



## PS1312.3

The ZP786Ex-1 intrinsically safe callpoint, provides a manual means of raising an alarm within areas made hazardous by the presence of explosive gasses.

Intrinsic safety is a technique for ensuring that items of electrical equipment and their associated wiring are incapable of releasing sufficient electrical and thermal energy to cause ignition, when installed within areas where hazardous concentrations of explosive gasses may permanently, or from time to time, be present.

Wiring to an intrinsically safe area is completed by teeing off from the standard ZP loop, via a zener barrier unit and line voltage conditioner.

Up to a maximum of eight ZP intrinsically safe devices can be connected to each zener barrier. Each line voltage conditioner contains switch settings, in order to provide a block of eight addresses, enabling the control panel to identify each IS component separately.

Devices must be connected using either MICC (with a continuous insulated outer sheath) or appropriate soft skinned screened cable. Maximum line length out from the zener barrier is 300 metres. It is recommended that line isolators be installed on either side of each IS tee off from the ZP loop.

The callpoint is operated by breaking a frangible glass element, allowing an internal micro switch to move from an open, to a closed circuit position. Operated by finger pressure, the glass has a protective clear vinyl coating on the front surface to prevent operator injury and to inhibit the release of loose fragments as the glass is broken.

ZP786Ex-1 callpoints are designed for surface mounting. System testing is carried out by using a special test key which is inserted into a slot in the base of the callpoint moulding, the glass element drops allowing the device to operate.

Rated at IP42 the moulding is constructed of ABS plastic and intended for indoor applications. A red LED indicator is prominently positioned on the front of the moulding, which flashes when the unit is operated.



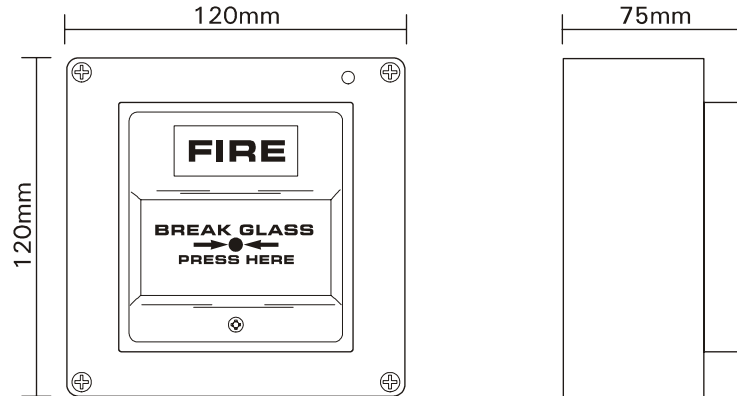
# ZP786Ex-1

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## Intrinsically Safe Addressable Manual CallPoint

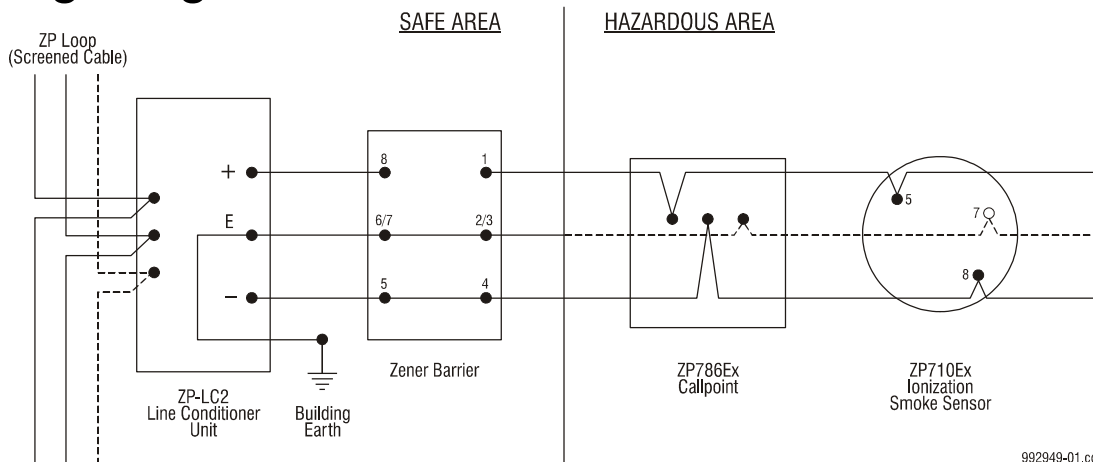
- Complies with EN 50014, EN 50020
- Addressable
- System test facility via test key
- Operated by finger pressure
- Sira 04ATEX2380X  $\text{CE}$  0518  $\text{Ex}$  IIIG  
EEx ia IIC T6 (Ta = -20°C +60°C)

# Dimensions



990939-01.cdr

# Wiring Diagram



992949-01.cdr

Note: Typical Zener Barrier connections. Terminals shown for - Pepperl & Fuchs type Z967 dual A.C. Star connected shunt Zener diode barrier. Installation and repair of this equipment should be carried out in accordance with the applicable code of practice by suitably trained personnel. There are no special checking or maintenance conditions other than a periodic check.

# Specification



Model No.	ZP786Ex-1
Description	Intrinsically safe analogue heat detector
Specification	EN 50014, EN50020, EN50284, BS 5839 PT2
Compatibility	All ZP analogue addressable systems
Wiring	MICC or suitable screened cable-spurred from ZP loop via zener barrier and line voltage conditioner.
<b>Intrinsically safe</b>	
For use in	Potentially explosive atmospheres
Area classification	Zone 0 (NEC505) and Division 1 (NEC500)
Gas group	IIA, IIB and IIC Non-mining
Temperature class	T1, T2, T3, T4, T5 and T6
Compliance	If the equipment is likely to come into contact with aggressive substance, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that type of protection is not compromised.
Aggressive substances	e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials.
Suitable precautions	e.g. regular checks as part of routine inspections or establishing from the material's data sheet that it is resistant to specific chemicals.
Special conditions "X"	The unit must be powered from a resistively limited supply whose total combined parallel internal series resistance (Rext) is at least 35Ω (i.e. at least 70 ohm per channel for a two-channel supply). Parts of the enclosure are non-conducting and may generate an ignition-capable level of electrostatic charge under certain extreme

<b>Monitoring:</b>	
Indication	Alarm LED (red)
Operating voltage	12 to 18 volts DC
Current (quiescent)	600 uA
Current (alarm)	700 uA
Address method	7 way DIP switches in head
Operating principle	Encapsulated micro switch
<b>Environmental:</b>	
Application	Indoor installation
EN60529 rating	IP42
Ambient Temp range	-20°C to +60°C
Humidity range	20% to 95% RH (non condensing)
EMC	CE marked (EEC89/336)
<b>Construction:</b>	
Material	Moulded ABS
Dimensions	120mm (H) x 120mm (W) x 75mm (D) overall
Colour	Red
Weight	505g
conditions. The user should ensure that the equipment is not installed or used in a location where it may be subjected to external conditions (such as high-pressure steam), which might cause a build-up of electrostatic charge on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.	
Open and short circuit-wiring faults.	

Ziton  
 8 Newmarket Court Chippenham Drive Kingston Milton Keynes MK 10 0AQ United Kingdom  
 Telephone +44 (0) 1908 281981 Fax +44 (0) 1908 282554 email zitonuk@ziton.spx.com

Ziton (Pty) Ltd  
 Ziton House 555 Voortrekker Road Maitland 7405 PO Box 181 Maitland 7404 South Africa  
 Telephone +27 (0)21 506 6000 Fax +27 (0)21 506 6100 email zitonsa@ziton.spx.com

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