

Datasheet

Wideband Sub-Mini Transponder/Responder (WSM)



Sonardyne's family of Wideband® Sub-Minis (WSM) are a versatile range of Ultra-Short BaseLine (USBL) transponder/responders designed for positioning ROVs, towfish and other mobile targets in water depths up to 4,000 m.

Compact and rugged, WSMs incorporate the latest Sonardyne Wideband signal technology which offers superior ranging accuracy, operation in a multi-user, multi-vessel environment and fast USBL position updates.

In addition to supporting new Sonardyne Wideband signals, WSMs also support traditional Sonardyne tone and HPR 300 and HiPAP® channels. A link allows the WSM to be configured for use with all of the popular MF frequency band acoustic navigation systems.

The Type 8071 WSM is equipped with an omni-directional transducer and is depth rated to 1,000 m making it suitable for a wide range of general USBL tracking application.

The Type 8070 WSM is a 4,000 m rated unit and features a high-power directional transducer with an acoustic output comparable to Sonardyne's most powerful full size seabed transponders.

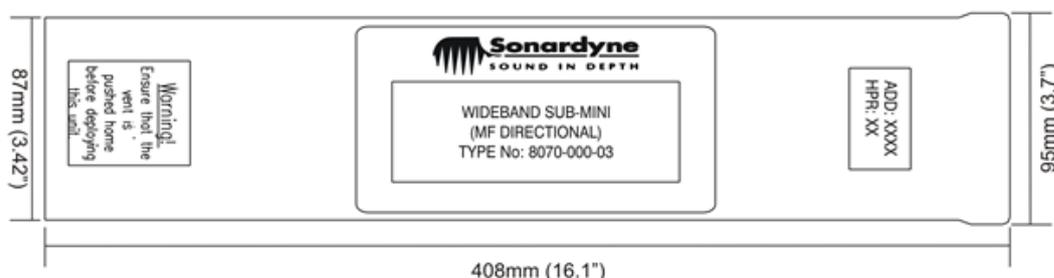
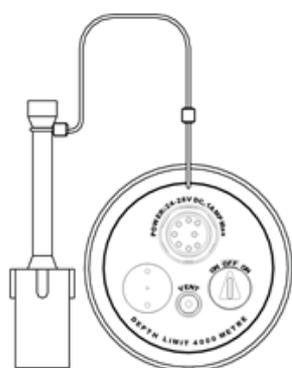
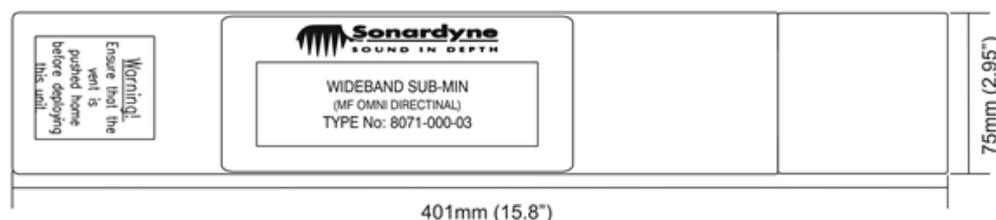
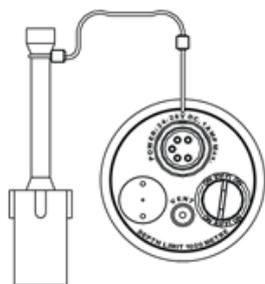
Both types of WSM have a depth sensor fitted as standard to aid USBL positioning accuracy and an external on/off switch for ease of use and storage when not in use.

Key Features

- Choice of 1,000 or 4,000 m depth rating
- Choice of omni-directional or directional beam shape with class leading acoustic power output
- Channel selection via serial data port by PC
- Transponder or responder operating modes
- Depth sensor for improved USBL positioning performance
- Long-life NiMH battery
- Compact and rugged design
- Windows based software for test and setup
- External on/off switch for ease of use and storage

Specifications

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Feature		Type 8071	Type 8070
Depth Rating		1,000 m	4,000 m
Operating Frequency		MF (19–36 kHz)	MF (19–36 kHz)
Transducer Beam Shape		Omni-directional	Directional
Transmit Source Level (dB re 1 μ Pa @ 1 m) (26–32kHz)	External Power	190 dB	202 dB
	Battery – High Power	188 dB	199 dB
	Battery – Low Power	185 dB	196 dB
Receive Sensitivity (dB re 1 μ Pa)	High Gain	<100 dB	<100 dB
	Low Gain	<110 dB	<110 dB
Power Supply		Long-life Ni MH battery or external 24 V via ROV's umbilical	
Operating Channels		All Sonardyne Wideband/tone HPR 300 & 400 channels	
Number of Replies (Responder)		Unlimited with external power	Unlimited with external power
Depth Sensor		Standard	Standard
Update Period (Maximum)		750 ms	750 ms
Quiescent Life		60 days	60 days
Connector		Subconn MCIL5F	Subconn MCIL5F
Mechanical Construction		Anodised aluminium alloy	Anodised aluminium alloy
Dimensions (Length x Diameter)		401 x 75 mm (15.8 x 2.95")	408 x 95 mm (16.1 x 3.7")
Weight in Air/Water		2.7/1.4 kg	5.0/2.6 kg
Battery Charger		Type 7972-000-04	Type 7972-000-04