Physelec Family
bzg
Zener Barrier

Characteristics*

- Zener Barrier is designed to limit energy which may appear in hazardous area
- Simple or double models
- 13mm tightness with 1 or 2 channels
- Installation in safe or hazardous (Zone2) area
- ATEX and IECEx certifications
- Certification for a Safety Instrumented System (SIL2 or SIL3)
- Removable label holder on the front
- Barrier / DIN-rail isolator
- Current flow signaling Led on the front
- 100% Made in France product

* according to models
ATEX products interfacing

- **Location of the equipment:** Surface industries
- **Method of protection:** Intrinsic safety «Ex ia» and Ex nA (a) safety
- **Type of equipment:** Associated equipment which must be installed in the safe area or in zone 2 in an IP54 housing (refer to the instruction manual)
- **Suitable to interface** category 1, 2 or 3 equipment installed in:
  - Zone 0, 1 or 2 for gas of group IIA, IIB or IIC (according to EN/IEC 60079-0)
  - Zone 20, 21 or 22 for dust of group IIIA, IIIB or IIIC (according to EN/IEC 60079-0)
- **EC type Examination certificate number:** INERIS 11 ATEX 0024 X
- **IECEx conformity certificate:** INE 11.0009X
- **ATEX/IECEx Classification:**
  - II (1) GD [Ex ia Ga] IIC or [Ex ia Ga] IIB or [Ex iaD Da] IIIIC
  - II 3 (1) G Ex nA [ia Ga] IIC T4 Gc
  - II 3 (1) G Ex nA [ia Ga] IIB T4 Gc

Application examples

- **Analog input:** BZG2728+/BZG2728L+
  - Two 4...20mA transmitters connected with a Zener barrier with ground referenced mounting
  - Compatible with HART protocol smart transmitters

- **Digital input:** BZG789+
  - Contact interfacing with floating potential mounting

- **Analog output:** BZG787P+/BZG787LP+
  - Valve positioner or 4...20mA display interfacing with floating potential mounting diode return

- **Digital output:** BZG715+/BZG715P+
  - 12V system supply with ground referenced mounting

- **Temperature:** BZG756ac
  - RTD100 with floating potential mounting

- **Special applications:** Gauge bridge supply (BZG761), compensation (BZG764) and output (BZG764) with floating potential mounting

In compliance with the 1999-92 CE directive, the system safety conformity must be proved by the corresponding loop calculation validation.

Zener barrier principle

A Zener barrier is designed to limit energy that may appear in hazardous area whatever the type of connection made before the barrier.

A barrier is composed of resistances to limit current, of Zener diodes to limit voltage, and of fuse to secure these components.

Interfacing with a Zener barrier differs from other modes as there is no galvanic insulation: cables that pass in hazardous area have common features with those of the safe area. This implies a little resistive and equipotential ground mounting of the barrier.

More details on www.georgin.com