

EMTx40 EM Transmitter - 5 Cell Alkaline



The EMTx40 transmitter is an ATEX certified electromagnetic (EM) transmitter that can be used for pig tracking and locating functions, intended for use in pipeline diameters of 10" and above. The transmitters operate effectively in every type of pipeline, i.e. top-side, buried, gas or liquid and in pipeline bundles where acoustic transmitters are either less effective or ineffective.

Key Benefits

- Exact location of the transmitter can be determined to within a few cm by detecting the inherent EM null spot of the transmitter.
- Self-regulation ensures the signal strength is constant over the battery's lifetime.
- Several activation methods designed to conserve battery life when deployed in advance of pigging operations.
- Bluetooth connection and IK Trax's EMTx CONFIG Application allows transmitter parameters such as pulse rate, pulse width and power output to be modified by the user providing flexibility to manage signal strength and battery requirements.
- Mounting holes are built in to aid centralising the transmitter within a pig body, eliminating the need for a transmitter carrier. This dramatically increases the received EM signal.



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The standard transmission frequency is 22Hz however the frequency is configurable between 10Hz and 30Hz. Once the approximate location of the transmitter has been established using an EM Receiver with the antenna held parallel to the pipeline/transmitter, the exact location can be determined to within a few cm by orientating the antenna perpendicular to the pipe and detecting the inherent EM null spot of the transmitter.

The EMTx40 series offers several activation methods designed to conserve battery life when deployed in advance of pigging operations including bleedscrew, pressure switch and delayed activation. These methods may be used individually or in combination. Contact IK Trax to discuss your individual requirements.

The received signal strength is dependent on several factors and frequency, signal strength and transmission pattern can be configured to achieve the desired balance between detectability and battery life.

PRODUCT SPECIFICATION

Battery Type (Alkaline) 5x Procell Constant PC1300 (LR20) Alkaline Cells

Frequency Range 10Hz to 30Hz

Temperature Range (Alkaline) $-20^{\circ}\text{C to} + 54^{\circ}\text{C} (-4^{\circ}\text{F to} + 129.2^{\circ}\text{F})$

External Pressure Rating 500bar (7252Psi)

Standard Signal at 1m 650mVpp (with IK Trax reference antenna in air)

BATTERY LIFE DATA

Based on measurements taken at 5°C and 100% power.

| Continuous | 1-sec pulse | 2-sec pulse | 3-sec pulse | 4-sec pulse | 5-sec pulse |
|------------|-------------|-------------|-------------|-------------|-------------|
| 2.7 days | 6 days | 11.1 days | 15.7 days | 19.9 days | 23.5 days |

MATERIALS & DIMENSIONS

Housing Material ASTM B348 Grade 5 Titanium Ti-6Al-4V

Endcap Material Alloy Bronze CA 104 EN 12163

O-Ring Material NBR70

Length374mm (14.7")Diameter76.8mm (3.02")Transmitter Weight (including batteries)7kg (15.5lbs)

CERTIFICATION

ATEX/IECEx/UKEx Code Ex II 2 G Ex db IIB+H2 T6...T5 Gb

EU Type Examination NumberERO 23 ATEX 0011XIECEx Cert NoIECEx EMT 23.0008XUKEx Cert NoEMA 23 UKEX 0026X

Interested in hearing more about this, or other applications?
Contact our IK Trax specialists at:

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