

# EMTx20 EM Transmitter - 2 Cell Alkaline



The EMTx20 transmitter is an ATEX certified electromagnetic (EM) transmitter that can be used for pig tracking and locating functions, intended for use in pipeline diameters above 4" to 8". The transmitters operate effectively in every type of pipeline, i.e. topside, 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.
- USB Endcap 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.
- Can be installed inside smaller lines when pig discs are fitted directly to the transmitter. This dramatically increases the received EM signal as it no longer needs to propagate through the carbon steel pig body in addition to the pipeline.

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

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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 EMTx20 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	2x Duracell Industrial ID1500 Alkaline Cells
Frequency Range	10Hz to 30Hz
Temperature Range	-20°C to + 54°C (-4°F to + 129.2°F)
External Pressure Rating (Stainless Steel)	300bar (4351Psi)
External Pressure Rating (Titanium)	500bar (7252Psi)
Standard Signal at 1m	35mVpp (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
4.5 days	11.3 days	22.5 days	33.8 days	45.1 days	56.3 days

## MATERIALS & DIMENSIONS

Housing Material	316L Stainless Steel or Grade 5 Titanium
Endcap Material	2205 Duplex Stainless Steel
O-Ring Material	NBR70
Length	129mm (5")
Diameter	33mm (1.3")
Transmitter Weight (including batteries)	Stainless Steel 0.6kg (1.3lbs) Titanium 0.4kg (0.9lbs)

## CERTIFICATION

ATEX/IECEX Code	Ex II 2 G Ex db IIC Gb T6
EU Type Examination Number	EMT 16 ATEX 0011X
IECEX Cert No	IECEX EMT 16.0009X

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