

600 SERIES ACOUSTIC PINGER

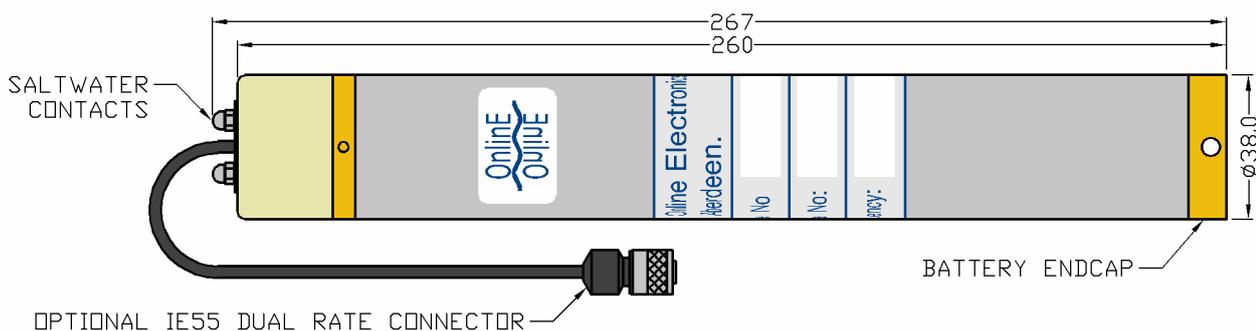
The 600 Series pingers are high specification pingers used for pig tracking and other subsea marking and location functions.

A 600 Series pinger may be fitted to a pig for use in offshore, fluid filled pipelines. The acoustic signal generated by the pinger is exceptionally powerful and stable, allowing the approximate pig or asset location to be established from the surface using an acoustic receiver and hydrophone (e.g. OEL 2001). The exact location can then be determined using a directional receiver such as the diver operated OEL PR1, 2405 or ROV mounted OEL 2001RS/2402RS/2401 system.

The acoustic pingers are usually configured to activate when the *saltwater contacts* are exposed to any conducting fluid e.g. salt water or MEG. This permits the loading of the pingers many months in advance; safe in the knowledge that the pinger will only activate once the line becomes flooded ready for launch.

The 600 Series pingers are highly configurable and their performance and functionality can be tailored to meet specific customer requirements. For example, if two pingers are required to operate in close proximity to one another, different frequencies and/or ping rates can be configured during manufacture to allow for easy differentiation between their transmissions.

The 600 Series Pingers are capable of sending acoustic transmissions up to 2km, although the effective range is dependent upon the specific configuration, mounting arrangement, and environmental conditions.



The standard 600 Series model is powered by 3 Alkaline C Cells and produces up to 10W of acoustic power at a single operating frequency in the range of 26-42kHz (configured at time of manufacture). In addition to the standard model, a number of options are available that offer additional functionality and/or performance.

OPTIONS

EXTENDED HOUSING: Extended housings are available that increase the battery capacity from 3 to 4 cells with corresponding increase in battery life for projects that may have various stages spread over a longer time-frame. These configurations have increased length of 317mm, and a weight in air of 1.25kg.

SHORTENED HOUSING: Shortened housings are available that decrease the overall length to 217mm and decrease the overall weight to 0.75kg. Shortened housing units are well suited for the use in 4inch NB lines that traditionally would not have been pigged. The short version accommodates two C cells.

LITHIUM CELLS: Lithium C cells may be fitted at time of manufacture in place of the standard alkaline C cells and will significantly increase the battery life of the unit (short and standard housing configurations only).

DUAL RATE: 600 Series Pingers with this option incorporate an external connector cable that allows them to be interfaced with an external piece of equipment such as an OEL Smart Gauge Plate for confirming the integrity of a subsea pipeline or as an alarm on an ROV should all ROV power be lost.

GRID™: Has the same functionality as the Dual Rate option above, except that the unit also transmits the time of an event as a series of acoustic pulses. This allows the location where the event occurred to be determined by reference to pumped volume data without having to recover the pinger first.

DELAYED START: In order to conserve battery life, the unit can be configured to enter a very low power mode for a pre-configured duration before it starts pinging.

SPECIFICATIONS:

Battery Capacity.....	3x Duracell ID1400 Alkaline C Cells*
Battery Life at +5°C	16.5 Days*
Acoustic Output Power	10W ±3dB*
Beam Pattern.....	Omni-Directional ±3dB
Operating Frequency.....	26-42 kHz (Configured During Manufacture)
Pulse Length	5ms ±5%*
Ping Rate	1 Ping Every 2 Seconds*
Operating Temperature Range	-2°C to +54°C (+28°F to +129°F)
External Pressure Rating	3,000m(9,842ft)/300bar (4531 Psi)
Weight in Air.....	1.1kg (2.2lbs)
Housing Material	316 STAINLESS STEEL
Endcap Material.....	ALLOY BRONZE CA104
Transducer Material	PEEK / PU
O-Ring Material	NBR70

***ALTERNATIVE CONFIGURATIONS**

The battery life of a 600 Series Pinger is dependent on the operating temperature, acoustic power, ping rate, pulse length and the number and type of C Cells. The acoustic power, pulse length and ping rate can be configured by OEL at the time of manufacture to match the customer’s desired performance and battery life. Please contact OEL to discuss specific project requirements.