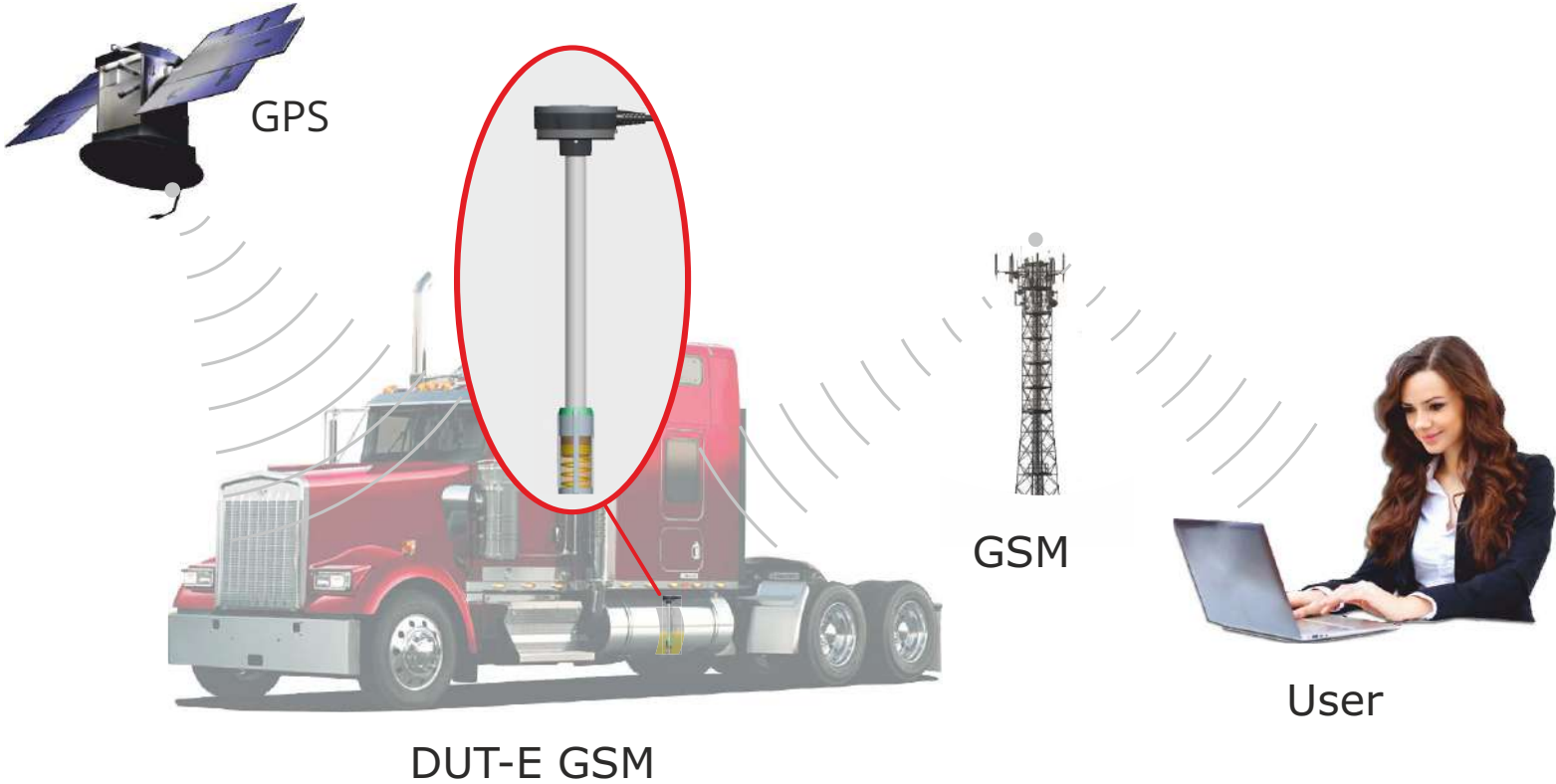


# Fuel level sensor with GSM and GPS



# Purpose



Fuel level sensor and GPS tracker in one device. Tank fuel volume measurement, geolocation and route tracking.

Data transfer to a telematics server:

- ✓ vehicle location;
- ✓ vehicle speed and direction of movement;
- ✓ fuel tank level and volume;
- ✓ fuel temperature;
- ✓ on-board voltage.

