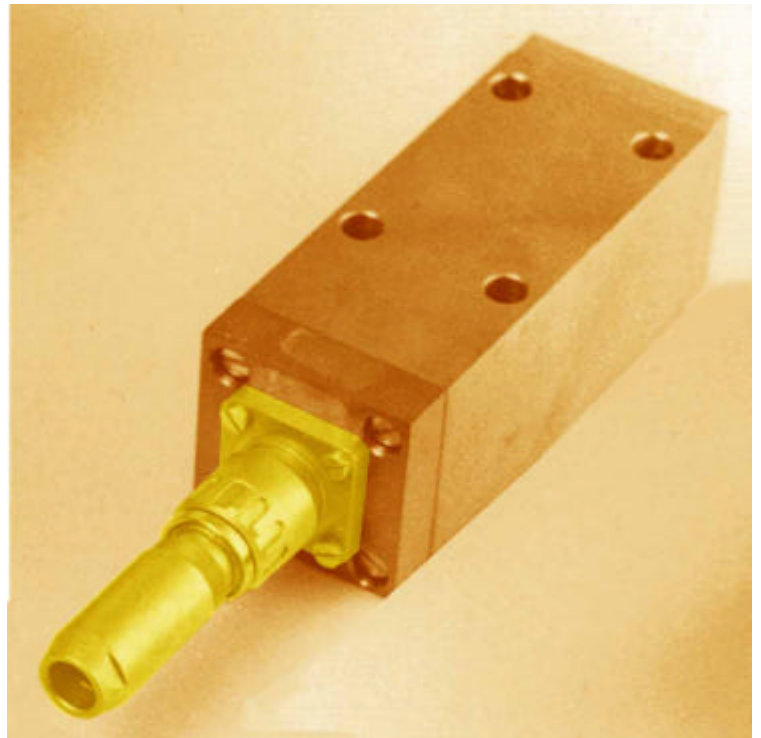


Type ELH103 Submersible High Precision Sensing Head

The Type ELH103 Submersible High Precision Sensing Head is a robust weatherproof sensor fitted with a very accurate **ELECTROLEVEL** tilt transducer.

For permanent submerged installation, the ELH103 can be bolted to the structure to be monitored, and connected to a suitable electronic Signal Conditioning Unit up to 100 metres away.



Type ELH103 Submersible High Precision Sensing Head

The standard sensor is made from Aluminium Bronze a corrosion-resistant material suitable for the marine environment.

For specialist applications, the ELH103 can be supplied in Naval Brass, or Stainless Steel.

A submersible connector is fitted to the ELH103 allowing the sensing head and its attached cable to be submerged to a depth exceeding 100 metres and giving a long term reliable connection to one of a range of Electronic Signal Conditioning Units above the surface.



Type ELH402 Submersible Connector

The ELH103 is one of a family of sensors which use the **ELECTROLEVEL** tilt transducer. A curved glass tube holds a conducting fluid and a bubble of gas. Just like a conventional spirit level, the bubble always settles at the highest point in the tube. Using electrodes built into the tube, the position of the bubble is measured electronically to a very high accuracy. In use, the smallest movement of the sensor will cause the fluid to flow and the output signal to change. the resolution of the sensor is thus effectively infinite, and unlike mechanical sensors, there is no stiction or friction or hysteresis to cause inaccuracy and nothing to wear out.

SPECIFICATION**ELH103 Submersible High Precision Sensing Head****PARAMETER****UNITS**

Linear Range (typical)	±0.5	Degrees
Linearity Error (max)	±1.0	%
Asymmetry Error (max)	±2.0	%
Unambiguous Range	2.0	Degrees
Discrimination	0.01	arc-seconds
Datum Change for ±5°Tilt about Cross Axis (max)	1.0	arc-minutes
Temperature coefficient with Matched Detector		
-10°C to 25°C	+0.2	%/°C (max)
+25°C to + 60°C	-0.1	%/°C (max)
Datum Temperature Drift (max)	0.3	arc-sec/°C

PHYSICAL PROPERTIES

Datum Stability Long Term	10	arc-sec/month
Datum Stability Short Term	1	arc-sec/hour
Settling Time to <1%	5	seconds
Housing		Aluminium Bronze
Weight	1.5	Kg

MEASUREMENT LIMITED

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