ZP7-IB2-P Isolator Base Installation Sheet

Description

The ZP7-IB2-P is a standard detector base with integrated isolator for use with ZP700 loop and ZX800 Series detectors. It enables sections of the line to be isolated under fault conditions.

Sections of the loop between isolators are disconnected (isolated) in case of a short circuit. The loop continues to operate normally for the remaining sections.

Application

In a Class A circuit, a short is isolated between the two isolator bases located electrically closest to the short, as shown in Figure 1 and Figure 2.

Figure 1: Class A configuration

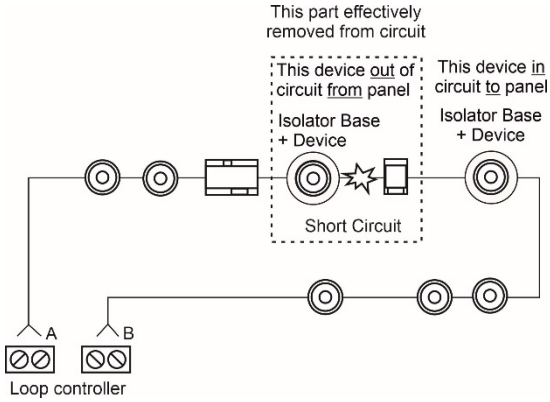
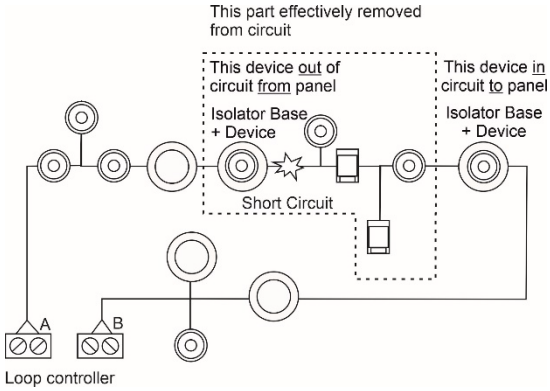


Figure 2: Class A configuration with T-taps

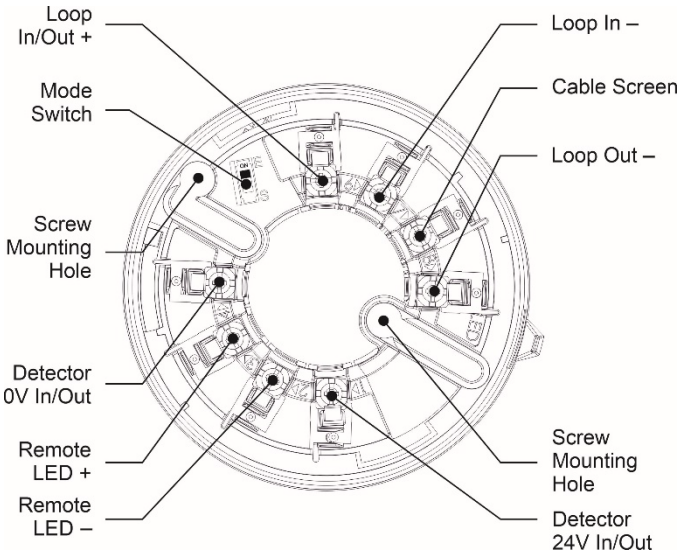


Installation

Two mounting holes are provided for fixing the isolator base to the ceiling, wall, or conduit box. The maximum screw diameter for the mounting holes is 5 mm.

See Figure 3 for the location of the wiring terminals, mode switch, and mounting holes.

Figure 3: Terminals, mode switch, mounting holes



Wiring

The following table shows the terminal designations.

Table 1: Terminal designations

Terminal	Designation
1	Detector 24V In/Out +
2	Remote LED –
3	Remote LED +
4	Detector 0V In/Out
5	Loop In/Out +
6	Loop In –
7	Cable Screen
8	Loop Out –

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Mode configuration

Use the mode switch (see Figure 3) to configure the operation mode – Standard or Enhanced. The default setting is Standard.

Table 2: Mode configuration settings

Mode	Switch position	Max. isolators per loop
Standard	S (Default)	< 16 (legacy mode)
Enhanced	E	< 127

Caution:

1. To use Enhanced mode, all of the isolators on the loop must be set to Enhanced mode.
2. T-taps are not allowed when using Enhanced mode.
3. Use Standard mode if there are legacy isolators on the same loop that don't support Enhanced mode (for example, ZP7-IB-P or A60E-2).

