Ex Products

ESSER
by Honeywell

Highest level of safety under the most difficult conditions

Fire protection for potentially explosive areas

The Ex Products

Logical: The avoidance of flammable materials still represents the easiest form of explosion protection. But in the chemical and pharmaceutical industry as well as other branches of industry, flammable materials are an everyday occurrence. There is no way around it.
Flammable gases, mist, and vapors from flammable liquids as well as clouds of flammable dusts can form a dangerous explosive atmosphere in connection with air. In such potentially explosive areas, resources such as electrical and mechanical devices can represent a risk not to be underestimated.

Avoiding such materials is usually difficult since flammable gases, mist, vapors, and also possibly dust are mandatory for the production sequence. The explosion protection in potentially explosive areas focuses on the elimination of possible sources of ignition in potentially explosive atmospheres, including hot surfaces, mechanical and electrical sparks, static electricity, and equalizing currents.

3 types of explosion protection can be fundamentally distinguished: the primary, secondary, and tertiary explosion protection. In primary explosion protection, the formation of a potentially explosive atmosphere is avoided right from the beginning. If this is not possible, which is often the case, the secondary explosion protection method can be used. Suitable resources are used with the aim of making potential ignition sources ineffective in the endangered areas. The third method is called tertiary explosion protection and does not prevent an explosion, but instead restricts its effects, for example through defined decompression via specific opening mechanisms.

The fire protection products represented in the following fall back on the secondary explosion protection methods and prevent a concurrence of ignition source and potentially explosive atmosphere – in a qualified and certified way.

The areas of application of the Ex Products

Paint and varnish processing, gas and liquid-filling machines, plastic production

European Ex Products

In July 2003, the European ATEX guidelines introduced a new classification of danger zones. It distinguishes different potentially explosive atmospheres according to their risk factor. Installed fire detection devices must correspond to these specific requirements.

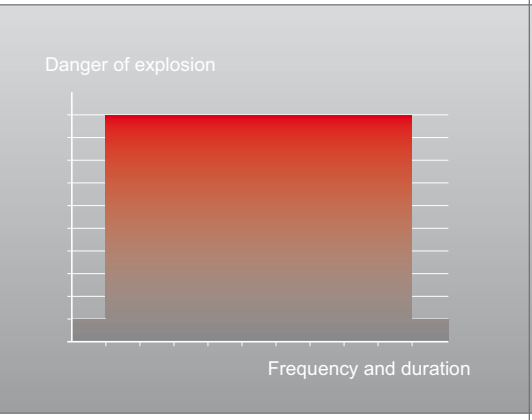
This categorization shows the extent of the necessary measures to be taken.
Our Ex Products correspond to this ATEX guidelines.

In the workplace, potentially explosive areas generally show characteristics of zone 1 and 2 as well as zone 21 and 22 at most. Zone 0 and 20 are the exceptions.

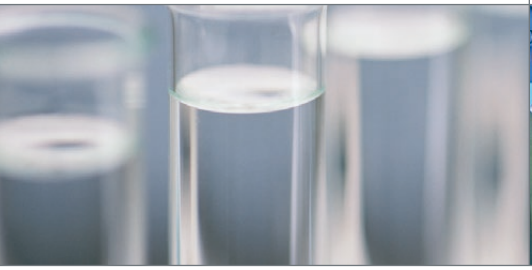
Zone 0/20

Areas in which a potentially explosive atmosphere is continuously, over long periods, or frequently present are:

- as a mixture of air and flammable gases, vapors, fogs **(zone 0)**
- in the form of a cloud of flammable dust contained in the air **(zone 20)**



