SETUP GUIDE · RUPTELA + DUT-E CAN

Connect a DUT-E CAN fuel level sensor to a Ruptela FM-Pro4

Wire one or two DUT-E CAN fuel level sensors to the CAN1 port of a Ruptela FM-Pro4, calibrate the tank, configure the tracker, and set up fuel level, consumption, reports and filling alerts in Wialon.

wagencontrol.eu/compatibility/ruptela/fm-pro4-dut-e-can/

TRACKER Ruptela FM-Pro4	SENSOR DUT-E CAN fuel level sensor, one or two per tank system
INTERFACE CAN, CAN1 port of the tracker, FMS mode at 250 kbit/s	COMBINED ACCURACY Error of the tracker + sensor measurement not more than 1%
SENSOR SOFTWARE Service DUT-E 3.25 or later with the SK DUT-E adapter	TRACKER SOFTWARE Ruptela Configurator 00.02.16
SERVER IN THIS GUIDE Wialon Hosting	

Wire the sensor

1. Sensor **white** wire (CAN L) → **CAN1 L** of the FM-Pro4.
2. Sensor **blue** wire (CAN H) → **CAN1 H** of the FM-Pro4.
3. Sensor **brown** wire (ground) → **–** of the power supply.
4. Sensor **orange** wire (supply) → **+** of the power supply.

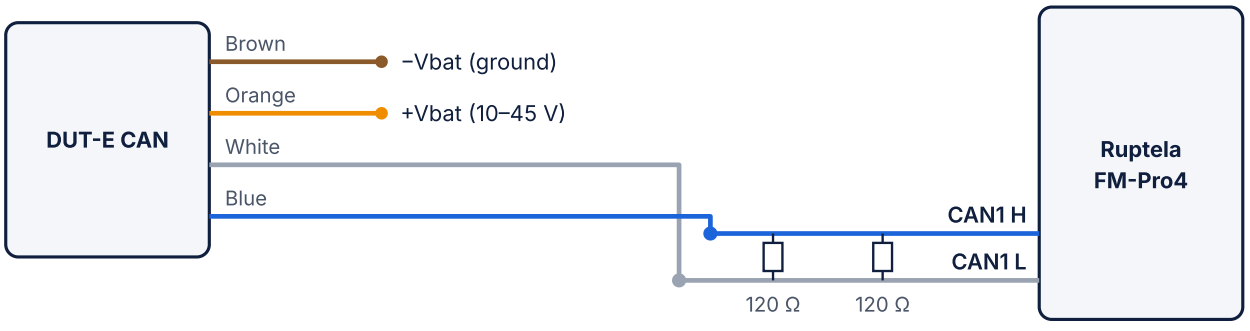

Figure 1. One sensor on the CAN1 port.

Build the CAN bus with the **S6 SC CW 700** cable: it has a twisted pair and the two **120 Ω** terminating resistors the bus needs.

Two sensors share the same bus: connect both CAN H wires to CAN1 H and both CAN L wires to CAN1 L, with the terminating resistors at the two ends of the bus.

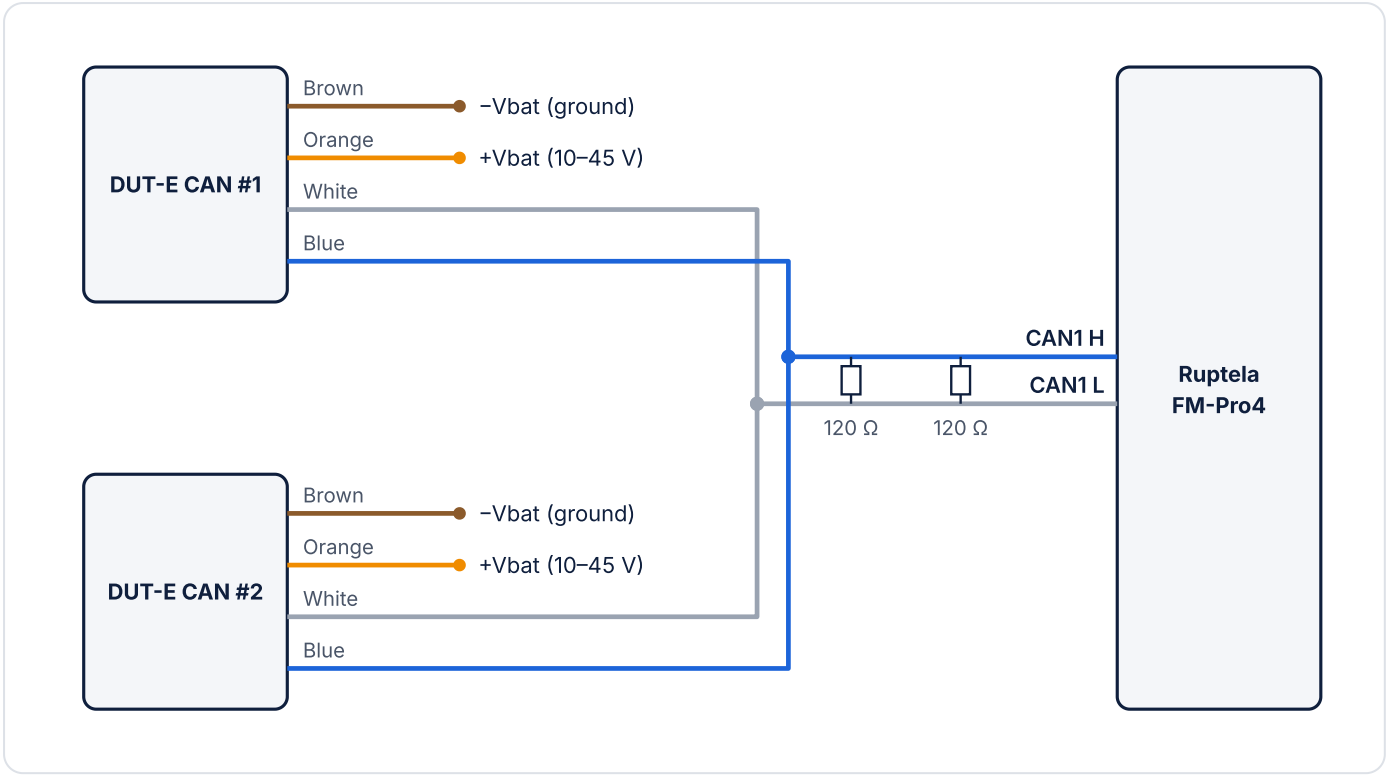

Figure 2. Two sensors on one CAN bus.

Set up and address the sensors

Configure each DUT-E CAN with the SK DUT-E adapter and the Service DUT-E software, version 3.25 or later.

1. Enter the actual probe length after trimming it, then calibrate with **Set empty** and **Set full**.
2. Set the address under **Operation modes**: **101** for the first sensor, **102** for the second, and so on.
3. With two sensors in one tank, set **Summator** to **Slave** on the sensor with the lower address and to **Master** on the one with the higher address. The Summator combines the two sensors into one reading for the tank.

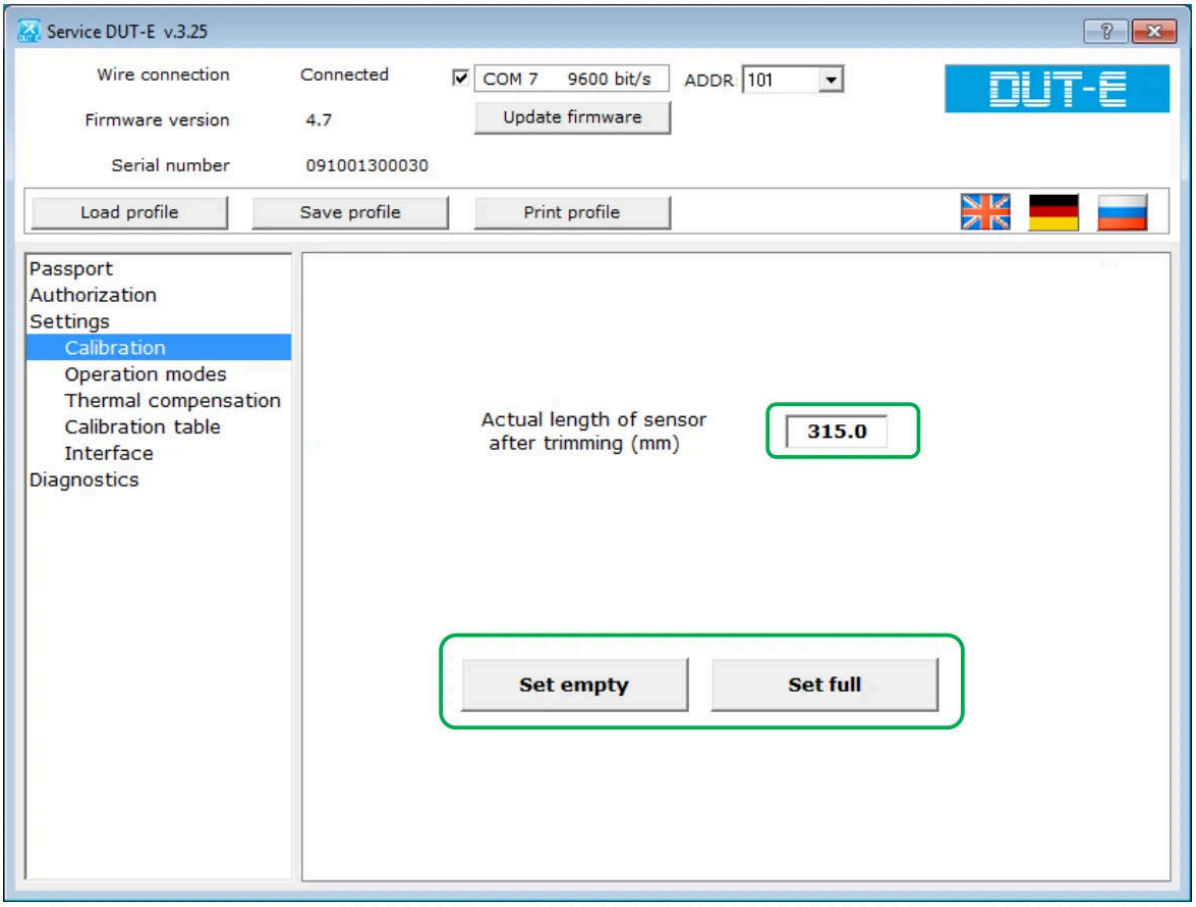

Figure 3. Probe length, empty and full calibration.

