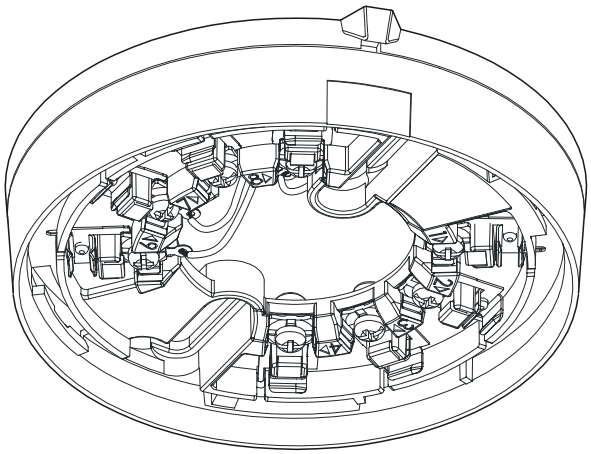

Figure 1: ZP7-IB Isolator Base

Description

The ZP7-IB is an isolator base for ZP detectors which, when fitted to a looped ZP address line enables sections of the line to be isolated under fault conditions.

Software control causes sections of line between isolators to be taken off-line in the case of short-circuit lines, and causes the line to feed and detect from both sides of an open-circuit break. Wiring to the ZP7-IB can be configured for operational or installation test operation, by means of a link connector.

Application Information

In a class A circuit, a short will be isolated between the two isolator bases located electrically closest to the short as shown in the two configurations in Figure 2 and Figure 3.

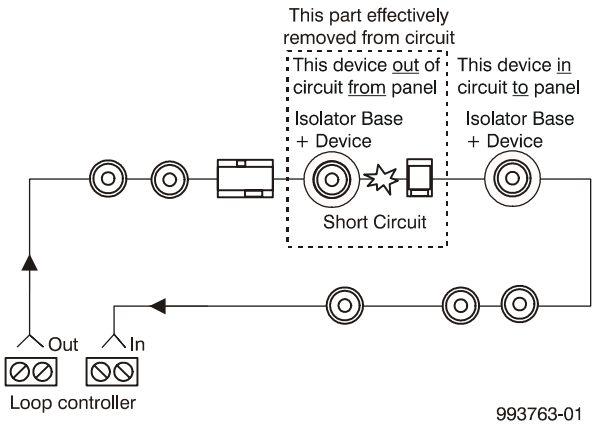

Figure 2: Class A Configuration

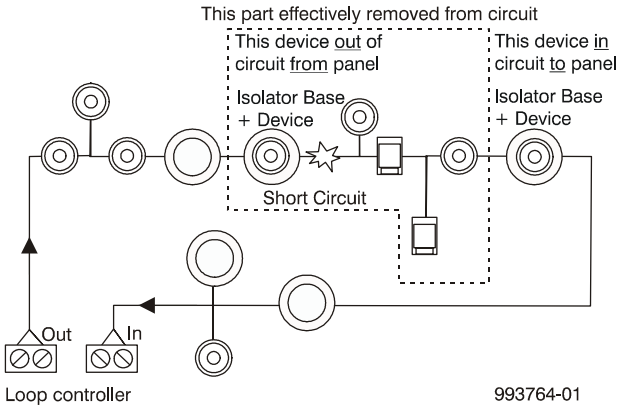

Figure 3: Class A Configuration with T-Taps

Specifications

General Information

Designation	Sensor isolator base
Model number	ZP7-IB
Part number	2017
Compatibility	All ZP analogue systems
Mounting	Surface mount
Addressing method	Soft addressed by panel software (does not require an address number)
Wiring	2 core "Class-A" return loop Total loop=75 ohm max. Between isolators=18 ohm max.
Monitoring	Loop wiring for short circuit faults
Indication	LED (red)
Maximum isolators per line	16
Maximum impedance between:	
panel and 1 isolator	18 ohm
isolator and next isolator	18 ohm
Operating voltage (loop)	19.5 to 20.5 VDC
Current (quiescent)	1.1 mA
Current (fault)	0.85 mA
Internal resistance of isolator when on	<0.25 ohm

Environmental	
Application	Indoor use
Operating temperature	-10 to +55°C
Humidity range at 40°C	10 to 95% RH (non-condensing)
Altitude range	0 to 2000 m
EMC	CPD compliant
Construction	
Built-in LED	Yes (flashes when open)
Material	Moulded thermoplastic
Dimensions (∅ x H)	109 x 23 mm
Weight	87 g
Colour	White
IP rating (EN60529)	IP20

Mounting the Isolator Base

Two screw holes for screws ϕ5 mm max., with slots shouldered for screw head ϕ9 mm max., are provided for mounting the isolator base to the ceiling, wall or conduit box (see Figure 4).