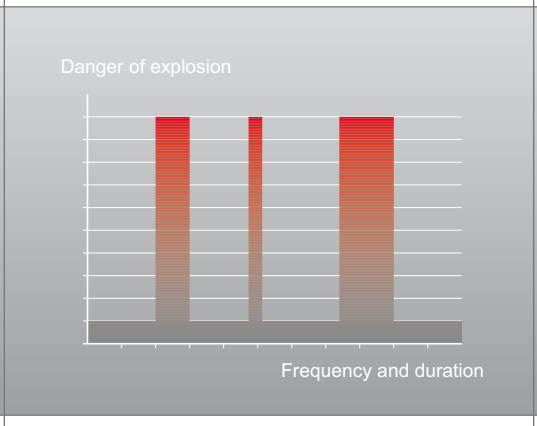
e.g. inside reaction vessels



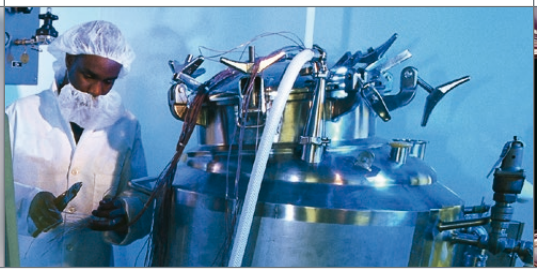
Zone 1/21

Areas in which a potentially explosive atmosphere can sometimes form during normal operation:

- as a mixture of air and flammable gases, vapors, fogs **(zone 1)**
- in the form of a cloud of flammable dust contained in the air **(zone 21)**



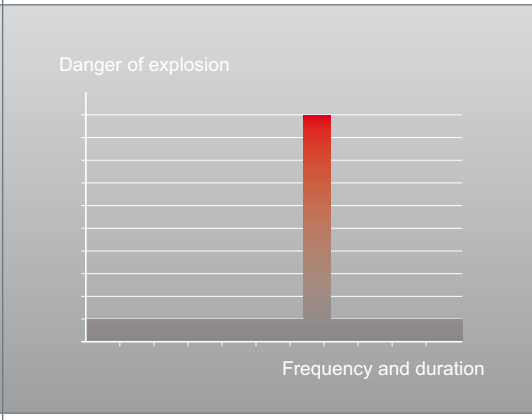
e.g. during the mixing of chemicals



Zone 2/22

Areas in which a potentially explosive atmosphere does not usually occur or occurs only short-term during normal operation:

- as a mixture of air and flammable gases, vapors, fogs **(zone 2)**
- in the form of a cloud of flammable dust contained in the air **(zone 22)**



e.g. during storage

Products for operation in potentially explosive areas

Automatic Detectors for potentially explosive areas

Automatic point-type fire detector series IQ8Quad Ex (i) without isolator especially for use in explosive environments.
Operation on the esserbus® or on the esserbus®-PLus with individual addressing in connection with Ex-barrier 804744.
Operation as standard detector in connection with Ex-barrier 764744.

Examination Certificate No.:
TÜV 09 ATEX 554910
EX-protection:
Ex ib IIC T4 Gb
Ta: –20 °C ... +70 °C
Category:
II 2G
Operation in ex zone 1 and 2 only via Ex-barrier Part No.: 804744 or 764744

Rate-of-rise heat Detector IQ8Quad Ex (i)
Part No.: 803271.EX
VdS: G 209223

Automatic heat detector with quick semiconductor sensor for the reliable recognition of fires with fast rate of temperature rise as well as integrated fixed temperature heat function for the recognition of fires with slow temperature rise.

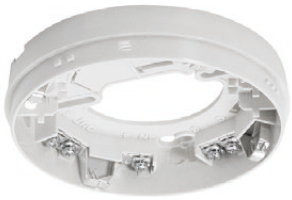
Optical Smoke Detector IQ8Quad Ex (i)
Part No.: 803371.EX
VdS: G 209224

Scattered-light smoke detector for reliable early recognition of fires.

O2T multi sensor detector IQ8Quad Ex (i)
Part No.: 803374.EX
VdS: G 209225

Intelligent detector with two integrated optical smoke sensors with different scattered-light angles as well as additional heat detector sensor evaluation for the recognition of smouldering fires up to open fires with uniform characteristics.