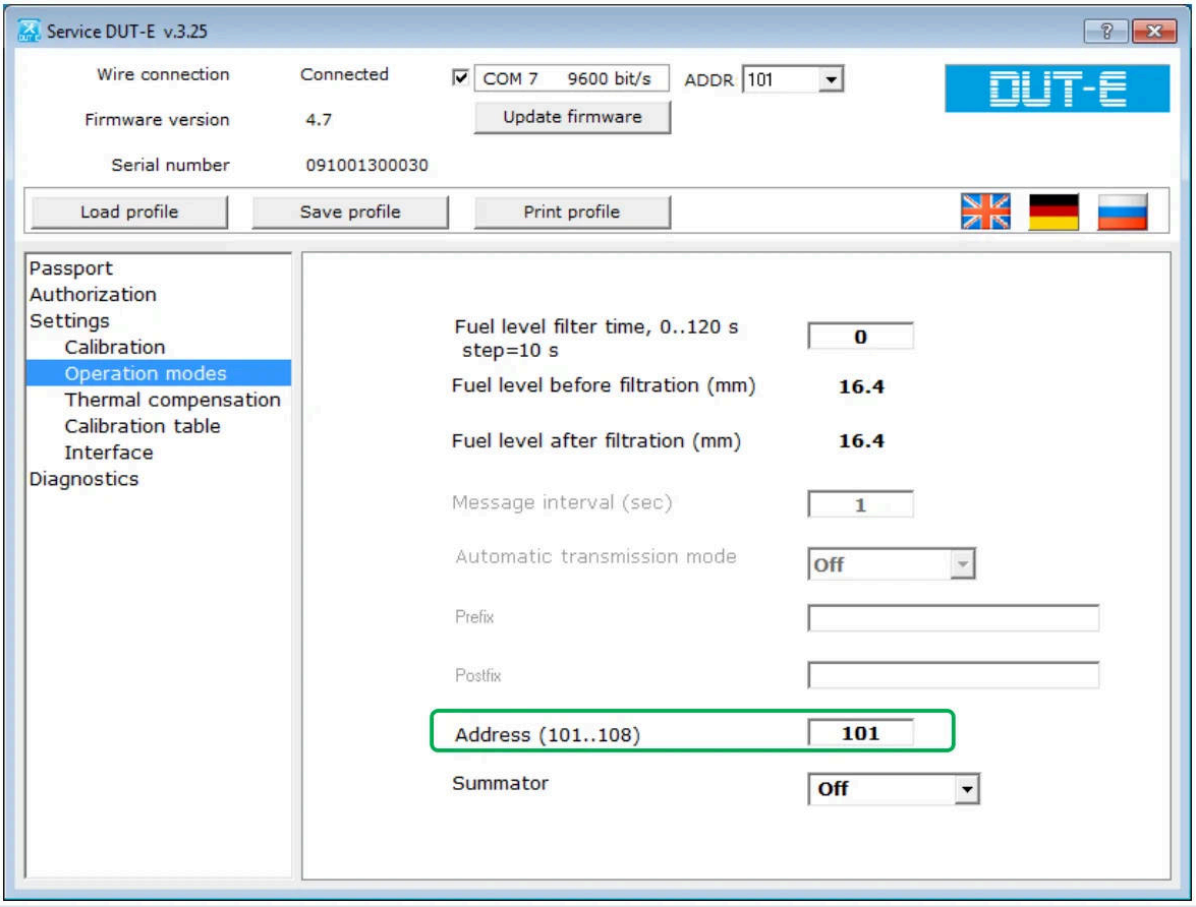

Figure 4. Address 101 for the first sensor.

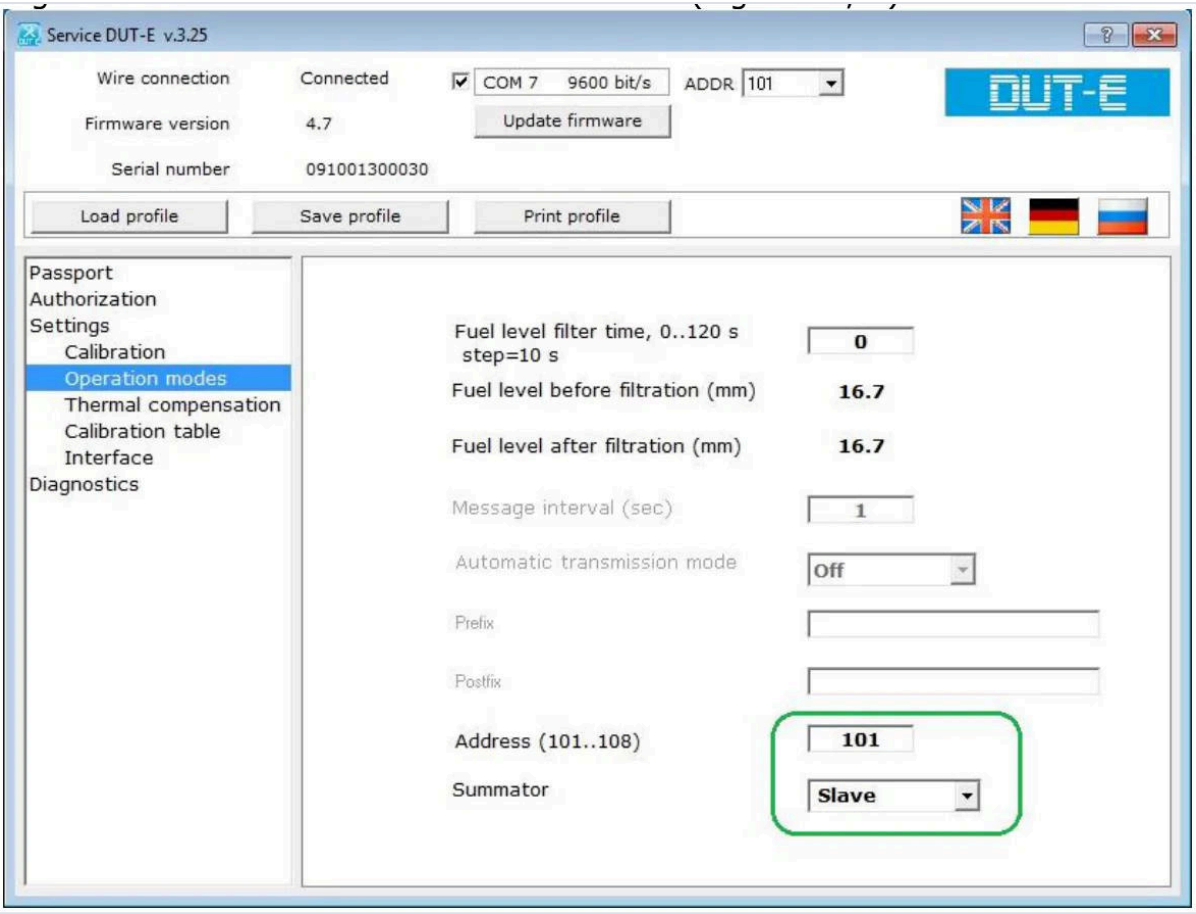

Figure 5. Two sensors: the lower address is the Slave...

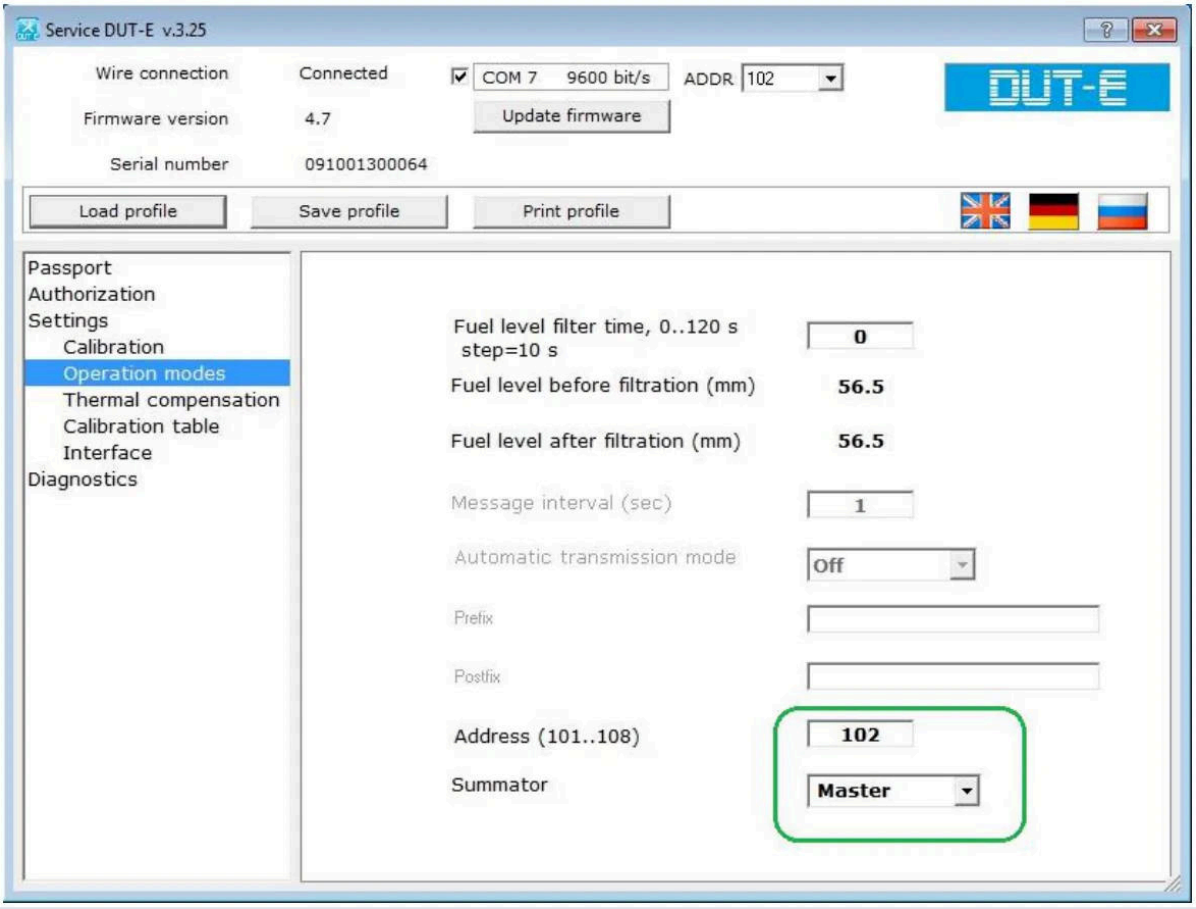

Figure 6. ...and the higher address is the Master.

Calibrate the tank

Fill the tank in measured portions and, after each one, record the fuel volume against the current fuel level. The result is the calibration table that converts level (mm) into volume (litres).

