LEGAL NOTICE XSOLE PTI

WHAT IS XSOLE PTI?

The XSole PTI module is a stand-alone radio-electronic device for professionals for the personal protection of workers. It allows the transmission of automatic or voluntary geolocated alarms.

XSole PTI refers to the device resulting from the combination of the XSole PTI module with the specific XSole TRAXxs comfort insole.

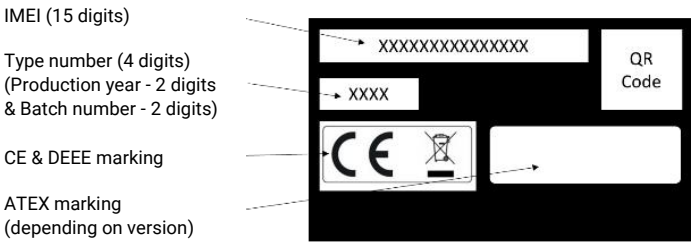
Maker:
TRAXxs SAS WTC
Ecopolis, entrance M
1300 route des cretes
06560 Sophia Antipolis, France
www.traxxs.net
TRAXxs SAS declares that the XSole PTI product meets the requirements of the European Directive 2014/53/EU.

For more information and documentation on TRAXxs products, please visit www.traxxs.net

In case of translation, the French version of this notice is referenced.

Marking and identification of the XSole PTI module:

The following information is engraved on the underside of the module:



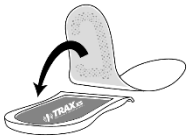
The IMEI is a 15-digit number that uniquely identifies the module.

REQUIREMENTS: SERVICE ACTIVATION

The XSole PTI module contains a multi-operator M2M SIM card crimped into the module. It cannot be removed or changed by the user. For it to work, the user must have a valid subscription to the service and associate the module with a user account: this is the pairing procedure. The IMEI of the module will be required. Get in touch with the service provider to find out what to do.

INSTALLING THE XSOLE PTI MODULE:

XSole PTI is to be used in anti-static work shoes and work shoes with anti-puncture composite inserts that comply with EN ISO 20345 or EN ISO 20347.



Glue the XSole PTI module under the XSole sole corresponding to the right foot. Repeat with the plastic phantom module under the XSole sole corresponding to the left foot.

Remove the original comfort insoles from the shoes and replace them with the XSole PTI insoles assembled as described.

Optionally, the XSole sole can be re-cut to match the size of the original soles. Never cut out the XSole PTI module. Any alteration of the physical integrity of the module may cause irreparable damage to the product and cause serious injury to persons (refer to the safety warnings and precautions for use described in the following parts of this manual).

DEVICE POWER:

Battery:

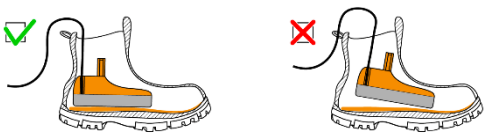
The XSole PTI module contains a high-capacity lithium-ion battery crimped into the device that cannot be replaced by the user. The device continuously monitors the state of charge and temperature of the battery. If an anomaly is detected, the device will move to safety.

Charging the device:

The device is charged inductively and is done exclusively with the TRAXxs charger. The ambient temperature should be between +0°C and +40°C. Charging in an ATEX (potentially explosive atmosphere) restricted area is prohibited.

Verify that the country voltage matches the voltage on the charger's USB power adapter. Plug the charger's USB termination into the adapter and then plug the adapter into the AC power plug.

The charger can be plugged directly into a car's standard CE USB socket (5VDC, 500mA minimum). Charging may be slower in this case.



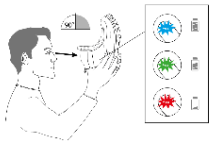
Insert the charger into the shoe and place it over the area corresponding to the heel of the sole. The LED of the charger provides the following feedback:

- 1 flash per second: charging is carried out correctly,
- 2 flash per second: charging is not done correctly, the charger is placed too far forward in the shoe or too far to the side.
- No flashing: charging is not taking place. Check that the outlet to which the charger is plugged is supplied with power and that the charger is positioned above the module slot. Contact the supplier if charging is not operational.