Detector bases

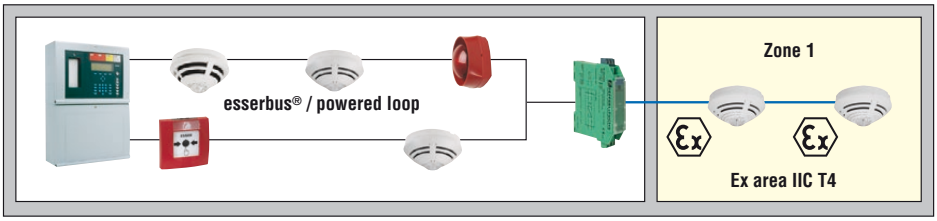


Detector base
Part No.: 805590

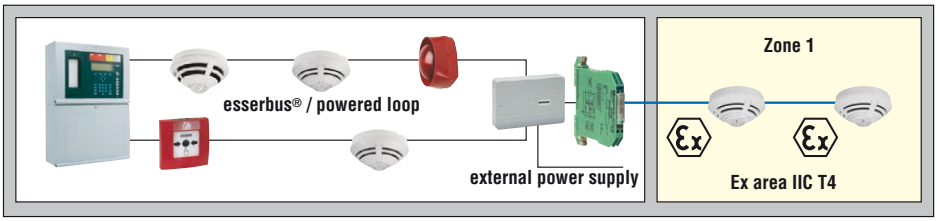
Detector base for the use in connection with the series IQ8Quad Ex (i) explosion-proof fire detectors.

Applications for early fire detection in potentially explosive areas

Ex-barrier 804744
Operation with individual addressing



Ex-barrier 764744
Operation with conventional zones



Manual call points for Ex areas – operation with individual addressing

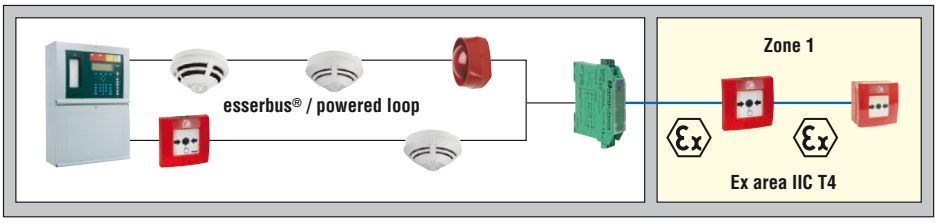
Manual call point
Part No.: 804924.EX
EX-protection:
Ex ib IIC T4 Gb
Ta: -20 °C ... + 70 °C
Category: II 2G
VdS: G 214114

IQ8 manual call point IQ8MCP Ex (i), type B, IP 55, without isolator especially for use in explosive environments.
Operation on the esserbus® or on the esserbus®-PLus with individual addressing in connection with Ex-barrier 804744.
EC-Type Examination Certificate: TÜV 14 ATEX 150789

Manual call point
Part No.: 804961.EX
EX-protection:
Ex ib IIC T4 Gb
Ta: -20 °C ... + 70 °C
Category: II 2G
VdS: G 214116

IQ8 manual call point IQ8MCP Ex (i), type A, IP 66/67, without isolator especially for use in explosive environments.
Operation on the esserbus® or on the esserbus®-PLus with individual addressing in connection with Ex-barrier 804744.
EC-Type Examination Certificate: TÜV 14 ATEX 150789

Ex-barrier 804744
Operation with individual addressing



Manual call points for Ex areas – operation on conventional detector zones

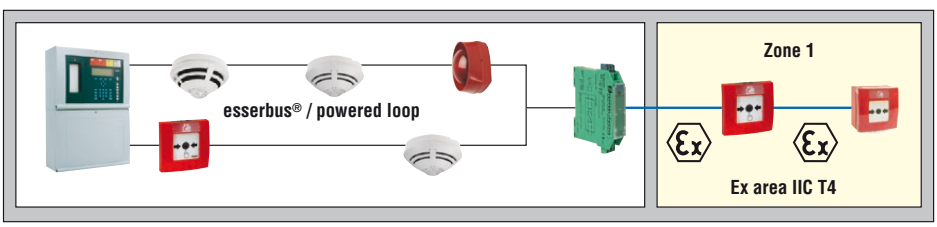
Manual call point
Part No.: 804920.EX
EX-protection:
Ex ib IIC T4 Gb
Ta: -20 °C ... + 70 °C
Category: II 2G
VdS: G 214113

