

Tyco 5BI

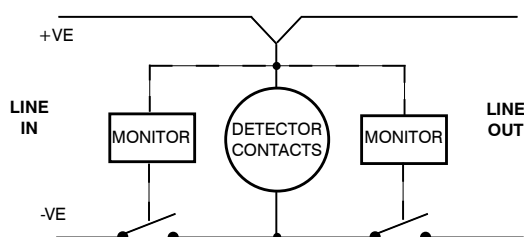
Isolator

Detector Base

INFORMATION SHEET

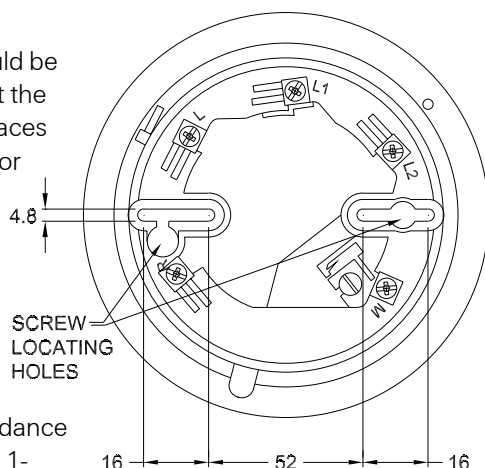
DESCRIPTION

The 5BI Isolator Base serves as both a base for MX detectors and a protection device against short circuits on the MX addressable loop. It monitors the voltage on the loop and when a short circuit is detected, isolates the affected section whilst allowing the rest of the addressable loop to function normally. If a detector fitted to a 5BI exhibits a short circuit, the Isolator Base will isolate both sides of the loop from the faulty device without affecting any other device on the loop. The 5BI is able to pass current in both directions, ie Line In to Line Out, or Line Out to Line In and does not require a detector to be fitted to operate correctly. The 5BI offers improved performance over the superseded 814IB and can support up to 100 IB units² instead of 32.



FIXING

The base should be fixed such that the park plunger faces toward the door or trafficable area. This ensures the detector LED will be visible from the direction of entry, in accordance with AS1670.1-2004. The 5BI



should be located as shown on the site plan, fixed to a suitable flat surface strong enough to take the weight of the base and detector. Two pan head screws 4.8mm diameter (max.) are required (not supplied) for fixing the base. It may be fixed directly to the ceiling, to a conduit box, DHM5B deckhead mount or Euro Mount base. To aid fixing, there are enlarged holes in the base allowing a screw to be started, then the base inserted over the screw head and rotated on the screw to be held loosely on the ceiling. The second screw can then be installed and both screws tightened.



SPECIFICATIONS

Loop Voltage ¹	20V to 40Vdc
Input Current:	
Normal	80µA
Tripped (max)	3.6mA
Series Resistance (max)	0.25 Ohm
Equivalent Capacitance	0.5pF
Remote Indicator	Tyco E500 Mk2
IB Units between 5BI bases ²	100 maximum
Overall Dimensions:	
Height	24mm
Diameter	127mm
Weight	63g
Ambient Temperature	-25°C to +70°C
Storage Temperature	-40°C to +80°C
Relative Humidity	10% to 95% (non cond.)

