

TF1

TotalFinder

UNIVERSAL MONITORING UNIT FOR LONG-TERM TRACKING & MONITORING WITH AN UNPRECEDENTED BATTERY LIFE AND EASY INSTALLATION BY STRONG MAGNETS

USAGE AND CHARACTERISTICS

For monitoring and tracking of railway wagons, containers, heavy machinery and construction equipment, trailers and caravans.

- » Tracking at preselected time interval
- » Monitoring of temperature, air pressure, humidity, acceleration, vibration and tilting
- » G-shock event reporting
- » Bluetooth 5.0 long range for external Sensor (optionally)
- » Easy installation by extremely strong magnets
- » Special holder for secure installation available
- » Charging by USB-C
- » Battery life up to 4 years on a single charge (1 position a day)
- » NB IoT and Cat M1 connectivity (optionally)



MEASURES AND TRANSMITS

- » Exact position of GNSS satellite system
- » GSM cell ID and signal strength
- » Speed and direction of movement
- » Temperature, air pressure, humidity, altitude
- » Tilting - removal detection
- » Battery voltage and status
- » G-shock event reporting
- » Up to 100 values of external long range BT 5.0 sensors

TYPES AVAILABLE*

| TYPE | GSM | BATTERY | CHARGING | LONG RANGE RECEIVER |
|------------|---------------------|-------------------------------|----------|---------------------|
| TF 100 203 | 2G | Lilon 15 600 mAh rechargeable | USB-C | - |
| TF 100 204 | 2G | Lilon 21 600 mAh rechargeable | USB-C | - |
| TF 100 003 | 2G/4G NB-IoT/Cat M1 | Lilon 15 600 mAh rechargeable | USB-C | - |
| TF 100 004 | 2G/4G NB-IoT/Cat M1 | Lilon 21 600 mAh rechargeable | USB-C | - |
| TF 102 204 | 2G | Lilon 21 600 mAh rechargeable | USB-C | BT 5.0 |
| TF 102 004 | 2G/4G NB-IoT/Cat M1 | Lilon 21 600 mAh rechargeable | USB-C | BT 5.0 |

*for customized solutions - combination of 2G, 4G NB IoT and/or Cat M1 - contact our sales department

ACCESSORIES

| | |
|------------|---|
| MD 092 000 | Robust metal holder for secure fixing (protected by patent) |
| MD 092 001 | Special tool for releasing the unit from holder |
| SA 092 000 | USB charger 2A (including cable) |
| BS 010 390 | BT 5.0 temperature sensor |
| BS 020 130 | BT 5.0 robust temperature sensor |
| BS 030 380 | BT 5.0 access card |
| BS 040 540 | BT 5.0 door sensor |
| SA 050 001 | BLE wireless fuel level sensor |



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UNIVERSAL MONITORING UNIT FOR LONG-TERM TRACKING
& MONITORING WITH AN EXTREME BATTERY LIFE AND EASY
INSTALLATION BY STRONG MAGNETS

TECHNICAL PARAMETERS

| | | | |
|---|--|---|-------------------------------|
| GSM | version 2G | 850/900/1800/1900 MHz | |
| | version 4G NB-IoT/Cat M1 | B1@2100MHz, B3@1800MHz, B8@900MHz, B5@850MHz, B20@800MHz, B28@700 MHz | |
| | version 4G LTE Cat M1 /NB-IoT/ EGPRS | B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28/B39 - for Cat M1 only @ LTE 850/900/1800/1900 @EGPRS | |
| | SIM | Nano Sim, Plug -in 1.8 V | |
| | | SIM Chip | |
| | Types of communication | Calling , SMS, GSM Data, GPRS | |
| | Calls | Alarm call | |
| | SMS | Alarm & Info SMS, SMS commands, requests, SMS configuration | |
| GPRS internet connectivity | Class 12/ static & dynamic IP VPN, UDP protocol / 128bit security encryption key / FW upgrade, configuration settings, on-line value reading, report memory reading, control | | |
| GNSS | GPS , Glonass, Beidou | 33 tracking channels, 99 acquisition channels, 210 PRN channels | |
| ANTENNAS | GPS, GSM, BT 5.0 | Internal | |
| BATTERIES | Type and capacity | Lilon 15 600 mAh rechargeable | Lilon 21 600 mAh rechargeable |
| CONSUMPTION | Standby | 4 mAh / day | |
| | One Trackpoint + data sending | 1 mAh / each position | |
| | Self-discharge of battery | 14 mAh / day | |
| INPUTS | USB C - covered by rubber cap | Charging /report memory reading/ configuration/FW upgrade ~ sealed optionally | |
| SENSORS | 3 dimensions G sensor | Movement detection / tilt detection / vibration histogram / G-shock | |
| | Other sensors | Temperature, humidity, air pressure | |
| WIRELESS EXTERNAL SENSOR INTERFACE | Bluetooth 5.0 long range | Range up to 250m in free space / 30m in buildings Up to 100 sensors | |
| INTERNAL MEMORY | Flash 512 kB | Capacity 5000 events or positions | |
| DIMENSIONS | Plastic box | 177 x 85 x 25 mm | |
| TEMPERATURE RANGE | Lilon rechargeable batteries | -25 °C up to +70 °C, charging 0 °C up to +70 °C | |
| PROTECTION CLASS | IP66 | Waterproof | |
| WEIGHT | With batteries | 550 g | |
| STANDARDS | EMC | EN 50121-3-2 ed.4 EN 61000-6-4:2007+A1:2011 EN 55032:2015 EN 55024:2010 | |
| | LVD | EN 62368-1:2014+A11:2017 | |
| | Climatic testing | EN 50155 EN 60068-2-2 EN 60068-2-1 ed.2 EN 60068-2-30 ed. 2 | |
| | Shock and vibration | EN 61373 ed. 2 | |
| | IP code | EN 60529 | |