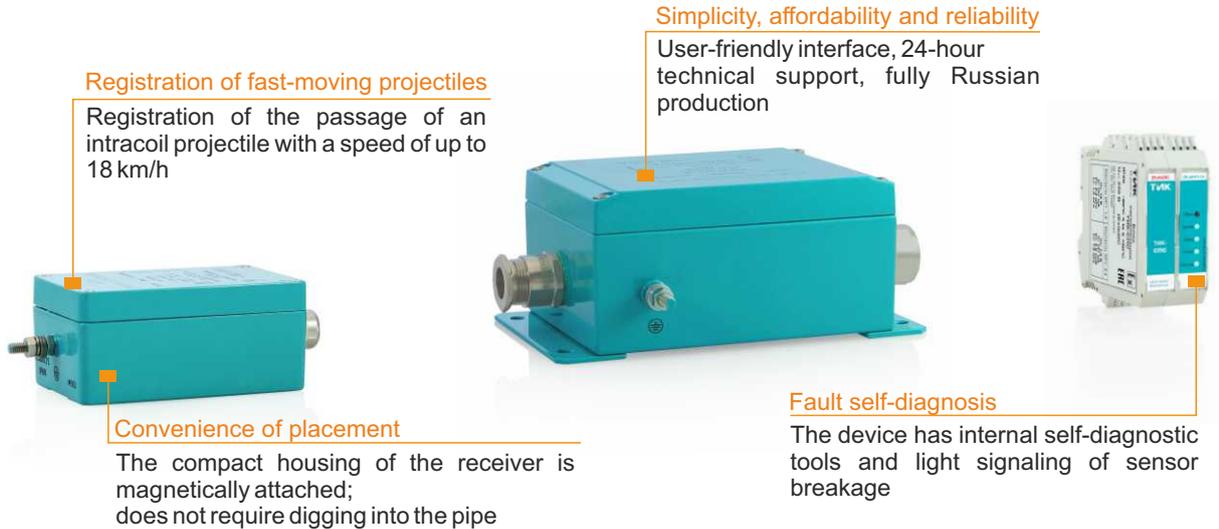


TIK-SPS detector

The **TIK-SPS** ultrasonic in-pipe passing detector was added to the **consolidated list of equipment and materials** in the direction of the DIT of the **Transneft OVP** register.



Description

Designed to **register passage of the cleaning or the diagnostic pig** through the control point of telemetry and to send the signals to pipeline telemetry control system.

The device consists of a TIK-SPS **alarm unit** (secondary device) located in the protective housing (optional), a TIK-SPS **receiver** (primary device) and KVS (KVA, KVP) explosion-proof **terminal box**.

The device's principle of operation is based on recording of changes in signals from the ultrasonic sensor and vibration acceleration sensor.

Features

- doesn't require digging the pipe;
- can be used on a large number of pipes (pipe diameters from 300 to 1500 mm and wall thickness from 2 to 25 mm);
- high maximum switchable AC voltage and high maximum current (240V / 2A);
- a wide holding time range of the «Event» signal (from 1 to 65535 seconds);
- two methods of operation based on ultrasound and vibration;
- automatic adjustment of the device (only the pipeline parameters are required).

Specifications

Interface

Supply voltage range, V	20-28
Output signal type	4-20 mA "current loop"; 2 groups of "dry contact" type
Digital interface	RS-485 (Modbus RTU)
Power consumption, W, not more than	4
Number of independent relays alarm systems and EPS	2

Parameters of discrete outputs of «dry contact» type

Maximum switching DC current, A	10
Maximum switching AC current, A	5
Maximum switching DC voltage, V	28
Maximum switching AC voltage, V	240

Operating parameters

Pipeline diameter, mm	300-1500
Pipe wall thickness, mm	2-25
Cleaning pig speed, m/s	1-5
Hold time of the «Event» signal, s	1 - 65535
Operating temperature range, °C	-60...+60

