

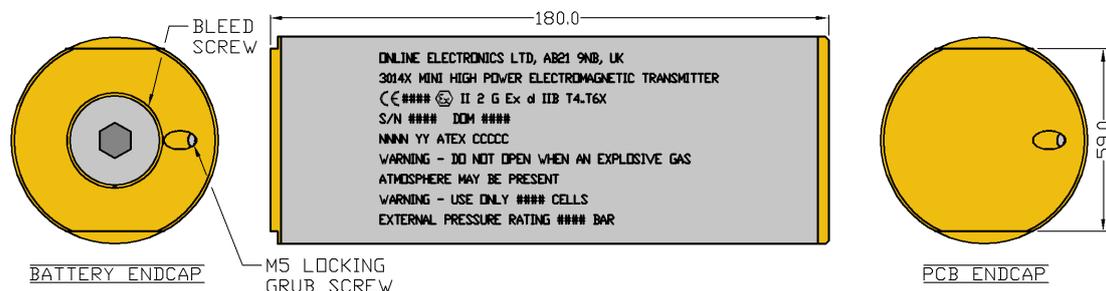
3014 SERIES EM TRANSMITTER

The 3014 are a series of electromagnetic transmitters that can be used for pig tracking and locating functions, intended for use in pipeline diameters of 8" to 12" (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.

The 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.

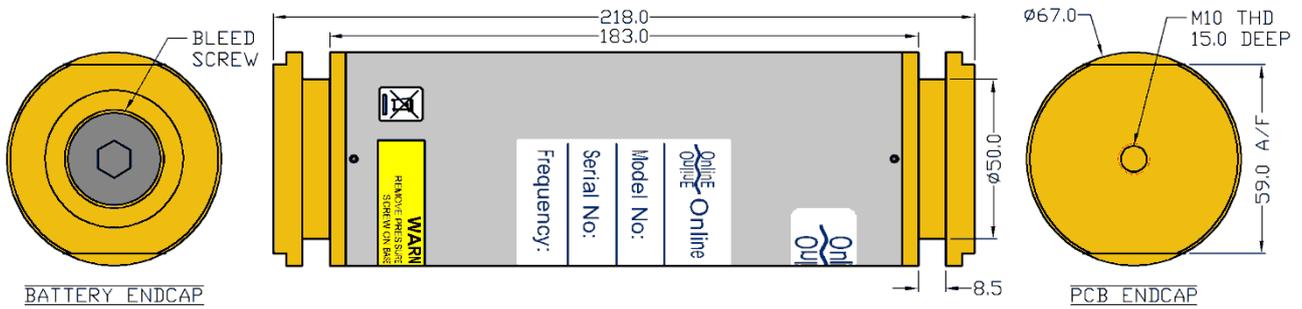
The standard transmission frequency is 22Hz. Once the approximate location of the transmitter has been established using an EM receiver system with the antenna held parallel to the pipeline/transmitter, the exact location of can be determined to within a few cm by orientating the antenna perpendicular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

The standard 3014X version (shown below) has been designed to be fully compliant with ATEX Zone 1 operation.



The 3014 can be fitted with a variety of endcaps 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 3014 is shown below.



N.B. the dual rate and pig-body configurations are **not** ATEX certified.

SPECIFICATIONS:

BATTERY LIFETIMES:

Lifetime in continuous mode at +20°C in air	6.5 days
Lifetime pulsing 0.4sec ON / 0.6sec OFF at +20°C in air	14 days
Lifetime pulsing 0.4sec ON / 1.6sec OFF at +20°C in air	25 days
Lifetime pulsing 0.4sec ON / 2.6sec OFF at +20°C in air	36 days
Lifetime pulsing 0.4sec ON / 3.6sec OFF at +20°C in air	46 days
Lifetime pulsing 0.4sec ON / 4.6sec OFF at +20°C in air	54 days

GENERAL:

Standard Battery Type	2x ELECTROCHEM 3B0035-TC PRIMARY LITHIUM D CELL
Standard signal at 1m with OEL reference antenna at +20°C in air	185mVpp
Standard frequency	22Hz
Temperature range	-20°C to +80°C (-4°F to 176°F)
Max Operating Pressure	225bar (3,263 Psi)
Bump rating	20G
Transmitter weight (dependent on configuration)	3.5kg-4kg (8.8 lbs to 11 lbs)

MATERIALS:

Housing material	316 Stainless Steel
Endcap material	Alloy Bronze CA104 EN 12163
Bleedscrew material	316 STAINLESS STEEL EN 1.4401
O-ring material	NBR70 (standard) / FKM936 (heavy duty)



Date

