

Figure 1: Terminal Layout

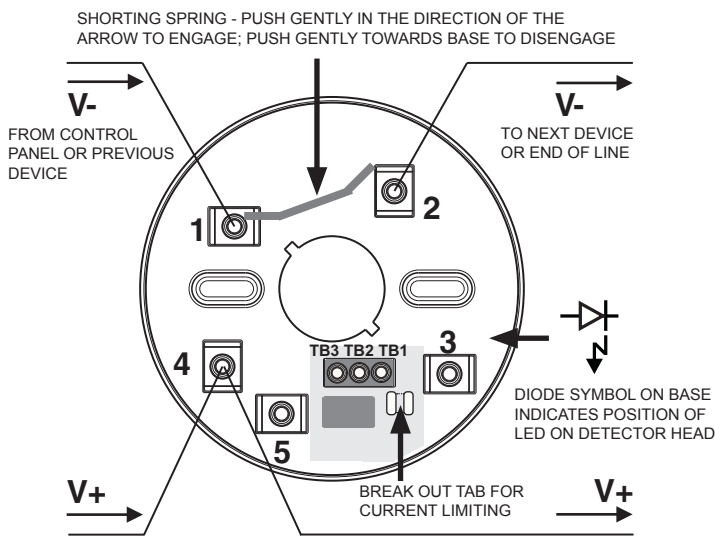


TABLE 1: WIRING CONNECTIONS	
Terminal No.	Function
BASE TERMINALS	
1	Supply In -
2	Supply Out -
3	DO NOT USE
4	Supply In and Out +
5	DO NOT USE
RELAY CONTACTS	
TB1	Normally Open
TB2	Normally Closed
TB3	Common

Figure 2: Tamper Resist Activation

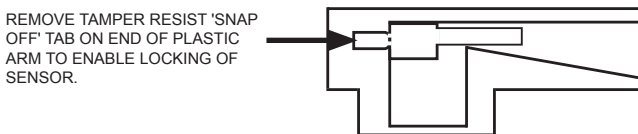


Figure 3: To Remove a Locked Sensor From the Base



TABLE 2: ELECTRICAL RATINGS

ECO1000BREL	24L	12NL	12L
Supply voltage DC	10-15V *	10-15V	9.5-15V
with Tab Broken	15-31V *	-	-
Standby Current	1µA	20µA	1µA
Contact activation time after detector alarm	100ms	100ms	100ms
Contact reset time after detector unlatch	100ms	100ms	100ms
Contact resistance	100mΩ	100mΩ	100mΩ
Contact rating DC	1A	1A	1A

*Important - when a BREL24L is to be used refer to the Breakout Tab Option paragraph.

GENERAL DESCRIPTION

These plug-in sensor relay bases are for use with System Sensor ECO1000 sensor heads. They are designed to operate in both 2 and 4-wire systems, with screw terminals provided for power connections. Normally open and normally closed relay contacts are provided on a separate terminal block. The circuit built into the base provides current limiting to the sensor in the alarm state.

The relay is controlled directly from the sensor, therefore as the sensor is latched in alarm, so will be the base. For the 24L and 12L latching relay bases, the alarm condition can only be terminated by removal of the supply to the sensor and base. The 12NL Non-latching base periodically isolates the sensor from the supply, hence providing an "automatic reset" once the alarm stimulus has cleared.

NOTE: In order to prevent possible nuisance alarms due to shock or vibration, any devices connected to the BREL12L base must not signal an alarm until the relay base contacts have switched for a period greater than 500ms.

MOUNTING

The sensor base should be mounted using pan head screws, with a maximum thread diameter of 4mm, and maximum head diameter of 8mm. If required, suitable junction boxes may be used.

Sensor LED Position

Mount detector base, using the **Diode Symbol** to indicate position of detector head LED when secured to the base (see Figure 1).

WIRING

See Figure 1 and Table 1.

All wiring must be installed in compliance with applicable local codes and standards, and the authority having jurisdiction.

The base terminals are designed to accept cables between 0.4mm² and 2mm², however reference should be made to the panel specifications for acceptable cable resistance and capacitance. The relay terminals can accept cables up to 1.5mm² (from 16 to 30 AVG).

Note: Do not loop the wire under the terminals - to ensure supervision of contacts, the wire run must be broken.

To permit continuity testing of the wiring circuit prior to installation of the sensor heads, the base contains a shorting spring which acts to connect terminals 1 (negative in) and 2 (negative out) - see Figure 1. To activate, gently push the spring toward the centre of the sensor until it clips into place. The short will automatically disengage when the sensor is installed.

BREAKOUT TAB OPTION (BREL24L ONLY)

See Figure 1: When power to the BREL24L is provided by a nominal 24V, or greater, power supply without current limiting (25mA or less) the tab should be broken using a suitable tool like a screwdriver or thin nose pliers to remove the narrow strip of circuit board, shown in the diagram.

Note: When power is provided by the conventional circuit of a fire control panel, the tab should be left intact.

Note: If in doubt, refer to the control panel manufacturer. **Once broken the tab cannot be reset!**

Tamper Resist Feature

The base includes a feature which, when activated, prevents removal of the sensor without a tool - see Figures 2 and 3.