funktel FM-S Mobile

Maximum mobility, optimal protection, low investment

Personal emergency call system with DGUV certification

Quality made in Germany

DGUV Test ET

GS geprüfte Sicherheit

dguv.de/dguv-test

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GSM-based FM-S personal emergency signal system

- Many activities are performed by persons working alone in an organisation. If an incident should occur, first responders must be able to locate the lone worker promptly. The GSM-based funktel FM-S personal emergency signal system ensures that situations that are hazardous for lone workers are detected and that alarm information, including the location of the incident, is forwarded to the rescue services.

  The small, robust and easy-to-operate funktel FM6 GSM personal emergency signal system detects potentially hazardous situations automatically and also enables the lone worker to summon help deliberately by operating the alarm button by touch alone.

  An aural pre-alarm is triggered when a hazardous situation is detected. The lone worker can cancel the alarm if no assistance is required. If the worker does not cancel the alarm or if a request for assistance has been made deliberately, the funktel FM6 reports the cause of the incident (fall, position, no-movement, time, flight) and its location.

  The funktel GSM personal emergency signal device uses the mobile phone network as well as a second, integrated ISM band radio module to forward this information.

Features

- Personal emergency signal system certified by the German Employers' Liability Insurance Association; in compliance with DIN VDE V0825-11, DGUV 212-139 for hazardous solitary workplaces
- Integrated personal emergency signal functions: willdependent (pushbutton alarm) and will-independent (position, no movement, fall, flight, time) alarm reporting
- Complete system including GSM personal emergency signal devices, an alarm control centre, localisation beacons and repeater technology
- Localisation function by means of ISM band FM localisation beacons. GPS/A-GPS satellite outdoor localisation, loud acoustic localisation (loudspeaker)
- Transmission via GSM-4G/LTE
- Alarm notification in the absence of a GSM connection by means of an additionally integrated ISM band radio network (areas that do not have GSM coverage, basements, etc.)
- Voice-activated user prompting (multi-lingual) for logon and sensor test
- Cyclic life-check self-monitoring with automatic transmission of technical alarms

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GSM personal emergency signal device with localisation function

FM6 certified GSM personal emergency signal device with localisation function

- The FM6 GSM PES device is the ideal solution for the safeguarding of personnel in hazardous solitary workplaces. In an emergency, the device transmits a pushbutton alarm or willindependent (automatic) alarms such as a position, no-movement, fall, flight or time alarm to the alarm control centre. In the process, precise localisation information is transferred so that assistance can be provided to the casualty swiftly and in a targeted manner. The localisation function, using a built-in ISM band radio module, is especially noteworthy as this also ensures that an alarm can be provided in areas that do not have GSM coverage.

Features of the FM6

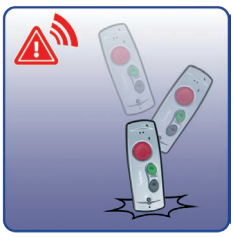
- GSM personal safety and voice communication in a single device
- Alarm notification in the absence of a GSM connection by means of an additionally integrated ISM radio module
- Alarm transmission to funktel alarm control centre
- Pre-alarm, individually parameterisable
- Transmission via GSM-4G/LTE
- Robust industrial device, IP 65 protection class
- Prioritised alarm chain with up to six numbers as well as 16 SMS recipients
- Mailbox detection (tones can be detected or prompted)
- Three freely programmable direct dialling buttons that can be operated with gloved hands
- Speaker and hands-free function, vibrating alarm
- Device parameterisation via remote maintenance (SMS)

Alarm types

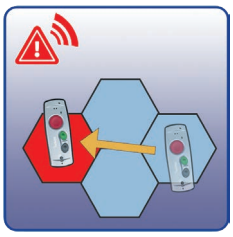
Position alarm

Pushbutton alarm

Time and no-movment alarm (Dead man's switch)


