Connecting an analog fuel level sensor to the Teltonika tracker

Connection diagram of an analog fuel level sensor to the Teltonika tracker, in accordance with Figure 1.



Figure 1 – Connecting an analog fuel level sensor to the Teltonika tracker

In this example, we use the Teltonika FMB640 tracker; in similar Teltonika trackers, the analog fuel level sensor is connected in the same way. Plus is connected to the power pin on the tracker, minus to GND, the third wire to the analog input AIN1, AIN2, AIN3 ...

After connecting the sensor and tracker, as well as supplying 12 volts, connect the Teltonika tracker to the laptop via a USB cable and open the Teltonika.Configurator application on the laptop. In Figure 2, you can see the application loading and searching for connected devices.

🕊 Teltonika.Configurat	or 1.7.40.8.FM64_R.58		-	Х
TELTO	NIKA			
	Searc	hing	_	
	Create new configuration	Open configuration file		

Figure 2 – Loading and searching for connected devices

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If the tracker is correctly connected to the laptop and there is power supply,

then the software will display this tracker, in accordance with Figure 3.

Teltonika.Configurator 1.7.40.B.FM64_R.58	– 🗆 X
Searching	
Create new configuration Op	n configuration file
Base IMEI 350424060415351 FW 01.02.22 Configuration 4.37.17.0 COM12	

After we have found our tracker, we click on it. The start window opens, as shown in Figure 4.





Next, click on the "I/O" tab, as shown in Figure 5.

	📤 Load from device	💾 Save	to device		🛄 Up	date firm	vare	🖆 Reset config	juration	FME	Can V	IMEI 3504240604153
	Load from file	🔒 Savi	e to file					🖆 Reboot d	evice	00 4		FW 01.02.22 Rev:04 Configuration 4.37.17
Status	r I/O 🚺 ———————————————————————————————————											
Security	Input Name	Current Value	Units	Priority	,			Low Level	High Level	Event C	Dnlv	Operand
System	1	0						0 4	•			
GPRS	Ignition	0		None	Low	High	Panic	0 ~	U	Yes	No	On Change
Data Acquisition	Movement	0		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	On Change
SMS \ Call Settings	Data Mode	4		None	Low	High	Panic	0 🐳	0 🔷	Yes	No	Monitoring
SMS Events	GSM Signal	3		None	Low	High	Panic	0 🔷	0 🔷	Yes	No	Monitoring
GSM Operators	Sleep Mode	0		None	Low	High	Panic	0 🐳	0 🔷	Yes	No	Monitoring
Features	GNSS Status	1		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring
Accelerometer Features	GNSS PDOP	0		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring
Auto Geofence	GNSS HDOP	0		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring
Nanual Geofence Settings	External Voltage	12195	mV	None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring
Manual Geofence Zones	Speed	0	km/h	None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring
Trip \ Odometer	GSM Cell ID	0		None	Low	High	Panic	0 🗘	0 🌩	Yes	No	Monitoring
Authorization ID List	GSM Area Code	0		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring
I/O	Battery Voltage	0	mV	None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring
LVCAN	Battery Current	0	mA	None	Low	High	Panic	0 🗘	0 💠	Yes	No	Monitoring
FMS IO	Active GSM Operator	0		None	Low	High	Panic	0 🗘	0 💠	Yes	No	Monitoring
Manual CAN IO	Trip Odometer	0	m	None	Low	High	Panic	0 🐥	0 🗘	Yes	No	Monitoring
Tachograph Data												



In this tab, we go down a little lower and find the line "Analog Input 2", in accordance with Figure 6. Our sensor is connected to this input; if we had connected the sensor to the tracker input "AIN 1", we would have looked for the line "Analog Input 1" accordingly.

