ID5001P

NON-INTRUSIVE ULTRASONIC SIGNALLER

The ID5001P (Passive) pig signaller is a fully ATEX and IECEx certified, Exd flameproof, non-intrusive, pig signaller which detects, signals, and logs the passage of pigs at critical points along a pipeline both on land and offshore.
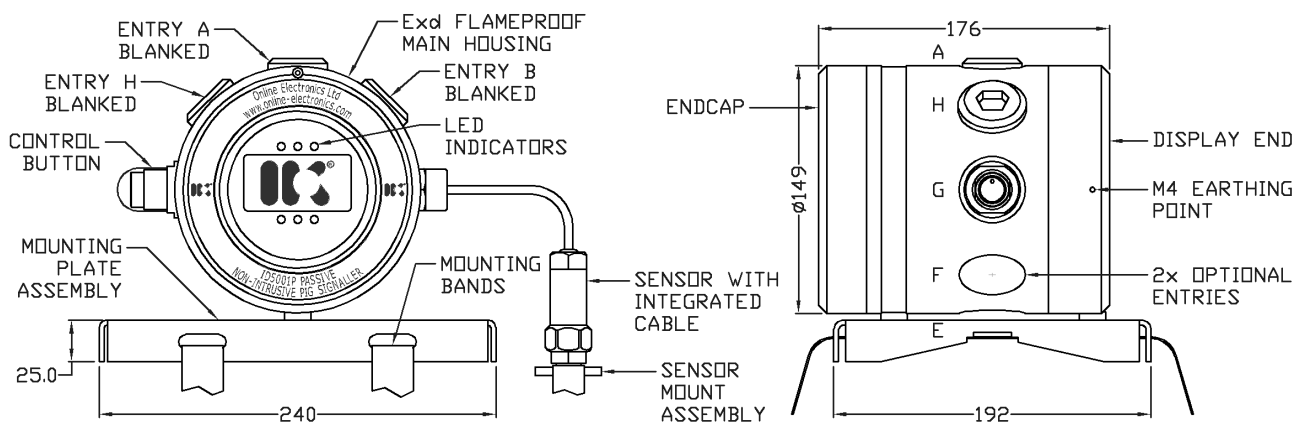
Key Benefits:

- Use of the ID5001P can result in both time and cost savings during pigging operations
- Removes any uncertainty over confirmation of pig passage
- Quick and easy installation using ratchet straps or steel banding
- Suitable for all pig types – no transmitters or magnets are required to confirm passage or location in the receiver.
- Suitable for gas and liquid pipelines
- Main housing can be mounted remotely for use on buried pipelines or where access is limited

The ID5001P monitors the acoustic emissions created by the vibrational and acoustic noise generated as a pig moves through a pipeline. The unit then processes the emissions to identify the signature of a passing pig.

Events are signalled as they occur via a graphical display and high brightness LED. The unit logs the time and date of up to 99 events. Logged events can be viewed locally on the display or transmitted remotely over several optional interfaces. The user can turn the unit ON and OFF as well as modify several settings using the single control button and intuitive menu system.

The ID5001P has two basic parts, main housing and sensor, as shown below. The sensor is permanently connected to the main housing via a cable and can be quickly and easily attached to the pipeline using ratchet straps or steel banding. The main housing contains all electronics, display and the control button and can be mounted onto the pipeline using a mounting plate and straps in a similar fashion to the sensor or mounted on a wall or post.

GENERAL

External Supply .... 24.0VDC, <2.0W

Battery type .... 7x Alkaline DURACELL ID1300 cells

Battery life (Alkaline) in LISTENING/LOW POWER MODE at +20°C .... 15 days

Battery type .... 7x Lithium SAFT LS33600 cells

Battery life (Lithium) in LISTENING/LOW POWER MODE at +20°C .... 30 days

Housing Ambient Temperature range (External supply) ...... -40°C to +85°C (-40°F to +185°F)

Housing Ambient Temperature range (Alkaline) .... -20°C to +54°C (-40°F to+130°F)

Housing Ambient Temperature range (Lithium) .... -40°C to +85°C (-40°F to +185°F)

Sensor Ambient Temperature Range .... -55°C to +110°C

Maximum Allowable Pipeline Surface Temperature .... +150°C NOTE1

Typical minimum pig speed 0.1m/s NOTE2

Main Housing Ingress Protection.. IP66

Sensor Ingress Protection... IP68

ATEX code .... $\langle Ex \rangle$ II 1/2 G Ex d ia [ia Ga] IIC T4…T6 Gb

IECEx code.. Ex d ia [ia Ga] IIC T4…T6 Gb

EU Type Examination Certificate Number .... TRAC 13 ATEX 0008X

IECEx Certificate Number .... IECEx TRC 13.0006X

Weight in Aluminium 8kg

Weight in Stainless Steel... 13kg

Standard Housing Entries 3x M20x1.5

OUTPUTS

DPDT Relay Output (Volt Free Contacts) .... 2A @ 30VDC NOTE3

Current Loop Output... 4-20mA NOTE4

Serial Data Interface .... RS485 MODBUS

NOTE1   Maximum allowable pipeline surface temperature depends on ambient air temperature and mounting configuration. If pipeline surface temperature exceeds +85°C only the sensor may be mounted on the pipeline.

NOTE2   Minimum pig speed depends on pig type, pipeline configuration and installation position.

NOTE3   DPDT is equivalent to 2x SPDT.

NOTE4   Current Loop levels are configurable between 4mA and 20mA.
Default listening state 4.0mA. Default detection state 20.0mA. Tolerance ±1.0mA.