

# New Product Information



## Standard Tubular Level Sensor



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## 1. Introduction

During the last years the market situation for tubular level sensors has changed. Apart from the observably constant decline in price level we also offer - besides customized solutions - an additional standard product line at very attractive price levels.

We are able to offer a standard program at a high quality. The idea was to transfer the established tubular sensor technology to a modular based design.

With the two spade connectors 6.3 x 0.8mm included in delivery the following configurations of the electric connections are possible:

- Threaded stud M4 for signal output without ground connection
- Threaded stud M4 for signal output and spade connector for ground connection
- Spade connector for signal output without ground connection
- Spade connector for signal output and spade connector for ground connection

Moreover, this standard solution will be available in ten different lengths between 200 mm and 650 mm (50 mm gradations). Thus, most of customer demands can be met.

The advantage is a wide range of applications:

- Automotive
- Light and Heavy Duty commercial vehicles
- Off-Road applications
- Diesel and gasoline applications

Please note: The standard tubular level sensors will not be available with warning contact.  
This feature is scheduled for approx. end 2005.

This product line not only warrants existing projects to be continued competitively, but the attractive price/performance ratio also allows a penetration of very price sensitive markets, which we did not reach in the past.

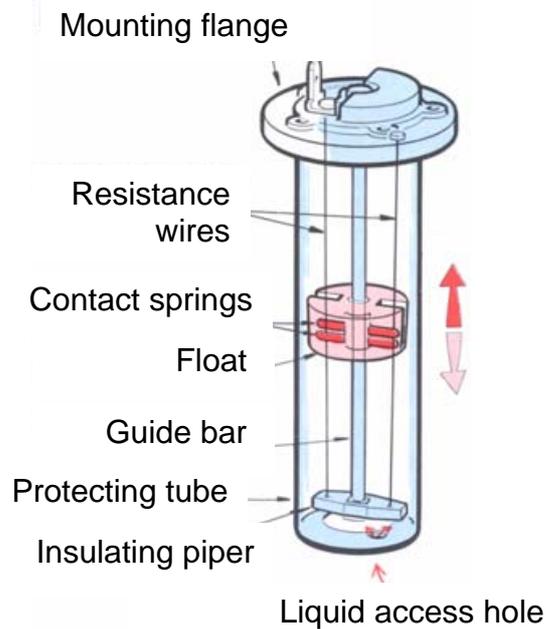
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## 2. Product Description

### Standard-Features:

- Resistance output
  - Compatibility to VDO-gauges 301-010-00X, X10-110-981-009 (adjustable 60-90 ohm)
  - Electrical connection: Threaded stud M4 respectively spade connector.
  - Optional with ground connector
  - Alternatively warning contact\*
  - Basically bolt cycle 54mm diameter of flange
- Available approx. end 2005

### Design of a Standard Tubular Level Sensor:



**Table with ten different lengths between 200mm and 650mm (50mm gradations) and the ohmic - values:**

Length [mm]	<b>200</b>	<b>250</b>	<b>300</b>	<b>350</b>	<b>400</b>	<b>450</b>	<b>500</b>	<b>550</b>	<b>600</b>	<b>650</b>
Resistance +/-2.5 [ohm]	<b>68.0</b>	<b>72.0</b>	<b>82.8</b>	<b>79.6</b>	<b>74.9</b>	<b>84.3</b>	<b>75.4</b>	<b>77.6</b>	<b>85.3</b>	<b>82.2</b>

### 3. Specifications

TU00-0772-0011101

The following tests have been accomplished:

- 1) Leak Tightness with Respect to Gas
- 2) Pressure Resistance
- 3) Aging in Mechanically Circulated Air without Load (Conditioning)
- 4) Temperature Cycle (with Specified Speed of Change)
- 5) Plug Resilience and Pull-out Strength
- 6) Resistance to Environmental Factors
- 7) Sealing against Dust and Water Spray
- 8) Humid Heat, Cyclic
- 9) Salt Spray Fog
- 10) Resistance to Chemical Agents
- 11) Vibration
- 12) Endurance Test