

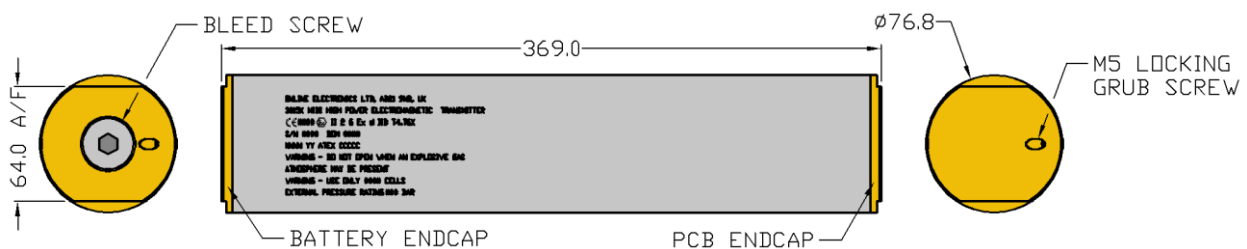
# 3015 SERIES EM TRANSMITTER

The 3015 transmitter is an electromagnetic transmitter that can be used for pig tracking and locating functions, intended for use in pipeline diameters above 10", larger transmitters are preferred in larger diameter lines to enhance detection capability. 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.

Transmission pulse rate can be switched between two pre-configured settings to extend the battery life of the unit. Please contact OEL to discuss the most effective pulse rate configurations.

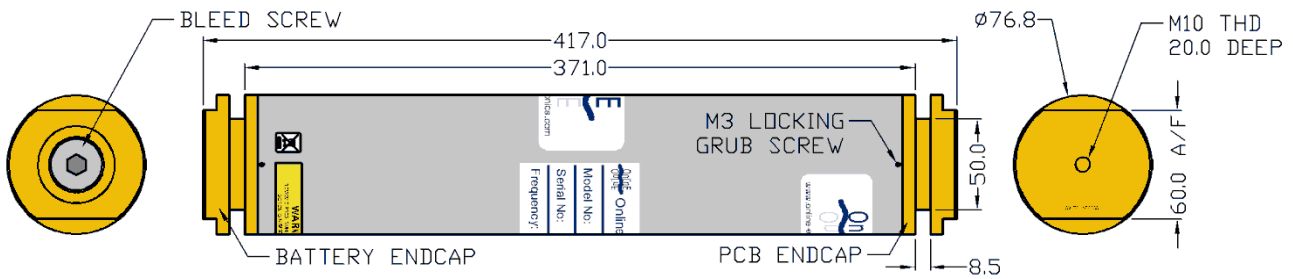
The standard transmission frequency is 22Hz. Once the approximate location of the transmitter has been established using an EM receiver system with the antenna held parallel to the pipeline/transmitter, the exact location of can be determined to within a few cm by orientating the antenna perpendicular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

The standard 3015X version (shown below) has been designed to be fully compliant with ATEX Zone 1 operation.



The 3015 can be fitted with a variety of endcaps either during manufacture to suit project specific requirements. Please consult OEL to discuss the most effective configuration.

- **Pressure Switch Endcap** – This activates the unit when the external pressure exceeds a specified pressure level, thus allowing the transmitter to conserve its battery life when it is installed in a pig for an extended time prior to launch.
- **Dual Rate** – This allows the transmitter to be interfaced with an external piece of equipment, which will determine the pulse rate of the transmitter. E.g. The transmitter can be interfaced with an OEL Smart Gauge Plate and the pulse rate will change to a faster rate if the gauge plate detects damage to the pipeline.
- **Pig Body Endcaps** – These allow pigging discs to be fitted directly to the transmitter, meaning the transmitter becomes the pig body. This permits the installation of larger transmitters inside smaller lines than would traditionally be the case. An added advantage is that 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. The Pig Body 3015 is shown below.



N.B. The pressure switch, dual rate and pig-body configurations are **NOT ATEX** certified.

**SPECIFICATIONS**

**BATTERY LIFETIMES:**

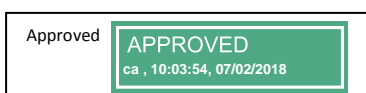
- Lifetime in continuous mode at +20°C in air ..... 12.5 / 5 days (Lithium/Alkaline)
- Lifetime pulsing 0.4sec ON / 0.6sec OFF at +20°C in air ..... 22.5 / 9 days (Lithium/Alkaline)
- Lifetime pulsing 0.4sec ON / 1.6sec OFF at +20°C in air ..... 41 / 17 days (Lithium/Alkaline)
- Lifetime pulsing 0.4sec ON / 2.6sec OFF at +20°C in air ..... 59 / 25 days (Lithium/Alkaline)
- Lifetime pulsing 0.4sec ON / 3.6sec OFF at +20°C in air ..... 74 / 31 days (Lithium/Alkaline)
- Lifetime pulsing 0.4sec ON / 4.6sec OFF at +20°C in air ..... 85 / 37 days (Lithium/Alkaline)

**GENERAL:**

- Standard Lithium Battery Type ..... 5x ELECTROCHEM 3B0035-TC PRIMARY LITHIUM D CELL
- Standard Alkaline batteries ..... 5x DURACELL INDUSTRIAL ID1300 ALKALINE D CELLS
- Standard signal at 1m with OEL reference antenna at +20°C in air ..... 624mVpp
- Standard frequency ..... 22Hz
- Temperature range (Alkaline) ..... -20°C to +54°C (-4°F to 130°F)
- Temperature range (Lithium) ..... -20°C to +80°C (-4°F to 176°F)
- Max Operating Pressure ..... 500bar (7,252 Psi)

**MATERIALS:**

- Housing material ..... ASTM B348 GRADE 5 TITANIUM Ti-6Al-4V
- Endcap material ..... Alloy Bronze CA104 EN 12163
- Bleedscrew material ..... 316 STAINLESS STEEL EN 1.4401
- O-ring material ..... NBR70 (standard) / FKM936 (heavy duty)
- Bump rating ..... 20G
- Transmitter weight (dependent on configuration) ..... 7kg-8.5kg (15.4 lbs to 19 lbs)



Date

