# TWIG One Ex

## The Intrinsically Safe Personal Alarm

TWIG One Ex is an intrinsically safe personal alarm device designed to protect lone workers in explosive hazardous areas. It is equipped with the essential lone worker protection functions, a powerful loudspeaker, preprogrammable device keys and a configurable user interface. The device functionalities can be extended with compatible TWIG Point cloud services and TWIG short range devices.

### Lone worker protection functions

- Automatic ManDown detection on tilt, non-motion and fall
- Device and server based Amber alert
- Distinct and tactile SOS key for emergency situations
- 2-way hands-free voice calls
- SOS cycle with preprogrammable phone numbers
- Tracking and locating indoors and outdoors
- Attendance monitoring with NFC tags
- 4 short cut dial keys

### Effective communication in emergency

- 2G/3G/4G
- Interactive on-screen messages
- Preprogrammed one-touch status messages
- One-touch voice calls
- Powerful speakerphone

### ATEX/IECEx approved

- II 2 G Ex ib IIC T4 Gb
- II 2 D Ex ib IIIC T130°C Db
- Ta: -20°C...+60°C*****
- EESF 20 ATEX 045X / IECEx EESF 19.0020X

### Hybrid indoor / outdoor location

- Satellite positioning with 3-constellation GNSS
- TWIG Point AGNSS service for faster location fix
- Hybrid indoor location with TWIG SRD, Wi-Fi and Bluetooth Low Energy (BLE) beacons (SRD3 device option)
- TWIG Point Netloc service for public space location (cellular network + public available Wi-Fi base stations)
- TWIG Point Netloc service for on-site location (TWIG SRD beacons + on-site Wi-Fi base stations + BLE beacons)

### Robust and ergonomic

- User Interface with configurable menu and function keys
- Slim, light and user-friendly
- Easy to wear with belt clip
- Robust nano SIM card tray

### Remote device management

- Saves time and money in customer support
- Firmware over the air (FOTA)
- Remote device configuration
- Access with TWIG Point SP web account

### Lone worker safety

Duty of care requires employers to give lone workers means to alert help. Depending on risk assessment, a dedicated alarm device may be required. An automatic ManDown alarm is sent when device user falls or is not moving. When entering a risky situation, enhanced monitoring can be requested with Amber alert. TWIG One Ex can trigger alert in ARC also in absence of mobile network connection.****

### Scalable for your needs

TWIG One Ex can be widely adjusted to specific needs by selecting only the needed options and functionalities and by configuring it for specific lone worker situations.

With remote configuration possibility TWIG One Ex is fast to deploy and flexible to operate. It is also USB programmable, either manually or from file.

### Configurable UI and keypad

The 4-digit keypad enables fast control of Amber alert and ManDown functions. Configurable menu key and function keys enlarge device deployment options.

### Power for noisy environments

Integrated high-power speaker-phone boosts two-way voice communications. Powerful vibrating alarm and alarm tones help sensing pre-alarms and incoming communications.

### Indoor positioning

In many buildings GNSS satellite signals are blocked and GNSS-computed location is not available at all.

The indoor location is possible with the device option SRD3 enabling the accurate indoor location by using signals from TWIG SRD beacons, Bluetooth Low Energy beacons or Wi-Fi base stations installed in the building.

### Attendance monitoring with NFC

The NFC Reader of TWIG One Ex registers attendance by reading NFC tags.

### Alarms monitoring and tracking

TWIG Integrator Kit resources enable integrating TWIG devices with alarm receiving centre (ARC).

Optionally the TWIG Point Monitor cloud service provides a turn-key solution for alarms monitoring and tracking.

Alarms and reports can also be received on smartphone as SMS including link to web map.

### ATEX/IECEx compliance

TWIG One Ex complies with ATEX standards 60079-0:2012/60079-11:2012 and IECEx standards 60079-0:2011/ 60079-11:2011.***

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# TWIG One Ex

## Technical Specification (TLP51EU)

### Compatibility and communication

- Communicates with all systems using MPTP (Mobile Phone Telematics Protocol) both SMS and GPRS (IP).
- Tracking and alert messages include information on satellite positioning, TWIG SRD beacons, speed, heading and battery charge.

