



PS1311.3

The ZP710Ex-1 intrinsically safe, analogue, ionization, smoke sensor is designed to provide reliable sensing of both visible and invisible products of combustion from fast burning fires, 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.

Featuring an advanced dual chamber single source design, the ZP710Ex-1 fully meets the sensitivity requirements of European Standard EN 54 Pt7 and fully complies with the ATEX directive.

Sensor sensitivity, calibration and self-test are carried out automatically by the ZP3 system. Removal or replacement of an incorrect sensing device, will be identified by the system and shown as a fault. Sophisticated auto contamination adjustment compensates for any drift in performance due to dirt in the sensing chamber.

For ease of removal sensors plug into a range of base units by a simple twist and lock action. A site selectable option is provided to lock the sensor into its base. Once applied the unit can only be removed by means of a special tool.

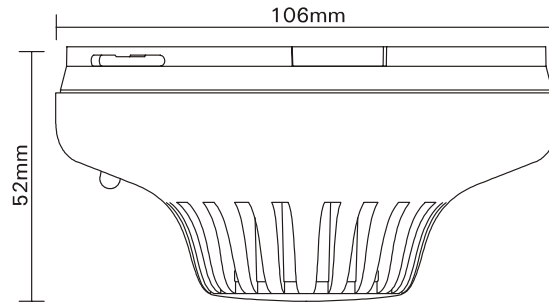


ZP710Ex-1

Intrinsically Safe Analogue Ionization Smoke Sensor

- **Complies with EN 50014, EN 50020, EN50284**
- **Analogue sensing - reduces false and unwanted alarms**
- **Addressable - system knows the status and location of every sensor**
- **Alarm verification, self test, auto contamination adjustment**
- **Sira 04ATEX2380X CE 0518 Ex IIIG EEx ia IIC T6 (Ta = -20°C +60°C)**

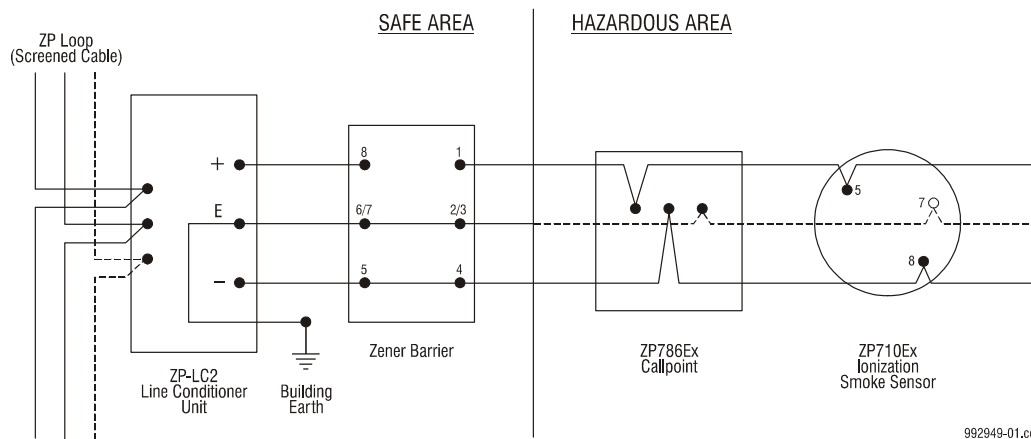
Dimensions



991520-01.cdr

Note: Dimensions shown without base.

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.	ZP710Ex-1
Description	Intrinsically safe analogue heat detector
Sensitivity	0.8Y (at sensitivity level2)
Specification	EN 50014, EN50020, EN50284, EN 54 PT7
Compatibility	All ZP analogue addressable systems
Wiring	MICC or suitable screened cable-spurred from ZP loop via zener barrier and line voltage conditioner.

Intrinsically safe

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

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.

Monitoring:

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
Detection principle	Dual chamber, source <1uC Am 241

Environmental:

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)

Construction:

Material	Moulded ABS
Dimensions	106mm(Dia) x 52mm(H) (excl base) From ceiling with base: ZP7-SB1 surface base – 60mm ZP7-RB1 recessed base – 38mm
Colour	White
Weight	205g

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