



## Operating Instructions

# LEVELview.PRO.OIL LEVELview.PRO.AQUA

GPRS/4G/NB-IoT-Transmitter unit for fill  
level monitoring of oil and water tanks

- Fill Level measurement by hydrostatic pressure probe or capacitive sensor



Remote Control Technology



RCT. Simplify monitoring.



#### ARTICLE INFORMATION

RCT Article-No.	1000078
Name	LEVELview.PRO.OIL or LEVELview.PRO.AQUA
Included	<ul style="list-style-type: none"><li>• Transmitter</li><li>• External antenna with magnetic base</li><li>• Instruction Manual</li><li>• Documentation of conformity</li></ul>

#### ACCESSORIES

Depending on selection	Pressure probe or capacitive sensor
1000516 (Standard)	External antenna with magnetic base 1,2 m
1000528	Standard battery
1000924	DATALOGGER

# Welcome

Thank you for deciding for this RCT quality product and the trust that implies. A good choice, because our dedicated team at RCT develops and produces smart, modular remote monitoring systems for a wide range of applications, MADE IN GERMANY.



3

Our promise: With **RCT. Simplify monitoring.** remote monitoring has become smart, safe, fast and in combination with strong service, very simple for our customers.

If you have any questions about assembly, installation or operation or would like further information about our products, please contact your specialist dealer or contact the manufacturer RCT directly (see address on last page).

## CONTENTS

Included Hardware	2
Welcome	3
Fill level measurement oil and water	4
Step 1: Zero adjustment	6
Step 2: Installing the probe or sensor	8
Step 3: Activate transmitter unit	10
Step 4: Mounting the transmitter	12
Step 5: Mounting the antenna	13
Step 6: Setting up the App	14



**Please read carefully before use!**





## Level measurement oil and water

The level measurement on the oil or water tank is carried out precisely by using a **hydrostatic pressure probe** or **capacitive sensor**. (Fig. 1)

**LEVELview.PRO.OIL** or **LEVELview.PRO.AQUA** are usable for all commercially available tank shapes: standing or lying cylinder, rectangular or battery tank, above and underground. Requirement is a suitable free tank opening (diameter at least 1").

The installation of the pressure probe or the capacitive sensor can be carried out independently of the filling level even when the tank is full.



5

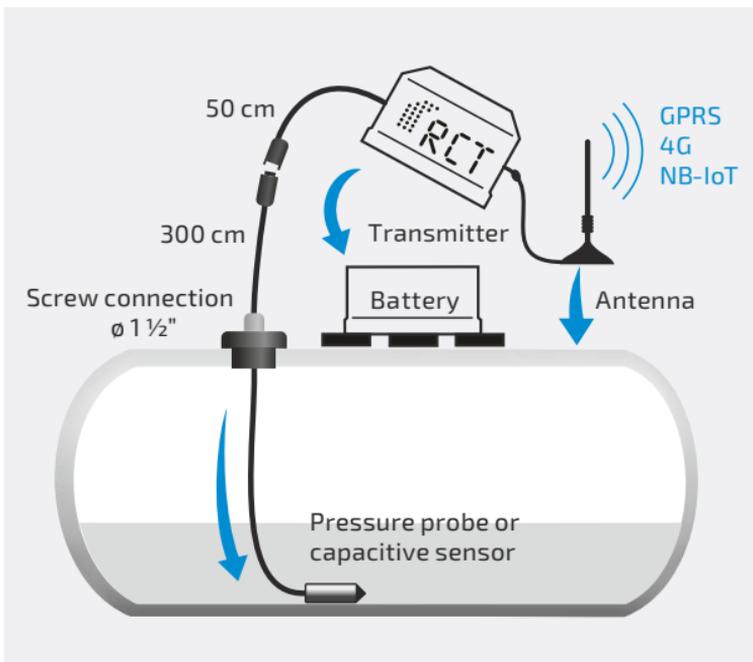


Fig. 1 | Level measurement by pressure probe



## Step 1: Zero adjustment

### For the pressure probe: (Fig. 2)

Carefully cut the white transportation straps that hold the pressure probe together. For proper installation, the probe must be free of twists. Therefore, leave the probe hanging to straighten the cable. This may take some time depending on the temperature.

