

Datasheet

SIPS 2 XSRS



Description

A key component in Sonardyne's SIPS System, XSRSs (Cross Streamer Ranging System) are intelligent acoustic devices used to measure one way slant range distances underwater.

The units are battery powered and are mounted on the streamer sections using industry standard collars. They can also be mounted on tail buoys. The XSRS units communicate with the XSRS controllers by means of the inductive coils and communication circuit within the streamers.

The design of the XSRS is based around a proprietary application specific integrated circuit (ASIC). The ASIC enables the decoding of the digital acoustic signal using digital signal processing (DSP) techniques. The unit has four receiver channels and one transmit channel.

Each receiver is capable of receiving 1 of 60 unique digital signals. The use of digital acoustic signals and digital processing techniques enable the XSRS to transmit and receive signals in the same event. In addition, they are able to transmit and receive SIPS 1 style tone burst for cross wake ranges.

The Type 7885 XSRS units are powered by individual standard C-size alkaline or lithium cells. The XSRS units have been designed to be very energy efficient, with over 80% of the available battery power being transmitted into the water.

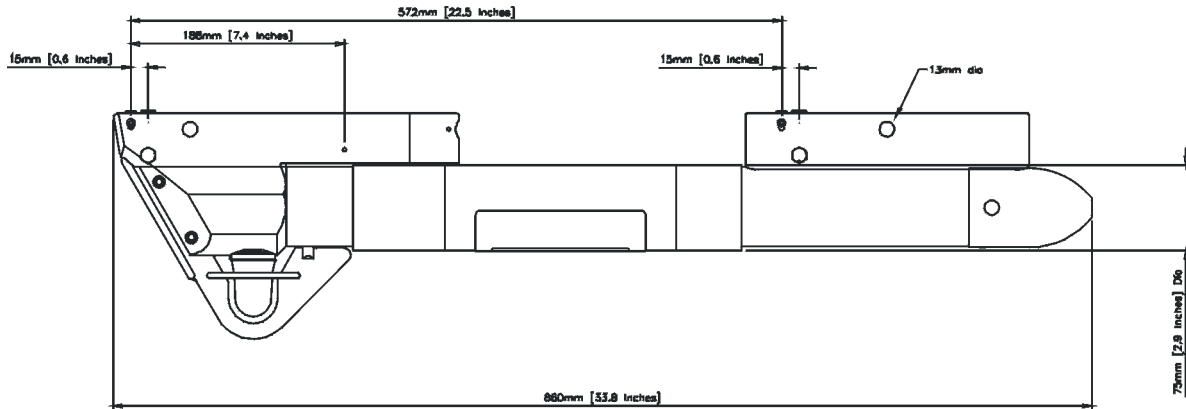
XSRSs are also available with a direct reading sound speed sensor (Type 8018 ASV XSRS). This 'time of Flight' sensor provides superior accuracy and ease of use compared to the more traditional CTD methods, particularly in areas affected by fresh water and salt water mixing.

Key Features

- Choice of Alkaline or Lithium battery packs
- Compatible with HGPS transceiver
- Capable of receiving 16 ranges per cycle
- Designed to transmit to an unlimited no of units
- Flash upgradeable firmware
- Sealed electronics compartment

Specifications

SIPS 2 XSRS



Feature	Alkaline	Lithium
Operating Frequency	EHF (55-110kHz)	EHF (55-110kHz)
Transmit Source Level (Controllable)	Max. 190dB re 1µPa @1m	Max. 190dB re 1µPa @1m
Receive Sensivity (Controllable)	73dB re 1µPa @1m	73dB re 1µPa @1m
Acoustic Range Resolution	5mm@ 1500 ms Vp	5mm@ 1500 ms Vp
System Sync Resolution	75mm @ 1500 ms Vp	75mm @ 1500 ms Vp
Immunity to Multipath	System can resolve bottom bounce/surface bounce greater than 0.3m	
Number of Digital Acoustic Signals	60	60
Number of Tone Acoustic Signals	6	6
Number of Received Channels	4	4
Battery Life (Typical)	5-6 Weeks	15-18 Weeks
Weight in Air	7.3kg	-
Weight in Water	3.0kg	-

Each different code represents one signal (Equivalent to a frequency group)

Note: Transceivers can transmit and receive in same event allowing for multiple observations to be collected faster.