# Tasks



Real-time route tracking



Measuring volumes of fuel tank filling-up and draining

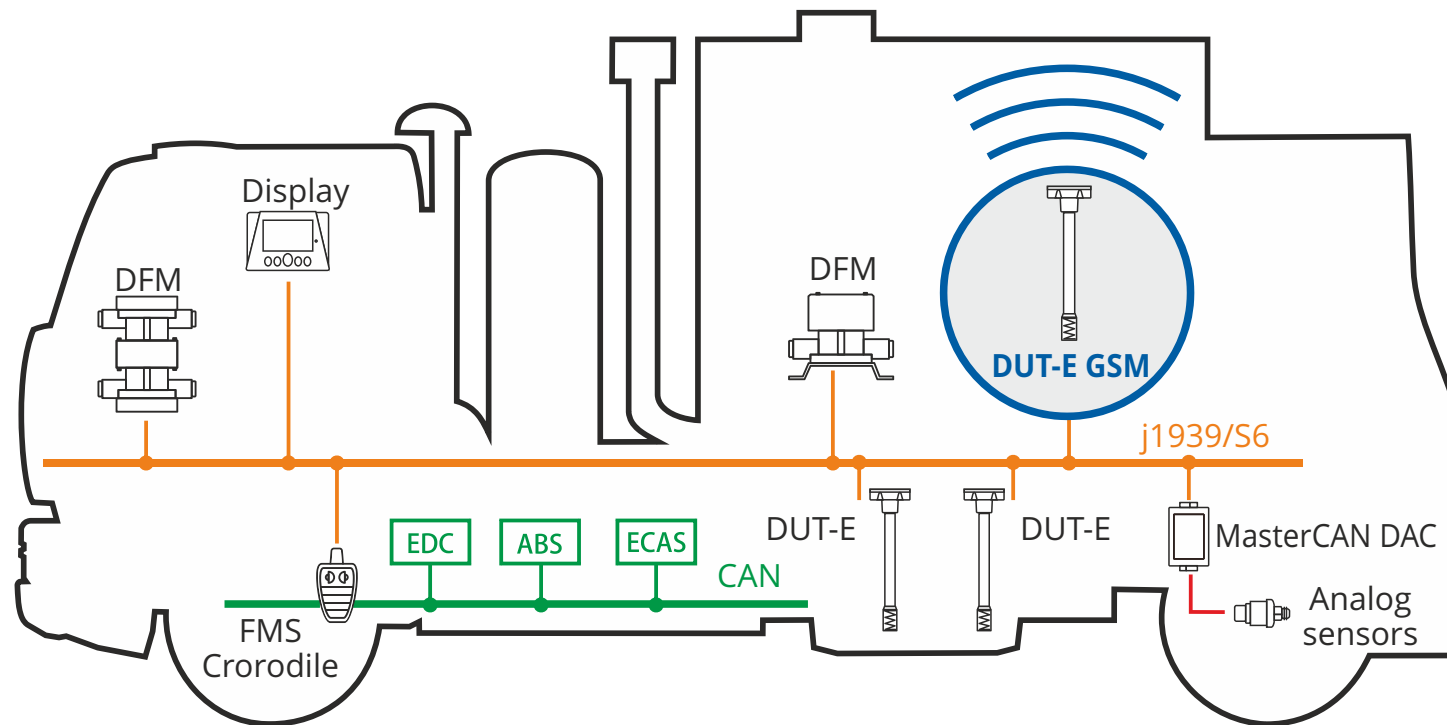


Detecting fuel theft



Monitoring fuel consumption from tank

# Technologies/ S6

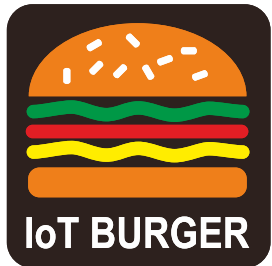


S6 technology allows to connect to DUT-E GSM:

- ✓ up to 16 DUT-E fuel level sensors;
- ✓ up to 256 DFM or DFM Marine fuel flow meters;

- ✓ FSM Crocodile contactless gateway for receiving CAN bus data;
- ✓ MasterCAN DAC converter for analog signal converting.

# Technologies/ IoT BURGER



IoT Burger technology allows maximum data processing **“on board”**.

