**Model 122M Data Sheet** 

### Mini Interface Meter

Model 122M - Laser Marked PVDF Coaxial Cable

Solinst Mini Oil/Water Interface Meters give clear and accurate measurements of product level and thickness in wells and tanks. Determination of both light (floating) non-aqueous phase liquids (LNAPL) and dense (sinking) non-aqueous phase liquids (DNAPL) is quick and easy.

The Model 122M Mini Interface Meter with PVDF laser marked cable is a convenient small version, which can easily fit in a backpack, or an optional custom mini carry case. It uses narrow laser marked PVDF cable, in 80 ft or 25 m lengths.

The Mini Interface Meter enhanced electronics include automatic circuitry testing; 300 hours of on-time battery life; clear signals; and high accuracy. The circuits are powered by one standard 9V battery housed in easy-access drawer in the faceplate.

Also available is the standard Solinst Model 122 Interface Meter with laser marked PVDF flat tape in lengths up to 1000 ft (300 m).

#### Probe

The 122M uses the P8 Probe, which is 5/8" in diameter (16 mm) and stainless steel. It is pressure proof, up to 500 psi. The beam is emitted from within a Hydex cone-shaped tip. The tip is protected by an integral stainless steel shield, and is excellent for the vast majority of product monitoring situations.



Model 122M P8 Probe

# Laser Marked PVDF Cable

The PVDF cable is traceable to NIST and EU measurement standards.  $\,$ 

The 0.12" (3 mm) coaxial cable has a durable PVDF jacket with permanent laser markings every 1/100 ft. or each millimeter. The cable has a braided copper outer conductor, a stranded stainless steel central conductor, and a smooth chemical-resistant surface that is easy to decontaminate.

LN2: Feet and tenths: with markings every 1/100 ft.

LN3: Meters and centimeters: with markings every mm.



Model 122 is approved for use in hazardous locations Class I, Div 1, Groups C&D based on CSA Standards and is ATEX certified under directive 94/9/EC as II 3 G Ex ic IIB T4 Gc



### **Features**

- Sensor accuracy to 1/200 ft or 1.0 mm
- · Certified intrinsically safe
- 5/8" (16 mm) diameter probe
- Easy access battery: minimum 300 hours of life
- Stable electronics with automatic circuitry testing
- Compact and easy to transport in a backpack
- Designed for rugged field use

# **Operating Principles**

**Product** (Non-conductive liquid) = Steady light and tone

Water (Conductive liquid) = Intermittent light and tone

To detect liquids, the Model 122M Mini Interface Meters use an infra-red beam and detector. When the probe enters a liquid the beam is refracted away from the detector which activates an audible tone and light. If the liquid is a non-conductive oil/product the signals are steady. If the liquid is water (conductive liquid greater than 20  $\mu S/cm)$ , the conductivity of the water completes a conductivity circuit. This overrides the infra-red circuit, and the tone and light are intermittent.

Both sensors use exactly the same zero point, giving accuracy as good as  $1/200~\rm{ft}$  or  $1.0~\rm{mm}$ . The high accuracy enables the sensors to detect the slightest sheen of oil on the surface of the water.

#### Hazardous Locations Use

The Model 122M Mini Interface Meter with PVDF Cable has been approved by QPS for use in hazardous locations, Class I, Div 1, Groups C&D based on CSA Standards. It is also ATEX certified under directive 94/9/EC, as II 3 G Ex ic IIB T4 Gc.

The ground cable is a safety essential when the meter is used in potentially explosive environments. It also ensures that the electronics are properly protected.