The charging produces a slight heating of the sole. Do not interfere with the natural ventilation of the shoe to allow indoor air to escape to the outside.

Checking the battery charge level:

To check the battery charge level, remove the charger and place the shoe vertically. The LED visible through the insole starts flashing rapidly after a few seconds; The colour indicates the charge level:



- Blue: maximum charge level
- Green: correct charge level, autonomy of about a short day's work
- Red: low charge level, battery life less than half a working day

Note: The flashing of the LEDs when the sole is horizontal has no relation to the charge level.

The estimated charge level can also be checked remotely from the monitoring tool.

Battery Care & Destruction:

The built-in battery in the XSole PTI module is designed for an indicative lifespan of 500 charge and discharge cycles. For the same use, the continuous operating time is less with an older battery. The battery will age faster depending on whether it is often allowed to discharge completely, or if it is not sufficiently charged. In order to prolong the performance of the battery, XSole PTI should be charged as often as possible after each day of use and avoid allowing the device to discharge completely.

NEVER attempt to remove or replace the battery. If the battery is damaged, it could catch fire or explode or release toxic gases.

Used XSole devices must be destroyed through specialized channels for the processing of electronic devices and Lithium batteries according to the specific regulations of the country of use. They can also be returned to the TRAXxs SAS headquarters for destruction.

OPERATION:

XSole PTI is equipped with an accelerometer that analyzes foot movements and position in all three dimensions. It activates automatically as soon as activity is detected. In order to prolong the autonomy, it goes on standby as soon as the activity ceases and the foot returns to a "conventional" resting position.

Alarm for loss of verticality and prolonged immobility

In the event of loss of consciousness, the legs no longer bear: the foot is in a position where the person's verticality is lost. The same applies if the person is lying or partially lying on the ground.

Detection phase: XSole PTI detects the loss of verticality and engages a counter. If no movement is detected before the meter expires, then the situation is considered unconventional and the device enters the pre-alert phase to inform the wearer.

Pre-alert phase: the sole emits intermittent vibrations close together. If all goes well, the wearer can cancel the alert with a slight movement of the foot and the vibration stops. Otherwise, the module transmits the alert to the TRAXxs server, which results in a longer vibration and the end of intermittent vibrations.

Note: All parameters (angle, counter, duration of the pre-alert) can be configured from the supervision application. This makes it possible to adapt the behaviour of the sole to specific work situations, such as personnel who have to lie down or kneel temporarily

SOS Alarm

The wearer can trigger an alert at any time to signal an emergency situation and request help.

Trigger: Tap your right heel against the other three times while resting on the ball of your foot

Pre-alert phase : the sole emits intermittent vibrations close together. If desired, the wearer can cancel the

alert by tapping their foot on the ground three times. Otherwise, the module transmits the alert to the TRAXxs server, which results in a longer vibration and the end of intermittent vibrations

Notification of support for the loss of verticality alert or the SOS alarm by supervision:

A long vibration informs the user that the alert is being taken care of by a supervisor.

Cancelling the Vertical Loss Alarm or SOS Alarm:

Once the pre-alert phase is over and the alarm is sent, the alarm cancellation is done from the monitoring application only.

Charging the device cancels out current alerts.

Evacuation alarm:

Porters can be informed of an alert sent by the supervisor to notify them to apply an emergency procedure, such as an evacuation of the site for example. In this case, the insole vibrates continuously for 20 seconds and repeats every 2 minutes while the alert is in progress.

Danger Zone:

The wearer is informed that he is in the danger zone by intermittent vibrations of the sole. The configuration of the danger zones is done by supervision.

