

# ANALOGUE - Isolator Base Model B524IEFT-1

## Overview

### Features

- Low profile (26mm)
- Low Current consumption (100 µA)
- Up to 99 isolators per loop
- Complete isolation of short circuits
- Automatic restore when short circuit is corrected
- Rugged industrial construction
- Remote LED Connection
- Sensor continues to operate in case of a short circuit on either side of isolator base



## Description

The System Sensor B524IEFT-1 isolator base is designed for use with all System Sensor 200 analogue addressable detectors. The B524IEFT isolator base prevents an entire communications loop from being disabled when a short circuit occurs. It achieves this by isolating the part of the loop containing the short from the remainder of the circuit. The base will automatically restore the entire loop when the cause of the short circuit is corrected. Up to 20 devices may be isolated per isolator base, depending on the device type (see tables 1 and 2).

This base accepts the following System Sensor detectors : 1551E, 2551E, 5551E, 5551HTE, 5551RE, 1251E and 2251E.

The table below shows the maximum number of detectors and modules that can be installed between isolators

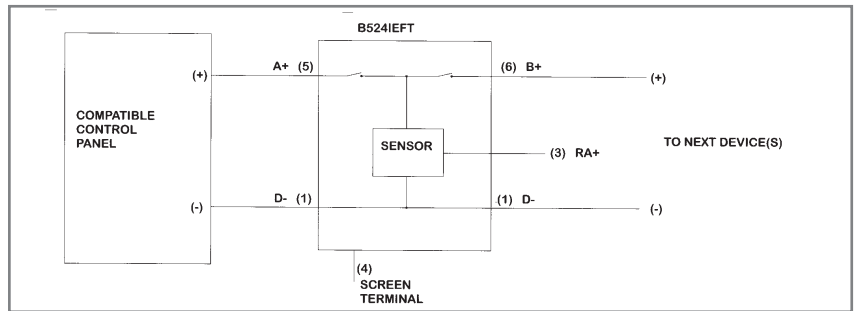
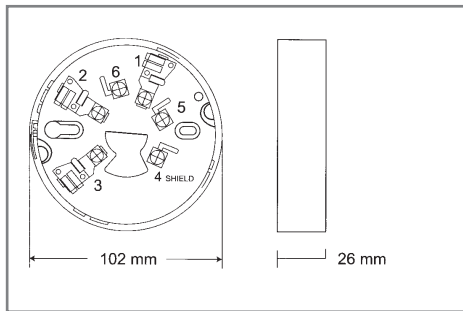
| Detector / Module Type                       | Max number between B524IEFT-1 or similar isolators |
|--|--|
| Series 200 Detectors in B501 base            | 60   |
| Series 200 Advanced Detectors in B501AP base | 60   |
| 7251 Pinnacle                                | 40   |
| 6500 beam detector                           | 15   |
| Old 500 Modules                              | 6  |
| M200 Modules (except CZ)                     | 40   |
| M210E-CZ conventional zone module            | 10   |
| Multi-modules                                | 6  |
| MCP5A call point                             | 4  |
| AV range sounders and strobes                | 25   |
| Any sensor in B524RTE relay base             | 3  |

### Assumptions:

Worst case figures  
Min loop voltage 17VDC  
Normal comms on the loop

# Architect/Engineer Specifications

## B524IEFT-1 Isolator Base



Since devices of different types are likely to be mixed between isolators, it is useful to be able to calculate the maximum number of devices between isolators where different types of device are mixed. To do this, we have allocated an "isolator compatibility number" to each analogue / addressable device. To check whether the current draw between a pair of isolators is within specification, simply add up the compatibility number for all the devices between each pair of isolators. The number should be equal to or less than 20, if the B524IEFT-1 is used.

| Detector / module type  | Compatibility Number          |
|---|-------------------------------|
| Standard Detectors in B501 base<br>(1251E, 2251E, 5551E, 5551RE, 5551HTE)                           | 1                             |
| Standard modules<br>M500ME, M500CHE, M501ME, M503ME, M500KAC,<br>SSM500DKM, M512ME (External power) | 1                             |
| M512ME (Loop power)   | Not compatible with isolators |
| Loop-powered Sounders EMA24ALx, DBS24ALx  | 2.5                           |
| Any detector in B524RE relay base   | 4                             |

TABLE 2. COMPATIBILITY RATINGS WHEN MIXED DEVICE TYPES ARE USED

Example: Six 2251E detectors in B501 bases, one 5551E detector in a B524RE base, two 1251E detectors in B501 bases and two loop-powered sounders used between a pair of B524IEFT-1 isolators:

Total compatibility number =  $6 \times 1 + 1 \times 4 + 2 \times 1 + 2 \times 2.5 = 17$   
 Since the maximum compatibility number for the B524IEFT-1 is 20, the system will work correctly.

## Electrical Specifications

|                             |                       |
|-----------------------------|-----------------------|
| Operating Voltage Range     | 15 to 28.5VDC         |
| Standby Current             | 100µA maximum @ 24VDC |
| Maximum ON Resistance (24V) | 0.2Ω                  |
| Maximum ON Resistance (15V) | 0.29Ω                 |

## Environmental Specifications

|                               |   |
|-------------------------------|---|
| Application Temperature Range | -30°C to +70°C                              |
| Operating Humidity            | 0 to 95% Relative Humidity (non-condensing) |

## Mechanical Information

|                              |   |
|------------------------------|---|
| Base Diameter                | 102mm                                   |
| Base Height                  | 26mm                                    |
| Max Wire Gauge for Terminals | 0.5mm <sup>2</sup> – 1.5mm <sup>2</sup> |
| Weight                       | 70g                                     |

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Installation information: in order to ensure full functionality, refer to the installation instructions as supplied.