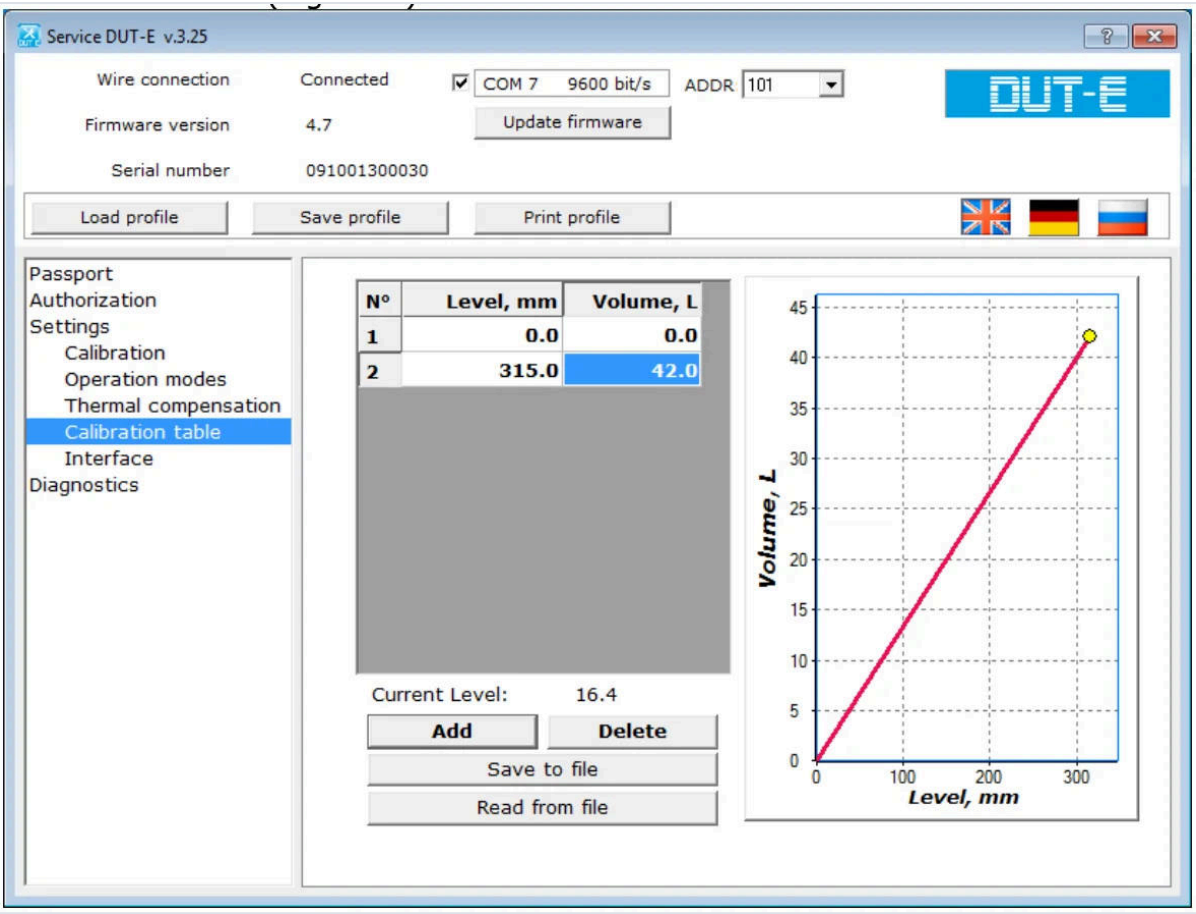

Figure 7. Calibration table: in the test tank, 315 mm = 42 L.

Configure the FM-Pro4

In Ruptela Configurator 00.02.16, open the IO settings:

SETTING	VALUE
IO slot	CAN fuel level1
IO properties	Enable ticked, ID = CAN fuel level1
Event on	Monitoring
Priority	High
Interfaces	CAN ticked, FMS, 250 (kbit/s), Active ticked

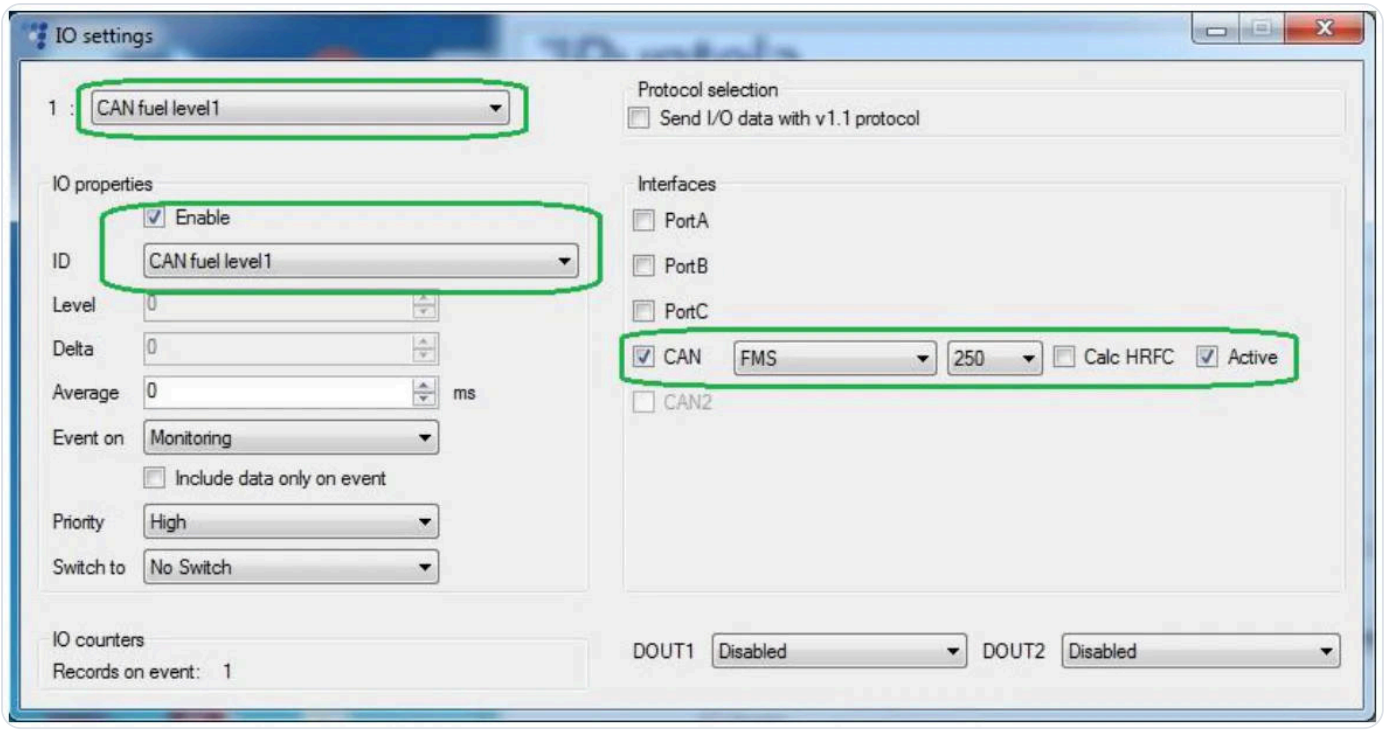

Figure 8. IO settings for the fuel level.

Set up the fuel sensors in Wialon

Register the FM-Pro4 in your fleet software. This example uses Wialon Hosting. Create two sensors on the unit: fuel level in percent and fuel volume in litres.

SENSOR	TYPE	PARAMETER	UNIT
DUT-E CAN (%)	Custom sensor	`fuel_lvl*const0.4`	%
DUT-E CAN (lt)	Fuel level sensor	`fuel_lvl*const0.4`, then the calculation table	L

The litre sensor converts percent into litres with a two-point calculation table: **0% = 0 L** and **100% = full tank volume** (42 L in the test tank).

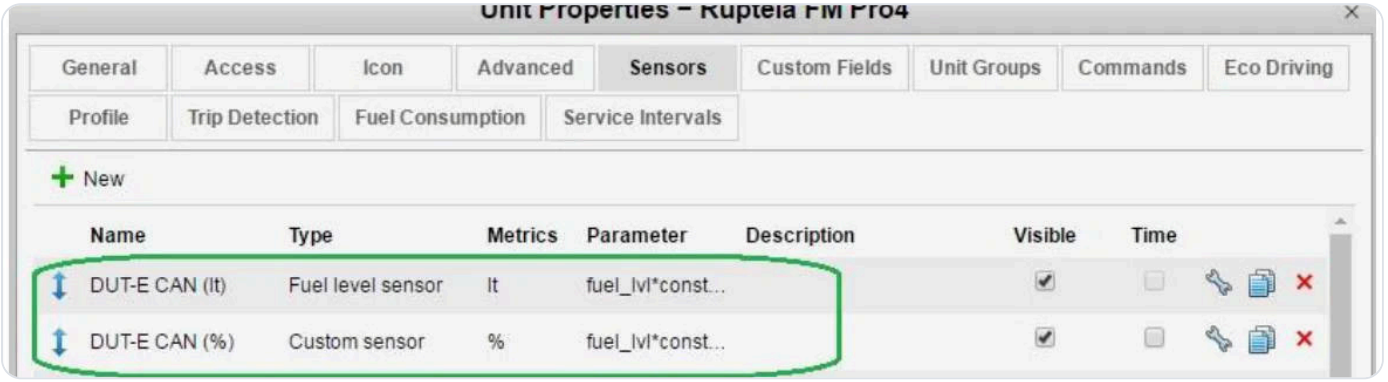

Figure 9. The two fuel sensors on the unit.

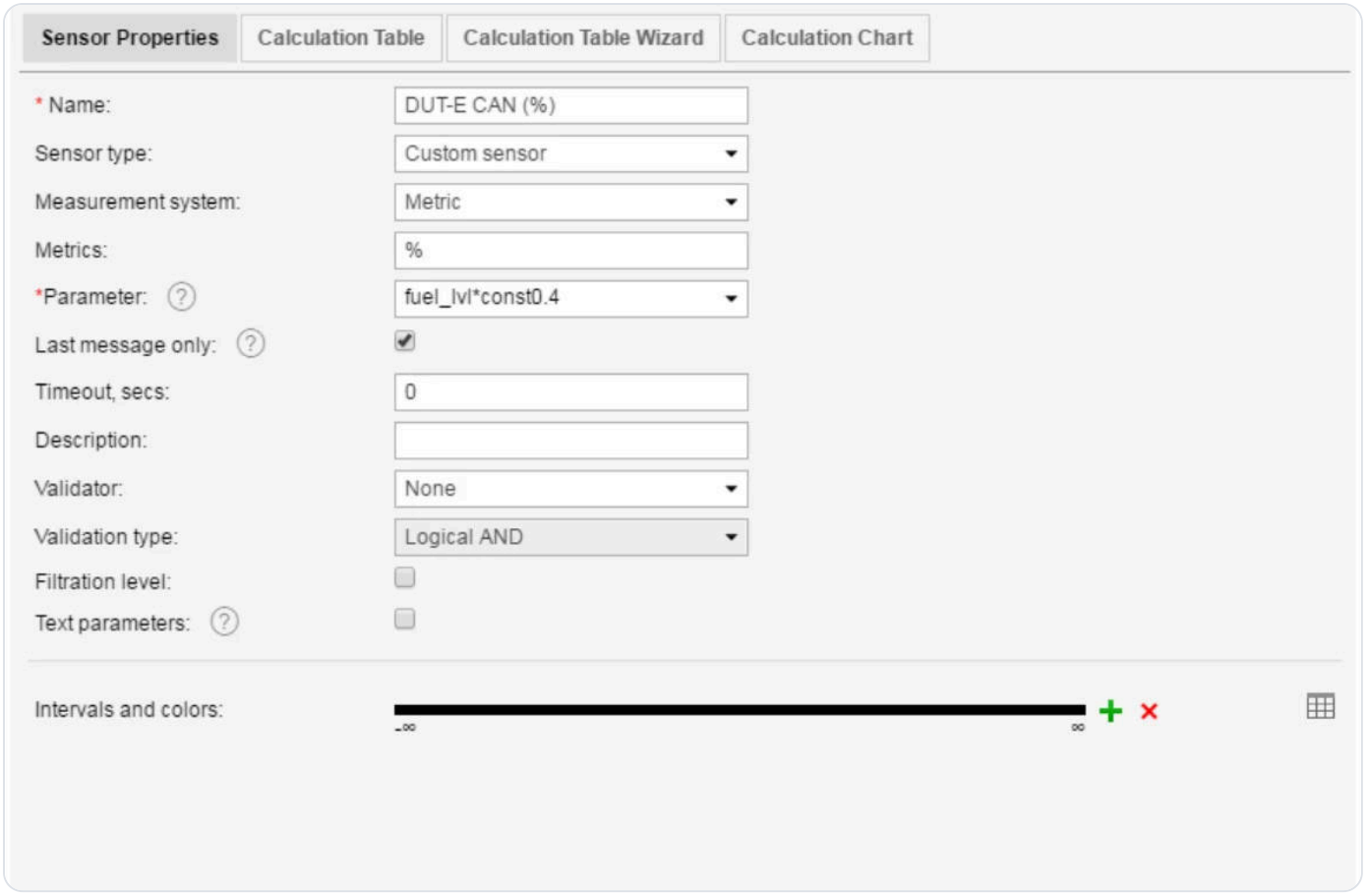

Figure 10. Percent sensor.

