



Operating Instructions

LEVELview.PRO.LPG

GPRS/4G/NB-IoT-Transmitter unit for fill level monitoring of liquid gas tanks

- Contactless fill level measurement using Hall effect sensors (magnetic field)





LPG

ARTICLE INFORMATION

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

ACCESSORIES

| | |
|------------------------|---|
| Depending on selection | Hall effect sensor |
| 1000516 (Standard) | External antenna with magnetic base 1,2 m |
| 1000528 | Standard battery |
| 1000924 | DATALOGGER |



Please read carefully before use!

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.

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).



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Liquid gas fill level measurement

The level measurement on the LPG tank is carried out precisely and contactless using a Hall effect sensor.

LEVELview.PRO is protected and approved for use in ATEX Zone 1 and 0. The unit may be installed in the manhole chamber of underground tanks, under the protective hood of above-ground tanks or further outside in ATEX Zone 1.



Caution! Opening the tank is not necessary thanks to the contactless measuring method and strictly forbidden to unauthorized persons!

The system can be installed on the tank quickly and without complex wiring. (Fig. 1)

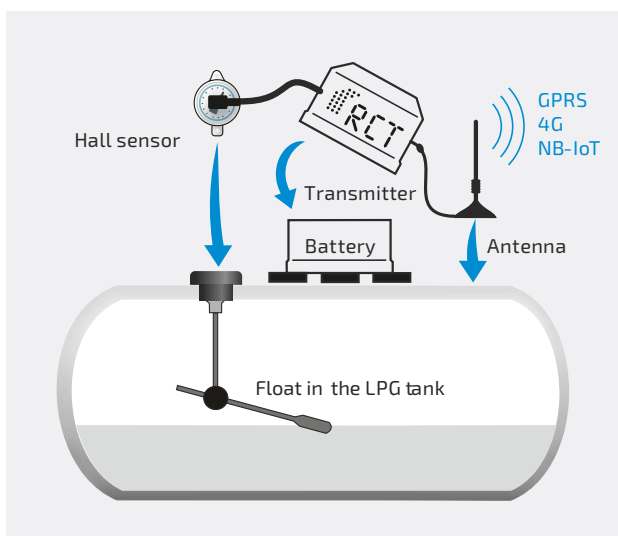


Fig. 1 | Fill level measurement using a Hall effect sensor

Step 1: Sensor and zero adjustment

Note the current fill level and remove the existing dial by removing the two Phillips screws. (Fig. 2)



Caution! Only remove the two screws of the dial. Never loosen the four hexagonal screws on the flange for fastening the float! There is a risk of gas leakage and explosion!



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Place the new RCT dial (= Hall effect sensor) in the holder and compare the new fill level with the old one. A deviation of up to 2% is within the tolerance.

If there are deviations of around 15% between the original and the RCT dial, an adapter of the type SRG705 is required. If the RCT dial is significantly smaller, contact RCT and ask for the right adapter.

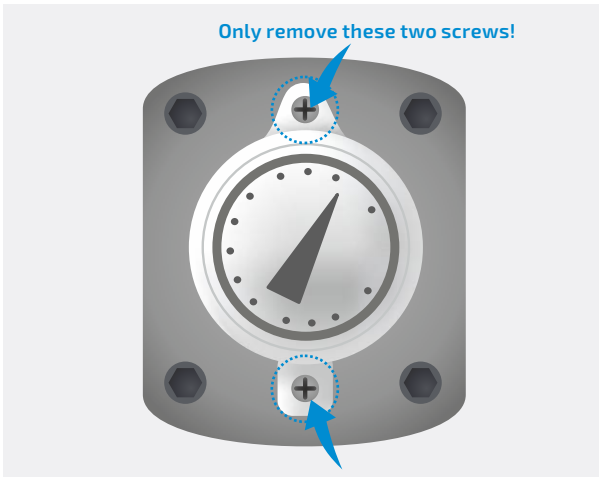


Fig. 2 | Removing original dial



Step 2: Installing the sensor

If the fill-level displayed matches, fasten the RCT electronic dial (Hall effect sensor) with the enclosed screws. (Fig. 3)

