

## DSES PIG Detector

The PIG detector DSES is designed to detect and register the passage of a PIG moving inside a oil or gas pipeline at the points where the detector DSES is installed. Providing reliable information about the passage of the PIG increases pipeline integrity and produces cost savings

By processing the signals inside the DSED device which are coming from the detectors integral sensor units and transmitting the data of the passage of the object to the automated process control system, via means of standard industry protocols such as 4-20mA, RS-485, Relays.

The sensor provides reliable detection of PIG's of any type due to constant presence of three methods of signal registration. These three methods are:

- Magnetic
- Acoustic
- Electromagnetic

The allows the detector to be versatile and compatible with all available designs of PIG's which are being used by the operators globally.

DSES is distinguished by increased noise immunity, which excludes false triggering and skipping of the in-tube object.

Convenient mounting of the sensor will shorten the time for installation and further startup.

The devices is non-intrusive allowing the operator to easily install, remove or relocate the device. It is installed directly on top of the pipeline surface, with a clamping system, which can be performed by one person, without any need of welding or drilling in order to mount the device onto the pipeline.

The device can also be installed on a pipeline which is located beneath the surface with installation depth from 1,8m to 3m.

The device is available in Topside and Subsea version for use in both onshore and offshore pipelines, with ability to monitor the PIG with moving speeds from 0,1 to 10 m/s.



### Feature and benefits

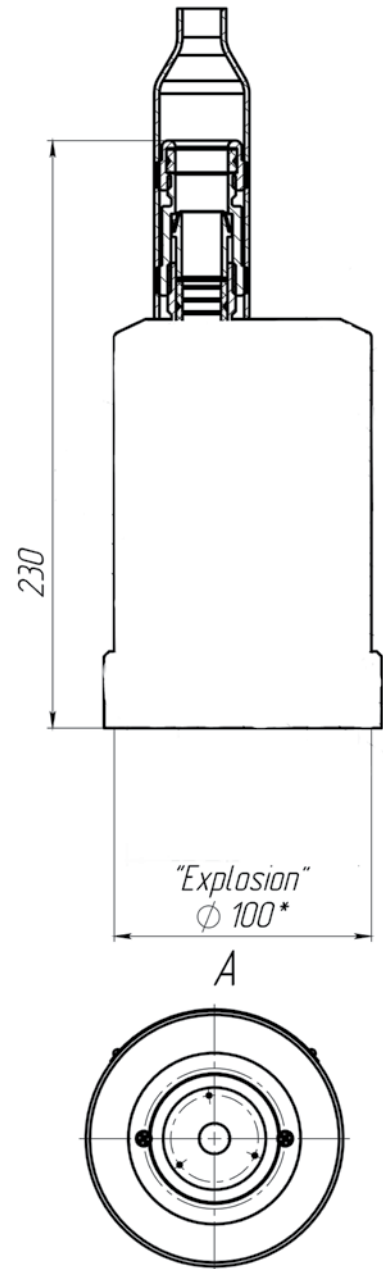
- » Industry standard protocols 4-20mA, RS-485, Relays
- » 3 sensing methods in 1 device (Acoustic, Electromagnetic, Magnetic)
- » Onboard signal processing unit
- » Non-intrusive installation
- » Low power consumption
- » Stainless Steel (SS316) construction for installation in harsh environments and corrosion resistance
- » High operating temperature range for operating in harshest environments

## Electrical Characteristics

Voltage: 18-32VDC  
 Power: <2W standby  
 Outputs: 4-20mA  
 RS-485 (Modbus)  
 Relays  
 Sensor: Acoustic  
 Electromagnetic  
 Magnetic

## Performance

LED Indication: Green, Red, Yellow  
 IP Rating: IP66/68  
 Explosion Proof Rating: Ex db IIC T4 Gb  
 Relative Humidity: Up to 95% (non condensing)  
 Operating Temperature: -60C to +85C  
 Pipe Thickness: 2-25 mm  
 Pipe Diameter: 300-2500 mm  
 Pipe Material: All types of steel alloys  
 Operating Mode: Real time measurement  
 Speed of Moving PIG: 0,1-10 m/s  
 Detection Direction: Bidirectional  
 Flow Conditions: Oil, Gas, Water, Multiphase  
 Repeatability: <1%  
 Mounting: Non Intrusive via mounting bracket



## Mechanical characteristics:

Material of construction : Aluminum/SS316  
 Cable Entry : 1- 3/4 NPT  
 Weight : 2.5 kg (Al)/ 5.0 (SS316)  
 Warranty : 2 years

## Certification



Class I, Division 1,  
 Groups B, C & D,  
 IP66

Certificate of Conformity:  
 CE Mark for EMC (TUV)  
 CE Mark for IECEx



Ex B IIC T4 Ta =  
 -40°C to +85°C