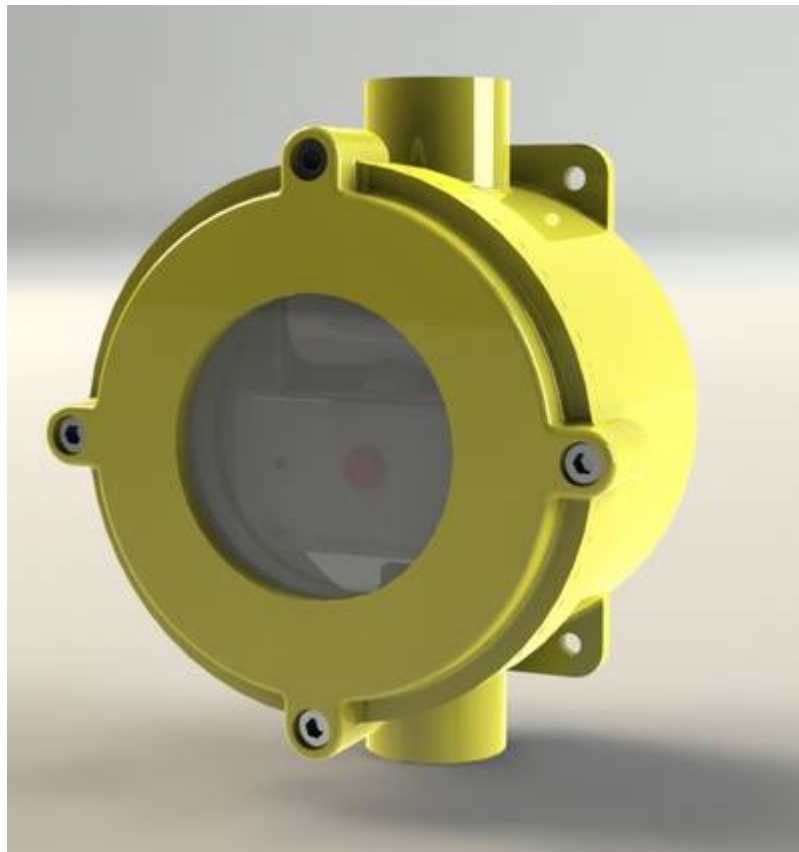


USER MANUAL

AP100 POTENTIAL ALARM



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GENERAL

The explosion-proof AP100 Potential Alarm is a self-standing device that can be used by personnel without any specific knowledge of cathodic protection to visually inspect the correct operation of their system.

To ensure that a fault is observed, a reset « without opening the box » is required to revert to a « normal » condition.

This product is particularly suited for the monitoring of:

- buried tanks
- service stations
- hazardous areas
- sites concentrated on a zero -energy point
- etc.

The AP100 Potential Alarm integrates new technologies in the fields of very low power consumption and optics.

The AP100 is part of IPSI's all-digital « product » strategy, which allows the future upgrading of the equipment thanks to the following features:

- Implementation of functions without hardware changes.
- Continuous improvement in function robustness from the very beginning of the product.
- In situ equipment programming or updating.

IMPORTANT NOTE:

SAFETY

When the AP100 is used in an explosive area, every precaution must be taken to ensure the safety of people and property, in line with the applicable regulations and procedures, before any installation or removal work is undertaken.

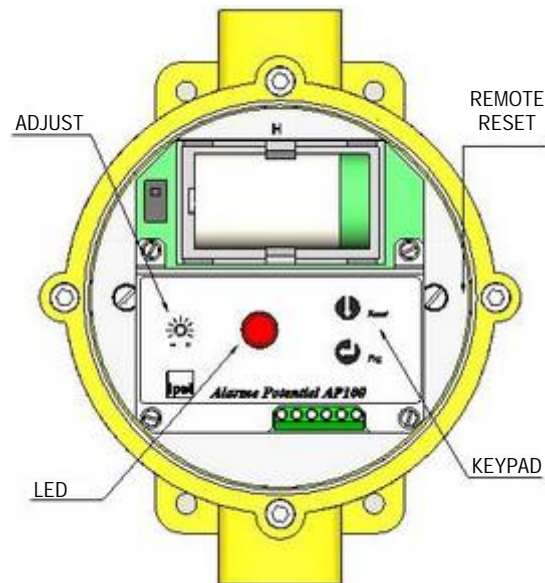
Do not forget that this device cannot be fully de-energized without removing the lithium battery.

ENVIRONMENT

In accordance with the legal or regulatory provisions in force in the user's country, the AP100 or the battery cannot be disposed of without resorting to approved processing center as the AP100 contains a lithium - thionyl chloride battery.



MAN - MACHINE INTERFACE



ADJUST

The « ADJUST » function is used to define the alarm triggering threshold.

