

# FMA120 Sleep modes

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There are two sleep modes:sleep and Deep sleep.

## Sleep mode

FMA120 is able to go to sleep mode after configurable Sleep timeout.

Sleep mode timeout starts counting when device is in STOP mode. After timeout is reached and all conditions for sleep mode are met, the device goes into sleep mode. When in sleep mode, FMA120 turns GPS module off and stops making new periodic records. As a result power usage decreases, in turn saving vehicle battery.

FMA120 will enter sleep mode if ALL of these conditions are met:

- FMA120 is configured to work in Sleep mode and sleep timeout is reached;
- Device time is synchronized with GNSS satellites and GPS fix is obtained;
- Movement is not detected by the accelerometer or configured movement source;
- Ignition (configured ignition source) is off;

FMA120 exits GPS sleep mode if ONE of following conditions is true:

- Movement by accelerometer or configured movement source is detected;
- Ignition (configured ignition source) is turned on.
- USB cable is connected.

## Deep Sleep mode

While in deep sleep mode, FMA120 sets the GNSS receiver to sleep mode and turns off GSM/GPRS module (hence it is not possible to wake up device via SMS). Despite records with last known coordinate being saved and sent to AVL server (GSM/GPRS module is turned on to send data and then it is turned off), power usage is decreased to save vehicle's battery. Please note that power saving depends on two configurable parameters: *Send Period* and *Minimum Record Saving Period* in "X on Stop Mode". When records are sent successfully in deep sleep mode, open link timeout counter will be skipped and FMA120 will enter deep sleep mode immediately.

Because a lot of functions are disabled in deep sleep mode following I/O elements are disabled from records that are generated in this mode: GSM Signal, GNSS Status, GNSS PDOP, GNSS HDOP, GSM CellID, GSM Area Code, Active GSM Operator, Trip Odometer, Total Odometer, Speed, Fuel Rate GPS, Fuel Used GPS and ICCID. FMA120 can enter deep sleep mode if ALL of these conditions are met:

- FMA120 is configured in Deep Sleep mode and sleep timeout is reached;
- Device time is synchronized with GNSS satellites and GPS fix is obtained;
- Ignition (configured ignition source) is off;
- Movement is not detected by the accelerometer or configured movement source;
- *Min. Record Saving Period* (FMA120 Data acquisition mode settings) must be larger than *Open Link Timeout* parameter, so that FMA120 could close GPRS link;
- The difference between *Send Period* (FMA120 Data Acquisition Mode settings) and *Open Link*

*Timeout* must be more than 90 seconds, so that FMA120 could close GPRS link within at least 90 seconds;

- Data socket(s) are closed;
- Data sending is not in progress;
- FOTA is not in progress.

FMA120 exits deep sleep mode if ONE of following conditions is true:

- Movement by accelerometer or configured movement source is detected;
- Ignition (configured ignition source) is turned on.
- USB connected<br\>

Note: In order to save GPRS traffic records saved in deep sleep mode do not contain below listed I/O elements information:

 PDOP, HDOP, Odometer, Speedometer, iButton ID, Cell ID, Area Code, Temperature and GPS power