The innovative DEVIL® technology continuously measures these important fundamental properties of liquids: density, viscosity and temperature. With a compact design and approval for use in hazardous areas, DEVIL® is ideal for embedding in OEM applications or for large scale deployments in industrial and field environments.

DEVIL® is a fully integrated package of sensor and electronics. The MesoScale design relies on precision machining of stainless steel for application flexibility along with flexible communications to integrate measured values easily with data systems. The modular low volume fluidic interface allows DEVIL® to be installed in flow-through, tank and sanitary applications.

DEVI L® REAL-TIME OUTPUTS

- **DENSITY**
- **VISCOITY (DYNAMIC)**
- **TEMPERATURE**

DEVIL® can embed derived measurements such as:
- Kinematic viscosity
- Specific gravity
- Temperature compensated density...

DEVI L® BENEFITS

- **EASY TO INTEGRATE**
- **COMPACT (< 10 cm)**
- **DURABLE**
- **WETTED PARTS IN 316L STAINLESS STEEL**
- **COST EFFECTIVE**
- **SAFETY IN HAZARDOUS AREAS**
- **ATEX / IECEx CERTIFIED (ZONE 0)**

TYPICAL APPLICATIONS

- **FUEL MANAGEMENT:**
  QUALITY, IDENTIFICATION AND INVENTORY
- **OIL CONDITION:**
  ROTATING MACHINERIES
- **ENHANCED FLOW METERING:**
  VOLUME TO MASS CONVERSION
- **PROCESS AUTOMATION:**
  CHEMICAL PLANTS
### LIQUID DENSITY & VISCOSITY METER

#### PERFORMANCES

<table>
<thead>
<tr>
<th></th>
<th>Density</th>
<th>Dynamic viscosity</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calibration ranges</td>
<td>650 - 1150 kg/m³</td>
<td>0.3 - 10 / 1 - 100 cP</td>
<td>0 ... 85 / -20 ... 65°C</td>
</tr>
<tr>
<td>Accuracy</td>
<td>From +/- 3 to +/- 8 kg/m³</td>
<td>From +/- 0.2 cP to +/- 5% of reading</td>
<td>+/- 0.5°C</td>
</tr>
<tr>
<td>Repeatability</td>
<td>1.5 kg/m³</td>
<td>From 0.05 cP to 2% of reading</td>
<td>0.1°C</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>-40 ... +105°C (-40 ... +95°C in Ex areas)</td>
<td>0 ... 25 bar</td>
<td>100 bar</td>
</tr>
<tr>
<td>Communication protocols</td>
<td>ModBus RTU (RS485), UART (via USB)</td>
<td>4-20 mA, 0-10V (on demand)</td>
<td></td>
</tr>
<tr>
<td>Certifications</td>
<td>CE, EMC (EN61326-1:2013, Namur NE21:2011)</td>
<td>ATEX II 1G Ex ia IIC T4 Ga, IECEx Ex ia IIC T4 Ga, TP TC 012/2011: 0Ex ia IIC T4 Ga X</td>
<td></td>
</tr>
</tbody>
</table>

#### MECHANICAL INTEGRATION

Dimensions in mm.

- DEVIL® installation on flowthru baseplate, with fittings from 1/8 to 1/2”
- DEVIL® installation on 1” threaded NPT adapter
- DEVIL® installation on sanitary tri-clamp adapters (1.5” or 2”)

Approximate total weight 500gr