

TrimTrac Pro



The TrimTrac Pro Locator

Key Features:

- Portable, AA Battery-Powered
- No External Wires or Antennas Needed
- Low or No Installation Costs
- No Custom Programming Required
- Ready-to-Use Water-Resistant Housing
- Quad-band GSM/SMS/GPRS
- Enhanced GPS

Hardware Options:

- Remote GPS Antenna
- Plug-in Modules for:
 - Input Monitoring
 - Output Control
 - External 9-32 VDC Power
- Metal Bracket
- Quick-release Plastic Bracket

Key Capabilities:

- Intelligent Motion-based Reporting
- Runtime Meters
- On-board Geo-fencing
- Scheduled Hours of Operation
- Start/Stop Reporting
- Speed Monitoring
- Exception Alert Reporting
- Over-the-Air Programability



Portable, Compact, Affordable

The TrimTrac™ Pro locator is a compact, light-weight asset monitoring device that requires little, if any, installation when used in its battery-powered configuration. Different hardware options allow the device to be configured to meet a variety of demanding installation and operational requirements. Motion-based reporting continues to be an important tool in minimizing power consumption and recurring communication costs.

Ready-to-Use, No Custom Programming Required

Simply insert an activated SIM card and batteries and the TrimTrac Pro is ready to start reporting position to your designated SMS or GPRS destination address. In its default configuration, reports are sent at 15-minute intervals whenever there is motion; status messages are sent once every 12 hours when the device is at rest. When you turn on the device, it will self-initialize anywhere in the world and then start transmitting, if an authorized GSM network is available.

Alternatively, you can easily reconfigure the unit to address any number of more sophisticated applications or, when used with an optional plug-in module, connect it to external power, monitor multiple inputs, and control other systems or devices, such as door locks, immobilizers, and remote start systems.

While a basic understanding of the different TrimTrac Pro operational states is helpful, configuring the TrimTrac Pro does not require a highly-skilled software programmer or technician.

Cost-effective, Universally Available Communications

The TrimTrac Pro takes advantage of the near universal availability of GSM SMS text messages while also leveraging cost-effective GPRS data rate plans. Typical SMS plans offer very extensive inter-network roaming capabilities, both within a host country and internationally. SMS plans also tend to be too pricey for applications requiring more than a few reports per day. GPRS data plans, on the other hand, typically allow for lower recurring communication costs although GPRS coverage and roaming can be restricted in some areas. The TrimTrac Pro takes advantage of both technologies by automatically selecting GPRS wherever such service is available, while relying upon SMS text messages as backup when outside GPRS coverage. This helps minimize recurring communication costs while allowing the greatest coverage possible.

Hardware Options, Expanded Capabilities

A number of different hardware options are available to enhance the suitability of the TrimTrac Pro to particular application requirements. These options include a miniature external GPS antenna that allows for more discrete, protected installation of the TrimTrac Pro.

In addition, two plug-in modules are offered; both provide connection to external 9-32 VDC power to eliminate the need to change batteries and can monitor inputs of three different priority levels. The Control Module also provides two outputs that can be used to control other on-board devices or systems, such as door locks, immobilizers and remote start systems.

To address different mounting requirements, two mounting brackets are offered. A metal bracket is available for more permanent

installations while a “quick-release” style plastic bracket is used when rapid insertion and removal of the TrimTrac Pro is required. This is particularly useful when a battery-powered TrimTrac Pro is routinely moved from one asset to another.

Enhanced Functional Capabilities

Position reporting triggered by motion continues to be an important attribute of the TrimTrac Pro; however, this basic capability is now augmented by a range of powerful new functional enhancements.

On-board Geo-fencing

The TrimTrac Pro supports on-board geo-fence enforcement. You can establish a geo-fence during initial activation of the device, or on-the-fly through over-the-air commands or through operation of a local switch connected to the TrimTrac Pro input module. You can define the geo-fence to report whenever the device is inside or outside the defined area or upon crossing a geo-fence area. These capabilities allow the device to be “locked down” where needed without creating nuisance reports during normal operation.

Scheduled Hours of Operation

Establishes how the device will report during daily hours of normal operation. During normal hours of operation, position reports may not be needed unless, for instance, a geo-fence has been violated. Outside normal hours of operation, however, any motion of an asset may be considered “unauthorized” and it would be desirable for the TrimTrac Pro to report this motion and its current position. Monitoring of equipment at a construction site is an application example that would use this Schedule Hours of Operation feature, possibly in conjunction with a geo-fence.

