

Alcohol sensor

Introduction

Integration of RS-588 Alcohol sensor RS232 protocol to the Ruptela FM devices allows users to test alcohol concentration in driver's blood, receive this data to the server and to ensure driving safety.

Feature for different FM devices is available starting with these firmware versions:

- FM-Pro4 - 00.02.06.02
- FM-Tco4 HCV - 00.02.06.02
- FM-Tco4 LCV - 00.02.06.02

You can get the newest firmware and configurator from our FTP server: doc.ruptela.lt

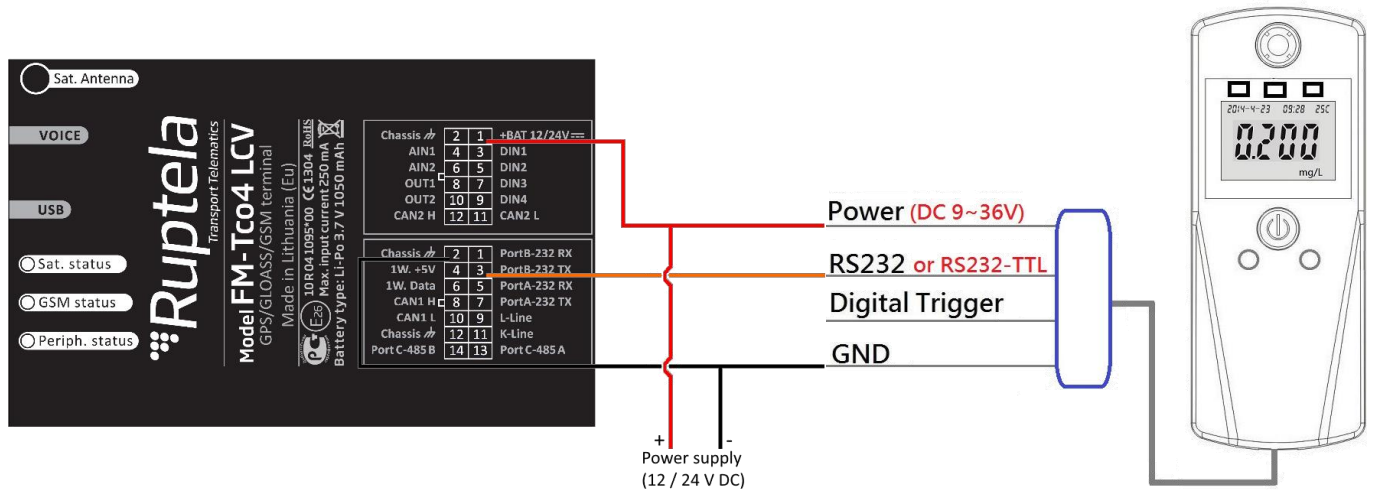
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Document change log