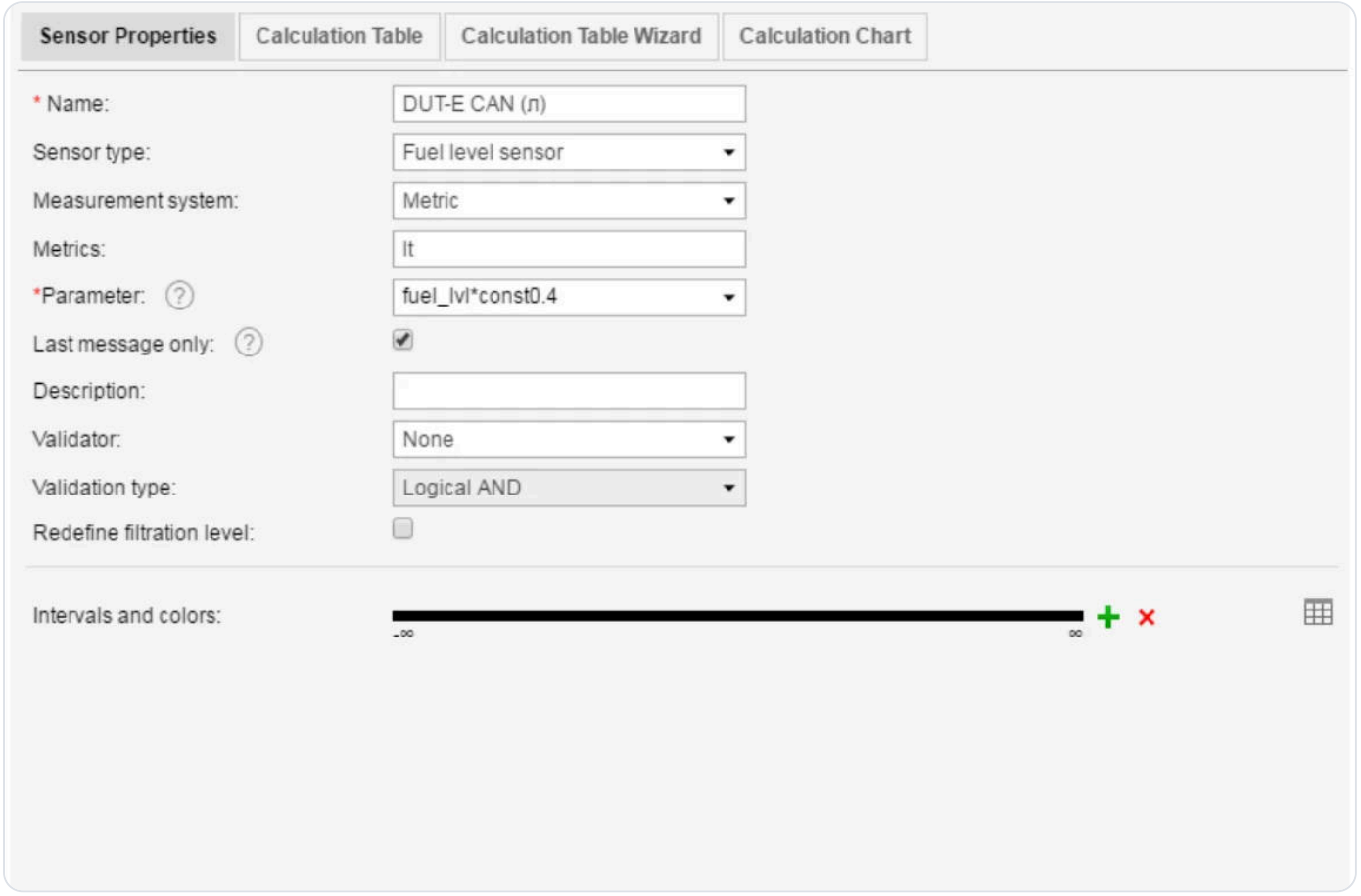

Figure 11. Litre sensor.

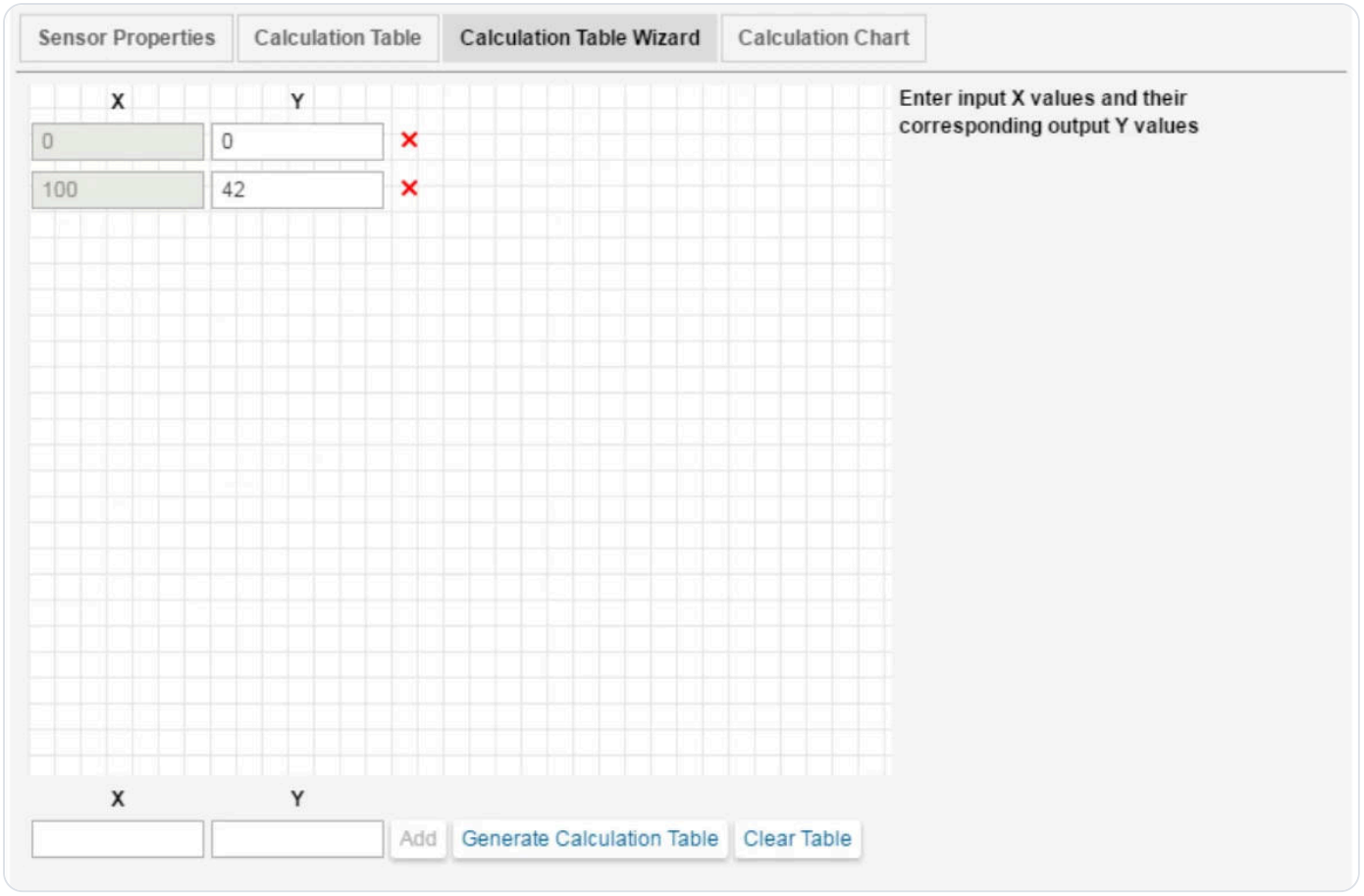

Figure 12. Calculation table: 100% = 42 L.