Runtime Meters

Equipment maintenance schedules are often managed based upon accumulated run-time hours. The TrimTrac Pro offers two resettable runtime meters: one is triggered by motion and if a plug-in module is used, the other can be hardwired to sensor, such as an oil pressure switch.

Start/Stop Reporting Mode

This mode causes the TrimTrac Pro to transmit one position report after first motion and one position report after coming to rest. There are no reports transmitted in between even though the device may be logging, but not transmitting, positions in the back ground. This provides a historical log that could be queried should the need arise while minimizing communication costs in the mean time.

Automatic Log Dump

When GSM coverage becomes available after a period of no coverage, TrimTrac Pro can be configured to transmit messages that had been logged while there had been no GSM coverage. This feature would be used when the TrimTrac Pro is expected to come in and out of GSM coverage areas.

Sample Target Applications:

- Unpowered Asset Monitoring
- Loss Prevention and Security
- Untethered Trailer Tracking
- Vehicle Track and Trace
- Equipment Management
- Fixed Asset Monitoring



Product Information



TrimTrac Pro Product Information

GSM Specifications

GSM	GPRS Multislot Class 10, Class B Operation Short Message Service (SMS)
850/1900/900/1800	Class 4 (2W) at 850/900 MHz (EGSM) Class 1 (1W) at DCS1800/PCS1900 MHz
SIM	1.8 V/3.0 V
Type Approvals	PTCRB and GCF CC FCC Parts 15 and 24 Industry Canada CE MARK E MARK ECR & TTE Type Examination

GPS Specifications

General	L1 (1575.42 MHz) frequency, C/A Code
Sensitivity	Minimum -136 dBm Acquisition
Accuracy	Horizontal: < 6 meters Altitude: <11 meters Velocity: 0.06 m/sec
Acquisition Times	Signal Power -130 dBm -136 dBm Warm Start (50%) <39 sec <80 sec
Dynamics	Acceleration: 4 g (39.2 m/sec ²) Motional Jerk: 20 m/sec ³
Datum	WGS-84

Environmental Specifications

Temperature ¹	Normal Operating: -10 to 55° C Max. Operating ² : -20 to 75° C Storage: -40 to 85° C
Humidity Casing	5% to 95% RH non-condensing at +40° C IP55 except when used with external GPS antenna or Control Module
Vibration ³	0.008 g ² /Hz 5 to 20 Hz 0.05 g ² /Hz 20 to 100 Hz -3 dB/octave 100 to 900 Hz
Shock ³	Operational: 40 g for 11 m/sec Non-Operational: 75 g for 6 m/sec

Physical Specifications

Assembly	Injection molded plastic
Size	143.3 mm x 76.2 mm x 36.7 mm 5.78" x 2.99" x 1.44"
Weight	205 grams (7.2 oz) not including batteries 300 grams (10.5 oz) with 4 AA alkaline batteries

Electrical Characteristics

Primary Power	Four AA alkaline batteries (not included) or 9-32 VDC(3)
Battery Life	Up to 90 days (10 reports/day, -130 dBm GPS)
Connectors	None unless used with external GPS antenna or Plug-in module

Ordering Information and Accessories

TrimTrac Pro	Includes basic unit cover, and battery pack for four AA batteries
Vehicle Adapter Module	Replaces standard battery pack and allows connection to external 9-32 VDC power supply and three types of switched inputs. Includes rechargeable battery to allow limited operation after loss of external power driver outputs
Control Module	Same as above plus two 500 mA low-side driver outputs
Remote GPS Antenna	Active micropatch antenna with magnetic mount and 5 m cable
Provisioning Kit	Provisioning Modules used to commission TrimTrac locator prior to initial use. Includes Manual CD-ROM, USB A-to-A data cable for connection to USB (2.0) port on PC
Starter Kit	Complete kit consisting of one each of all of the above plus preferential technical support
Mounting Bracket	Metal bracket for permanent or rugged installations
Clip-in Bracket	Quick release plastic holster-style bracket

Customer Supplied Items

- Active SIM card
- AA batteries
- Input switches and interface devices
- Installation compliances

Notes:

- 1 Excluding batteries
- 2 Operational except deviations from GSM specification may occur.
- 3 Requires a Plug-in module

Trimble Navigation Limited is not responsible for the operation or failure of operation of GPS satellites or GSM networks or the availability of GPS satellite or GSM signals.

Trimble has relied on representations made by its suppliers in certifying this product as RoHS compliant.