Part Numbers

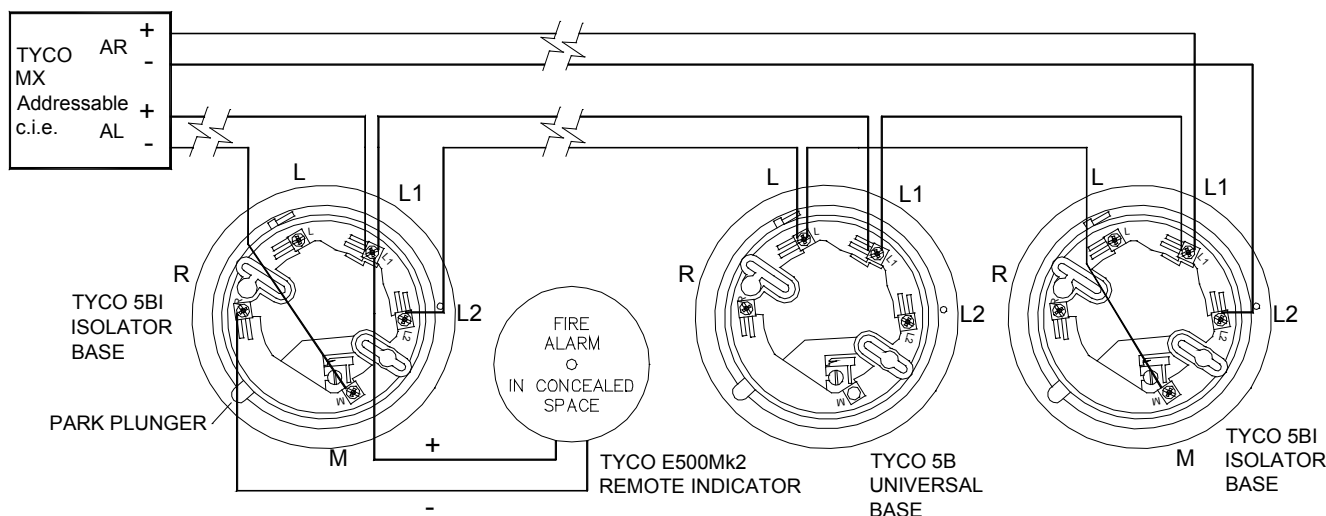
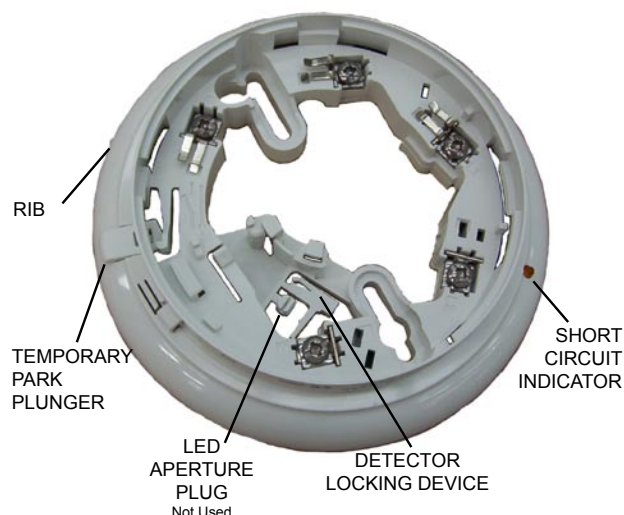
5BI Base	517.050.018
Deckhead Mount	517.050.603
Euro Mount	517.050.604
Detector Cage	517.050.614

1. Addressable loop voltage provided by MX c.i.e.

2. Maximum number of devices between 5BI limited to 40 for AS 1670.1-2004 systems. Refer to LT0273 (MXP), LT0313 (4100MXP), LT0360 (MX1) for IB Units and Loop Loading specifications

WIRING

Three loop connection terminals L1, L2 and M are provided on the base. The +ve input and output connections are both made at the **L1** terminal, the two -ve connections are made at terminals **L2** and **M** respectively, see wiring diagram. An E500 Mk2 Remote Indicator may be wired between R (-ve) and L1 (+ve). A maximum of two 1.5mm² or one 2.5mm² cables may be connected at any one terminal, unless the cables are fitted with a suitable fork or eyelet crimp terminal. The 814RB Relay Base or the obsolete 814SB Sounder Base may be fitted to the 5BI Isolator Base before fitting the addressable device. The 5BI Isolator Base may not be suitable for use with Types C and D heat detectors due to the high temperatures that may be experienced. Types C and D detectors may be used with the 5BI where temperatures are less than 70°C. The 802/901SB sounder bases (with ISO 8201 tones) cannot be used with the 5BI. These sounder bases have to be wired directly to the loop.



The MX c.i.e. can be programmed to illuminate a Remote Indicator for detectors in alarm other than the detector base to which the Indicator is connected.

5BI Isolator Base Wiring—Addressable Systems

POSITIONING OF ISOLATOR BASES

The 5BI Isolator Bases are normally positioned at the start and end of the loop and at every 40 devices (AS1670.1) or at zone boundaries (NZS4512) so that a short circuit has limited impact. Additional 5BIs will have to be installed if the combined IB loading of the MX devices between two Isolator Bases exceeds 100. Each detector/module is 1 unit, except for 814I (1.4), 814PH (1.2), CP820 (1.5), MIM800/801 (1.5), RIM800 (4.5), SNM800 (3), 814SB (2.5) (the 814SB is obsolete), 802/901SB (2.5) and 814RB (1.6). Refer to the relevant c.i.e. manual LT0273 (for MXP), LT0313 (for 4100MXP) and LT0360 (for MX1) for information regarding IB unit and loop loading specifications and design limits.

DETECTOR LOCK

The detector locking device is part of the base moulding and must be detached and inserted into the locking aperture if required. The detector may be locked in position by inserting the optional locking device in the base before fitting the selected detector. The detector may then be removed only after inserting the unlocking tool into the hole on the detector cover. A 3mm rod could be a suitable unlocking tool, or one can be fabricated by grinding a screwdriver with a 3mm diameter shaft to a length of 22mm. Use this to depress the locking arrangement to allow the detector to be rotated and removed.



Locking Device