Mount the antenna of the transmitter and place it on a metal surface with the magnet. Connect the pressure probe to the transmitter via the screw connector and activate the device by plugging in the battery. (Fig. 1, Page 5) Remove the black safety sticker placed over the contact before plugging it together.



Fig. 2 | Pressure probe with screw plug

### For the capacitive sensor: (Fig. 3)

Mount the antenna of the transmitter and place it on a metal surface with the magnet. Connect the capacitive sensor to the transmitter via the plug connection and activate the device by plugging in the battery. (Fig. 1, Page 5)



7

Fig. 3 | Capacitive sensor

Remove the black safety sticker placed over the contact before plugging it together. Make sure that the sensor does not come into contact with conductive materials during the measurement time. When the red and green LEDs light up, the measuring process is finished. The capacitive sensor can be placed on the floor.

### Completing the zero adjustment

Then wait about one minute until the device has sent the data. You can optionally see this in the RCT App (see step 6).

The transmitter unit has now transmitted an AD value to the server, which represents an empty tank - on the condition that the probe did not come into contact with other media or liquids during the measurement. Via the Mobile App or Web App you can see this transmitted AD value, which is usually between 10 and 200. Please now assign this value via the App or Web App as 0 %, 0 cm, or 0 liters (depending on the desired physical unit of size). This completes the zero adjustment.

Then disconnect the device from the battery again and go to step 2.



## Step 2: Installing the probe or sensor

Select a suitable opening: Choose a free tank cap opening of 1" diameter. Fasten the probe or sensor cable in it using the gland set and seal it odor-tight. (Fig. 4) Insert reducers if necessary.



**Caution!** Only use existing tank openings. Do not drill additional openings in the tank, as this poses a considerable risk and is strictly prohibited. Modifications to the tank may only be carried out by a specialized company. If no suitable opening is available, ask your tank specialist for advice.



Fig. 4 | Screw connection set for fastening the probe or sensor cable

**Installing the pressure probe:** Insert the pressure probe with the cable until it contacts the bottom (Fig. 5). Tighten the cable gland so that the cable cannot slip.

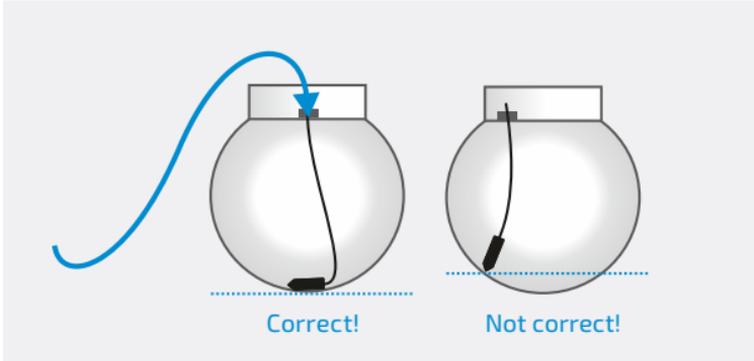


Fig. 5 | Insert the pressure probe into the tank

**Installing the capacitive sensor:** Insert the blue measuring probe of the capacitive sensor completely into the tank and make sure that there is a minimum distance of 5 cm between the blue measuring probe and the inner tank walls in all directions. The weight of the measuring probe rests on the tank bottom. (Fig. 6)

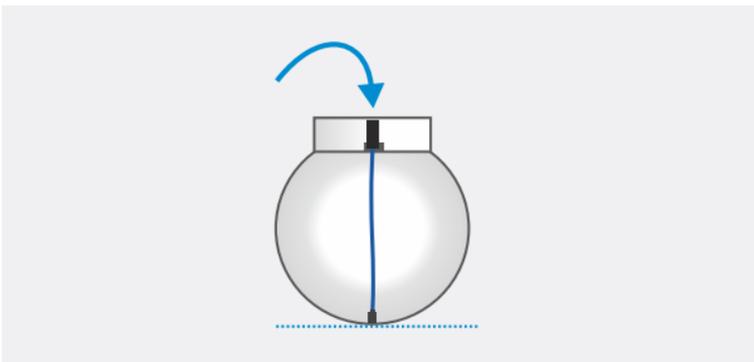


Fig. 6 | Insert the capacitive probe into the tank





**Caution!** Connecting and disconnecting the transmitter and battery pack during commissioning as well as a later battery change should be carried out outside ATEX zone 1.