The technology allows DUT-E GSM sensor to:

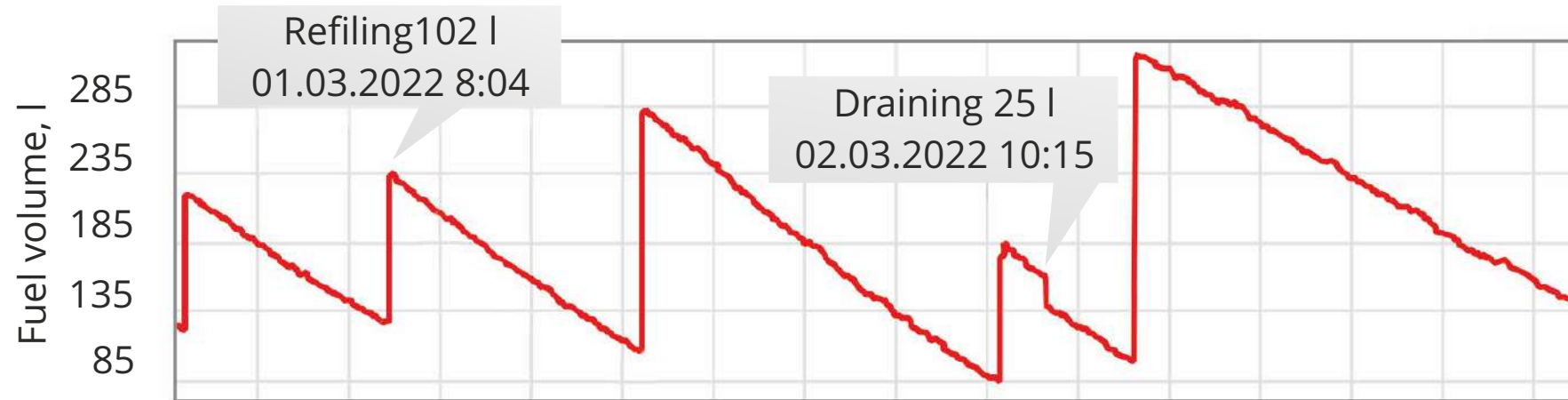
- ✓ detect “Fuel fill-up” and “Fuel drain” Events;
- ✓ carry out self-diagnostics, log data and Events to Journal in sensor’s memory;
- ✓ adjust signals (filtering, linearization, temperature correction);
- ✓ configure DUT-E GSM over Bluetooth.

# Features/ GPS tracking



Real time monitoring of vehicle's route, position and speed.

# Features/ Recognizing “Refilling” and “Draining” Events



- ✓ Detecting the change of fuel volume in tank.
- ✓ Sending Reports on recorded refiling and draining volumes.

# Features/ Events recognizing and Reports sending



## Events

Standard: refiling/draining fuel, low/high onboard network voltage, lost/established connection with satellites, engine start/stop.

Configurable: fuel level is lower than x%, exceeding allowed time of continuous vehicle operation, speeding, etc.