Date	Version	Change details
2016-03-04	1.0	Initial draft

Connection



FM Device side

Alcohol sensor side

Orange - PortB-232 TX

RS232 Tx

Configuration

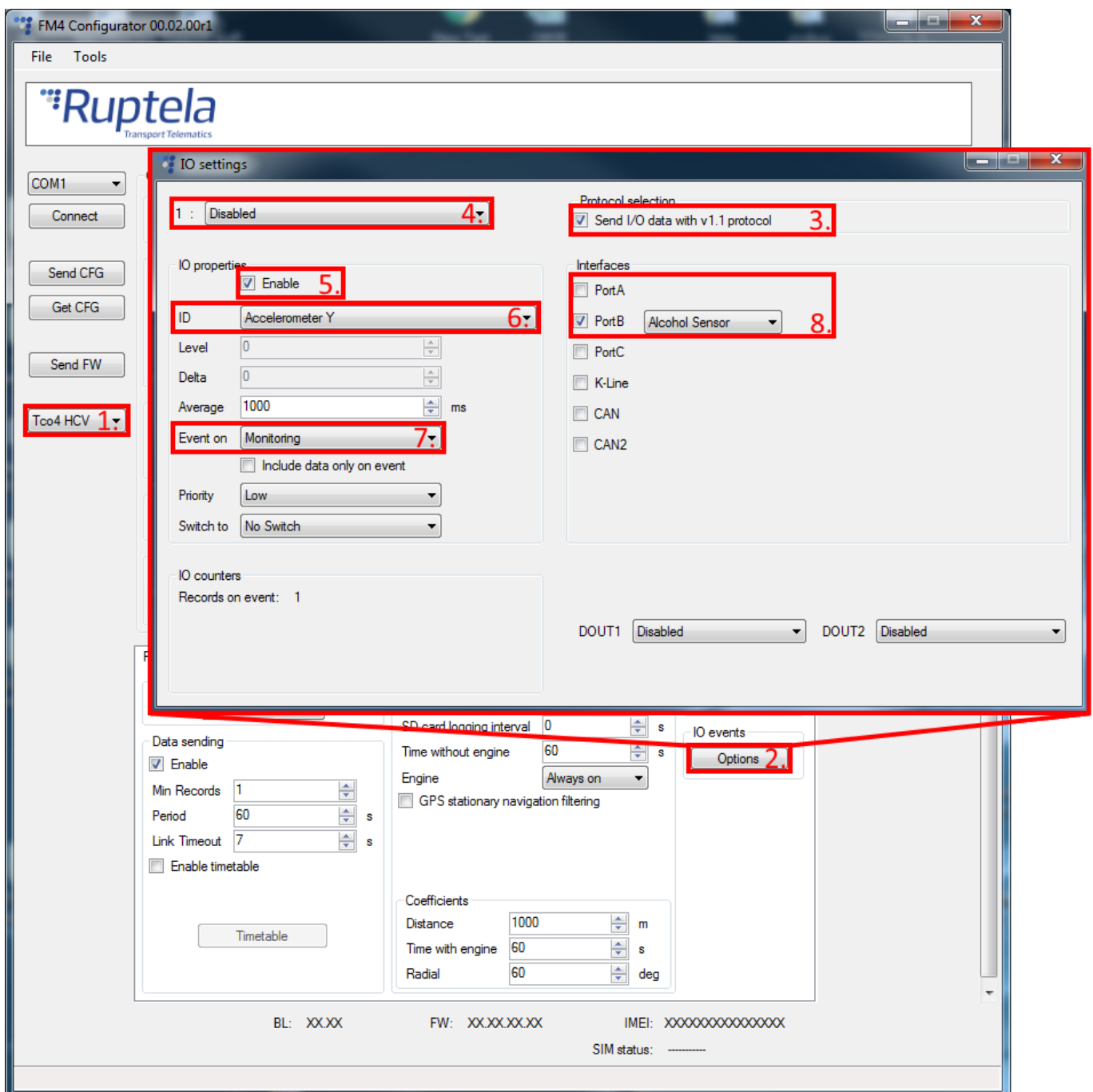
Follow these steps to configure your FM Device:

1. In the main configurator window choose your device (*FM-Tco4 HCV*, *FM-Tco4 LCV* or *FM-Pro4*).
2. **IO events** "Options" button opens up a new "IO settings" window, here you can enable or disable IO parameters.
3. In **Protocol selection** section put a tick in **Send I/O data with v1.1 protocol** checkbox. After this step, Alcohol sensor IO parameters will be displayed in the IO list.
4. Depending on your device you have up to 80 slots for parameters. Select a slot that you want to enable.
5. In the **IO properties** section tick the **Enable** check box, otherwise the slot will remain empty.
6. **ID** contains the parameter list. Choose a parameter you want to enable for the selected slot. One parameter can be enabled only one time. Alcohol sensor requires "Alcohol Sensor state" and "Alcohol Sensor test value" IO parameters to be enabled.
More details about these parameters available in "Alcohol sensor IO parameters description" table below.
7. Choose **Event on** field values for each parameter. For "Alcohol Sensor state" event on can be set to *Monitoring* or *Change*. "Alcohol Sensor test value" event on can be set to *Monitoring*, *Change* or *Hysteresis*. More information on these IO parameters available in the "Alcohol sensor IO parameters description" table.

8. In the Interfaces section, put a tick on either **PortA** or **PortB** checkbox. This should be the same device interface that is used in connection to the Alcohol sensor. In the drop down list on the right choose "Alcohol sensor". Only one sensor can be connected at the same time.

Note

Averaging is not available for Alcohol sensor IO parameters.



Alcohol sensor IO parameters description

IO parameters used with Alcohol sensor.

IO ID	Parameter name	Size, B	Min. value	Max. value	IO factor	Description
533	Alcohol Sensor state	1	0	9		0 – Not available 1 – Power ON 2 – Start blowing 3 – Above display range 4 – Above alcohol limit 5 – Below alcohol limit 6 – Error for blowing flow 7 – Error for outdoor temperature 8 – Error in sucking test 9 – Error in breath temperature
534	Alcohol Sensor test value	2	0	65535	0,001g/l per bit	Test value

Default “Alcohol sensor test value” is 65535 (0xFFFF). It will be reset every time sensor is powered on or when FM device restarts.

“Alcohol sensor state” value resets only on FM device restarts.

Note

To enable “Alcohol Sensor state” and “Alcohol Sensor test value” parameters in the IO settings window extended protocol version v1.1 has to be used.