**Caution!** To enforce another start message, disconnect the transmitter and battery pack and wait about 5 minutes.

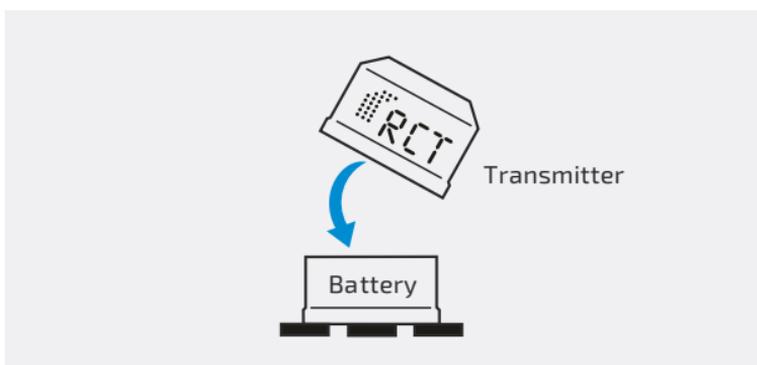


Fig. 7 | Plug transmitter together with battery

### Step 3: Activate transmitter unit

Activate the transmitter by plugging it into the battery pack. (Fig. 7)

The transmitter is immediately ready for operation and starts measuring and transmitting the fill levels.

**Changing the battery:** When replacing the battery periodically, a waiting time of > 1 minute must be observed after disconnecting the used battery before the new battery is connected.

**Cyclical notifications:** The interval for the regular status messages can be set individually by RCT in the factory. A notification contains the current level, up to 24 history fill level measurement values as well as the battery level and the signal strength. The corresponding temperature values are also recorded and transmitted.

**Alarm notifications:** Alarms via Web App, e.g. thresholds, overfilling, fillings, battery, etc. are set up directly in the Mobile App or Web App with optional forwarding.

### Settings

After the transmitter has now again sent an AD value with the current fill level to the App or Web App, this value must now again be assigned to the physical quantity (x %, x cm, or x liters). For further necessary settings (max. tank height, tank shape, max. liters), please use the menu navigation in the App or Web App.



#### Step 4: Mounting the transmitter

Now proceed with the installation of the transmitter and antenna.

**Protect from water:** The transmitter unit must be installed in such a way that it is protected from water. For outdoor systems, place the unit upright to prevent water from entering the battery contacts.

**Mounting:** Attach the transmitter to the tank or the wall of the manhole chamber using the magnets integrated in the battery pack (see arrows below) (Fig. 8), or with the help of an optional bracket.



**Caution!** In Ex zone 1, the cable to the sensor must be laid carefully to avoid damage. Make sure that the cable is not kinked or pinched and damaged when the manhole cover is closed.

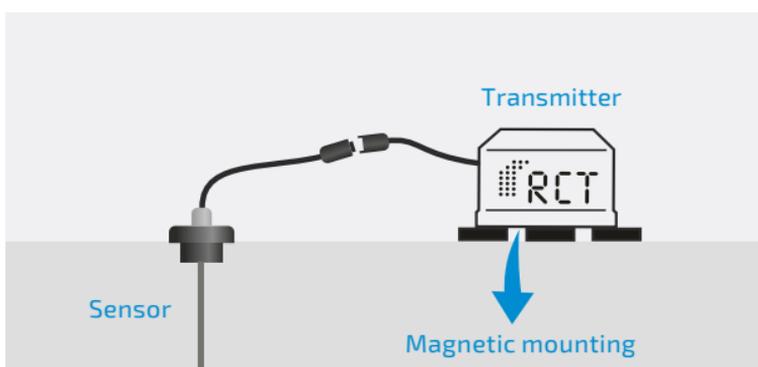


Fig. 8 | Attaching the transmitter unit

## Step 5: Mounting the antenna

Attach the external antenna to a metal surface using the magnetic base (Fig. 9). As a general rule, the larger the metal surface, the better the transmission power.