Security	Input Name	Current Value	Units	Priority				Low Level	High Level	Event C	nly	Operand	Avg Const	
System	Batten/ Voltage	0	mV	None	Low	High	Danie	0 ^	0 ^	Var	No	Monitoring	10 ^	1
GPRS		0	mv	None	LOW	nign	Panic	0 ~	0 ~	res	INO	- Wonitoring -		+
Data Acquisition	Battery Current	0	mA	None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring ~	10 🗘	_
SMS \ Call Settings	Active GSM Operator	0		None	Low	High	Panic	0 🐳	0 🔷	Yes	No	Monitoring ~		
SMS Events	Trip Odometer	0	m	None	Low	High	Panic	0 👶	0 🜩	Yes	No	Monitoring 🗸		
GSM Operators	Total Odometer	1659	m	None	Low	High	Panic	0 🗘	4 🗘	Yes	No	Monitoring 🗸		
Features	Digital Input 1	0		None	Low	High	Panic	0 💠	0 🍨	Yes	No	Monitoring 🗸	1 🗘	
Accelerometer Features	Digital Input 2	0		None		High	Panic	0 🗘	0 🔷	Yes	No	Monitoring 🗸	1 🗘	
Auto Geofence	Digital Input 3	0		None	Low	High	Panic	0 🔷	1 🗘	Yes	No	Monitoring 🗸	1 \$	
Manual Geofence Settings	Digital Input 4	0		None	Low	High	Panic	0 🗘	0 🌩	Yes	No	Monitoring 🗸	1 🗘	
Manual Geofence Zones	Analog Input 1	0	mV	None	Low	High	Panic	0 🗘	0 🍨	Yes	No	Monitoring 🗸	10 🗘	1
Trip \ Odometer	Analog Input 2	1992	mV	None	Low	- High	Panic	0 🗘	0 🍨	Yes	No	Monitoring ~	10 🗘	1
Bluetooth	Angles legat 2	7		N			Durin	0 ^	0 ^		N	Manitaning M	10 ^	1
Authorization ID List	Analog input 5	7	mv	None	LOW	High	Panic	0 -	0 v	res	NO	wonitoring	10 -	-
I/O	Analog Input 4	0	mV	None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring ~	10 🗘	_
LVCAN	Digital Output 1	0		None	Low	High	Panic	0 🗘	0 🔷	Yes	No	Monitoring 🗸	1 🗘	
FMS IO	Digital Output 2	0		None	Low	High	Panic	0 🗘	0 🍨	Yes	No	Monitoring ~	1 🗘	
Manual CAN IO	Digital Output 3	0		None		High	Panic	0 🗘	0 🔷	Yes	No	Monitoring 🗸	1 🗘	
Tachograph Data	Digital Output 4	0		None	Low	High	Panic	0 🗘	0 🔷	Yes	No	Monitoring 🗸	1 🗘	1
RS232 \ RS485	Axis X	0	mG	None	low	High	Panic	0 🗘	0 🏠	Yes	No	Monitoring V	1 🌲	1
CAN \ Tachograph	A. i. M	7		None				• •	• •			Manhadan		+
ContiPressureCheck	AXIS Y	-1	mu	None	Low	High	Panic	• •	0 v	Yes	No			-
Custom scenarios	Axis Z	980	mG	None	Low	High	Panic	0 🗘	0 🕈	Yes	No	Monitoring 🗸	1 🗘	
Mobileye	IMSI	-		None	Low	High	Panic			Yes	No	Monitoring 🗸		

Figure 6 – Input of the connected sensor

Then we set up our input, for this we set "High" in the "Priority" column, and set "Monitoring" in the "Operand" column, in accordance with Figure 7.

Status	r I/O 🚺 —												
Security	Input Name	Current Value	Units	Priority				Low Level	High Level	Event C	Inly	Operand	Avg Const
System	Battery Voltage	0	mV	None	Low	High	Panic	0 🔶	0 🏠	Yes	No	Monitoring V	10 🏛
GPRS	Battery Current	0	mA	Nana	Low	Uinh	Danie	0 ^	0 ^	Vec	Ne	Monitoring Y	10 ^
Data Acquisition	A via control a	0	iiia	None	LOW	nign	Panic	0 ~	• •	Tes	NO	Monitoring •	10 🗸
SMS \ Call Settings	Active GSM Operator	0		None	Low	High	Panic	0 -	0 ~	Yes	No	Monitoring	
SMS Events	Trip Odometer	0	m	None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring ~	
GSM Operators	Total Odometer	1659	m	None	Low	High	Panic	0 🗘	4 🗘	Yes	No	Monitoring V	
Features	Digital Input 1	0		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring 🗸	1 🗘
Accelerometer Features	Digital Input 2	0		None	Low	High	Panic	0 👶	0 🍨	Yes	No	Monitoring ~	1 🗘
Auto Geofence	Digital Input 3	0		None	Low	High	Panic	0 🗢	1 🗘	Yes	No	Monitoring 🗸	1 🗘
Manual Geofence Settings	Digital Input 4	0		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	Monitoring 🗸	1 🗘
Manual Geotence Zones	Analog Input 1	131	mV	None	Low	High	Panic	0 🗘	0 🌩	Yes	No	Monitoring 🗸	10 🗘
Bluetooth	Analog Input 2	58	mV	None	Low	High	Panic	0 🗘	0 🗢	Yes	No	Monitoring 🗸 🗸	10 🗘
Authorization ID List	Analog Input 3	0	mV	None	Low	High	Panic	0 💝	0 💠	Yes	No	On Exit	10 🗘
I/O	Analog Input 4	0	mV	None	Low	High	Panic	0 🗘	0 💠	Yes	No	On Entrance On Both	10 🗘
LVCAN	Digital Output 1	0		None		High	Panic	0 🗘	0 🍨	Yes	No	Monitoring	1 🗘
FMS IO	Digital Output 2	0		None	Low	High	Panic	0 🗘	0 🌩	Yes	No	On Hysteresis On Change	1 🗘
Manual CAN IO	Digital Output 3	0		None	Low	High	Panic	0 🗘	0 🗘	Yes	No	On Delta Change	1 🗘
Tachograph Data	Digital Output 4	0		None	Low	High	Panic	0 🗘	0 🌩	Yes	No	Monitoring ~	1 🗘
RS232 \ RS485	Axis X	0	mG	None	Low	High	Panic	0 🗘	0 🏠	Yes	No	Monitoring V	1 3
CAN \ Tachograph	Avic V	0	mG	None	Low	High	Danic	0 ^	0 ^	Ver	No	Monitoring Y	1 ^
ContiPressureCheck	A.:	076		None	LOW			• •		res	NO	Manitarian	· · ·
Custom scenarios	Axis Z	9/6	mG	None	Low	High	Panic	• •	0 🐺	Yes	No	Monitoring	1.

