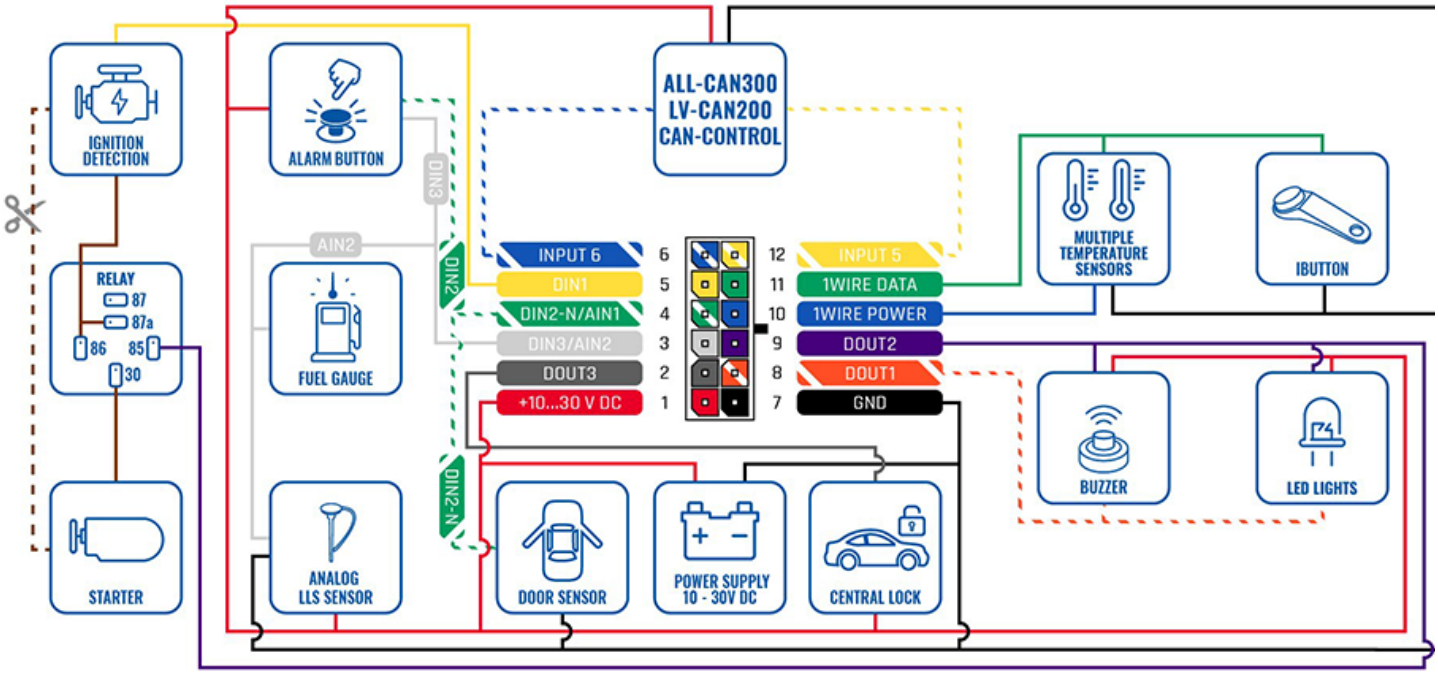
HublogiQ Documentation for FMC230

The Teltonika FMC230 is water and dust resistant tracker with 4G (LTE Cat 1) network coverage including 2G (GSM) fallback compatibility. It comes equipped with internal GNSS antennas, configurable digital/analog/negative and impulse inputs, three DOUT outputs, Bluetooth connectivity, and backup battery. This tracker is dust tight and protected agai the effects of a temporary immersion in water. It can be mounted inside and outside of a vehicle without worries that high pressured water, mud or a dusty environment will impa operation or performance quality. This is particularly relevant for the industries where harsh conditions exist, such as agriculture, construction and mining, and more. For starters FMC230 features negative input which allows you to save precious integration time while connecting accessories like vehicle doors sensor, alarm buttons, seatbelt detection, an other similar sensors or accessories. In addition to that, the device has an integrated possibility to enable Impulse Input for precise fuel flow meter data reading. Impulse based f usage monitoring is much more accurate than a different type of fuel metering sensors, and it makes the FMC230 a perfect solution for high fuel usage machines like cranes, construction vehicles, mining machines, agriculture equipment.

Diagram:



Pinout:

PIN NUMBER	PIN NAME	DESCRIPTION
1	VCC (10-30) V DC (+)	Power supply (10-30 V DC).
2	DOUT 3	Digital output, channel 3. Open collector output. Max. 0,5 A DC.
3	DIN 3 / AIN 2	Analog input, channel 2. Input range: 0-30 V DC / Digital input, channel 3.
4	DIN 2-N / AIN 1	Digital input, channel 2, Negative input (ground sense), Analog input, channel 1, Input range: 0-30 VDC.
5	DIN 1	Digital input, channel 1.
6	INPUT 6	TX EXT (LVCAN – TX).
7	GND (-)	Ground pin. (10-30) V DC (—)
8	DOUT 1	Digital output, channel 1. Open collector output. Max. 0,5 A DC.
9	DOUT 2	Digital output, channel 2. Open collector output. Max. 0,5 A DC.
10	1WIRE POWER	+3,8 V output for 1–Wire devices.
11	1WIRE DATA	Data for 1–Wire devices.
12	INPUT 5	RX EXT (LVCAN - RX).