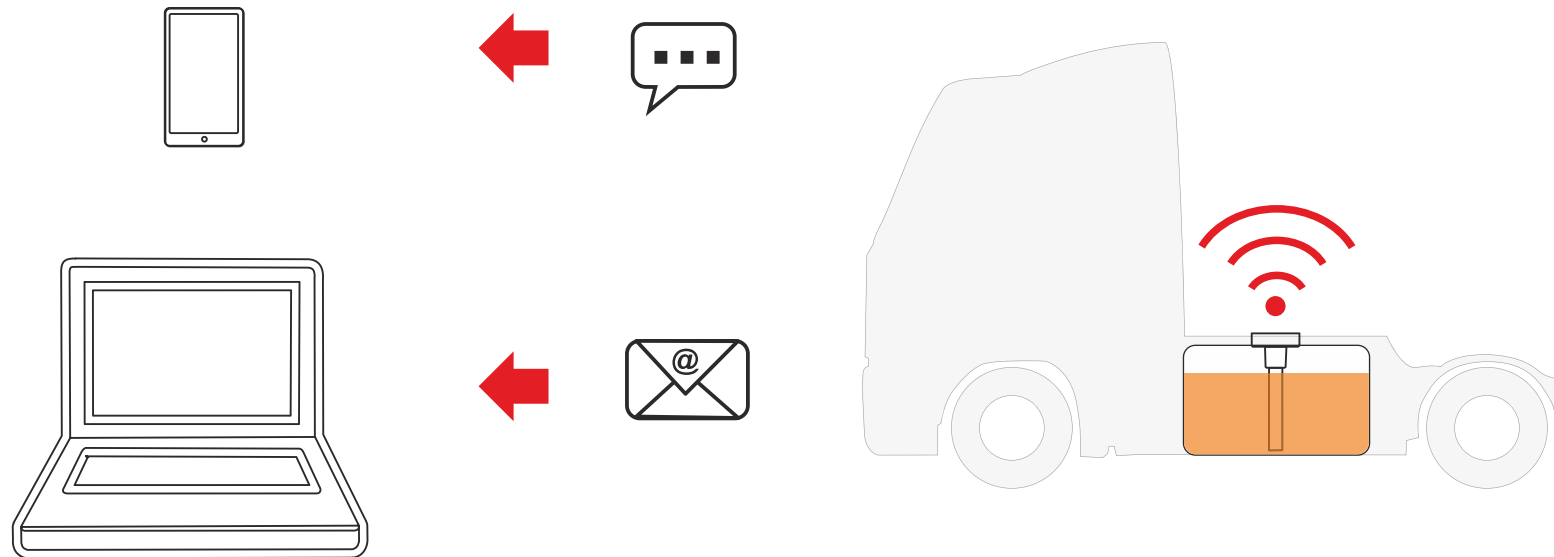
## Reports

Combination of 10 selected operation parameters.

DUT-E GSM can send up to 20 different Reports simultaneously, on regular basis or upon Event recognition. User can select an Event from the list and set sending interval from 5 seconds to 12 hours.

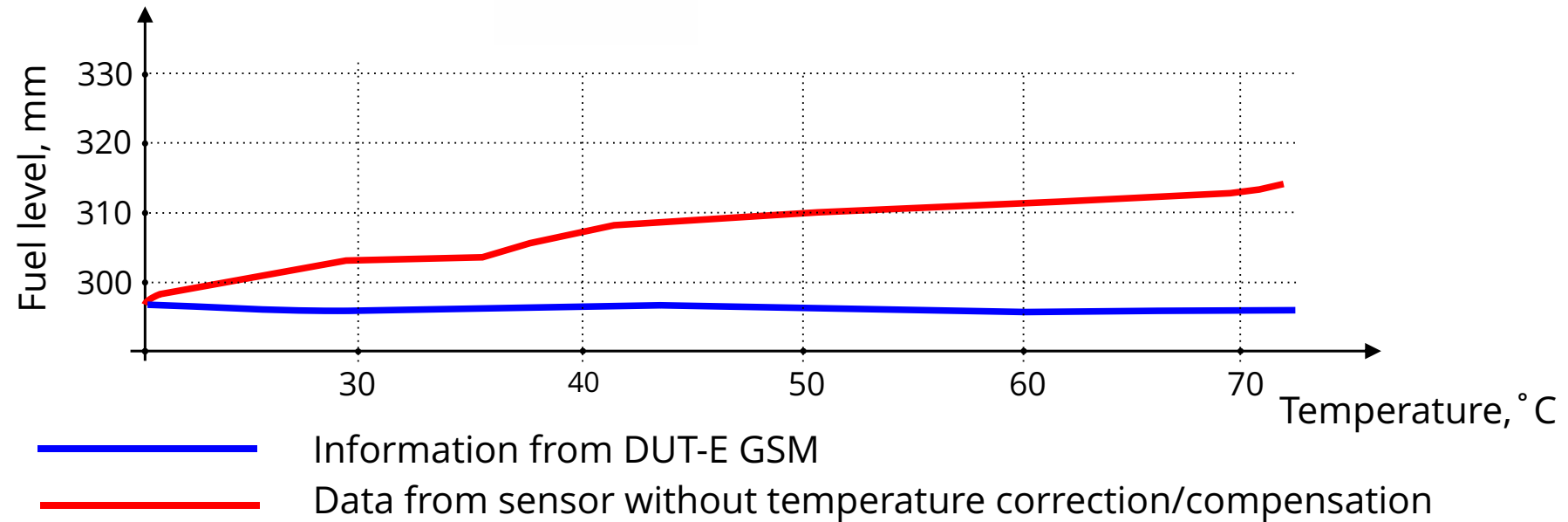


# Features/ Sending SMS and e-mail



Prompt notification by SMS on recognized important Events. Sending Reports to user's e-mail without using telematics server.

