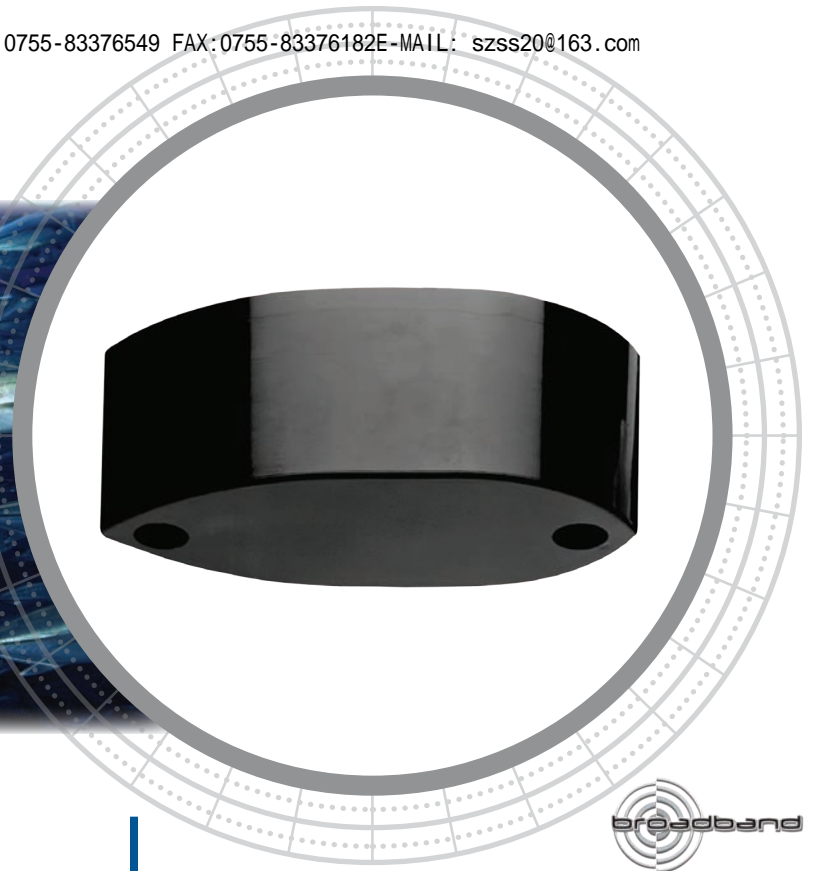


# M163



## Single and Dual-Frequency

This version of Airmar's M163 is available in two configurations. The first packs a 28 kHz, 2 kW array in a compact, SEALCAST™ housing. The second configuration uses nine, ceramic elements that resonate at both 28 kHz and 50 kHz and results in a very compact, dual-frequency transducer. The 75 kHz, M163 features an efficient highly-sensitive 19-element array. Its design is easier and less costly to install than magno-restrictive transducers requiring steel tanks. Both configurations have very high-efficiency and sensitivity for their size, resulting in excellent deep-water performance. The 33 kHz, 200 kHz, and 210 kHz, dual-beam transducers have conical beam patterns and minimal sidelobes that provide accurate depth measurements in both shallow and deep-water.

## Options

- Temperature sensor
- Impedance to customer specifications using matching transformer
- Available as special order unit with 75 kHz-G array

## External-Mount 500 W - 2 kW Broadband

### Applications

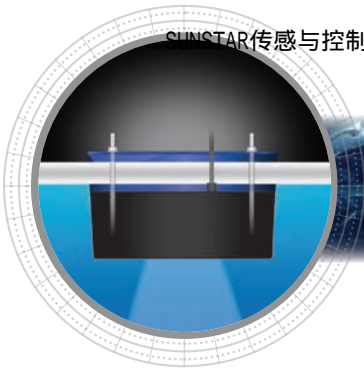
- Shallow and deep-water survey
- Commercial fishing vessels

### Features

- Low-ringing and low-sidelobes at 28 kHz, 38 kHz, and 75 kHz allows fisherman to see bottom structure clearly and to easily discriminate between bottom structure and target fish
- Fairing vertically orients sound beams for stronger return echoes resulting in optimal sounder performance
- Narrow beams and low sidelobes provide clear bottom detail
- Matching transformer provides pure, resistive load
- Stuffing tubes are available to form a watertight conduit for cable routing and are available in a variety of materials to match all hull types
- Can be mounted on a towed body, directly to a wood and fiberglass hull, or as an in-hull in a fiberglass hull for precise echosounding—even at speeds over 20 knots (23 MPH)
- Streamlined shape minimizes drag
- All mounting hardware included
- Seamless, SEALCAST™, urethane housing for long life underwater



*Sensing technology*



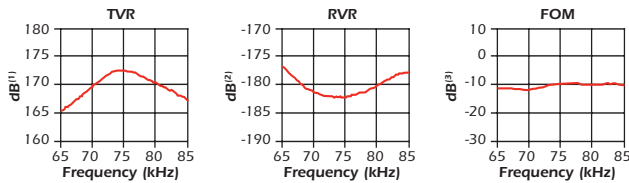
## Technical Information

Frequencies	Configuration	Beamwidth (@-3 dB)	RMS Power (W)	FOM (dB)	Q	Series Impedance (R-jX)
28 kHz-O		CALL	2 kW	-10	9	90-j0(t)
28 kHz-D/ 50 kHz-D		17° x 28° 10° x 16°	1.6 kW	-12 -12	9 16	110-j10(t) 180-j90(t)
28 kHz-E		29°	1 kW	-14	9	70-j0(t)
33 kHz-D		19°	1 kW	-13	7	125-j0(t)
50 kHz-AE		19°	1 kW	-14	8	222-j80(t)
75 kHz-L		10°	1.5 kW	-10	6	70-j0(t)
200 kHz-H		9°	600 W	-18	24	110-j0(t)
200 kHz-BCq Broadband		8°	500 W	-16	2.3	60-j0(t)
210 kHz-C		8°	600 W	-12	27	100-j0(t)

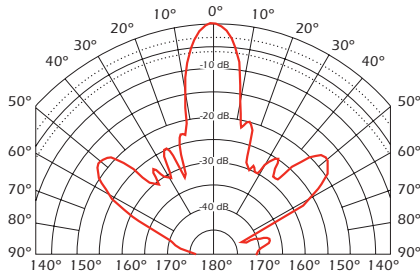
### Technical Data—75 kHz-L

TVR in dB re 1μPa/Volt at 1 m

RVR in dB re 1 Volt/μPa



### Directivity Pattern—75 kHz-L



### SPECIFICATIONS

**Weight:**

28 kHz, 28/50 kHz, 50 kHz, 75 kHz—7.8 kg (17 lb)  
33 kHz, 200 kHz, and 210 kHz—20 kg (44 lb)

**Acoustic Window:** Urethane

**Housing Material:** Cast urethane

**Cable Type:** C-44

Three shielded twisted pair (two 2-18 AWG and one 2-22 AWG) with foil and braided shield overall, black TPR jacket, 11 mm (7/16") diameter

### DIMENSIONS

