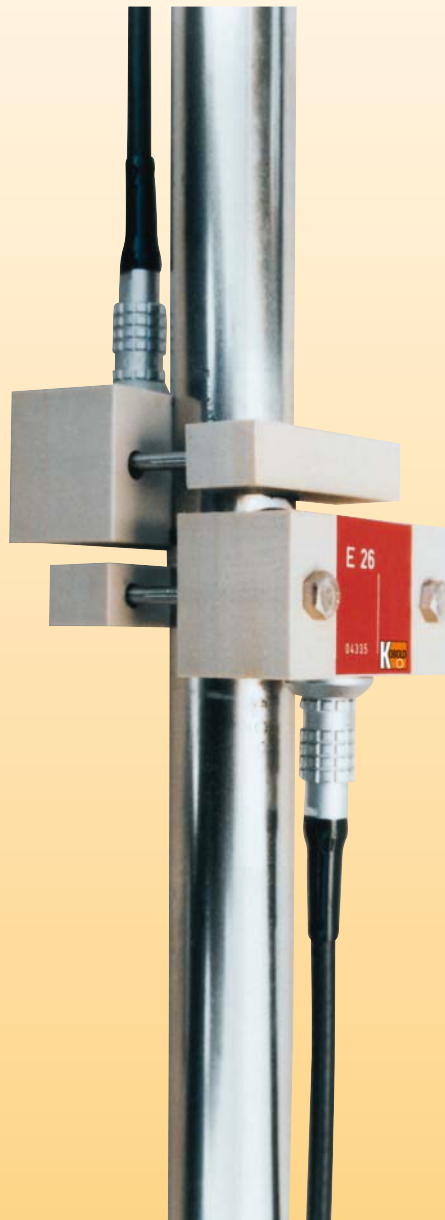




## Ultrasonic Level Switches for Liquids



measuring  
•  
monitoring  
•  
analysing



- 1 Relay contact
- Level control non-contacting through tube wall
- Easy and safe installation
- No drilling, welding or testing needed
- Can be installed on site during production



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**Model:**  
NDW

**Description**

The NDW operates on the ultrasonic technique (sound bridge). Two sensors are mounted on the outside of the tube. One sensor sends a short pulse of ultrasonic energy at a particular angle into the tube. The second sensor receives the pulse delayed with respect to the medium.

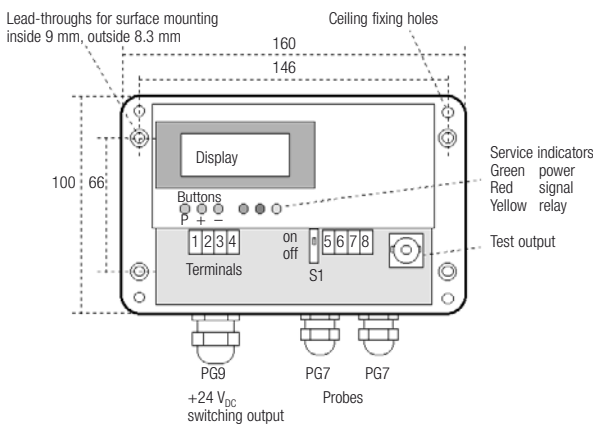
If there is liquid in the tube, the downstream electronics detects the echo time delay and switches a suitable floating contact (N/O contact). This method of measurement can be used with pipes between 8 and 55 mm diameter.

For all measurements it is assumed that the viscosity of the medium is similar to that of water and that it is practically free of air bubbles, gas bubbles and solids.

**Special advantages**

- Level control non-contacting through tube wall
- Safe, uncomplicated und no wear and tear
- Easy and safe installation
- No drilling, welding or testing needed
- Can be installed on site during production

**Dimensions**



**Areas of application**

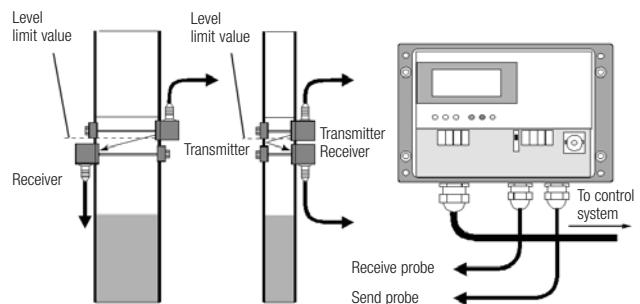
To monitor levels of liquids in piping where the sensor must not come in contact with the medium for physical, hygienic or safety reasons.

**Applications**

- Pharmaceutical plants
- Medical engineering
- Food industry
- Piping with liquified gas or aggressive media
- Installations already accepted by the Government Testing Laboratories
- Run dry protection for pumps
- Wet detector, dry detector for thin piping

**Technical Details**

- Installing the probe: on the outside of the tube
- Tube cross-section: 8 mm - 55 mm outer diameter please specify when ordering
- Tube material: steel, stainless steel, glass-lined steel, other metals, glass, plastics
- Settings: all parameters are set with buttons and integrated display
- Signal processing: integration and inverting function, time-delay elements
- Measurement interval: 20 ms
- Hysteresis: adjustable 20 ms - 200 s
- Switching time: adjustable 20 ms - 1000 s
- Service indicators: power, signal, relay
- Output: relay switch contact (N/O contact) max. 50 V/0.5 A floating
- Power supply: +18 V...30 V<sub>DC</sub> / 100 mA, ripple factor max. 10%, response time 0.5 s, polarity reversal protection
- Operating temperature: probes: -20 to +135 °C electronics: -20 to +60 °C
- Protection: IP 65



**Order Details (Example: NDW-1200)**

Description	Order number
Complete measuring instrument comprising: Digital indicating unit and separate pipe sensor	<b>NDW-1200</b>

Please specify external diameter of pipe to **1/10 mm accuracy** when ordering!