Explosion protection

Kind	intrinsically safe circuit
Marking	1Ex ib II CT5

Design parameters

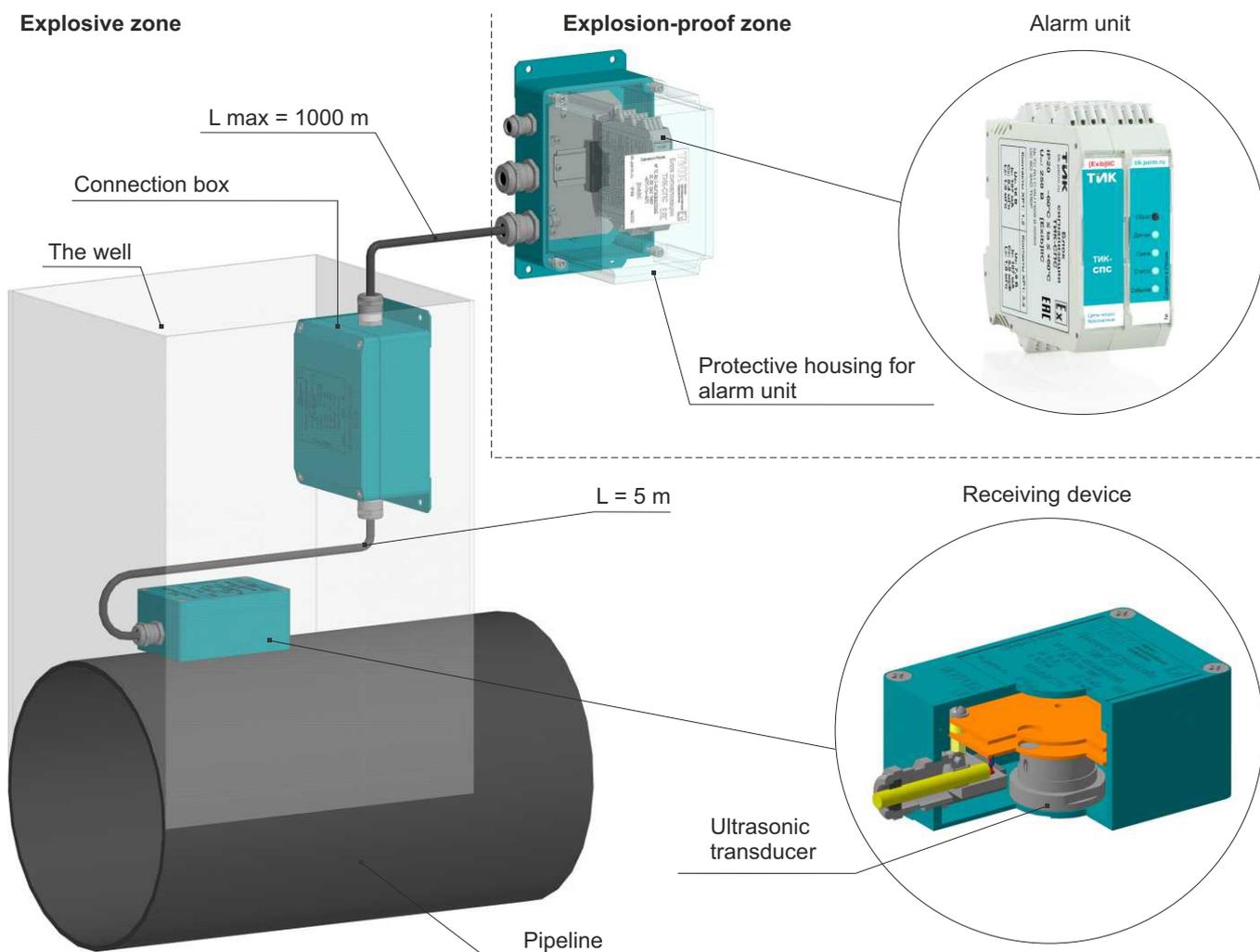
Overall dimensions, mm:	
• alarm unit	114x45x99
• alarm unit in a protective housing	153x212x125
• receiving device	57x125x80
• connection box (KVA-14)	83x212x120
Weight, without cable, kg, max:	
• alarm unit	0.3
• receiving device	3
• connection box	1.1
Device versions:	
• without protective housing	
• in a protective housing	
Protection class:	
• receiving device	IP68
• connection box	IP67
• protective housing	IP66
• alarm unit	IP20
Mounting type	magnet

Reliability parameters and manufacturer's warranty

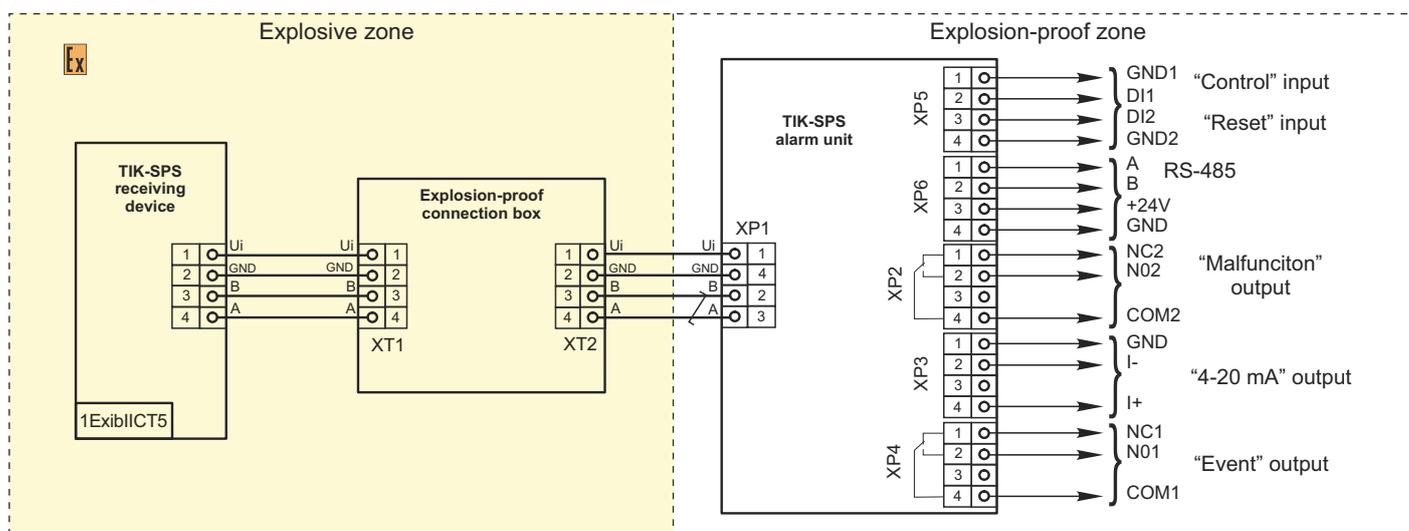
MTBF, hours, no less than	12 000
Service life, years	10
Warranty period, months	24



Conditional diagram of the location of the detector



Wiring diagram



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