Automatic connection to the mobile phone network:

XSole PTI is equipped with a multi-operator M2M SIM embedded in the device. This SIM cannot be removed or replaced by the user. From anywhere in the world, the device detects available operators and automatically connects without any user intervention. XSole PTI is delivered with an European mobile operator plan. Check with you service provider for commercial conditions to activate Worldwide operator plan and technical compliance with local mobile operators technology.

Geolocation of alerts:

The geolocation of the device is transmitted to the supervision during the alert phases. It is estimated either by GPS satellite positioning or by the XSpot indoor positioning technology developed by TRAXxs.

PRECAUTIONS FOR USE

Technologies radio

The XSole PTI solution is a security aid and cannot be considered completely foolproof. In particular, some of its functionalities depend on the GSM network and satellite networks that are operated by state or private operators independent of TRAXxs. The quality of service may vary without notice and without the knowledge of TRAXxs or its customer.

For satellite positioning to work, the device must have an unobstructed view of the sky at all times. In degraded conditions, such as under thick tree foliage or during a thunderstorm, the accuracy of the location may be decreased. For the same reason, GPS positioning may not work or may be impaired inside buildings. In this case, use XSpot-based TRAXxs technology for indoor positioning.

The device uses the mobile phone network to communicate with the TRAXxs server. The transmission of all messages is carried out by the telephone operator, whose quality of service may vary without prior notice and without TRAXxs being held responsible. In the event of a sudden operator unavailability, the device is designed to automatically reconnect to the best available operator. This procedure may cause a delay in the transmission of the alert. For no-signal areas, i.e. areas without a GSM radio signal, TRAXxs provides the XSwitch gateway solution.

Some materials such as metal, electrostatic charge dissipating (ESD) materials, ionizing fluxes or water can affect the proper transmission of radio waves. Conduct a pre-test if these materials are present in significant quantities in the immediate vicinity of the wearer.

Compatible insoles

The specific XSole insoles are designed to meet the specifications of the EN20344 standard for points concerning the sole. In particular, they are designed to meet intensive use, to provide the necessary cushioning to the heel above the XSole PTI module, and to remain comfortable over time.

XSole is also made of a specific material that allows the dissipation of electrostatic charges towards the shoe.

The use of other insoles is contraindicated and must be studied beforehand by the customer for both safety and health.

Radiation emitted by the device

The XSole module is designed and validated to meet the requirements of the European regulation on radio frequency emitting electronic devices and their electro-magnetic compatibility. It is suitable for most professional uses.

Conduct a prior assessment if there is an area with specific radio frequency regulations or equipment known to be sensitive to mobile phone signals.

Persons with medical devices

In accordance with the regulations, particular vigilance must be taken if it is planned to equip people with active implantable medical devices (AIDs). A preliminary study should be carried out to ensure that the emission values of the XSole device, although below the regulatory limits, do not exceed the immunity limits of the medical devices concerned.

Immunity to external radiation

Strong sources of electromagnetic radiation located in the vicinity of the workstation can affect the proper functioning of XSole PTI, either by causing interference with the device or by degrading the radio signal. The consequences can be as follows:

- Difficulties in transmitting alerts, characterized by an increase in the duration of the pre-alert phase. The device will try to choose an operator with a less disturbed frequency, however the actual transmission of the alert may take several minutes in this case.
- Additional delays in receiving the evacuation alert
- Unintentional triggering of vibrations or, conversely, reduction of the amplitude of vibrations

Vibrations & Shocks

Very high vibrations and shocks are likely to alter the internal structure of the battery. The consequences can be the loss of battery performance, and in extreme cases the safety of the battery, making XSole PTI inoperable.

It is therefore necessary to take precautions for use and avoid the use of devices that can cause significant and repeated shocks to the arch area.

