

Datasheet

Origin Seabed Lander



Origin® Seabed Lander is a dedicated solution that can integrate everything you need to support your Origin 600 Acoustic Doppler Current Profiler (ADCP) operations. It simplifies deployments by integrating Origin 600, Origin E-Mux, Origin PowerPlus, and up to four third-party sensors into one compact payload. Two acoustic releases are integrated as standard for dual redundancy.

Origin Seabed Lander is designed for use at shallow sites where monitoring currents, waves, turbulence, and/or conducting echosounding is required.

Supporting the Origin 600 ADCP, Origin E-Mux and up to two additional Origin PowerPlus (external rechargeable batteries), Origin Seabed Lander allows a diverse range of measurements to be made over an extended period.

Origin Seabed Lander consists of a mild steel bedframe and semi trawl-proof cover. It incorporates bracketry mechanics to hold Origin E-Mux and Origin PowerPlus firmly in place during lifting and calibration procedures and has mounting infrastructure for third-party sensors. It has a lifting lug rated to 400 kg, meaning the lander can be deployed with additional ballast, and its low centre of gravity and small cross-section ensures stability at even the most dynamic sites.

The steel frame base can be drilled for installation of additional mud-feet where these are required (sold separately).

Origin Seabed Lander has two integrated RT6-1000 acoustic releases for dual redundancy as standard. These releases each come with a 120 m rope canister and popup buoy. Dual release transponders can also be used to determine ADCP heading, removing reliance on the internal magnetic heading sensor.

Typical applications

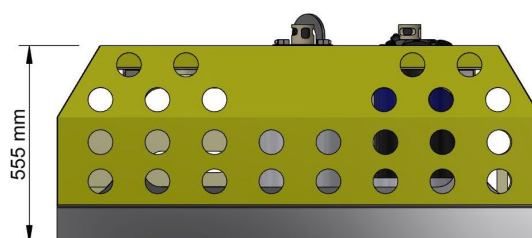
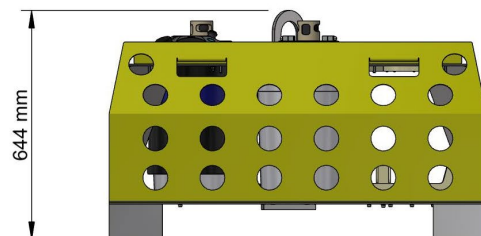
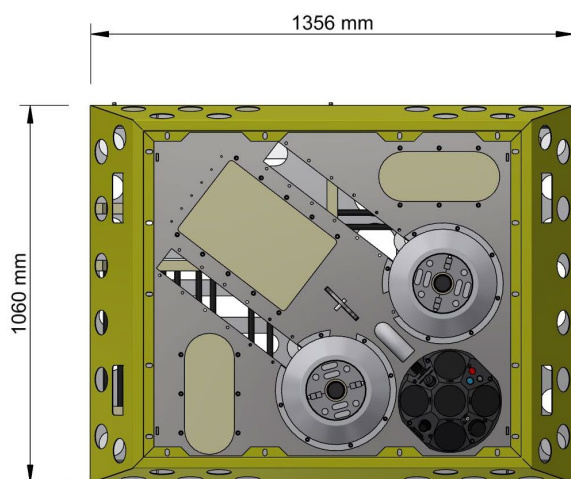
- Shallow (<100 m) deployment sites
- Currents, waves, and/or turbulence monitoring
- Echosounding
- Third-party sensors
- Longer-term deployments

Key features

- Integrated bedframe solution
- Compact payload to contain Origin 600 ADCP, Origin E-Mux, Origin PowerPlus and third-party sensors
- Dual redundancy integrated acoustic releases with rope canister and popup buoy
- Operational depth of 100 m
- Central lifting point
- Dual releases allow heading calibration via USBL

Specifications

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Features		Specification
Mechanical	Construction	Mild steel bedframe
	Dimensions (height x length x width)	644 x 1,360 x 1,060 mm
	Weight in air/water ¹ (with Origin 600 fitted)	225/138.3 kg
	Weight in air/water ¹ (with Origin 600 and Origin E-Mux fitted ¹)	260/160 kg
	Weight in air/water ¹ (with Origin 600, Origin E-Mux and 2x Origin PowerPlus fitted)	330/202 kg
	Lifting point working load limit	400 kg
Environmental	Depth rating (operational/survivable)	100/200 m
	Storage temperature	-5 to 40°C
	Operating temperature	-20 to 55°C
Integrated acoustic release ²	Operating frequency	MF (20–34 kHz)
	Transducer beam shape	Hemispherical
	Transmit source level (dB re 1 µPa @ 1 m)	187 dB
	Tone equivalent energy (TEE) ³	193 dB
	Receive threshold (dB re 1 µPa)	<100 dB
	Battery life (alkaline)	>13 months
	Inclinometer accuracy	±5°
	Surface unit	Deck Topside, Ranger 2 USBL, RT 6 Android™ App
	Mechanical construction	Anodised aluminium alloy, plastic and super duplex stainless steel
	Typical operating range	500 m

¹ Estimated weights

² For more information, see Release Transponder 6 (RT 6-1000) datasheet (available on the Sonardyne website)

³ WBv2+ signals are 4x the duration of Sonardyne tone signals (WBv1 & WBv2 are 2x). The TEE figure shows the operational performance when comparing wideband and tone systems.