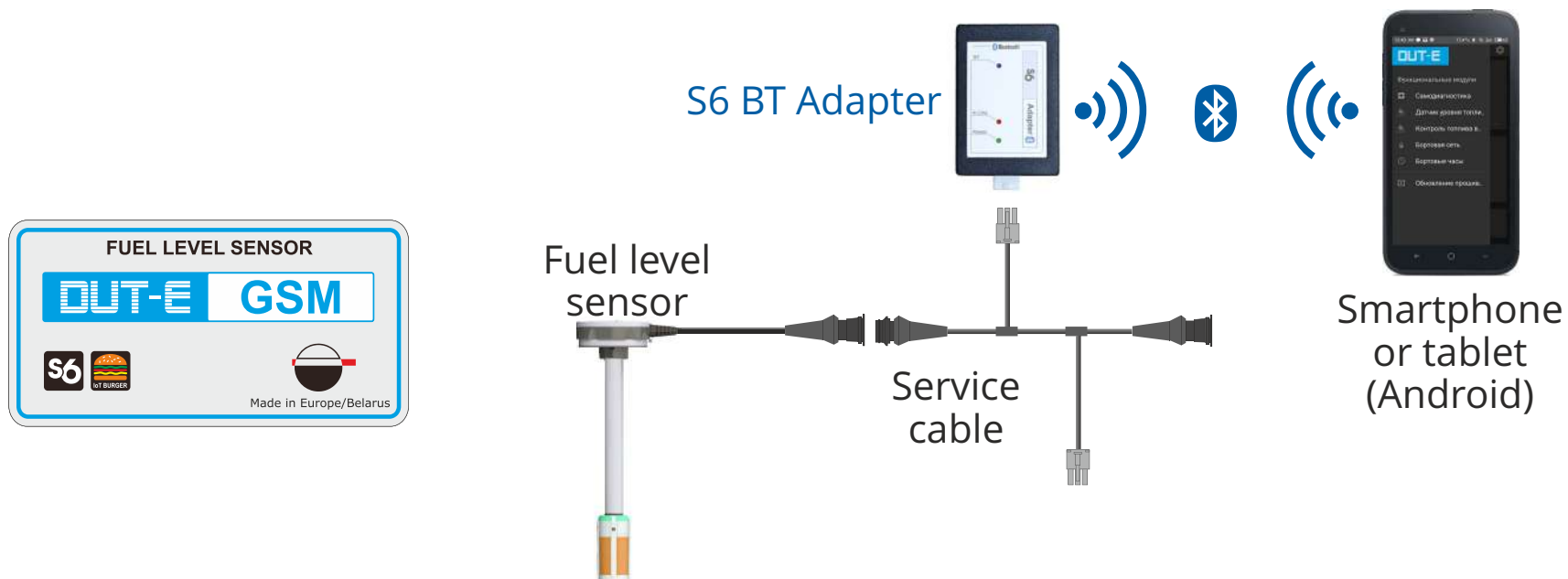
# Features/ Temperature correction & compensation



Temperature compensation - automatic function necessary for eliminating influence of ambient temperature on sensor's parts, especially on electronic components.

Temperature compensation and correction functions are helping to increase measurement accuracy and get temperature-independent information without false fluctuations on chart.