Wiring Details

Figure 4 shows the wiring for the isolator base clips, and Table 1 provides the clip designations.

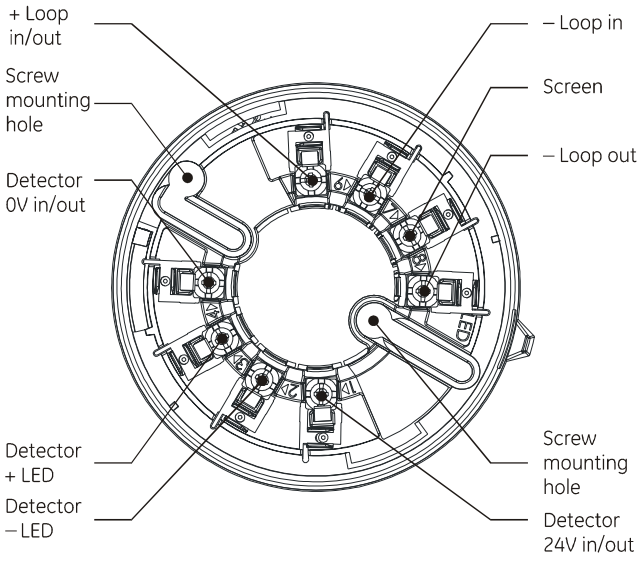

Figure 4: Isolation Base Loop Wiring

Table 1: Isolator Base Clip Designations

Clip	Designation
1	DETECTOR +24 V IN/OUT
2	DETECTOR - LED
3	DETECTOR + LED
4	DETECTOR 0 V IN/OUT
5	+ LOOP IN/OUT
6	- LOOP IN
7	SCREEN
8	- LOOP OUT

ZP Line Test Mode

Caution: The red, black and grey wires on clips 5, 6 and 8 respectively, must NOT be connected for this test.

The isolator base is supplied with a white bypass jumper wire for high voltage insulation testing of the loop wiring. This wire is connected between clip 6 (loop in) and clip 8 (loop out).

Figure 5 shows the + Loop In and – Loop Out connected to the isolator base. Carry out the insulation test with the red, black and grey wires of the isolator base NOT connected as shown below.

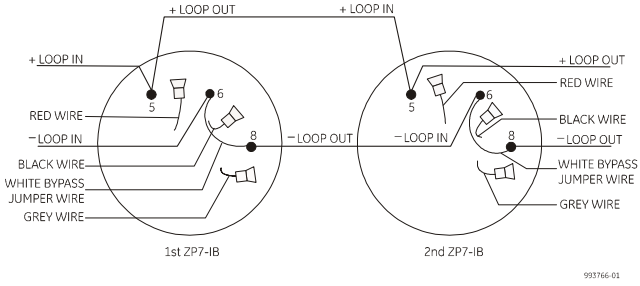

Figure 5: ZP Line Test Wiring Diagram

Operational Wiring Diagram

After testing, wire the isolator base for operation by connecting the red wire to clip 5, the black wire to clip 6 and the grey wire to clip 8 as shown in Figure 6. Remove the white bypass jumper wire between clip 6 (loop in) and clip 8 (loop out).

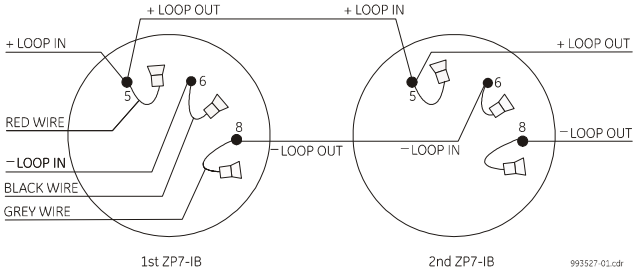

Figure 6: Operational Wiring Diagram