

# DIWICON-M

## DW 418 MX / DW 418 MXV

### PERSONAL TRACKING & COMMUNICATION DEVICE

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Compact and intelligent tracking device with GPRS communication

#### FEATURES

- GPS satellite localization
- GSM/GPRS based communication
- Connectible to navigation systems (optional)
- Voice function (optional)
- Emergency (panic) button
- Integrated motion sensor
- Integrated 'non-volatile' memory

#### SPECIAL CHARACTERISTICS

- High sensitivity GPS receiver
- Integrated, high capacity rechargeable battery
- Remote software update
- Optional magnetic base
- Low power consumption
- Integrated, intelligent battery charger

#### INDUSTRIAL QUALITY

- Operational temperature range  
-10°C to +60°C
- Case meets the requirements  
of the IP65 safety standard

#### SOCKET AND CONTROL

Battery charging

Optional:

- RS232 port
- Headset plug
- Integrated beeper
- Mode selection button

#### FUNCTIONS

- High sensitivity GPS localization  
(even indoors with limited accuracy)
- Motion sensor for tracking  
and power management
- GPRS based TCP/IP communication  
with the central database
- Engineering port
- Setting via WEB based interface
- Long operation time (10 - 80 hours)

#### GPS RECEIVER CHARACTERISTICS

- Chipset: Embedded  $\mu$ blox LEA 4S
- Channels: 16
- PPS precision: 43 ns
- Receiver sensitivity: -158 dBm
- Active/passive antenna
- Antenna disconnect and short circuit protection



## TECHNICAL DATA

Power:	Built in rechargeable 3.6 V DC Li-Ion
Input power for charging battery:	9-30 V DC $\pm$ 10%
Operational temperature range:	-10°C to +60°C
Storage temperature range:	- 40°C to +120°C
Relative humidity:	5% to 95% (non condensing)
Vibration:	< 15 Hz, deviation $\pm$ 2.5 mm/ 15 Hz - 150 Hz, 2.1 g
Dimensions (LxWxH):	109 x 30 x 65 mm
Weight:	85 g (without battery)
Reverse polarity protection:	Yes

## OPERATIONAL DESCRIPTION

### APPLICATIONS

- Personal tracking
- Security applications (emergency signal, localization)
- Vehicle tracking
- Freight delivery tracking

### BASIC FUNCTIONS

The basic functions of DW 418 MX / DW 418 MXV are the automatic communication of alarm signals, position data, speed data, condition data, and other data to a central database server.

The central server module generates alarms to the central and regional monitoring workstations and delivers a detailed digital map on which the unit can be monitored.

In addition to geographical positioning, numerous statistical and reporting functions are available to the user, such as the travel log.

### OPERATION

When charged and switched on, the unit will wake up the GPS receiver which will determine its position if it receives signals from an adequate number of GPS satellites. At the same time, the device establishes a GPRS connection and registers with the central database to which it sends the detailed information collected.

If the device senses motion based on system engineer defined settings the, it will collect position and speed data and store it in non-volatile memory. DW 418 MX / DW 418 MXV can store up to several weeks of data which is automatically uploaded to the server.

In order to optimize tracking and power consumption, a built-in motion sensor detects when the unit is not

in motion and automatically switches to standby mode after a specified period of time.

The sensitivity of the motion sensor can also be adjusted. Power consumption in standby mode is extremely low thus eliminating the need to switch the device off when not in use. When the device begins to move again, object tracking automatically begins.

For in-vehicle use, constant 12 or 24 V DC power can also be supplied to the unit.

### VOICE COMMUNICATION (ONLY MXV)

DW 418 MXV supports voice communication for specialized security applications.

The user can signal a number of pre-determined and adjustable messages to the dispatcher, by pressing the multifunctional button in various combinations (short, long, double short), which can also include a request to establish a voice call or to signal an emergency situation when help is required.

### SETTINGS

The operational parameter settings are easily adjusted via the web interface of the central server. These pages allow for adjustment of the network settings, the tracking and motion sensor sensitivities, stand-by mode timing, and signal button functions.

### SOFTWARE UPDATE

To ensure easy upgradeability, the flash program memory of the microcontroller can be remotely accessed by system engineers. The upload is done with the help of the DIWICON 9000 FWU software module.