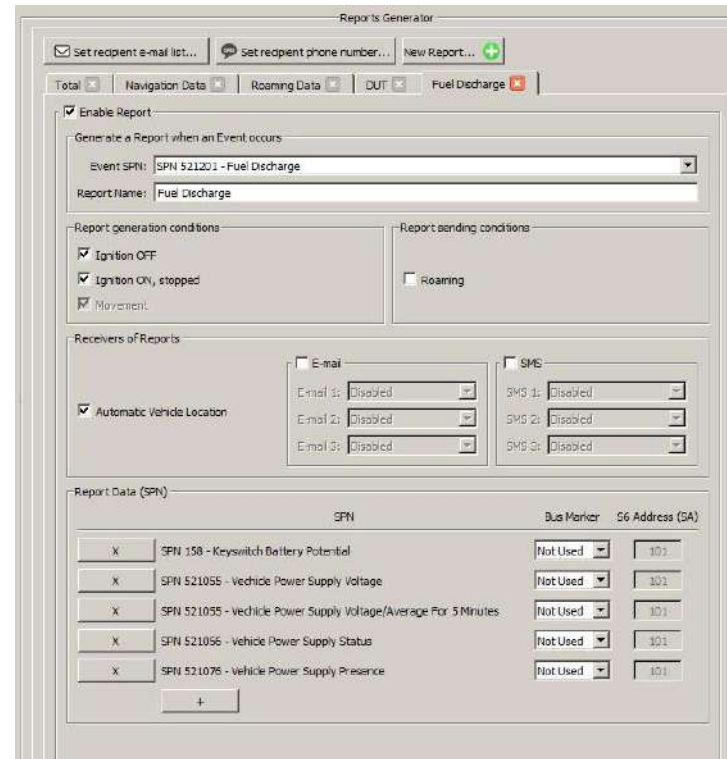
# Configuration/ Over Bluetooth



DUT-E GSM fuel level sensors marked with IoT Burger Technology logo can be configured over Bluetooth using Android-smartphone or tablet. To do that, S6 BT Adapter should be connected to sensor.

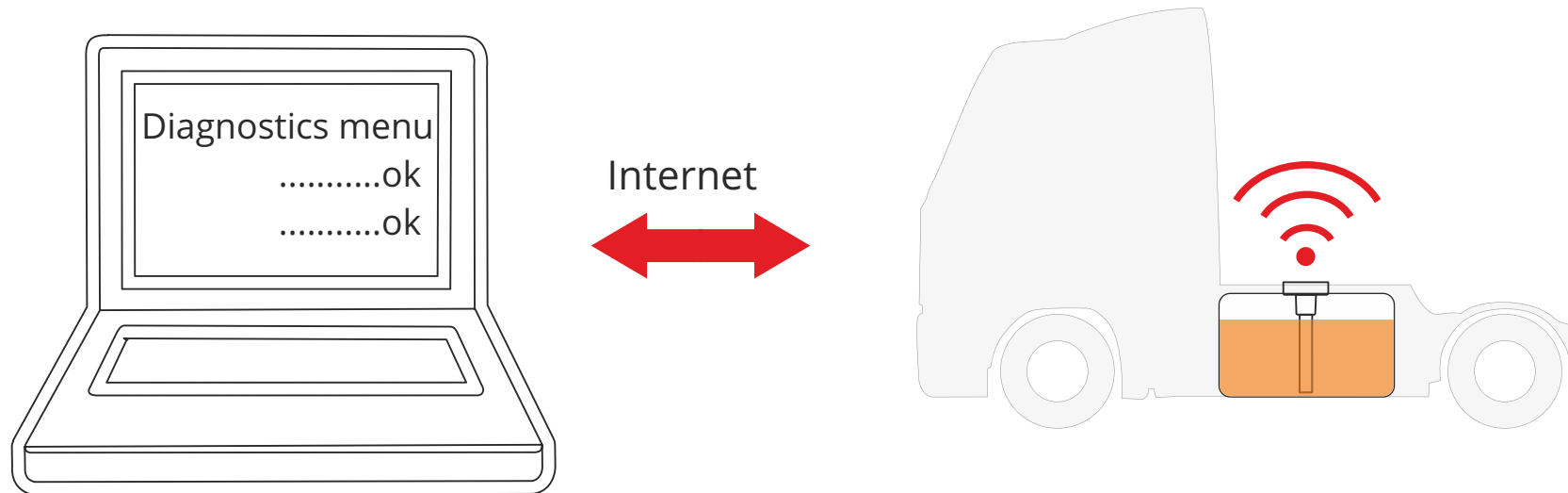
Mobile application Service S6 DUT-E is free for download from Google Play.

