

ANALOGUE - Isolator Base Model B524IEFT-1

Overview

Features

- Low profile (26mm)
- Low Current consumption (100 μ A)
- 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

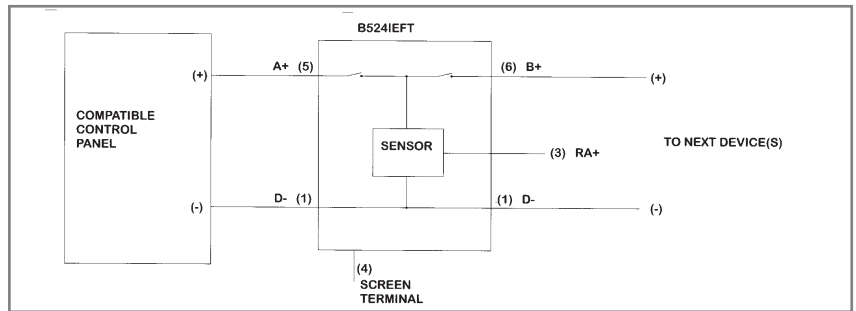
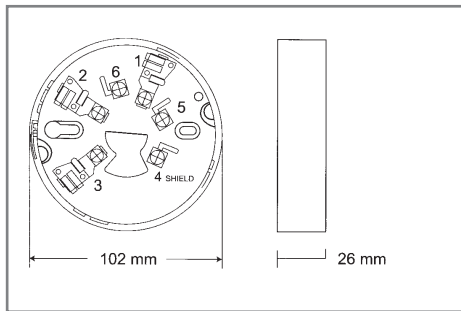
Detector / Module Type	Max number between B524IEFT-1 or similar isolators
Series 200 Detectors in B501 base	60
Series 200 Advanced Detectors in B501AP base	60
7251 Pinnacle	40
6500 beam detector	15
Old 500 Modules	6
M200 Modules (except CZ)	40
M210E-CZ conventional zone module	10
Multi-modules	6
MCP5A 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 (1251E, 2251E, 5551E, 5551RE, 5551HTE)	1
Standard modules M500ME, M500CHE, M501ME, M503ME, M500KAC, 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 ² – 1.5mm ²
Weight	70g

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