Testing

Loop test mode

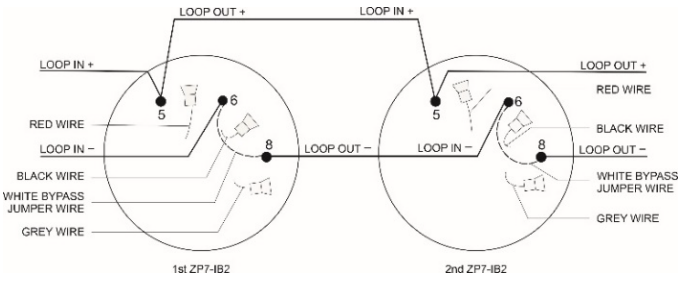
Caution: Disconnect the red, black, and grey wires from terminals 5, 6, and 8 before performing this test.

By connecting the supplied link wire connector between terminal 6 (Loop In –) and terminal 8 (Loop Out –), the ZP7-IB2-P can be configured for continuity and high voltage insulation testing of the loop wiring.

Figure 4 shows the Loop In + and Loop Out – connected to the isolator base.

After testing, return the isolator base to normal operation (see "Normal operation" below).

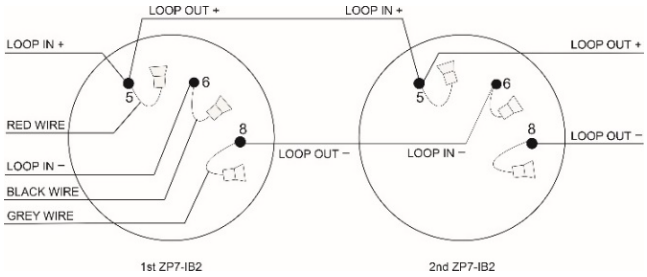
Figure 4: Loop test wiring



Normal operation

After the loop high resistance testing, return the isolator base to normal operation by removing the bypass jumper between terminal 6 (Loop In –) and terminal 8 (Loop Out –) and reconnecting the red, black, and grey wires to terminals 5, 6, and 8, as shown in Figure 5.

Figure 5: Normal operation wiring



Testing the isolator

Always test the isolator after any configuration changes.

1. Using a multimeter, confirm that the voltage between terminal 6 (Loop In –) and terminal 8 (Loop Out –) is less than 0.1 V.
2. Create a short circuit between terminal 5 (Loop In +) and terminal 6 (Loop In –).

   The yellow LED flashes and the pulsed voltage between terminal 6 (Loop In –) and terminal 8 (Loop Out –) is greater than 15 V
3. Remove the short circuit and reset the system at the control panel.

   After the system reset and loop recovery (approximately 90 seconds), confirm that the yellow LED is off and that the voltage between terminal 6 (Loop In –) and terminal 8 (Loop Out –) is less than 0.1 V.
4. Repeat steps 2 and 3 creating a short circuit between terminal 5 (Loop In +) and terminal 8 (Loop Out –).

Specifications

Application	Indoor use
Mounting	Surface mount
Compatibility	All ZP addressable systems
Addressing	Not required
LED indication	Yellow LED (isolated)
Wiring	2-core Class A return loop Loop resistance <75 Ω
Monitoring	Loop wiring for short circuit faults
IP rating	IP21
Operating voltage	16 to 20.5 VDC pulsed
Current consumption Quiescent Activated	 180 µA 230 µA (Standard mode) 4.0 mA (Enhanced mode)
Number of isolators per loop Standard mode Enhanced mode	 16 max. 127 max. [1]

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Maximum impedance	
Between panel and first isolator	<16 Ω
Between adjacent Isolators	<16 Ω
Isolation resistance	<0.060 Ω
Operating environment	
Operating temperature	−10 to +55°C
Storage temperature	−10 to +55°C
Relative humidity	10 to 95% (noncondensing)
Weight	79 g
Dimensions (Ø x H)	109 x 23 mm

[1] The maximum number of loop devices between two adjacent isolators is limited to 16 when using Enhanced mode.

Regulatory information

This section provides a summary on the declared performance according to the Construction Products Regulation (EU) 305/2011 and Delegated Regulations (EU) 157/2014 and (EU) 574/2014.

For detailed information, see the product Declaration of Performance (available at firesecurityproducts.com).

Conformity	CE
Notified/Approved body	0370
Declaration of Performance number	03-0281-360-0001
Year of first CE marking	20
Product Identification	ZP7-IB2-P
Intended use	See the product Declaration of Performance
Declared performance	See the product Declaration of Performance
Manufacturer	KGS Safety System (Hebei) Co. Ltd., 80 Changjiang East Road, QETDZ, Qinhuangdao 066004, Hebei, China. Authorized EU manufacturing representative: KGS Fire & Security B.V., Kelvinstraat 7, 6003 DH Weert, Netherlands.
	2012/19/EU (WEEE Directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: recyclethis.info.

Contact information and product documentation

For contact information or to download the latest product documentation, visit firesecurityproducts.com.

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