# Features/ Configuring Reports



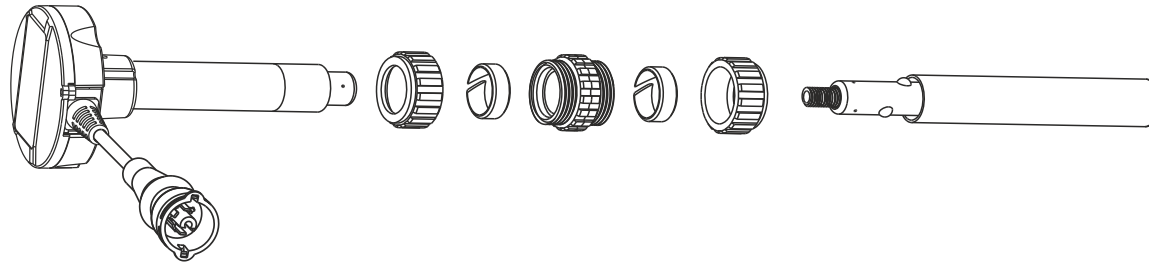
“Reports Generator” menu in Service S6 DUT-E software allows to create and configure up to 20 different Reports. Reports are also configured remotely.

# Features/ Remote diagnostics and configuration

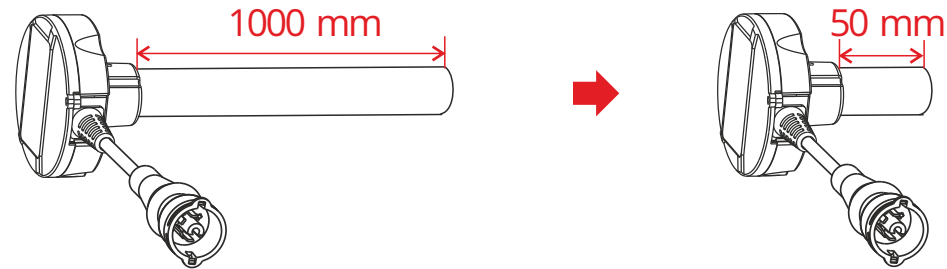


Remote check of sensor's quality of operation - accuracy, settings, malfunctions. Allows to configure sensor remotely.