In order to achieve good transmission power, the antenna should be mounted vertically (upright). Make sure that the connection between the antenna base and the metal surface is clean.

In the case of above-ground tanks, for example, attach the external transmission antenna directly to the container.

In the case of underground tanks, the antenna should be attached outside the manhole chamber e.g. to the manhole cover or safely embedded into the ground using the optional driveover antenna. Inside the chamber, the signal can be significantly restricted by the metal surroundings, thus reducing the transmission range.

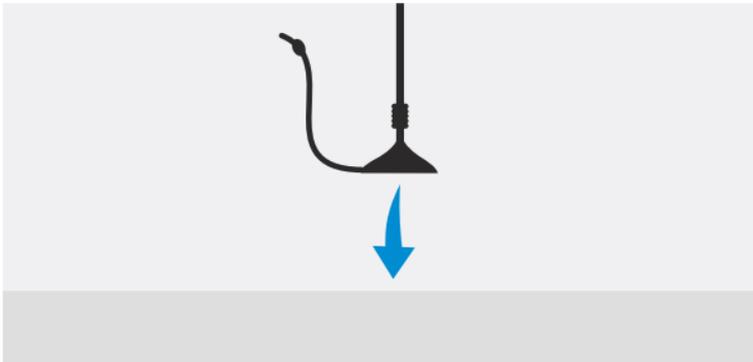


Fig. 9 | Attaching the antenna



13



Email

Password: 

Remember me

[Forgot your password?](#)

Login

# Simplify Monitoring.



## Step 6: Setting up the App

Further configuration of the LEVELview as well as monitoring and analysis of the fill levels and device data is usually carried out via a Web & Mobile App (RCT standard: <https://webapp.r-c-t.biz>).

The platform offers various display options for a quick overview as well as a number of detailed analysis options and forecasting tools.

Important or critical conditions around the monitored tank can be defined individually. A wide range of alarm options and ways are available, as well as the free or automated generation of reports.

By using an API (programming interface) of the system, an automated data exchange with the customer's own ERP systems can be set up.

**Please note:** The specific information on accessing the Mobile App and Web App is supplied together with the device.

If you receive the device from a reseller, ask them for possible login details.

Further information is available directly in the App due to the different functions and possible upgrades!

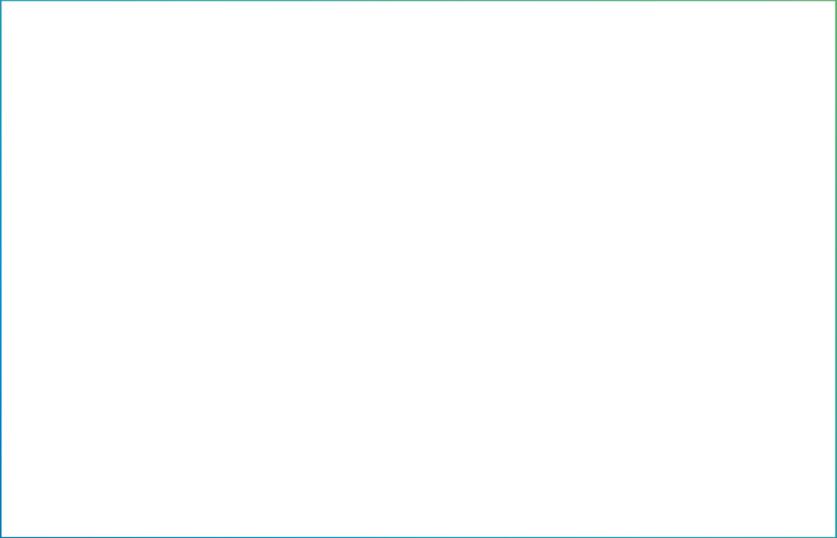


15





Your contact



**Remote Control Technology GmbH**

Turmstraße 15  
D-35075 Gladenbach

T +49 (0) 6462 419880  
F +49 (0) 6462 4198810

info@r-c-t.biz  
www.r-c-t.biz

Photos: RCT, Andy Alexander

© RCT 10.2023 | Subject to modification!