


# Template:FMA1 Trip and Odometer settings

## Virtual Odometer

Virtual odometer is used to calculate traveled distance in FM36YX as a separate I/O element. When FM36YX detects movement, it starts counting distance using GNSS signal: every second it checks current location and calculates distance between current and previous point. It keeps adding these intervals until it is time to make a record, then FM36YX records its location and adds odometer value, which is equal to the sum of all distances, measured every second. When record is made, odometer resets to zero and distance calculation starts all over again. Virtual odometer as an I/O element can be also used with [Trip](#).

## Trip

Trip customizable feature enables user extended monitoring of performed trips (from engine start at present location to engine stop at arrived location), log their start and stop points, view driven total distance. Event will be generated (included into send records) only when trip starts and finishes. This feature is available on all FM36YX hardware versions without limitations.

 Note: Scenarios and Trip features are activated (DOUTs are activated) only if DIN1 = 1 (ignition is on).



If Trip is enabled following parameters are configurable:

- Start Speed - GPS speed has to be greater than the specified Start Speed in order to detect Trip Start.
- Ignition Off Timeout - timeout to wait if ignition (configured Ignition Source) was off, to detect Trip stop.
- Continuous distance counting - Not or Continuous can be chosen. For this feature I/O Trip distance must be enabled.
- Remember iButton ID - devices remembers connected iButtons id(While trip is detected) and sends it to server along with periodical records.

If I/O Trip distance is enabled and Continuous distance counting variable is set to Continuous, Trip distance is going to be counted continuously (from Trip start to Trip stop). This value is written to I/O Trip distance value field. When Trip is over and next Trip begins, Trip distance value is reset to zero. When the next trip starts counting continuously starts from the beginning again.

If I/O Trip distance is enabled and Continuous Distance Counting variable is set "Not", then the distance is going to be counted only between every record made. This value is written to I/O Trip distance value field and reset to zero every new record until Trip stops. If later all Trip distance values are summed up manually, the user gets the distance driven during the whole period of the Trip.



Continuous odometer calculates the distance if Total Distance I/O element is enabled. Odometer Value is constantly saved to flash memory every 30 seconds, but counted every second. After power is turned off, odometer value saved in flash does not reset. Start odometer value with can be set using configurator („set“ button) or SMS/GPRS (setparam/getparam) commands. This parameter can not be configured via TCP config. If this value is not set, FM36YX starts counting from 0. Continuous odometer works irrespective of the Trip functionality.