FT5 S

High End TETRA Radio
for health & safety in the workplace

Quality made in Germany

- **Certified for use in dangerous workplaces***
  - ▶ DIN VDE V 0825-1, DGUV 112-139
    (of German government safety organization)

- **Unique Health & Safety Functionalities**
  - ▶ Large, red emergency button
  - ▶ 4 manual alarm types
  - ▶ 4 automatic alarm types
  - ▶ 3 separate localization technologies
  - ▶ contactless guard control

- **3 W Output Power**

- **4-way Satellite Receiver**
  - ▶ GPS, GLONASS, Galileo, BeiDou

- **Smart-ready Bluetooth module**
  - ▶ BT 4.0 (LE) for audio and localization

- **Inductive localization module (ILS)**
  - ▶ for exact indoor localization

- **Robust & Shock Resistant**
  - ▶ IP65 (dust-proof and water-jet protected)
  - ▶ rubber coating

- **MicroSD and Micro SIM card slot**

- **Messaging and alarm indicator**
  - ▶ Optical and acoustic

DGUV Test ET 17012   GS geprüfte Sicherheit   dguv.de/dguv-test

Bluetooth *SMART*

The new generation – Smart TETRA
robust, ergonomic, safe

FT5 S

Smart TETRA Radio
for health & safety in the workplace

funktel

Features

- High-End TETRA radio according to ETSI-standard
- Vibration
- Large red and easy accessible emergency button
- Emergency call in TMO and DMO mode
- Audio amplifier 500 mW (1 W at audio interface)
- Two memory card slots
  - ▸ Micro SIM for E2E Encryption (on request)
  - ▸ Micro SD for user-specific settings
- Sensors for health & safety
  - ▸ Hall-sensor for loss alarm
  - ▸ Timer and acceleration sensor
  - ▸ Automatic brightness control
- Micro SD card functionality (optional)
  - ▸ Storage of individual alarm- and device settings
  - ▸ Storage of different device settings (switchable)

Localization

- Inductive receiver for exact localization up to room and floor level
- Bluetooth module for rough localization
- 4-way satellite receiver module (GPS, GLONASS, Galileo, BeiDou)

Health & Safety Functionalities

- Automatic detection of emergency situations
- Wide range of alarm and localization sensors
- Cyclic life check with automatic initiation of technical alarm
- Test of safety and localization sensors while log-in
- Automatic registration at control center

Accessories

- Single and multi-charger (6-way) for devices and/or batteries
- Programming station
- Mounting charger for safe deposit boxes
- High-capacity battery
- Carrying accessories and leather cases
- Headsets and audio accessories
- MicroSD card

*) at operation with
funktel TETRA Secury Systems

Technical data

Housing & Display

Size (H x W x D):	138 x 55 x 27 mm (with standard battery),
(w/o antenna and clip)	138 x 55 x 32 mm (with extended battery)
Weight:	189 g (w/o battery) / 245 g (with standard batt.) / 283 g (with extended batt.)
Protection class:	IP65 (acc. IEC 60529, water-jets protected & dust tight)
Temperature range:	Operation: -20... +55 °C Charge: 0... +40 °C Storage: -30... +75 °C
Display:	High-res. 2,2" TFT colour display, 240 x 320 Pixel (QVGA), 262.000 colours, support of Cyrillic and Chinese character sets

Power Supply

Battery:	Lithium-Polymer, 3.8 V
Capacity:	1,950 mAh (standard battery) / 3,850 mAh (extended battery)
Operating time (5/5/90):	> 22 h, with extended battery, incl. GNSS (up to 31 h stand-by) > 12 h, with standard battery, incl. GNSS (up to 21 h stand-by)

Safety

Certification:	DIN VDE V 0825-1 und -11, DGUV 112-139, of German government safety organization, for use at dangerous workplaces*
Manual alarm types:	emergency alarm (step 1+2), warning alarm (step 1+2) (each configurable active/inactive)
Automatic alarm types:	Position, No-motion, Time, Loss, (each configurable active/inactive, reaction times, pre-alarm times and activator angle for position alarm (default: 55° +/- 5%))
Guard control functionality:	contactless arrival point detection, for monitoring and validation of watchmen patrol way and time
"Security Light" functionality:	Alarm forwarding to defined TETRA identities incl. rough localization via BT or GNSS (without localization via IOS)

Localization

Inductive (IOS):	IOS receiver module for exact indoor localization up to room and floor accuracy (via inductive beacons)
Satellite (GNSS):	Receiver module for GPS, GLONASS, Galileo, BeiDou, Outdoor localization acc. to ETSI LIP protocol
Sensitivity:	-156 dBm (Hot Start) / -160 dBm (reacquisition)
Accuracy:	5 m (50% probability), 10 m (95% probability)
Bluetooth (BT):	BT module (4.0/LE) for rough localization via BT beacons

RF Specification

Frequency range:	380–430 MHz (other frequency ranges available on request)
Channel- / Duplex space:	25 kHz / 10 MHz
Output power:	3 W (power class 3), adjustable in 4 steps of 5 dB
Class of emission:	18KO G7WDT
Receiver class:	A&B
Sensitivity:	-111 dBm (acc. to ETSI EN 302561 V2.1.1)

Operating elements

Keypad:	illuminated, alphanumeric keypad with navigation key, two selection keys for easy navigation with quick-access, free assignable numeric keys for special tasks
Function elements:	Free assignable function key at the side (i.e. for warning alarm), two-level rotary knob (volume & group selection), large emergency button
Special functions:	Phone book with up to 1.000 individual and group entries, MicroSD and Micro SIM card slot, accessory interface at the side, Bluetooth for audio and data, individually configurable audio parameter, configurable charging mode (mute / display / TETRA)

Services

Voice services (TMO) a.o.:	Group call (half duplex), Single call (half/full duplex), Telephony (full duplex), Emergency call (TETRA and public, i.e. "911"), Late entry, Dynamic group number assignment (DGNA), Scan list (16 lists with up to 16 talk groups per list)
Voice services (DMO) a.o.:	Group call, Single call, Emergency call to DMO group, operation at DMO-gateway and DMO-Repeater
Data services (TMO+ DMO):	Short data service (SDS) (up to 16 SDS-templates), Status messages (up to 32)
Encryption (option):	Authentication, Air Interface Encryption (AIE) Class 2 & 3 SIM-card based end-to-end-encryption (E2EE) on request

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