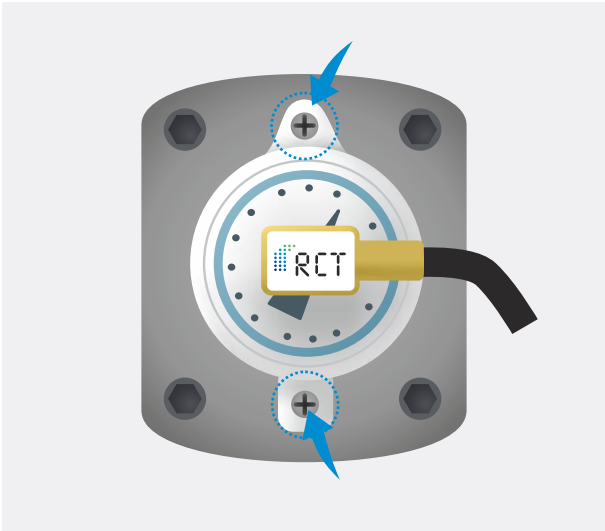


Fig. 3 | Installing RCT sensor

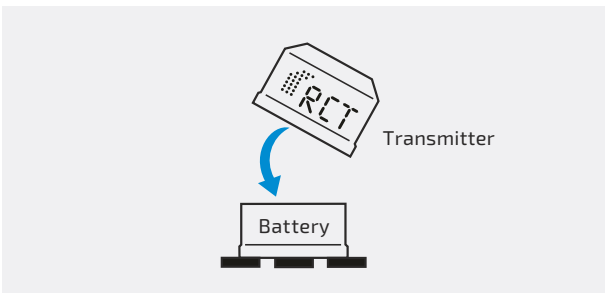


Fig. 4 | Plugging in transmitter and battery

Step 3: Activating the transmitter

Activate the transmitter by plugging it into the battery pack. (Fig. 4)

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



Caution! The plugging and unplugging of the transmitter and battery pack during set-up and later battery changes should be carried out outside of ATEX Zone 1.



Caution! To force another start message, separate the transmitter and the battery pack. Then wait around 5 minutes.

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

Cyclical notifications: The transmission interval of the regular status reports 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, filling, battery, etc. are set up directly in the Mobile App or Web App with optional forwarding.



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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. 5), 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.

There should be a distance of at least 20 cm between the device and the signal generator. Otherwise there is a risk that the magnetic field of the sensor system will be affected by the fastening magnets and the measurement result will be distorted. (Fig. 5)

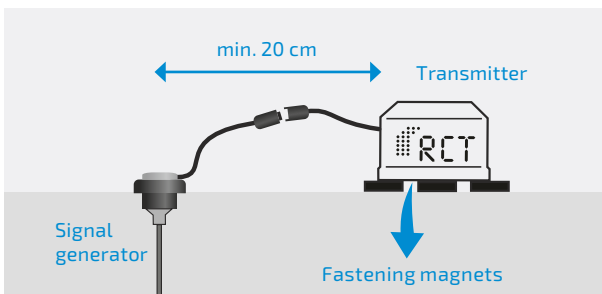


Fig. 5 | Attaching the transmitter

Step 5: Mounting the antenna

Attach the external antenna to a metal surface using the magnetic base (Fig. 6). 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. attached to the manhole cover or safely embedded into the ground using the optional drive-over antenna. Inside the chamber, the signal can be significantly restricted by the metal surroundings thus reducing the transmission range.

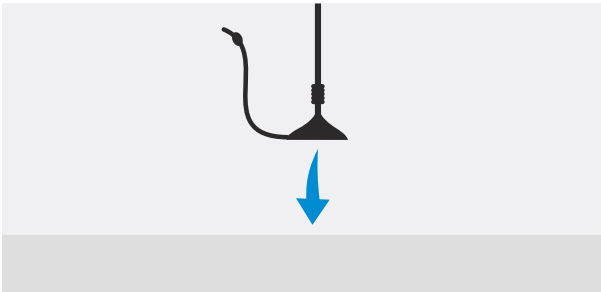


Fig. 6 | Attaching the antenna





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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 can be found enclosed with the device.

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

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



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