



PROD TAG 410

SPECIFICATION AND USE

Personal precise positioning tag PROD TAG 410 is a mobile device included in the RealTrac Positioning product that allows real-time identification of the employee locations. The personal tag is compatible with the RealTrac Collision Awareness System.

The device is equipped with a UWB (ultra-wide band) module for sending signals to stationary units of the positioning system (access points). The device is built into the section of a mine lamp wire of any model according to the customer's requirements.

The positioning tag implements the object locating function. It sends a signal on the air, which is processed by the access points, which are included into the system. The processing result is sent to the RealTrac system server, which calculates the location of the tag relative to the fixed RealTrac access points and displays it on the map in the RealTrac client software. The tag also supports the RealTrac Collision Awareness System.

The photo shows how the tag is built in the wire of a typical mine lamp. The tag can be built into the customer's mine lamp. The lamp itself is not included to the supplied equipment.



Zone
Precise

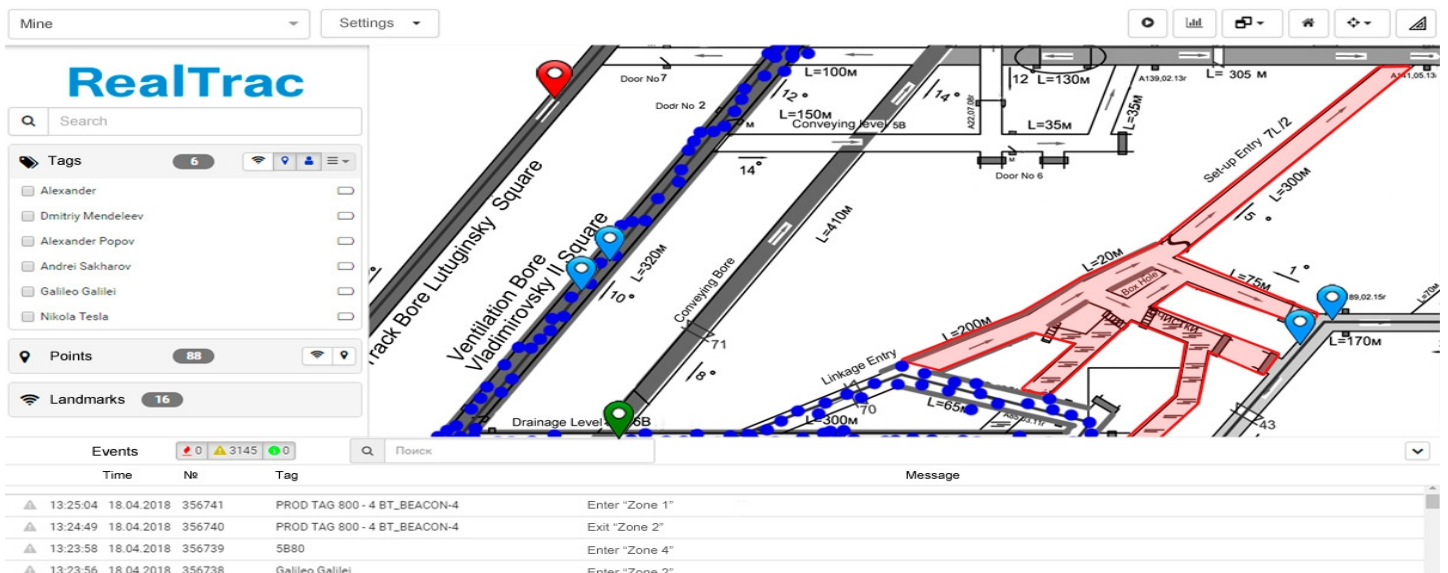


Collision
Awareness
System

PROD TAG 410 SPECIFICATION

PARAMETER	VALUE
Positioning type	Precise, zone (support of the CAS)
Positioning systems supported	UHF, UWB
Operating frequency range	868 MHz, 2.4 GHz, 3-7 GHz
Radio standard	IEEE 802.15.1, IEEE 802.15.4c
Transmitter power	ISM 20 dBm, UWB -41,3 dBm/MHz
Antenna	Build-in (UHF, UWB)
Accelerometer	Available
Gyroscope	Available
Light indication	Available
Power supply	From the mine cap lamp
Ingress protection	IP65
Housing material	Plastics
Operating temperature range, °C	-40 to +45°C RH up to 85%
Dimensions, mm	110 x 40 x 25
Weight, kg	0,1

REALTRAC SYSTEM INTERFACE



The screenshot displays the RealTrac system interface. On the left, there is a sidebar with navigation options: Mine, Settings, Search, Tags (6), Points (88), and Landmarks (16). The main area shows a detailed 3D map of a mine layout with various levels and entries. Key features include:

- Track Bore Lutuginsky Square
- Ventilation Bore Vladimirivsky II Square
- Conveying Bore
- Linkage Entry
- Set-up Entry 7L/2
- Drainage Level 6B
- Door No 2, Door No 6, Door No 7
- Various lengths (L=100M, L=150M, L=300M, L=410M, L=200M, L=75M, L=170M, L=305M, L=35M, L=35M, L=20M, L=65M, L=70M, L=120M, L=130M, L=35M, L=300M)
- Angles (14°, 12°, 14°, 71°, 70°, 43°)

 At the bottom, an 'Events' log shows a list of activities:

Time	No	Tag	Message
13:25:04	18.04.2018	356741	PROD TAG 800 - 4 BT_BEACON-4 Enter "Zone 1"
13:24:49	18.04.2018	356740	PROD TAG 800 - 4 BT_BEACON-4 Exit "Zone 2"
13:23:58	18.04.2018	356739	5B80 Enter "Zone 4"
13:23:56	18.04.2018	356738	Galileo Galilei Enter "Zone 2"