

## Datasheet

# Wideband Mini Transponder (WMT)



### Description

Sonardyne's existing Wideband Sub-Mini transponder (WSM) is typically interrogated by a responder trigger sent down the ROVs' umbilical or a narrow band tone signal. In some situations, reverberation or multipath of the tone interrogation can cause interference problems. The new WMT is Sonardyne's first mini-sized transponder. It is slightly larger than the WSM and provides full two-way Wideband interrogation and reply which completely mitigates interference from and to other users.

For use on ROVs, the WMT includes responder trigger, an integrated rechargeable Li-Ion battery pack that is charged from the ROV's power supply, and full RS232 communications enabling channel set up, power and gain etc. to be changed from the surface.

An On/Off switch helps to ensure that the internal battery is not discharged when not in use. When an umbilical trigger is not available, then the full Wideband transponder mode provides excellent USBL performance from a small, lightweight package.

New remote omni or directional transducers are available for both the WMT and existing WSM range. These make installation on an ROV easier as the remote transducer can be installed where there is good line-of-sight and is easily replaced if damaged.

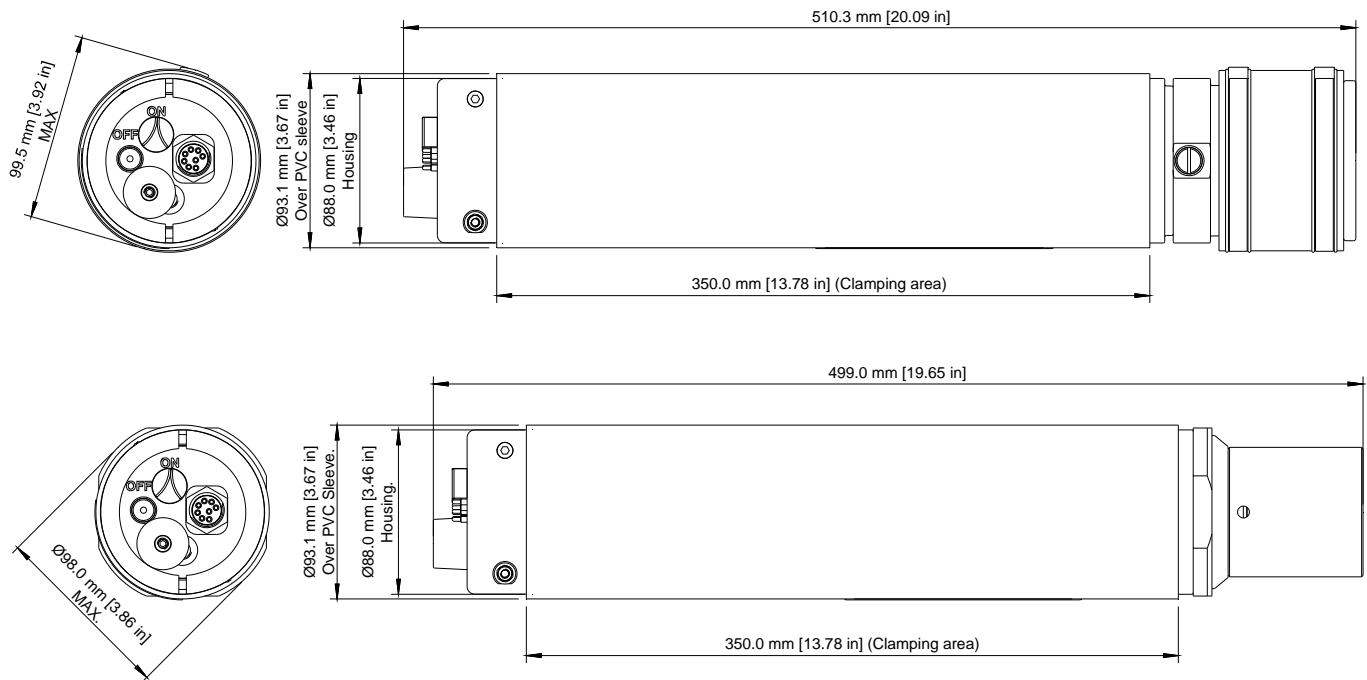
The main body of the transponder can be installed within the ROV frame where it is well protected from damage.

### Key Features

- Full two-way Sonardyne Wideband® 2 interrogation and reply – mitigates any interference and multi-path issues
- Mini size – lightweight and small
- Responder mode
- Li-Ion rechargeable battery pack
- Optional remote transducer
- Depth sensor fitted as standard.
- Full RS232 control from the surface
- External On/Off switch
- New, versatile and future-proof design

# Specifications

## Wideband Mini Transponder (WMT)



System Features		Type 8190-3111	Type 8190-3112
Depth Rating		3,000 Metres	3,000 Metres
Frequency Band		MF (19-36kHz)	MF (19-36kHz)
Transducer beam shape		Omni-Directional $\pm 130^\circ$	Semi-Directional $\pm 40^\circ$
Source Level (re 1 $\mu$ Pa @ 1m)	High Power	187 dB	193 dB
	Low Power	181 dB	187 dB
Tone Equivalent Energy*(TEE) WBv2+	High Power	193dB	199dB
	Low Power	187dB	193dB
Range Precision		Better than 15mm	Better than 15mm
Depth Sensor		$\pm 0.5\%$ full scale	$\pm 0.5\%$ full scale
Communications Interface		RS232 (9,600 – 115,200 baud)	
External Supply Voltage		18-50 Volts DC	18-50 Volts DC
External Power	Sleep	<300mW	<300mW
	Wideband Listening	<500mW	<500mW
	Battery Charging	6W	6W
	Peak (during transmission)	<50W	<50W
Battery Life (Lithium Ion 15V)	Listening	30 days	30 days
	Continuous 5 sec interrogation	Approx 6 days at low power	Approx 6 days at low power
Mechanical Construction		Anodised Aluminium Alloy and Plastics	Anodised Aluminium Alloy and Plastics
Weights (Air / Water)		5.1 / 2.2Kg	7.0 / 3.5Kg
Options		Remote, cable connected transducer (see separate datasheet), 5000m and 7000m depth rating.	

\*TEE Tone Equivalent Energy – WBv2+ signals are 4x the duration (WBv1 & WBv2 are 2x) of Sonardyne tone signals, therefore the TEE figure is to give the user an idea of the operational performance when comparing wideband and tone systems.