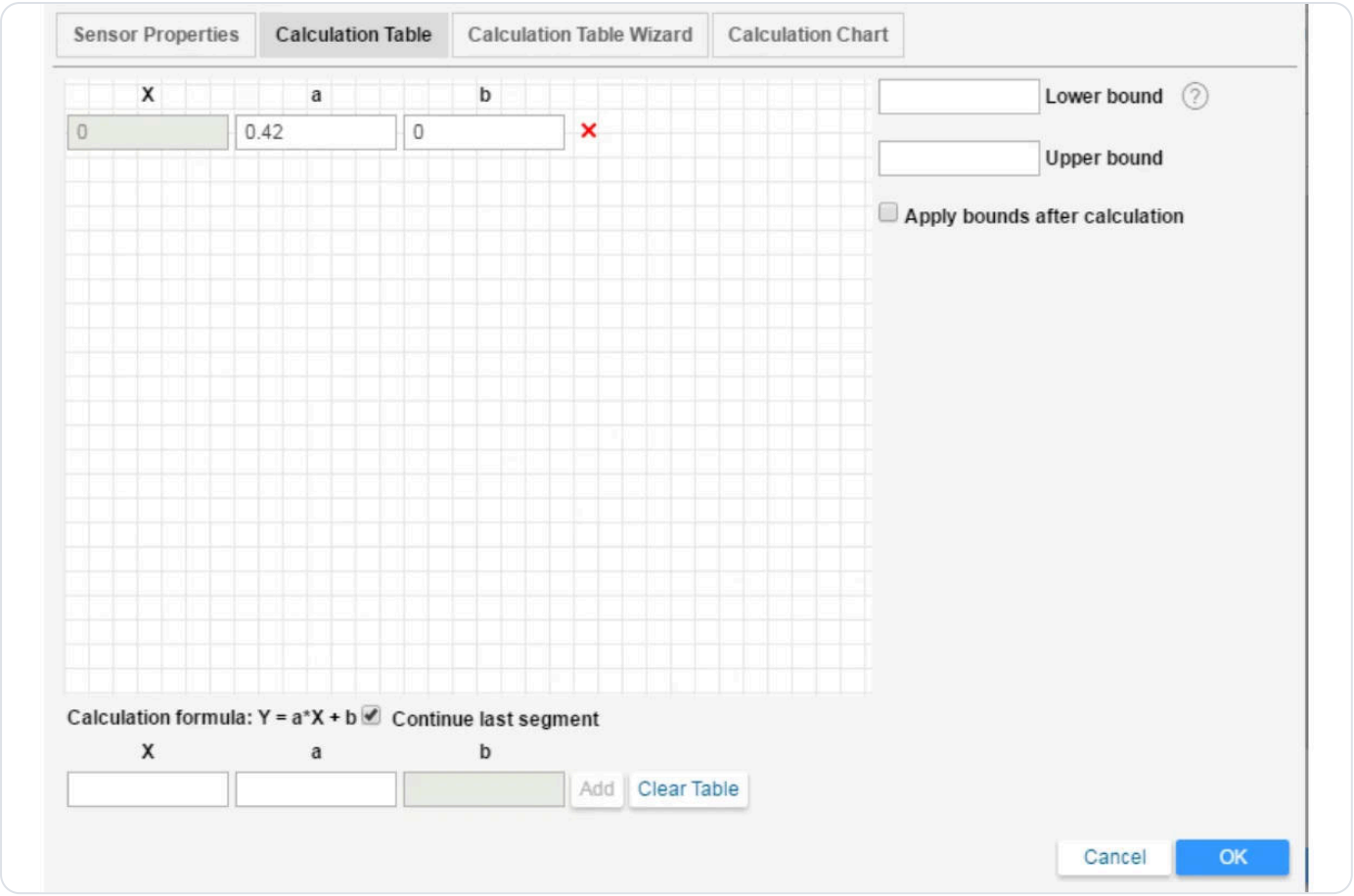

Figure 13. The resulting conversion (0.42 L per %).

Fuel consumption, reports and filling alerts

On the unit's **Fuel Consumption** tab, set the filling and theft detection thresholds and tick **Fuel level sensors** as the consumption source.

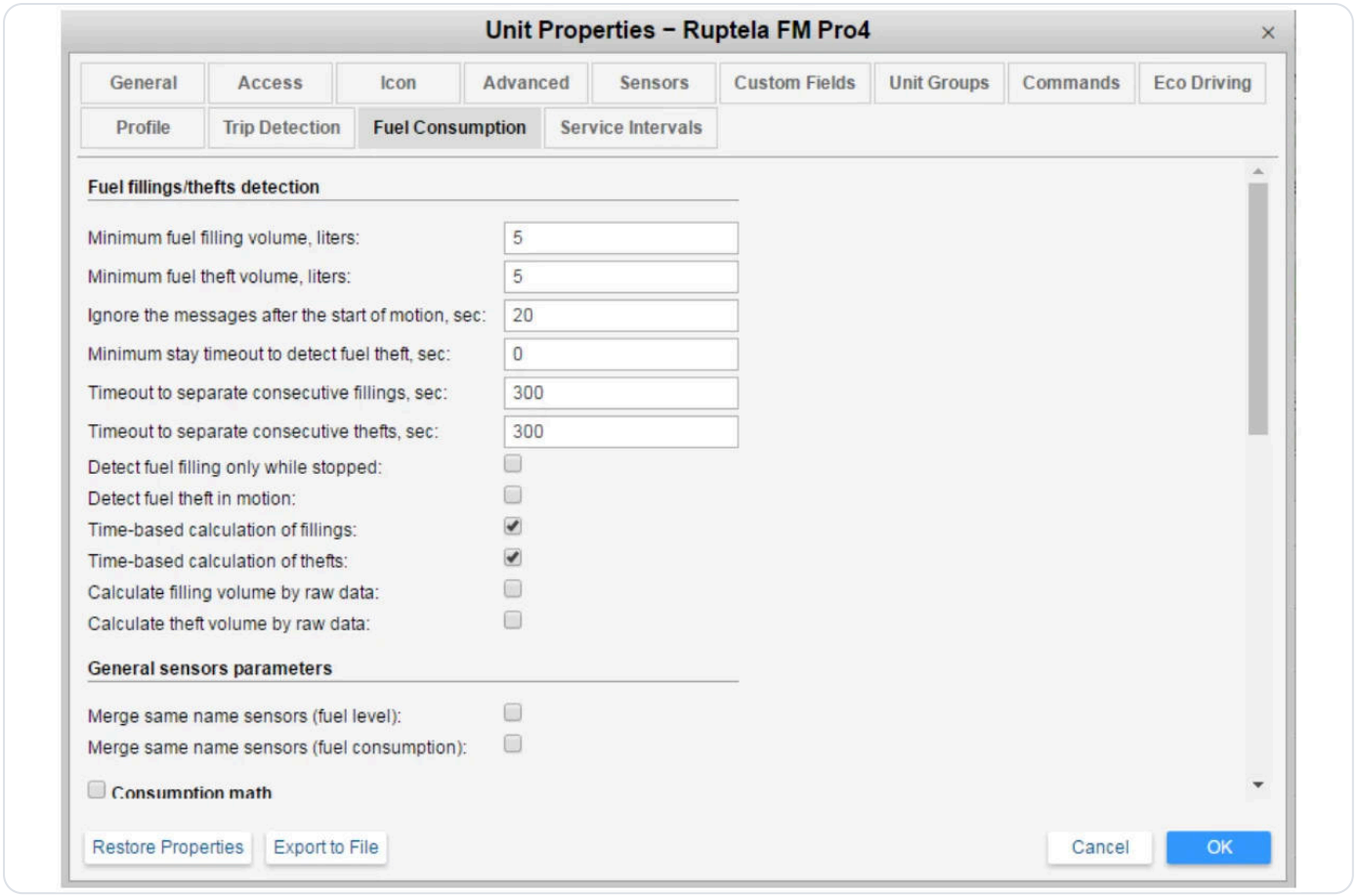

Figure 14. Filling and theft detection.

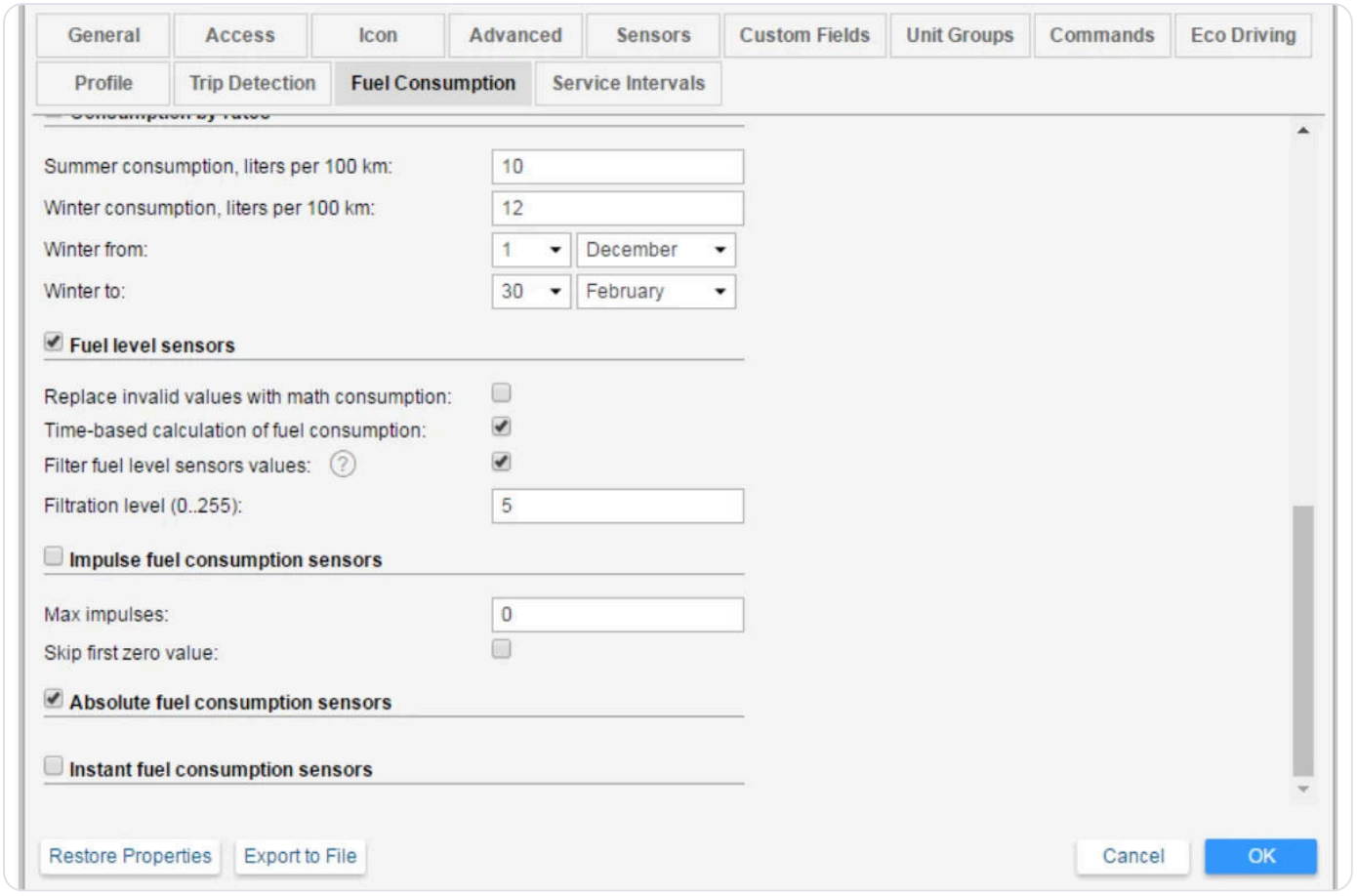

Figure 15. Fuel level sensors as the consumption source.

Create a report template with a statistics table, a fuel level chart and a fuel fillings table.

