



## TSB-31.1 AND TSB-31.2 INTRINSIC SAFETY BARRIERS

### Protection system for explosive environment

The TSB-31 is an intrinsic safety barrier which allows to avoid the high voltages and to secure the transmission of the signals in explosive environments.

Four safety barriers have been developed:

**TSB-31.1 10V100mA:** specially designed to protect the lines of communication RS-232, it can also be used to transmit the analog and digital signals.

Usable in zone 1 or in Ex zone 2, the barrier TSB 31.1 allows, for example, an application with a gas volume corrector.

**TSB-31.2 10V100mA:** this barrier has the same utility as TSB 31.1 but it is a category 3 and can be only used for Ex zone 2.

**TSB-31.2 10V20mA:** specially designed to provide the connection with meters having a SCR interface (GWF Coder), installed in Ex zone 2.

**TSB-31.2 16V110mA:** this barrier can read 4-20mA probes in Ex zone 2.

The TSB is planned for signals: RS-232 (PC), RS-485, RS-422, analog, digital and impulse.

### Advantages of TSB-31 :

- ✓ ATEX Certified
- ✓ Safe transmission with meters and sensors installed in ATEX zones 1 or 2
- ✓ Passive barrier (does not require a power supply)
- ✓ Enclosure IP65 (case not needed)
- ✓ 4 channels
- ✓ Fixation on Rails DIN



## Applications

- ✓ Gas station expansion
- ✓ Refineries
- ✓ Meter reading

## How does it work ?

The main function is to reduce the voltage and the electric current by the barrier's output to connect a sensor, a gas volume corrector or a meter in complete safety. The current passes through a fuse, resistances and diodes ensuring a maximum of 10V (depending on model) to the output.

The barrier can assure the connection towards meters and electric devices situated in EX zone 1 or 2.

## Certification

TSB-31.2 : Ex II 3G Ex ic IIC T4

TSB-31.1 : Ex II 2G Ex ic [ib] IIC T4

## They trusted us

TSB-31 was developed in collaboration with the Geneva Industrial Services (SIG), Energies Services in Yverdon, making it a 100% product adapted for the specific needs of professionals.