The use of XSole PTI at workstations exposed to vibrations (e.g. vibrating platforms, hopper, screening) may impact the operation of the loss of verticality alert. Indeed, in the event of an unconventional situation, the vibrations can be interpreted as a movement of the foot and cancel the pre-alert. In this case, it is possible to configure XSole PTI to allow the cancellation of the pre-alert with three knocks on the ground as for the SOS alert. The configuration is done from the supervision.

Extreme temperatures.

XSole PTI can be used over an ambient temperature range of -20°C to +50°C. In general, it is advisable to use a shoe that protects the insole from exposure to extreme temperatures.

Heating equipment for drying PPE

It is not recommended to use heaters to dry the inside of shoes with XSole PTI, as the battery performance may be decreased.

If, however, such a device is to be used, check that the temperature cannot exceed the operating temperature of XSole PTI during the drying period and that the device does not blow hot air directly onto the sole.

Static Electricity

XSole PTI component elements are made of materials that prevent the build-up of electrostatic charges on their surface.

Sealing

The XSole PTI module is designed to be liquid and dustproof. IP68 protection class.

Exposure to hydrocarbons

In general, XSole PTI should not be exposed to hydrocarbons that may alter TPU and epoxy resin materials. If exposed, rinse with clean or lightly soapy water, allow to dry and visually inspect the integrity of the protective covering.

Risk of fire, risk of explosion

The XSole PTI module is designed with the safety provisions to prevent any risk of fire or explosion under the normal conditions of use provided for in this manual.

Civil aviation

XSole PTI belongs to the "small electronic equipment" category of international civil aviation regulations. It can therefore be carried in the cabin or in the hold if the airline authorises it.

XSole PTI contains a Lithium-ion battery with a capacity of less than 4Wh that meets the "UN Manual of Tests and Criteria".

In-flight charging of the aircraft is not permitted.

Vehicle Driving and Machine Driving

XSole PTI is compatible with vehicle or machine driving. In some situations, the cockpit and terrain of movement can generate a foot angle that is greater than the detection angle. An XSpot beacon can be used to inhibit angle detection in the driver's seat.

SPECIFICS FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES (ATEX): XSole PTI ATEX version only

XSole PTI ATEX version can be used in the presence of gases, vapours, dust and mist with an ignition temperature above 85°C at atmospheric pressure. XSole PTI ATEX version should not be used in underground firedamp mines.

XSole PTI ATEX version is identifiable by the Ex II 3 GD marking. A version that does not have this marking should not be used in an environment with a potentially explosive atmosphere.

The ATEX Directive 2014/34/EU distinguishes three hazardous areas:

- Zone 0 or 20: the potentially explosive atmosphere is always present.
- Zone 1 or 21: the potentially explosive atmosphere is often present: for example, a mixture forming during the operation of an installation.
- Zone 2 or 22: the potentially explosive atmosphere may be accidentally present: for example, a malfunction of the installation, a leak, etc.

XSole PTI ATEX version is a category 3 equipment that can be used in zones 2 and 22. Prohibited for use in zones 0 and 20 and zones 1 and 21.

Before using the insoles, be aware of the different explosive areas encountered when you travel and at work.

XSole PTI ATEX version must be used in electrostatic dissipating (ESD) safety footwear that meets the requirements of EN ISO 61340. In accordance with the regulations on working in the ATEX zone, it is necessary to test each "ESD + XSole PTI shoe" footwear device before entering the ATEX zone.

⚠ Never charge XSole PTI in an ATEX zone.

Meaning of ATEX marking:

<Ex> II 3 GD

- Ex: use of equipment in potentially explosive atmospheres.
- II: Group of apparatus for surface industries.
- 3: Device for zones 2/22.
- GD: Gas and dust environment.

