

# TURCK

Industrial  
Automation

**levelprox® -  
NON-CONTACT  
LEVEL CONTROL**



**Sense it! Connect it! Bus it! Solve it!**

**levelprox® - Types and data**

| Dimensions | Type Designation<br>Ident No.                                                        | Connection<br>Wiring diagram                                                             |
|------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|            | <b>LPRE-M30-AP6X-H1141</b><br>1606203<br><b>LPRE-EM30-AP6X-H1141</b><br>1606205      | M12 connector<br>metal housing<br>M12 connector<br>stainless steel housing<br>           |
|            | <b>LPRE-EM30-RP6X2-H1141</b><br>1606209                                              | M12 connector<br>stainless steel housing<br>                                             |
|            | <b>LPRE-T50-UP6X3-H1151</b><br>1606201<br><b>LPRE-T50-UP6X3-H1151/3GD</b><br>1606208 | M12 connector<br>stainless steel housing<br>M12 connector<br>stainless steel housing<br> |

#### Technical data

|                            |                                |
|----------------------------|--------------------------------|
| Operating voltage          | 15...30 VDC                    |
| Switch element function    | PNP, N/O, N/C                  |
| No-load current $I_0$      | ≤ 60 mA                        |
| DC rated operating current | ≤ 300 mA                       |
| Overcurrent release        | > 270 mA                       |
| Voltage drop at $I_0$      | ≤ 2.5 V                        |
| Switching frequency        | ≤ 1 Hz                         |
| Initialisation delay       | ≤ 2 s                          |
| Degree of protection       | IP67                           |
| Temperature range          | -25...+70 °C (+95 °C, passive) |

# TURCK

Industrial  
Automation



[www.turck.com](http://www.turck.com)

**Hans Turck GmbH & Co. KG**  
Witzlebenstraße 7  
45472 Mülheim an der Ruhr,  
Germany  
Tel. +49 (0) 208 4952-0  
Fax +49 (0) 208 4952-264  
E-Mail [more@turck.com](mailto:more@turck.com)  
Internet [www.turck.com](http://www.turck.com)

D101317 1107



# levelprox® - A VIEW THROUGH THE WALL

levelprox® sensors detect liquids through the walls of containers or tanks. The sensor is simply attached to the exterior wall and thus has no contact with the medium being detected.

Even if the container is made of steel, stainless steel or glass: Level control with levelprox® functions with aggressive liquids, on pressurized containers or in explosion-hazardous areas.

## Features

- Detection of liquids through the wall of a container
- Non-invasive, without medium contact, thus especially hygienic
- Simple, subsequent correction of mounting with welded, adhesive or strap retainer supports
- Processor-controlled teach-in of medium level and ambient conditions
- Two operating modes: Reverberation and echo modes
- Insensitive to medium temperatures up to 95 °C
- Suitable for use in explosion-hazardous areas in compliance to ATEX classification (zone 2 and zone 22, housing T50)
- Alarm display with malfunctions (housing T50)

## Areas of application

- Food industry
- Hydraulic industry
- Mechanical and system engineering
- Pharmaceutical industry
- Process industry

## Reverberation mode

In reverberation mode the sensor will only evaluate the reflection on the walls on which it is mounted. Gas bubbles or suspended particles and installed equipment in the liquid, such as agitators, will not interfere with operation. The interior walls of the containers should be free from any media residue when empty.

## Housings M30 and T50 – in reverberation and echo modes



Housing M30

### Housing M30

The best solution for all level control applications in general is the attractively-priced M30 housing, for mechanical and system engineering, and also for less critical food-related applications.

The sensor is simple to install and suitable accessories are available for every demand. Teach-in of the ambient conditions is just as simple.

The teach-in button only has to be pushed once in the full and empty state – and the process is complete!



Housing T50

### Housing T50

The T50 has been specially developed for use in the food and pharmaceutical industries. The mounting sets include a Tri-clamp connection, a clamp seal and a clamping collar. When mounting, the sensor and the seal ring are pushed into the support which has been welded or glued-on beforehand and fixed in place using the clamping collar.

The levelprox® version T50/3GD is available with ATEX approval for use in explosion-hazardous areas, zone 2 and zone 22.

## Mounting accessories for levelprox® sensors

| Illustration | Type            | Description                                                                   | For housing | Ident No. |
|--------------|-----------------|-------------------------------------------------------------------------------|-------------|-----------|
|              | LP-MS-M30-S     | Mounting set <sup>1</sup> for welded mounting                                 | M30         | 6001015   |
|              | LP-MZ-M30-SB    | Combined support for welding or retention strap mounting                      | M30         | 6900377   |
|              | LP-MZ-M30-B250  | Retaining strap, total length 250 cm with two tension jacks                   | M30         | 6900378   |
|              | LP-MZ-M30-B500  | Retaining strap, total length 500 cm with two tension jacks                   | M30         | 6900379   |
|              | LP-MZ-M30-B1000 | Retaining strap, total length 1000 cm with two tension jacks                  | M30         | 6900380   |
|              | VB2-SP1         | Teach adapter                                                                 | M30         | 6999084   |
|              | LP-MS-T50-S     | Mounting set <sup>1</sup> for welded mounting                                 | T50         | 6900253   |
|              | LP-MS-T50-K     | Mounting set <sup>1</sup> for permanent mounting with adhesive                | T50         | 6900255   |
|              | LP-MS-T50-T     | Mounting set <sup>1</sup> for temporary adhesive mounting (for test purposes) | T50         | 6900341   |
|              | LP-MS-T50-S-3GD | Mounting set for welding                                                      | T50/3GD     | 6900397   |
|              | LP-MS-T50-K-3GD | Mounting set for permanent adhesive mounting                                  | T50/3GD     | 6900399   |

<sup>1</sup> The mounting set consists of a Tri-clamp connection, a clamp seal, a clamping collar and a two-component adhesive if required.

## Echo mode

Echo mode is used if residue is unavoidable on the container walls. The echo reflected from the opposite interior wall is evaluated. The liquid medium should be as homogeneous and clean as possible as the sound has to cross the container twice. Built-in components are only possible if they are to be used as reflective surfaces.