Figure 7 – Login settings

Then click "Save to device" to save the changes to the tracker, in accordance with Figure 8.

Teltonika.Configurator 1.7.40.B.F	M64_R.58														-	
	🛓 Load from device	💾 si	ave to device		🖞 Upda	te firmw	are	🗅 Res	et configuration]			ſ	FMBG40	IMEI 3504240604 FW 01 02 22 Rev	415351 ∙∩4
	🗟 Load from file	R	Save to devi	ce				Ċ)	Reboot device					and the second	Configuration 4.3	87.17.0
Status	_ I/O ()		Save configu	ration to	device											
Security	Input Name	Current	t Value	Units	Priority				Low Level	High Level	Event (Only	Operand		Avg Const	
GDRS	Battery Voltage	0		mV	None	Low	High	Panic	0 🕺	0 🖕	Yes	No	Monitoring	~	10 🗘	
Data Acquisition	Battery Current	0		mA	None	Low	High	Panic	0 🔹	0 🔷	Yes	No	Monitoring	~	10 🗘	
SMS \ Call Settings	Active GSM Operator	0			None	Low	High	Panic	0 🔹	0 🔷	Yes	No	Monitoring	~		
SMS Events	Trip Odometer	0		m	None	Low	High	Panic	0 🐥	0 🔹	Yes	No	Monitoring	*		
GSM Operators	Total Odometer	1659		m	None	Low	High	Panic	0 🔪	4 🗘	Yes	No	Monitoring	~		
Features	Digital Input 1	0			None	Low	High	Panic	0 🕺	0 💠	Yes	No	Monitoring	~	1 🗘	
Accelerometer Features	Digital Input 2	0			None	Low	High	Panic	0 👶	0 🔹	Yes	No	Monitoring	~	1 🗘	
Auto Geofence	Digital Input 3	0			None	Low	High	Panic	0 🔹	1 🗘	Yes	No	Monitoring	~	1 🗘	
Manual Geofence Settings	Digital Input 4	0			None	Low	High	Panic	0 🖕	0 🔷	Yes	No	Monitoring	~	1 🗘	
Manual Geotence Zones	Analog Input 1	21		mV	None	Low	High	Panic	0 🐳	0 🔷	Yes	No	Monitoring	~	10 🗘	
Bluetooth	Analog Input 2	65		mV	None	Low	High	Panic	0 🔹	0 🔷	Yes	No	Monitoring	~	10 🗘	
Authorization ID List	Analog Input 3	21		mV	None	Low	High	Panic	0 🐥	0 🔹	Yes	No	Monitoring	~	10 🗘	

Figure 8 – Saving tracker settings

A window will appear informing you that the settings have been saved, click

"OK" and disconnect from the tracker, in accordance with Figure 9.

🗱 Teltonika.Configurator 1.7.40.B.Fl	M64_R.58				
	Load from device	💾 Save to device	Update firmwa	are Reset configuration	
	Load from file	Save to file		C Reboot device	
Status	Device Info				
Security	Device Name Las	t Start Time Power Volt	age External Stora	age Battery Voltage 目	J
System	FMB640 18.	11.2015 03:00:07 12195 mV	Not Present	Format 0 mV	
Data Acquisition	Firmware Version RT0 01.02.22 Rev:04 18.	CTime Device IME 11.2015 03:11:06 350424060-	I Device Uptim 415351 00:10:58	e Internal Battery Status Not Charging 0%	
SMS \ Call Settings	GNSS Info	in I/O Info Tachor	Naintananco		
SMS Events			apri maintenance		
GSM Operators	Medule Status GNSS D	Location	la Altituda HDOR	Maille la une	
Features	ON 2762	0, 0	0 0		CIONASS
Accelerometer Features	Fix Status Fix Time No fix 00:00:00	Speed	Angle PDOP		JUNASS J
Auto Geofence		0 km/h.	0. 0	BeiDou Galileo BeiDou 0 0 0	Galileo 0
Manual Geofence Zones				Total In View Total In I	Use
Trip \ Odometer				0	
Bluetooth					

Figure 9 – Disconnecting from the tracker

At the end, we close the application, and perform further calibration and configuration through the monitoring platform.