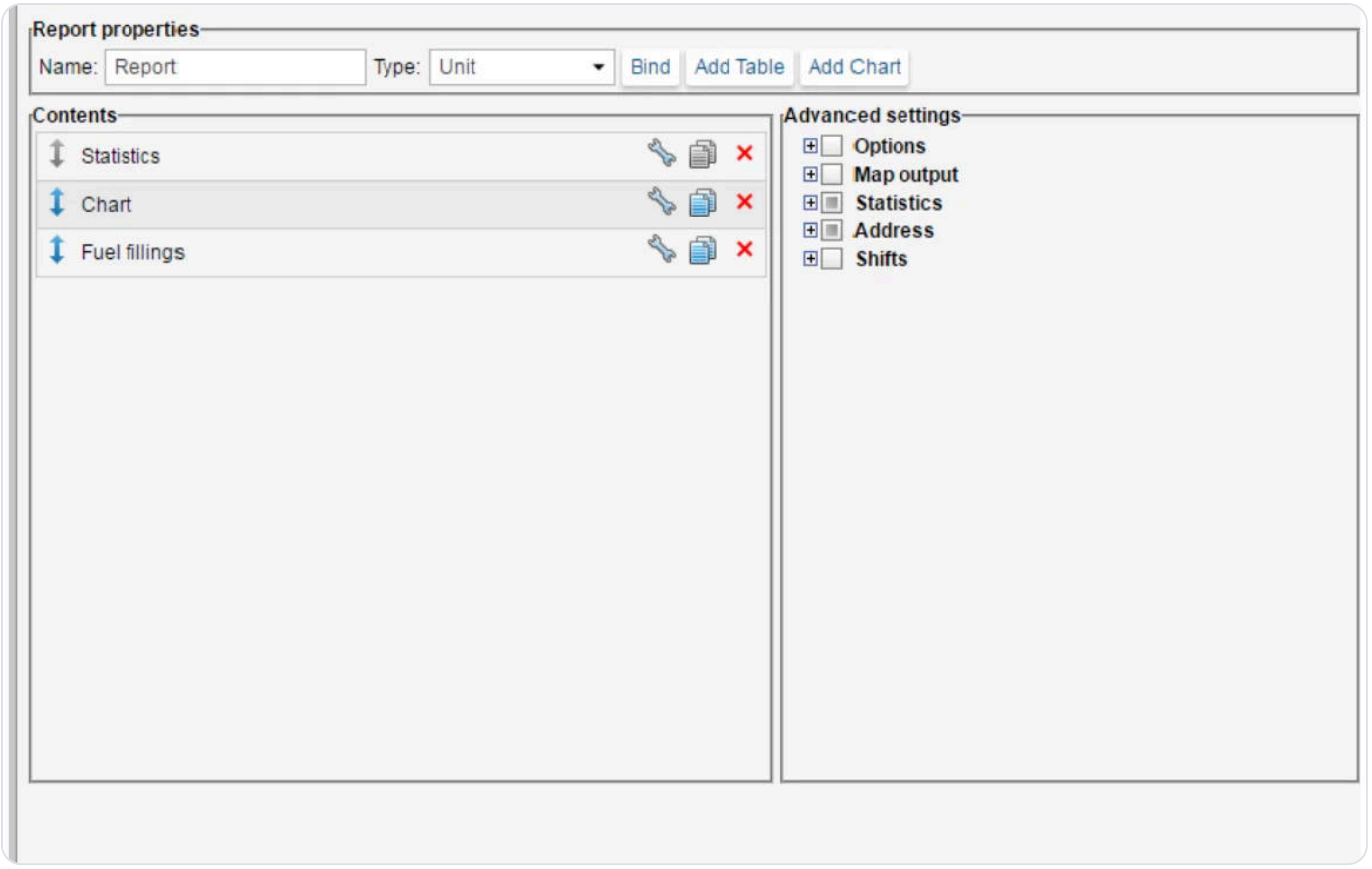

Figure 16. Report template.

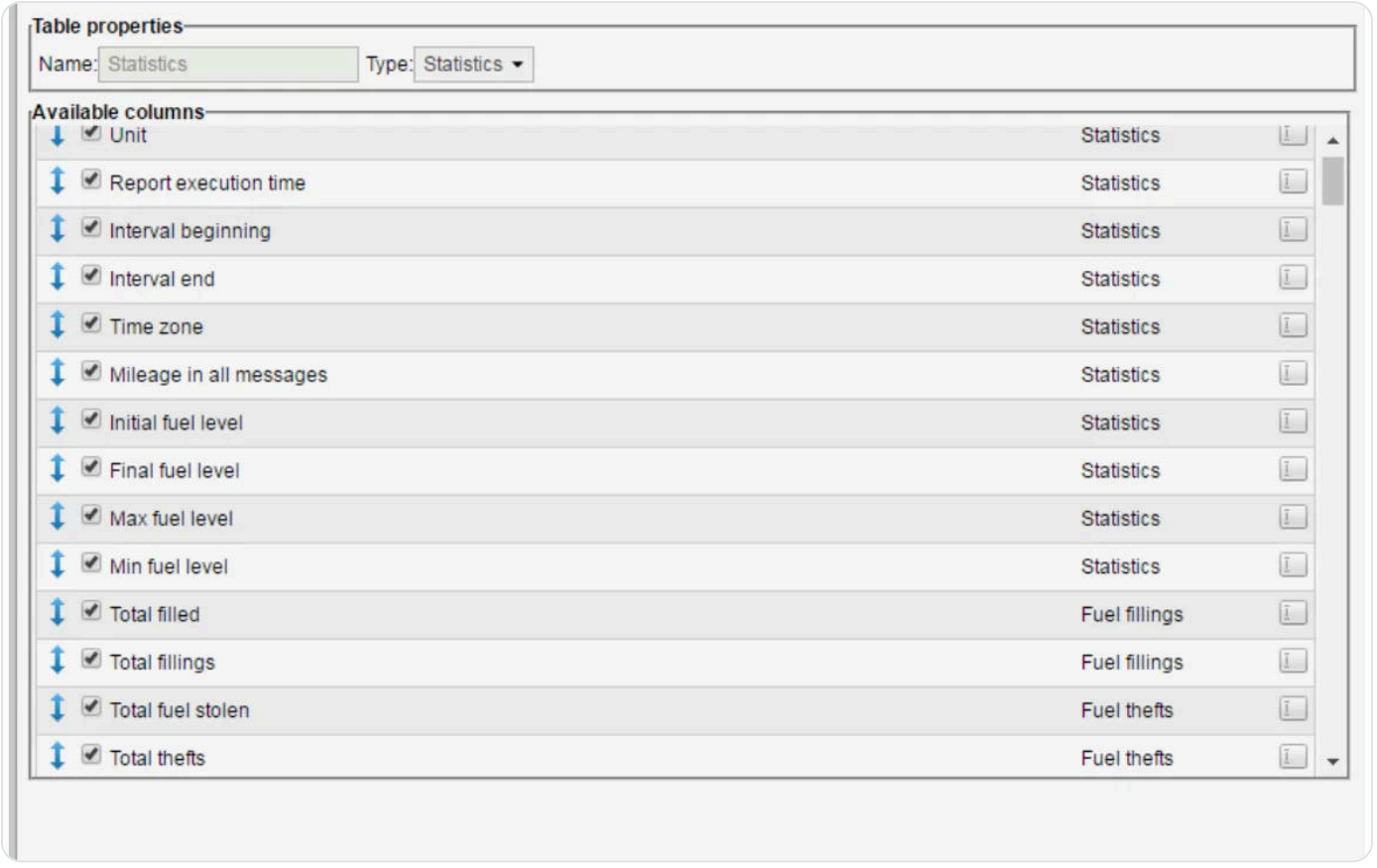

Figure 17. Statistics columns.

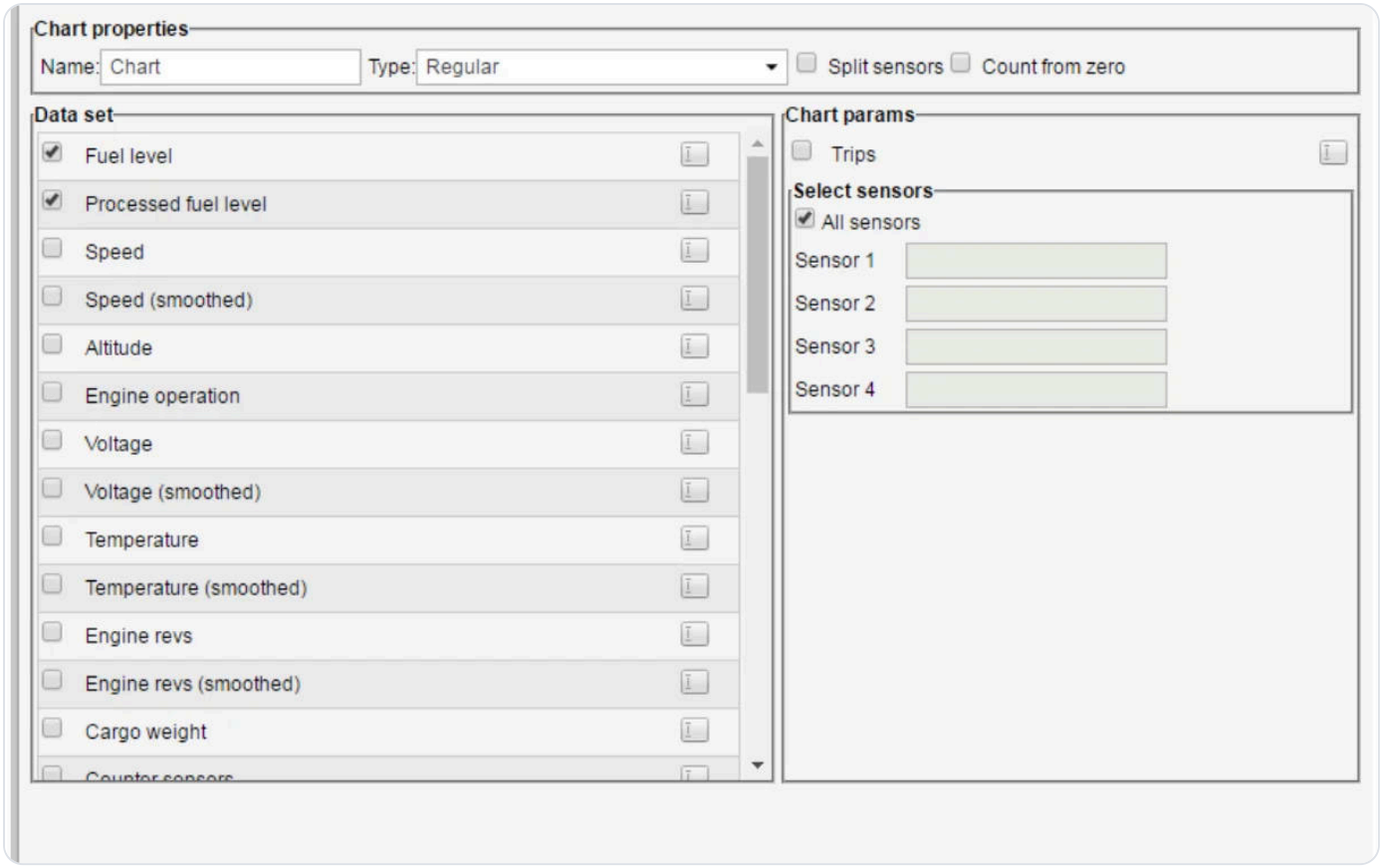

Figure 18. Fuel level chart.

