

**Tecno
Control**

MADE IN ITALY



GDS850

ABSOLUTE RELIABILITY

01. ABSOLUTE RELIABILITY

GDS850, an instrument for infallible gas detection, without uncertainty. Designed to exceed the strictest standards and engineered to operate and withstand the harshest industrial environments where every second counts and safety allow no compromise, **GDS850** is the answer to continuous and reliable monitoring needs.



**ATEX
ZONE1
CERTIFIED**



**IECEX
ZONE1
CERTIFIED**



**SIL2 HW and SIL3 SW
CERTIFIED**

**EN60079-29-1
PERFORMANCE
CERTIFIED**

MAIN FEATURES

- + Industrial signal outputs: 4-20mA; Modbus; Relays; Bluetooth
- + Non-intrusive maintenance and calibration via Bluetooth connection - APP
- + Sensor cartridge replaceable via integrated contact socket
- + 4 cable entry points

GD800
ATEX-IECEX



GDS800
ATEX-IECEX
SIL2 - SIL3 (SW)
EN60079-29-1

**WITH DISPLAY
AND BLUETOOTH**

GD850
ATEX-IECEX



GDS850
ATEX-IECEX
SIL2 - SIL3 (SW)
EN60079-29-1

02. CONNECTIONS

The **GDS850** stands out for the completeness of its possible connections, which ensures its extreme versatility. The numerous output signals allow the detector to communicate with the main industrial systems, enhancing its range of applications.



03. DISPLAY

GDS850. Everything visible at a glance.

The large display clearly shows the atmosphere status at all times.

Real-time gas concentration reading and multicolor illumination provide instant hazard awareness.



04. SENSOR

GDS850 does not just detect: it interprets, communicates, and protects.

Certified SIL2 hardware and SIL3 software according to IEC/EN 61508 and certified to IEC/EN 60079-29-1 "performance", it is ideal for critical applications in oil & gas, chemical, and energy sectors.

THE GDS850 IS DESIGNED FOR APPLICATIONS SUCH AS:

- Power generation
- Chemical and petrochemical plants
- Hydrocarbon storage
- Offshore and onshore oil and gas terminals
- Gas transportation

STANDARDS

EN 50270 - Electromagnetic compatibility - Electrical apparatus for the detection and measurement of combustible gases, toxic gases and oxygen.

EN 50402 - Electrical apparatus for the detection and measurement of combustible or toxic gases or vapours, or of oxygen - Requirements for the functional safety of gas detection systems.

IEC EN 61508 parts 1,2,3,4,5,6,7 - Functional safety of electrical/electronic/programmable electronic safety-related systems.

EN 50495 - Safety devices required for the safe functioning of equipment with respect to explosion risks.

EN IEC 60079-0 / IEC 60079-0 - Explosive atmospheres* part 0: equipment - general requirements.

EN 60079-1 / IEC 60079-1 - Explosive atmospheres* part 1: equipment protection by flameproof enclosures "d".

EN 60079-29-1 / IEC 60079-29-1 - Explosive atmospheres* part 29-1: gas detectors - performance requirements of detectors for flammable gases.

EN IEC 60079-31 / IEC 60079-31 - Explosive atmospheres* part 31: equipment dust ignition protection by enclosure "t".

SPARE PARTS AND ACCESSORIES

Often as important as the product itself, the available accessories include not only those for installation under any necessary condition, but also those designed to protect the detector and sensor when exposed to extreme environments.

REPLACEABLE CARTRIDGE

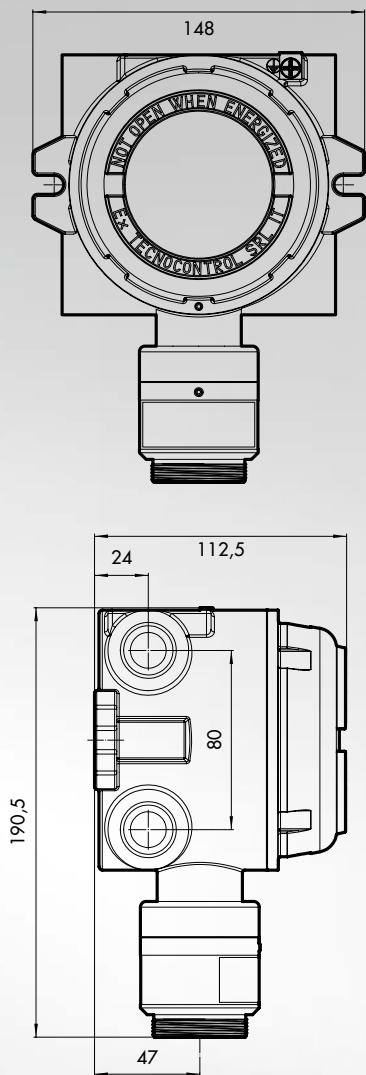
Replacing the sensor cartridge on-site makes extraordinary maintenance extremely fast, very simple, and economical.

WEATHER PROTECTION

Protects from rain and dirt, also acts as wind shield.



05.TECHNICAL DATA



TECHNICAL SPECIFICATIONS

Rated power supply	4.6 W
Current output	4÷20 mA
Relay outputs (optional)	2 alarm relays, 1 fault relay
Digital output (optional)	RS485
Wireless output (GD/GDS 850 only)	Bluetooth
Measuring range	0÷100% LFL
Accuracy	+/- 5% FS
Resolution	1% LFL
Response times t(90)	< 60 s
Warm-up time	120 s
Stabilization time	2 hours
Sensor life in clean air	5 years
Relative humidity at 40°C	95% Rh (non-condensing)
Storage temperature	-20 +55 °C
Operating temperature	-40 +60 °C
Operating pressure	0.8÷1.1 bar
O ₂ in air	21% v/v
Protection rating	IP66
Dimensions L x W x H	148x190.50x112.50
Weigh	3 kg

ORDERING CODE

GD	[]	8	[]	OP	[]	+	[]	+	[]	—	MB - RS485 interface	Digital communication
											None - No digital communication	
											RS - Safety relays (SIL)	
											R - Standard relays	Relays
											None - No relays	
											VALUE - Calibrated for (see DETECTED GAS table)	
											Example: 1 for Methane	Gas detected
											X - Only for GD*850P (Gas selectable from menu)	
											5 - Display and Bluetooth version	Display
											0 - Blind version (no display, no Bluetooth)	
											S - SIL version	Safety
											None - Not SIL version	

DETECTED GAS

1 - Methane	6 - Ethanol	11 - n-Pentane	16 - Ethyl acetate	21 - n-Hexane	26 - n-Octane
2 - n-Butane	7 - Acetone	12 - Methyl Ethyl Ketone (MEK)	17 - Iso-butane	22 - Styrene	27 - n-Propanol
3 - Hydrogen	8 - Ethylene	13 - Acetic acid	18 - Iso-octane	23 - Propylene	
4 - Propane	9 - Methanol	14 - Cyclo-hexane	19 - Iso-propanol	24 - Carbon monoxide	
5 - Ammonia	10 - Toluene	15 - Cyclo-pentane	20 - n-Heptane	25 - Xylene	



DISCOVER ALL THE
DETAILS OF THE NEW
GDS850



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