Standard manual call point MCP Ex (i), type B, IP 55, – especially for use in explosive environments.
Operation on conventional detector zones in connection with Ex-barrier 764744.
EC-Type Examination Certificate: TÜV 14 ATEX 150860

Manual call point
Part No.: 804960.EX
EX-protection:
Ex ib IIC T4 Gb
Ta: -20 °C ... + 70 °C
Category: II 2G
VdS: G 214115

Standard manual call point MCP Ex (i), type A, IP 66/67, – especially for use in explosive environments.
Operation on conventional detector zones in connection with Ex-barrier 764744.
EC-Type Examination Certificate: TÜV 14 ATEX 150860

Ex-barrier 764744
Operation with conventional zones



Products for operation in potentially explosive areas

Special detectors

IR flame detector (Ex) X 9800
Part No.: 761347
EX-protection: EEx d IIC T5-T6, T86°C
Category: II 2 GD
VdS: G 203084

The pressure-proof, fully enclosed infrared flame detector particularly distinguishes itself through reliable operation in difficult conditions.

Typical areas of application are turbines, petro chemistry and the automotive industry.

UV/IR flame detector (Ex) X 5200
Part No.: 761349
EX-protection: EEx d IIC T5-T6, T86°C
Category: II 2 GD
VdS: G 203085

Since it can be mounted, the pressure-proof, fully enclosed combination ultraviolet/infrared flame detector enables UV and IR transmitters to monitor the same danger zone with a visual angle of 90°.

Typical areas of application are turbines, munitions depots, natural gas depots and aircraft hangers.

Alarm signaling devices

Ex signaling device
Part No.: 045040
EX-protection:
Ex nAc IIC T4
Ta: –25 °C ... +55 °C
Category: II 3GD

The Ex signaling device DS 10 has been specially designed for use in industrial environments (zone 2 and 22). Its robust die-cast aluminum housing is resistant to environmental influences and chemicals.

Ex sound generator
Part No.: 766253
EX-protection:
II 2G Ex de IIC T4
Category: II 2G

The Ex sound generator is particularly suitable for use in industrial areas with potentially explosive environments (zone 1 and zone 2). The robust die-cast aluminum housing is resistant to environmental influences and chemicals

Close-and-retain systems

Ex magnetic door retainer
Part No.: 767153
EX-protection:
EEx me II T6
Category: II 2G

Magnetic door retainer in pressure-proof die-cast housing.

Accessories

	**Ex-barrier** Part No.: 804744 VdS: G 210047	Ex-barrier for the operation of intrinsically safe IQ8Quad Ex (i) series detectors and IQ8 manual call point IQ8MCP Ex (i) directly on the esserbus® / esserbus®-PLus* with individual addressing in zones 1 and 2. **EC-Type Examination Certificate:** BAS 00 ATEX 7087
	**Ex-barrier** Part No.: 764744	Ex-barrier for the operation of intrinsically safe IQ8Quad Ex (i) series detectors as conventional detectors and standard manual call point MCP Ex (i) in zones 1 and 2. **EC-Type examination certificate:** BAS 01 ATEX 7005
	**Isolation and assembly block** Part No.: 764745	For the isolated assembly of the barriers (off-ground) 764744 on standard C rail.
	**Housing for Ex-barrier** Part No.: 764752	Housing for the installation of maximum 10 Ex-barriers for the secure operation of intrinsically safe detector groups.
	**Cable glands M16** Part No.: 764754	Cable glands M16 for housing 764752.

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Part No. 797352.G0 · 05/2016 · Subject to change without notice ·