### Mechanics

- Dimensions: 102,1 mm x 48,9 mm x 24,6 mm
- Weight: 114 g
- Water and dust proof (IP67), shock resistant
- Firm grip with tactile silicone keypad

### Key telematics functions

- Manual alert through SOS key
- ManDown alarm with 4 automatic alert triggers: device orientation, non-motion, free fall and impact
- Two-way 4G/3G/GSM voice with speaker
- Device and user status messages
- Interactive on-screen messages
- GNSS satellite positioning
- TWIG Beacon SRD / Wi-Fi / BLE location*
- Geofence

### Key technical features

- GSM/GPRS/EDGE: Dual band 900/1800 MHz
- UMTS/HSPA+: Triple band 900 (BdVIII) / 1800 (BdIII) / 2100MHz (BdI)
- LTE: Five band: 800 (Bd20) / 900 (Bd8) / 1800 (Bd3) / 2100 (Bd1) / 2600 MHz (Bd7)
- Built-in GSM, SRD*, GNSS, WiFi*, BLE*, NFC* antennas
- Speakerphone with 2 microphones
- Powerful vibrator

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### Provisioning and security

- Remote or local configuration
- Authorisation of remote and local access
- SSL/TLS secured server connection
- NOTE! Programming allowed only with TWIG Ex USB cable of device type FME92EU.

### Operating time and temperature

- Rechargeable 1350 mAh Li-ion battery
- Typical operating times, GNSS satellite positioning/ cellular data reporting**
- 9 days (1 report / hr)
- 5 days (1 report / 10 min)
- 33 hours (1 report / min)
- 10 hours (1 report / 5 sec)
- Up to 12 days (cellular network standby)
- Recharging time*** < 4 hrs for 95 %
- NOTE! Charging allowed only with TWIG Ex charger of device type CME92EU (or with USB cable FME92EU).
- Operating temperature -20°C ...+60°C*****

### Satellite positioning system

- High performance 48-channel receiver
- Multi constellation GNSS receiver
- (GPS, Glonass and Galileo)
- Time to first fix: Hot start 1 s; cold start < 35 s
- Configurable opt-out and roaming block
- Extended ephemeris on-board generation
- Motion based GNSS control

### TWIG Point turn-key services

- TWIG Point Remote Configurator for device settings management over the air
- TWIG Point Netloc service for public space location (cellular + Wi-Fi) and for on-site location (TWIG SRD + Wi-Fi + BLE)
- TWIG Point AGNSS for faster GNSS location (free of charge)
- TWIG Point Monitor for alarms monitoring and tracking
- TWIG Point Site for site planning and management

### Display and keys

- Alterable SOS key colour
- LCD display with guiding symbols
- Preprogrammable function keys and menu key
- 4 numeric keys for answer / assistance call
- Dedicated keys for Amber alert and ManDown alarm functions

### Standard sales package

- TWIG One Ex 2G/3G/4G personal alarm device with integral battery
- TWIG Ex USB cable and TWIG Ex charger with adapter of choice (EU/UK)
- User and safety documents

### Optional device features

- SRD3 compatibility including SRD + Wi-Fi + BLE location + NFC reader 13.56 MHz*