Gas protection mode: Ex mc IIC T6 Gc X

- Ex: use of equipment in potentially explosive atmospheres.
  mc: Encapsulation Protection Mode.
- IIC: subdivision of gases including ethylene.
- T6: maximum surface temperature 85°C.
- Gc: gas protection level.
- X: must be glued under the XSole sole

Dust protection mode: Ex mc IIIC T85°C Dc X

- Ex: use of equipment in potentially explosive atmospheres.
- mc: Encapsulation Protection Mode.
- IIIC: conductive dust.
- T85°C: maximum surface temperature 85°C.
- Dc
- : Dust Protection Level
- X: must be glued under the XSole sole

CARE & MAINTENANCE:

XSole PTI can be cleaned with cold, slightly soapy water. Wipe with a dry cloth and let air dry. Do not use detergents, solvents or other chemicals.

Do not tumble dry or blow dry.

Inspect the appliance regularly. A degradation or deformation of the envelope of the electronic module should be a red flag; In this case, do not use the device and have it checked by an authorized person.

Maintenance of the device must be carried out by TRAXxs authorized personnel.

Store device components in a cool, dry place.

Used devices must be destroyed through specialized channels for the processing of electronic devices and lithium batteries according to the specific regulations of the country of use. They can also be returned to the TRAXxs SAS headquarters for destruction.

SAFETY WARNINGS:

Use the device in footwear that is standardized for professional use and in good condition

⚠ Do not damage, twist, hit violently, puncture the electronic module. Do not damage the structure of the device.

⚠ Do not approach the device to a heat source above 50°C or a flame.

⚠ Do not use XSole PTI if the module is degraded, deformed, cracked, swollen. If this is the case, immediately stop using the product and replace it.

⚠ XSole PTI is not a toy. Do not leave it available to children. If swallowed, seek prompt medical attention.

⚠ Do not charge the device if the ambient temperature is likely to be below 0°C or above 40°C during charging.

⚠ Do not charge the device in a location that may have an explosive atmosphere or humidity above 80%.

Failure to comply with these provisions is likely to result in serious injury to persons.

TECHNICAL SPECIFICATIONS:

Xsole PTI Features:

- Configurable loss of verticality and prolonged immobility alarm
- Voluntary SOS alarm with acknowledgment
- Evacuation alarm
- Configurable battery level alarm
- Isolated Hazard Proximity Alarm (optional)
- Zone Entry/Exit Alarm (Optional)
- Positive Security

Radio:

- 2G GPRS radio modem:
  Band EGSM 900MHz -> Power class 4: 33dBm, Rx sensitivity: -107dBm
  Band DCS 1800MHz and PCS 1900MHz -> Power class1: 30dBm, Rx sensitivity: -107dBm
- 4G LTE Cat M radio modem:
  B3, B8, B20, B28 bands -> Power class 5: 21 dBm, Rx sensitivity according the bands: B3: -105 dBm, B8: -106dBm, B20: -105dBm, B28: -107dBm
- Bluetooth 5.1 Low Energy - Long Range 2.4 GHz Modem
  Maximum transmit power 5mW
- 72-channels multi-constellation GNSS:
  GPS, Galileo, Glonass, Baidu. Rx sensitivity: -166 dBm

- Built-in BAN (Body Area Network) antennas for proximity to the human body.
- Electromagnetic compatibility (CE standard)

SIM card:

- Built-in multi-carrier M2M SIM card for GSM communications; European coverage, Global Coverage as an option.

Geolocation:

- Outdoor: Assisted-GPS, Multi-constellation GNSS
- Indoor: XSpot TRAXxs beacons
- GDPR: Transmission of individual positions only in the event of an alarm.

Battery:

- Built-in Li-Ion battery capacity 680mAh (2.51Wh)
- Inductive charging (Qi)
- Battery life> 10 continuous hours

Ambient temperatures:

- Use: -20°C to +50°C
- Load: +0°C to +40°C

Weight:

- Electronic module only: 80g
- Module and sole: 130g

Water and dust resistant (IP68).

ATEX (XSole PTI ATEX version only):

- Ex II 3 GD: (use in ATEX zones 2 and 22)
- Gas: Ex mc IIC T6 Gc X
- Dust: Ex mc IIIC 85°C dc x