



# EMTx20 Series EM Transmitter

The EMTx20 transmitter is an ATEX rated electromagnetic 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. 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.
- Battery life can be conserved by using Pressure Switch, Water or Magnetic Activation Endcap, all of which are easily changeable.
- USB Endcap 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.
- Dual rate endcap allows unit to be interfaced with an external piece of equipment such as an OEL Smart Gauge Plate to confirm the integrity of a pipeline.
- The EMTx20 can be installed inside smaller lines than would traditionally be the case 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.

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The standard transmission frequency is 22Hz. 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 has been designed to be fully compliant with ATEX Zone 1 operation.

**Specification:**

Standard Battery Type	Alkaline AA Duracell ID1500 Cells*
Battery life at +5°C in air	Up to 68 days**
Standard Frequency (adjustable)	22Hz
Temperature Range	-20°C to +51°C (-4°F to 124°F)
Max Operating Pressure (Stainless Steel)	300bar/4,531 Psi
Max Operating Pressure (Titanium)	500bar/7,252 Psi
Housing Material	Grade 5 Titanium or 316L Stainless Steel
Endcap Material	2205 Duplex Stainless Steel
Standard signal at 1m with OEL reference antenna at + 20°C in air	12mVpp (1 cell)/35mVpp (2 cell)/ 80mVpp(3 cell)



Model	Length	Diameter	Weight (incl batteries)
EMTx20 AA1***	79mm (3.1")	33mm (1.3")	0.35kg (0.8lbs) – SS 0.4kg (0.9lbs) - Titanium
EMTx20 AA2	129.5mm (5.1")	33mm (1.3")	0.6kg (1.3lbs) – SS 0.4kg (0.9lbs) - Titanium
EMTx20 AA3	180mm (7")	33mm (1.3")	0.9kg (2lbs) – SS 0.7kg (1.5lbs) - Titanium

\* EMTx20 AA1 is a Lithium-only unit, 1x Lithium Thionyl Chloride AA Cell

\*\* Dependent on model and transmitter configuration. Contact OEL to discuss individual requirements

\*\*\* Non-ATEX model