# Design/ Shortening and extending length

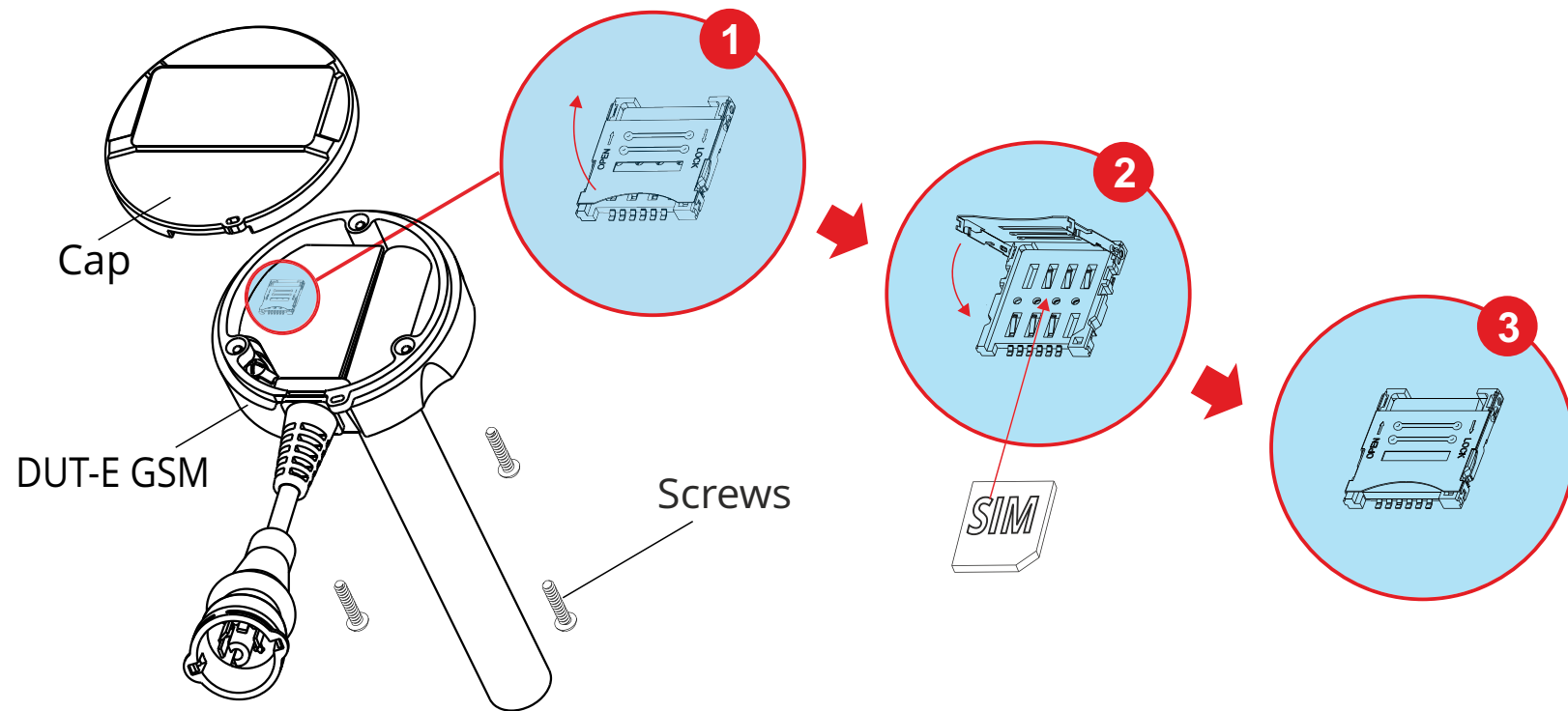


Measuring part length is extended up to 6000mm by using additional sections.

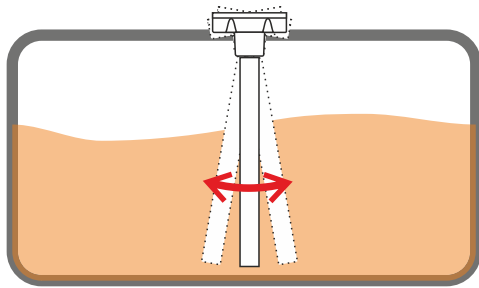


Measuring part can be shortened to any length by cutting probe.

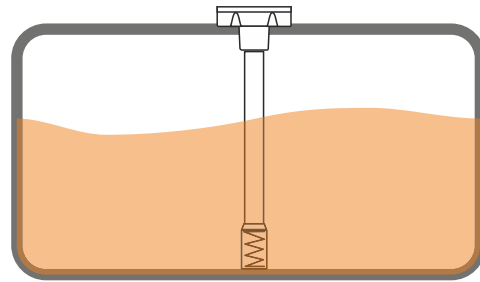
# Design/ Installing SIM-card



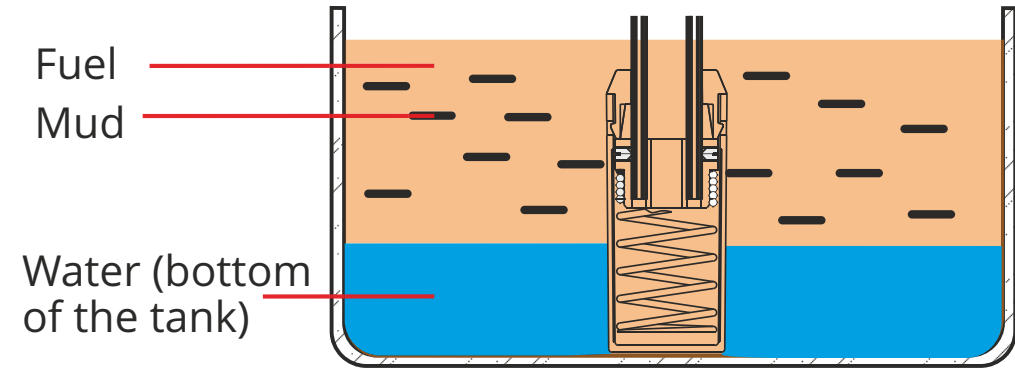
# Design/ Bottom stop and screen filter



Without bottom stop



With bottom stop



## Bottom stop

increases durability of fastening,  
sensor is mounted in tank firmly

## Screen filter

protects against water and mud  
gathering on fuel tank bottom



# Summary

Two-in-one. Saving time for installation and configuration. "Hardware/firmware incompatibility" is not topical anymore.

Flexible Report generation system. Receiving ready-for-use Reports, no need of further data processing and creating report templates on teleamtics server.

Remote diagnostics and configuration over the Internet. Saves customer's time and efforts of technical support team.

Operation via S6. Advanced telematics system connected over a single cable. Compatibility is guaranteed, saves time on equipment installation and cabling.