INDICATOR LED

The « LED » informs the user of the operating mode or « state » of the AP100:

- Short-duration fast flashing on power-up.
- Short-duration fast flashing upon a reset or acknowledgement.
- Short-duration fast flashing during a functional test.
- One fast flashing upon activation of the « PRG » key.
- Long-duration flashing until a reset or acknowledgement after an alarm.

KEYPAD

RESET

The « RESET » key is used to acknowledge the alarm, to perform a reset or to perform a functional check of the battery.

PRG

The « PRG » key is used to activate or deactivate the alarm trigger threshold function.

OPERATION

ALARM

The AP100 performs periodical potential measurements and compares the reading with the threshold. When the absolute reading is lower than the threshold, the AP100 switches to alarm mode and the indicator led flashes slowly.

To quit the alarm mode, you just need to acknowledge the alarm (see RESET OR ACKNOWLEDGEMENT).

Note:

- To ensure a long battery life, the measurements are performed on the basis of energy-saving strategies down to the minute.
- To avoid false detections, the AP100 integrates signal processing functions.

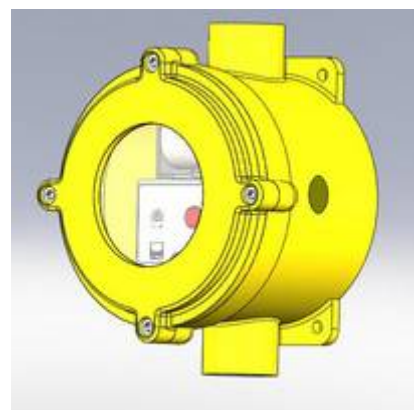
RESET OR ACKNOWLEDGEMENT

For the AP100 to quit the alarm mode, you just have to perform a « reset » or an acknowledgement by pressing the « reset » key or by placing a magnet on the right side of the device.

Reminder: in an area without burning or welding & cutting permit, this « reset » or acknowledgement must be performed by means of the magnet.

Upon a « reset », all AP100 functions are reinitialized like after a restart, the threshold setting being kept.

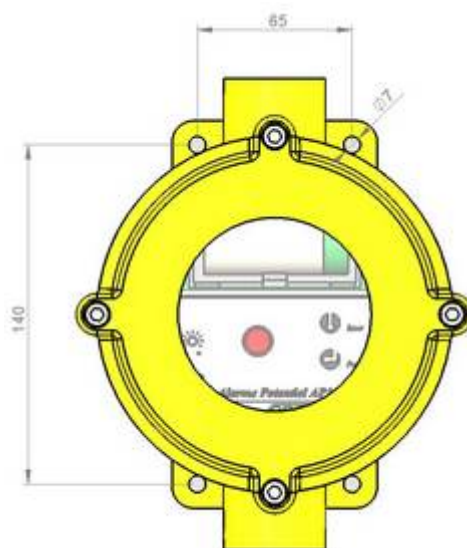
After a « reset » or acknowledgement, the indicator LED flashes rapidly for a short period of time.



INSTALLATION

When the AP100 is used in an explosive area, every precaution must be taken to ensure the safety of people and property, in line with the applicable regulations and procedures, before any installation or removal work is undertaken.

Do not forget that this device cannot be fully de-energized without removing the lithium battery.



TECHNICAL SPECIFICATIONS

ELECTRICAL DATA

Power supply	: 3.6V lithium battery, D case.
Service life	: Normal mode: 10 years (battery life). : Alarm mode: 1 year minimum (with new battery).
Protections	: Thermistor on power supply 3.3V Zener diode on electrode input upstream of filter.
Electrode input (ER/STRUCTURE)	: For Cu/SO ₄ only, max 5V peak, max 3.3V mean, 4μA@5V; measurement error ±50mV max @5V, ±25mV max @1V.

MECHANICAL DATA

Dimensions	: 166mm x 195mm x 109mm.
Mass	: 2.2 kg.
Materials	: Marine grade aluminum alloy (AS10GY30).
Color	: Yellow polyurethane paint RAL1003.
Installation	: Wall mounted by means of 4 M6 screws.
Class	: Ex II 2 G – Eexd IIC T6; IP56.

ENVIRONMENTAL DATA

Operating temperature	: -20° to +40°. : Surface classification T6.
Storage temperature	: -40° à + 85°.
GAS environment	: Zone 1 & Zone 2.

MISCELLANEOUS

Maximum battery life	: 10 years.
ON/OFF cycles	: 10,000 cycles.
RESET/Test cycles on magnetic field	: 10,000,000 cycles.
Color of indicator LED	: Red (λd 626nm).
Light flux of indicator LED	: 12,000 to 16,000 mcd at 6 deg.
Field of vision of indicator LED	: 80 deg. direct, 140 deg. indirect.