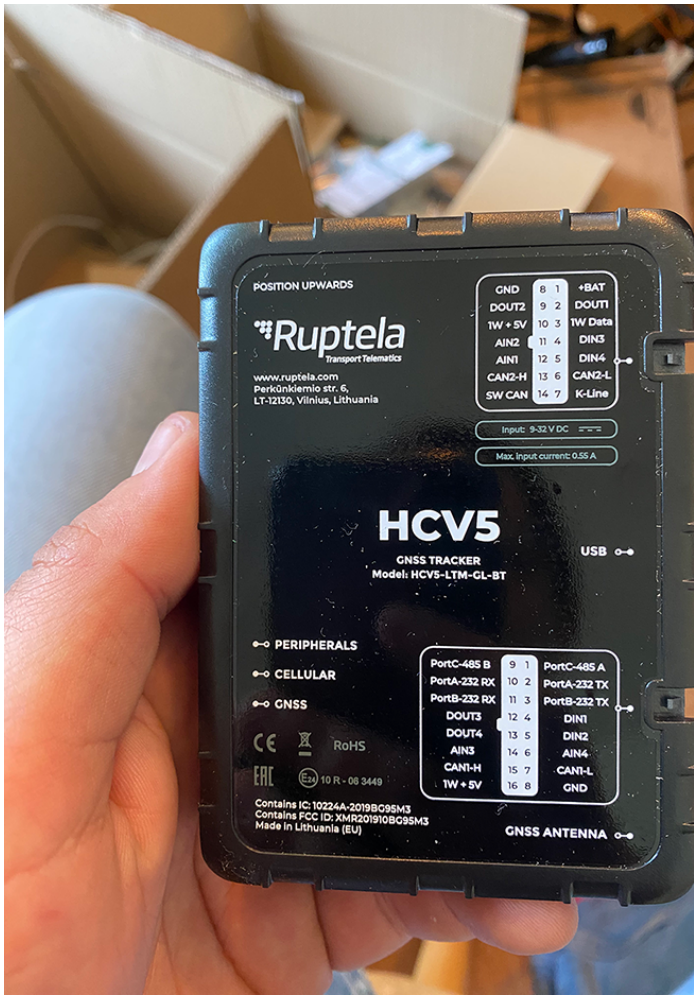
Figure 2 FMC230 2x6 socket pinout

Dimensions:

Additional information, placement and other:

To insert the Micro-SIM card and connect the battery, follow these steps: 1. Upon receiving your device, note that it is partly closed. 2. Carefully remove the top and bottom cove the device. 3. Insert the Micro-SIM card as shown, ensuring that the PIN request is disabled or refer to the Teltonika Configurator Wiki for instructions on how to enter it later. Ens that the cut-off corner of the Micro-SIM card is pointing outward from the slot. 4. Connect the battery to the device according to the provided diagram. Place the battery in a pos where it doesn't obstruct other components. 5. Once the configuration is complete, refer to the "PC Connection (Windows)" section and attach the top and bottom covers of the device, pressing them twice to ensure full closure. 6. Verify that the product casing is closed correctly. It is important to note that this device has an IP67 casing with a two-phas closing mechanism, ensuring reliable protection and ease of use. Please ensure that the product casing corner clips are securely fixed and that the cable is connected to mainta IP67 protection level.

Resistor is placed between pin number 1 and 4.



Place to insert the SIM Card.

Technical details:

Description	Property
2 W max. Current consumption (Power supply 6...30 V DC)	At 12V < 3 mA (Ultra Deep Sleep). At 12V < 5 mA (Deep Sleep). At 12V < 16 mA (Online Deep Sleep). At 12V < 18 mA (GPS Sleep). At 12V < 33 mA (nominal with no load). At 12V < 2A Max. (with full Load / Peak).
Battery charge current	Average 140 mA
Operating temperature and Storage temperature (without battery)	-20..+85 °C
Operating temperature and Storage temperature (with battery)	-20..+40 °C
Operating humidity	5% to 95% non-condensing
Ingress Protection Rating	IP67
Device + case + battery weight	55 g
Internal Fuse	3A, 125V

Final recommendations:

When connecting wires, it is important to follow these guidelines: Ensure that the module is not plugged in while connecting the wires. Fasten the wires to stable and non-moving parts, keeping them away from heat-emitting or moving objects. Avoid exposed wires, and if the factory isolation is removed during the connection process, apply isolation mate the wires are located in exterior or vulnerable areas exposed to heat, humidity, dirt, etc., provide additional isolation and ensure they are not loose. Do not connect wires to board computers or control units. When connecting the power source, be aware that power may still be available on the power wires even after the car computer goes into sleep mode measure the voltage again after connecting the module. It is recommended to connect to the main power cable in the fuse box and use a 3A, 125V external fuse. When connecti the ignition wire, verify that it is a genuine ignition wire that maintains power after starting the engine, and not an ACC wire. Confirm that power is still available when turning off a vehicle devices. Connect the ignition to the ignition relay output or choose an alternative relay with power output when the ignition is on. For the ground wire, connect it to the ve frame or fixed metal parts. If the wire is fixed with a bolt, ensure the loop is connected to the end of the wire. For better contact, remove paint from the spot where the loop will b connected.