

POSITION SENSOR

LVDT for subsea applications

TE Connectivity (Germany) has announced the Macro Sensors SSIR 937 submersible LVDT position transmitters. They provide a CANopen interface compliant with the CiA 443 profile.

THE TRANSMITTER OFFERS MORE INTEROPERABLE and standardized communications to network with devices from different manufacturers used on the ocean floor. It withstands deep-sea environments with external pressures up to about 51 MPa (7500 pound per square inch) in excess of 1 million hours mean time between failure, when encased in special alloys. The sensor also offers repeatability (error less than 0,01 % of full range), regardless of offsets due to pressure and/or temperature. The sensors come with a CANopen interface, which is compliant to CiA 443 for subsea instruments.



The sensors are designed for use in either pressure-balanced, oil-filled containers, or directly in seawater (Photo: TE Connectivity)

TE's Macro Sensors (USA) submersible LVDTs are used in a variety of subsea measurement systems. Some typical applications include monitoring structural movements for long-term FEA (Finite Element Analysis) of pipelines, derricks, moorings and other critical high stress members on offshore oil platforms. The position sensors can measure the extension of structural members of oil platforms to a fraction of a micro-strain. To ensure oil platforms don't shift, movement is measured to less than 2 mm.

These rugged, 24-mm diameter sensors are available in standard ranges of 50 mm, 75 mm, or 100 mm, although other ranges are available at special request. To withstand deep-sea environments, the products are constructed of [Inconel](#). Inconel ensures that the sensors can meet service life requirements of at least 20 years, even if the device is fully exposed to seawater.