### Accessories

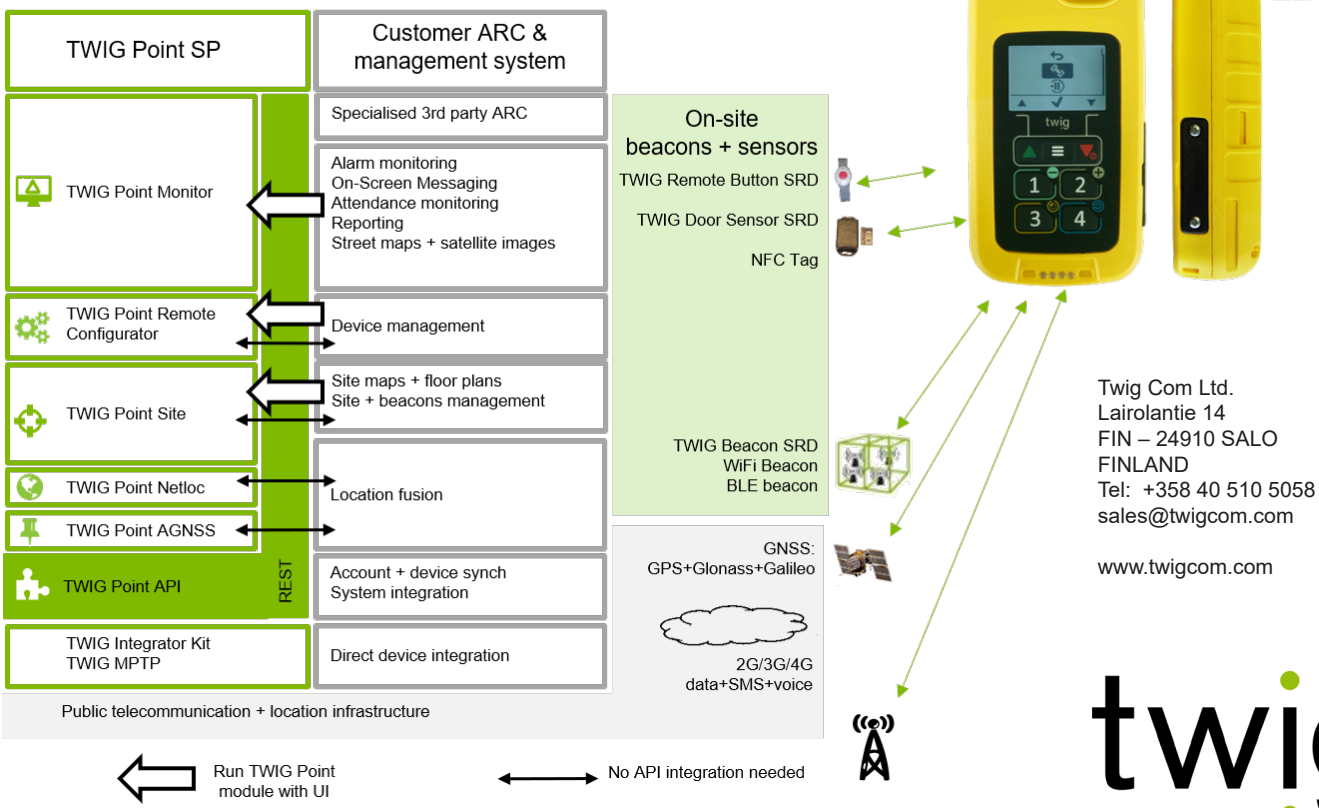
- Charging and programming stations
- Alterable SOS key colours
- Belt clip
- Ex carrying case
- Car charger
- TWIG Beacon Ex SRD*

Non-ATEX SRD devices:

- TWIG Beacon SRD*
- TWIG Remote Button SRD*
- TWIG Door Sensor SRD*

### Software and resources

- TWIG Configurator PC app
- TWIG FirmwareLoader PC app, FOTA
- TWIG Integrator Kit for ARC integration



Twig Com Ltd.
Lairolantie 14
FIN – 24910 SALO
FINLAND
Tel: +358 40 510 5058
sales@twigcom.com

www.twigcom.com


twig™


Product images are indicative only. Twig Com reserves right to change all information without prior notice. Communication is only possible within mobile network coverage. *Optional device feature. **Operating times may vary substantially depending on environment. ***Charging only above 0°C and below +40°C. ****Requires appropriate central station implementation. ***** The recommended usage temperature is above -10°C and below +50°C. TWIG is a registered trade mark of Twig Com Ltd. More information: www.twigcom.com