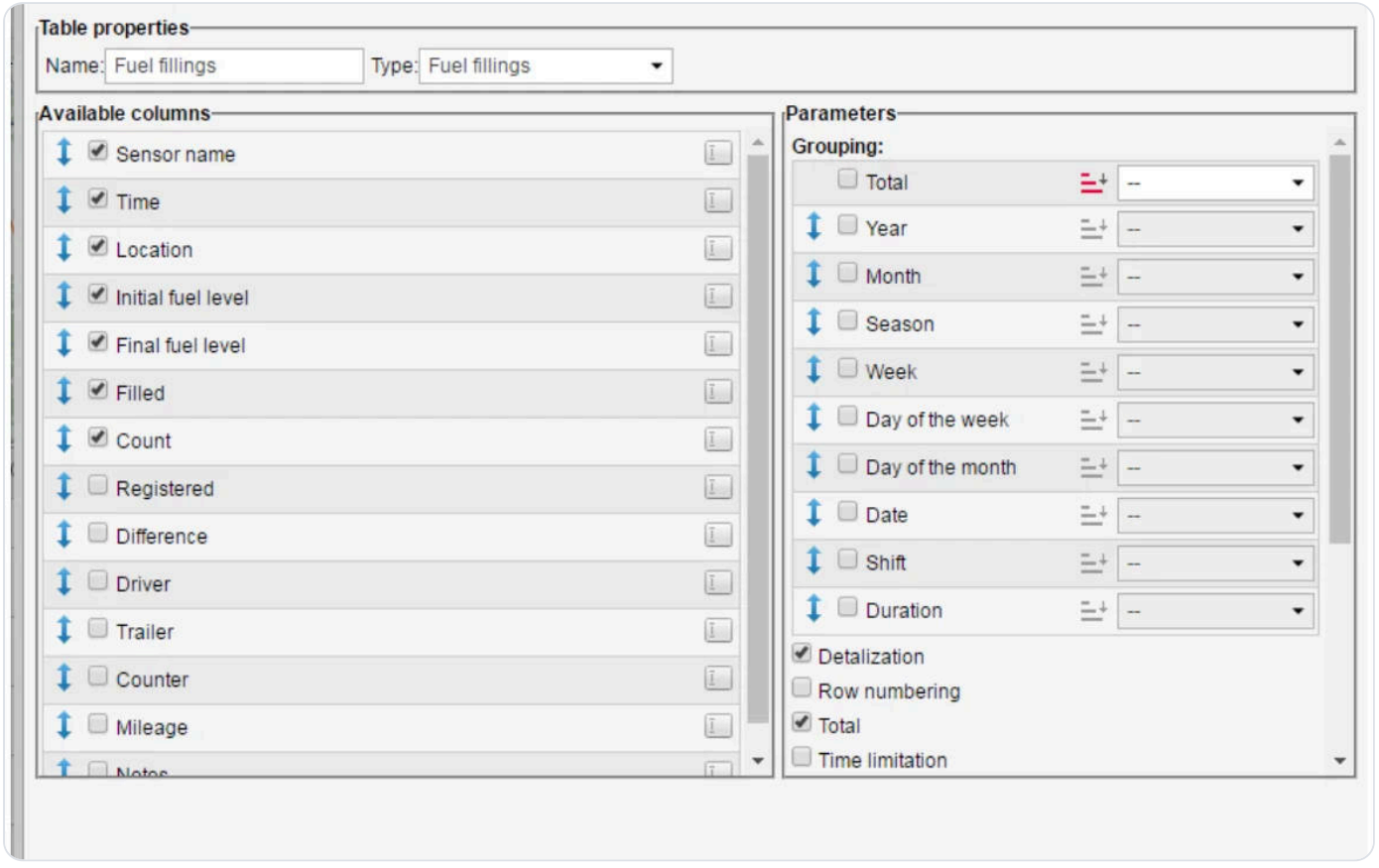

Figure 19. Fuel fillings table.

To be told about each filling, add a notification of the **Fuel filling** type and choose how to deliver it (e-mail, pop-up, event in the unit history). The message text can use variables such as `%VOLUME%`, `%INITIAL_LEVEL%`,

`%FINAL_LEVEL%` and `%LOCATION%`.

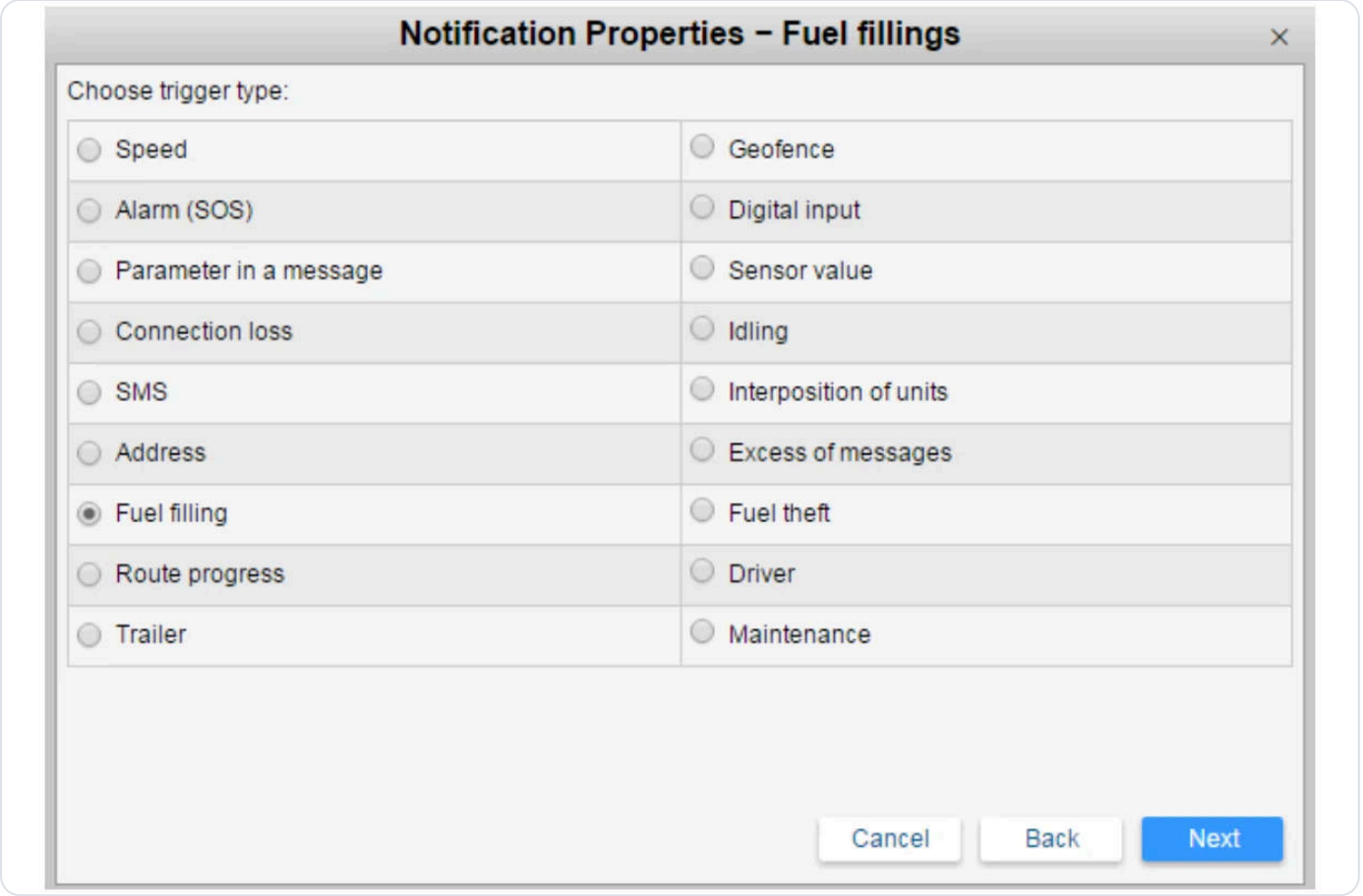

Figure 20. Notification type: Fuel filling.

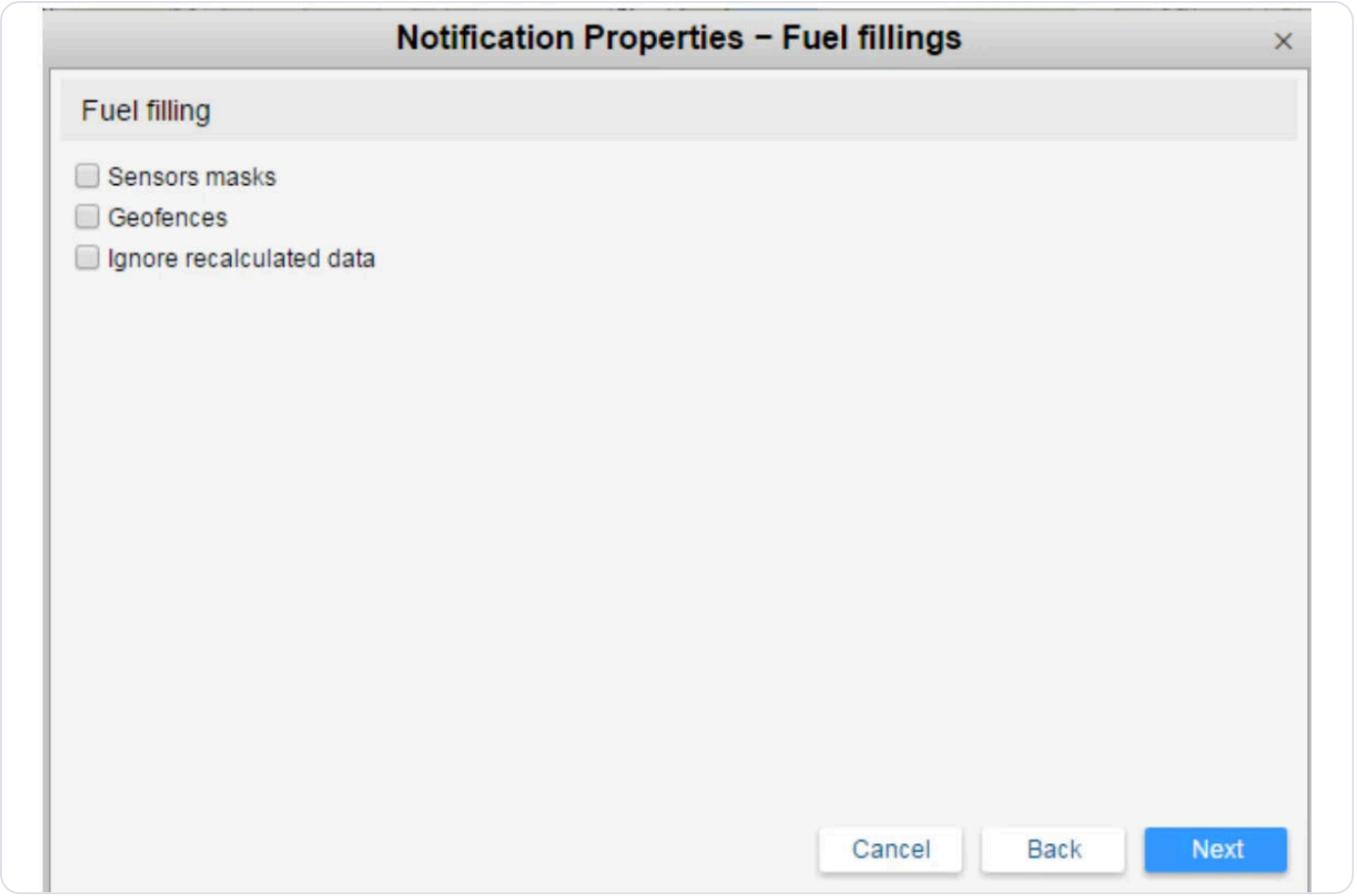

Figure 21. Filling options.

