Smart ignition

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Introduction to Smart Ignition Detection functionality

Smart Ignition detection is a functionality which detects ignition by sudden external voltage jumps instead of manually predefined High and Low voltage thresholds. This feature is especially beneficial to clients who want to monitor the ignition status of a vehicle based on the voltage of the battery, irregardless of the battery's health.

Smart Ignition Detection functionality logic

Figure 1. "Smart Ignition" functionality logic

"Smart Ignition Detection"– detects ignition "on" and "off" automatically by monitoring last "Smart Ignition Duration" seconds of external voltage and comparing it to current external voltage value. If current external voltage value is higher by "Smart Ignition Delta" than external voltage "Smart Ignition Duration" seconds ago, Ignition "on" event is detected. If current external voltage value is lower by "Smart Ignition Delta" than "Smart Ignition Duration" seconds ago Ignition "off" event is detected.

Smart Ignition Detection configuration

New configurable parameters were added under "Ignition Settings" (Figure 2):

• Smart Ignition Enable/Disable – To enable functionality. Parameter is able to be configured if "Ignition Source" has "Power Voltage" configured.

• Smart Ignition Delta (mV) – How much external voltage must change to detect ignition ON or OFF event.

• Smart Ignition Duration (s) – Time interval used for comparing current external voltage against historical external voltage configured seconds ago.
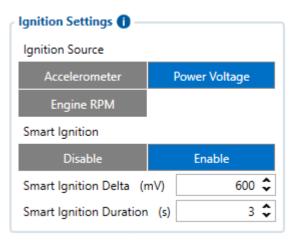

Figure 2. "Smart Ignition" configurable
parameters

In case the vehicle has a variable voltage alternator, also known as a smart alternator, an alternative configuration is advised -- taking into account movement detection by accelerometer, in order to monitor the ignition status of the vehicle.

Figure 3. "Smart Ignition" recommended
configuration for vehicles with smart
alternators

Parameter list

Parameter ID	Name	Value range			Description
		Min	**Max**	**Default**	
66201	Smart Ignition	0	1	1	0 - Disabled; 1 - Enabled
66202	Smart Ignition Delta, mV	100	2000	600	How much external voltage must change, in miliVolts to detect ignition ON or OFF event.
66203	Smart Ignition Duration, s	2	20	3	Time interval, in seconds, used for comparing current external voltage against historical external voltage configured seconds ago.

Firmware and hardware compatibility

Smart ignition detection functionality is available for FMT100/FMX880 devices on the firmware 03.29.00.rev.980. You can download the firmware and configurator here.