Proper wire gauges should be used. The conductors used to connect smoke detectors to control panels and accessory devices should be color-coded to reduce the likelihood of wiring errors. Improper connections can prevent a system from responding properly in the event of a fire.

For signal wiring (the wiring between interconnected detectors and modules), it is recommended that the wiring be no smaller than 18 AWG (0.823 mm²). Wire sizes up to 12 AWG (3.31 mm²) may be used with the base.

Alarm system control panels have specifications for allowable loop resistance. Consult the control panel specifications for the total loop resistance allowed before wiring the detector loops.

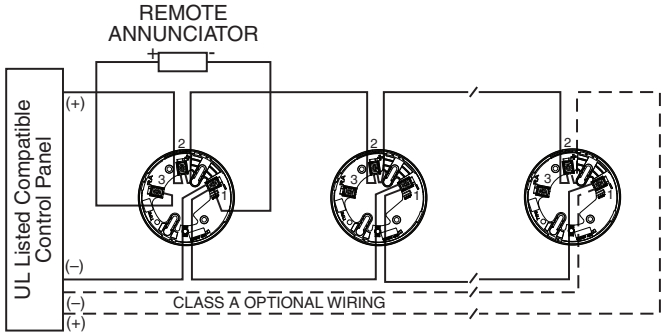
Make wiring connections by stripping about ³/₈" (10 mm) of insulation from the wire end (use strip gauge molded in base). Then slide the wire under the clamping plate and tighten the clamping plate screw. Do not loop the wire under the clamping plate. (See Figure 3.)

Check the zone wiring of all bases in the system before installing the detectors. This includes checking the wiring for continuity, correct polarity, ground fault testing and performing a dielectric test.

The base includes an area for recording the zone, address, and type of detector to be installed at that location. This information is useful for setting the detector head address and for verification of the detector type required for that location.

Once all detector bases have been wired and mounted, and the loop wiring has been checked, the detector heads may be installed in the bases.

FIGURE 2. TYPICAL WIRING DIAGRAM FOR 2-WIRE LOOP



CAUTION: Do not loop wire under terminal 1 or 2. Break wire run to provide supervision of connections.

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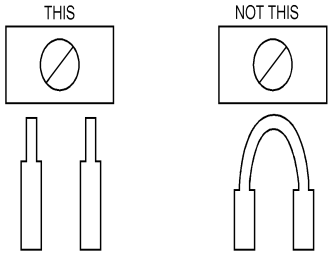
FIGURE 3.



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TAMPER-RESIST FEATURE

NOTE: Do not use the tamper-resist feature if the removal tool is to be used.

The detector base includes a tamper-resist feature that prevents removal of the detector without using a small screwdriver or similar tool.

To activate this feature, use needle-nose pliers to break the tab on the detector base as shown in Figure 4A. Then, install the detector.

To remove the detector from the base once the tamper-resist feature has been activated, insert a small-bladed screwdriver into the small hole on the side of the base and push the plastic lever away from the detector head. (See Figure 4B). This allows the detector to be rotated counterclockwise for removal.

The tamper-resist feature can be defeated by breaking and removing the plastic lever from the base. However, this prevents the feature from being used again.

FIGURE 4A. ACTIVATE TAMPER-RESIST FEATURE

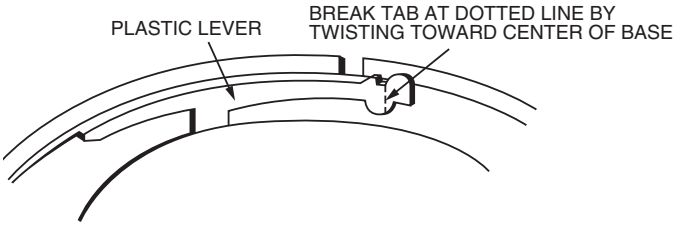

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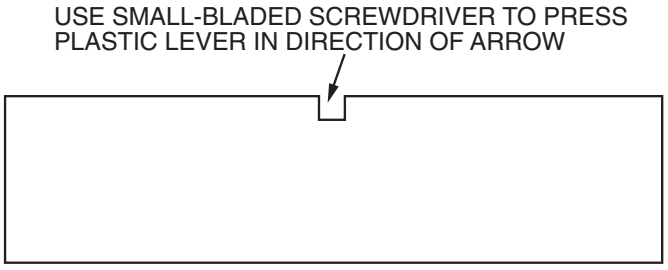
FIGURE 4B. DETECTOR REMOVAL



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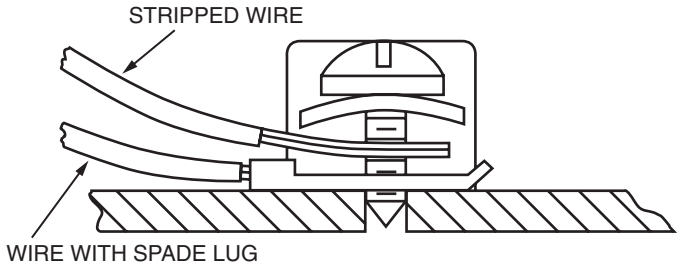
REMOTE ANNUNCIATOR (TR-RA100Z)

The remote annunciator is connected between terminals 1 and 3 using the spade lug terminal packed with the remote annunciator. The spade lug terminal is connected to the base terminal as shown in Figure 5.

It is not acceptable to have three stripped wires under the same wiring terminal unless they are separated by a washer or equivalent means. The spade lug supplied with the model TR-RA100Z is considered an equivalent means. See Figure 2 for proper installation.

FIGURE 5. CONNECTION TO REMOTE ANNUNCIATOR TERMINAL



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