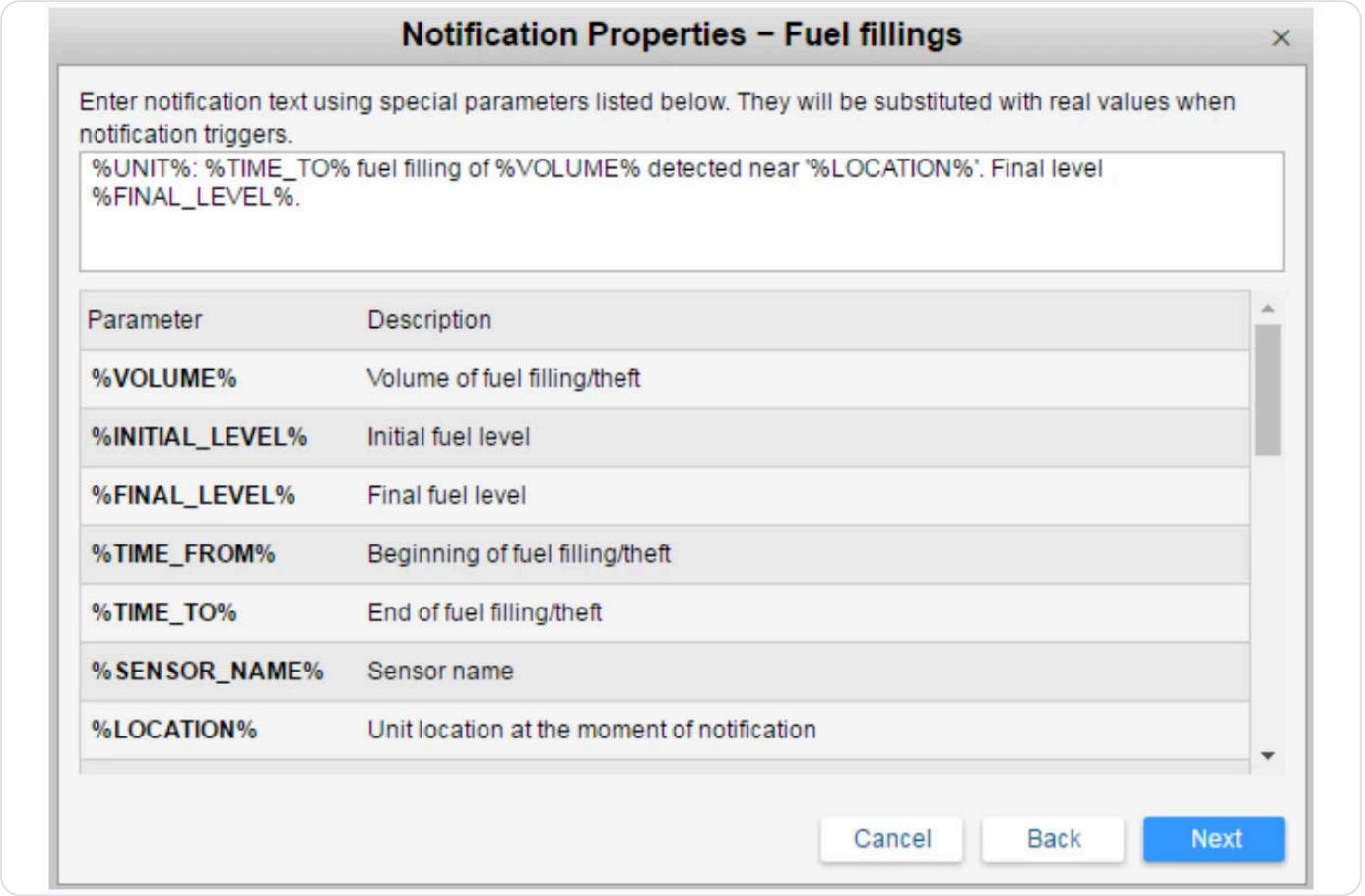

Figure 22. Notification text and variables.

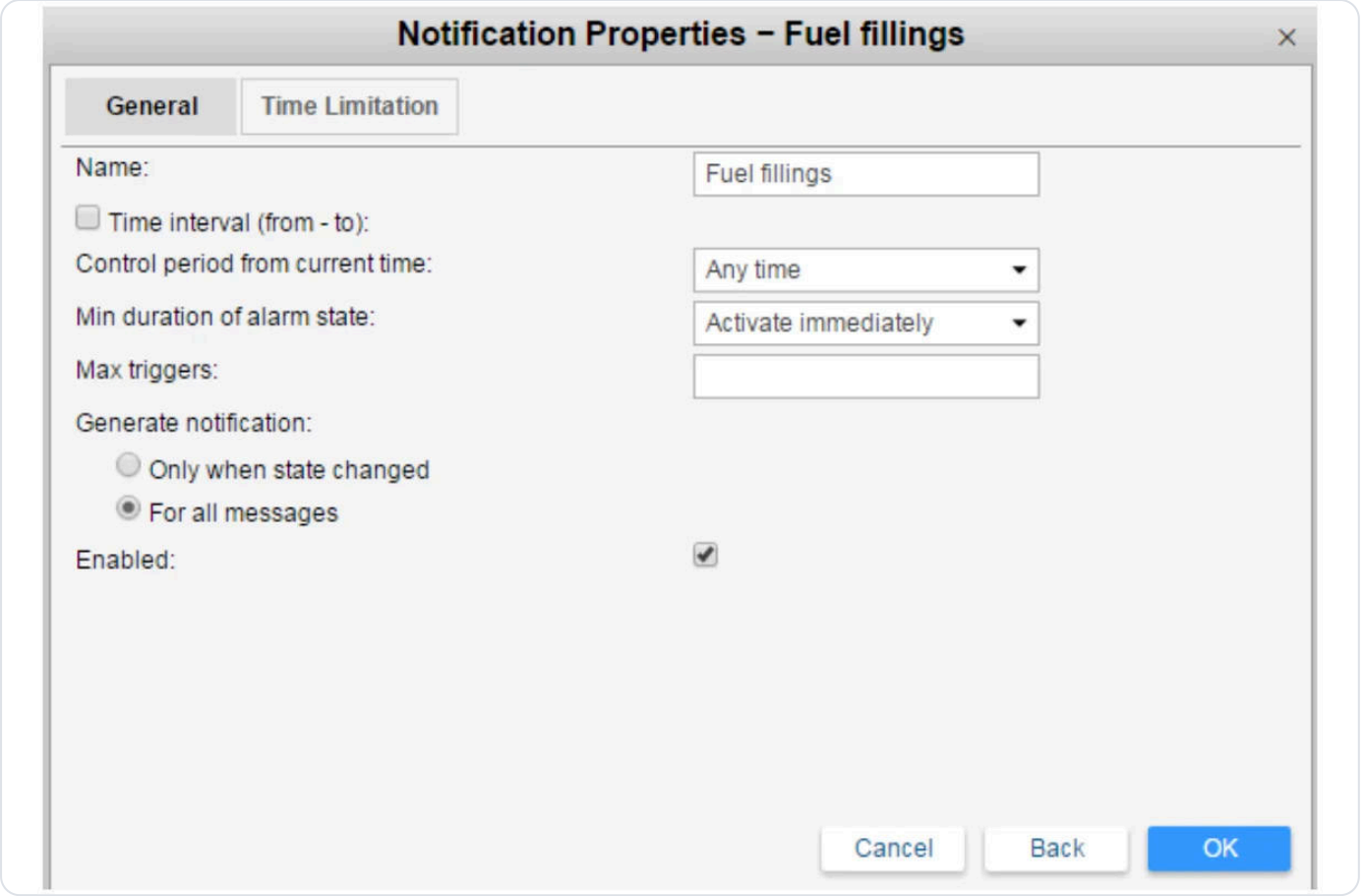

Figure 23. Name and activation.

Check the data

Run the report for a day with fillings. The fuel level chart should show a flat line while parked, a steady fall while working and a clear step at each filling.

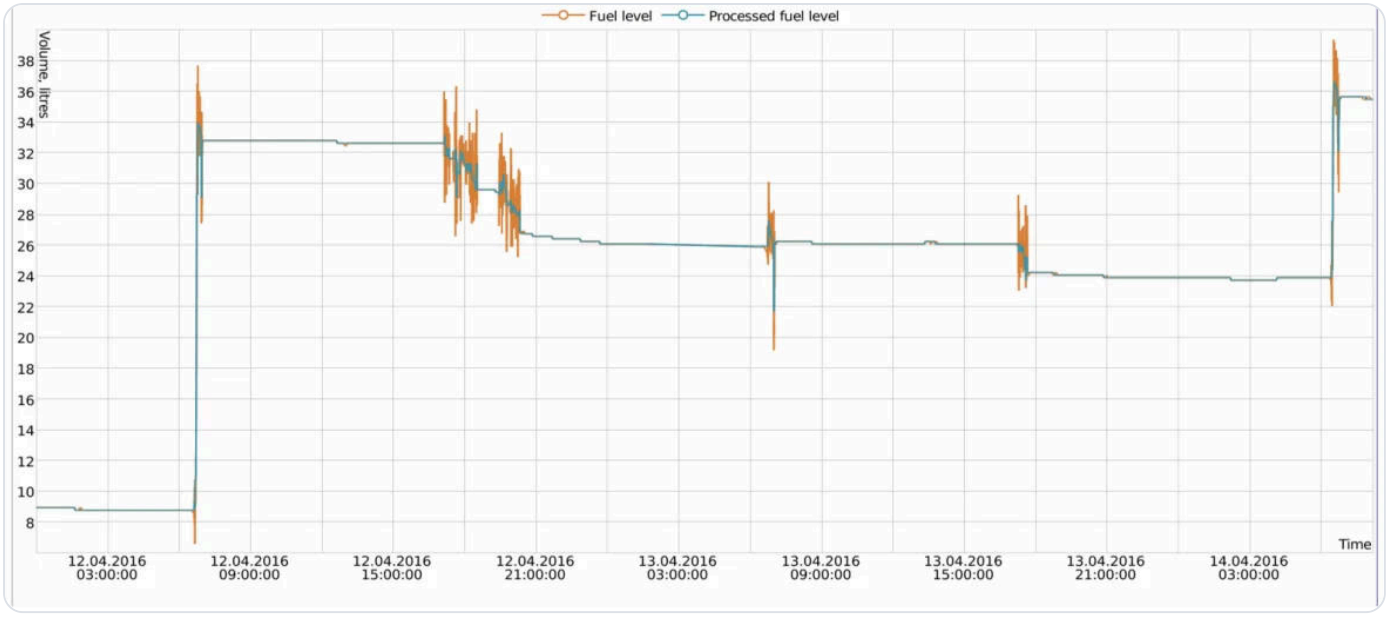

Figure 24. Fuel level chart in Wialon.

Last updated 26 November 2026.