Fall alarm

Flight alarm

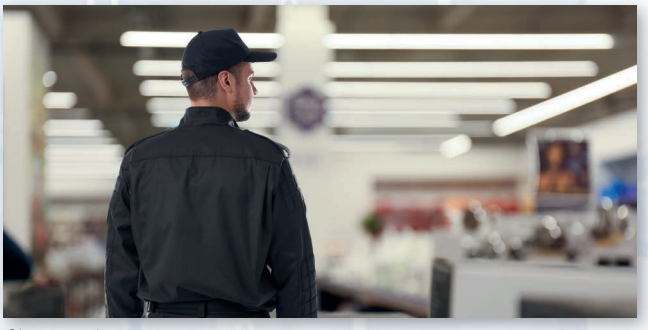

Geofencing

Diverse applications

A solution for many applications

Industrial

Wastewater/Treatment plants



Site security

Control point

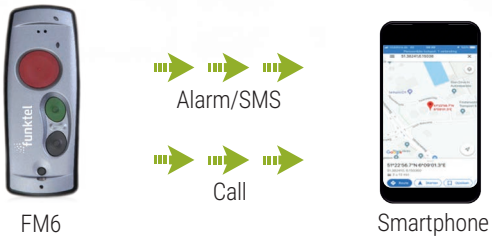
Use case: Raising an alarm at the alarm control centre

The full potential of the FM6 can be exploited when it is operated in conjunction with an alarm control centre and the funktel FM-S is certified for use in solitary workplaces in compliance with DGUV 212-139 when used in conjunction with the Nucleus alarm server.

Use case: Raising an alarm on a smartphone

A control centre is not necessary in order for the FM-S components to be operated.

An alarm sequence for voice calls with up to six phone numbers can be defined. In addition, SMS notifications can be sent in text or data format to 16 different numbers. This also enables various languages to be used according to the number.



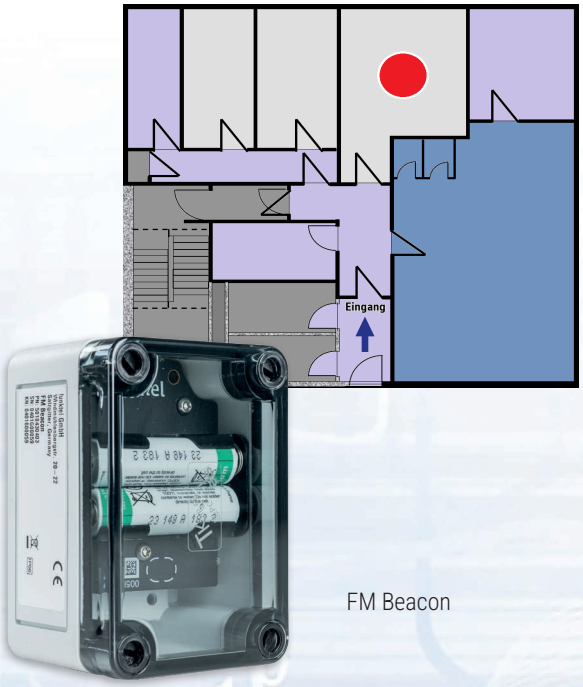
Use case: Raising an alarm in areas without GSM coverage (dead spots)

The FM6 can also operate on the licence-free ISM band in areas without mobile communications. The use of multiple FM repeaters enables in-house ISM networks to be established. Ultimately, the alarms can also be transferred to the mobile phone network by means of the FM Wallbox.

Localisation functions in the event of an alarm

Localisation

- In order to provide prompt rescue assistance as well as to implement the necessary measures, it is vital that no time is wasted by unnecessary searching in entire buildings or throughout company premises in an emergency. The funktel personal emergency call system offers numerous localisation options for the FM6 for this purpose.



ISM localisation beacon (Beacon)
FM Beacon, FM Repeater, FM Gateway

- The ISM beacons that are designed for operation in conjunction with the FM6 transmit a location indicator at customisable intervals. Configurable transmitter power makes it possible for very precise localisation scenarios to be implemented.

  The localisation beacons can be used in expansive outdoor as well as labyrinthine indoor areas. Effort associated with the installation is kept to the minimum by the use of special longlife batteries. A battery warning is forwarded in good time.

FM Beacon

GPS

- It is possible to revert to GPS localisation in expansive outdoor areas. This obviates the need for localisation beacons to be installed.

Bluetooth

- The FM6 is compatible with the BlueBeacon protocol. BT beacons are available for outdoor as well as indoor areas.

Geofencing

- Up to five permitted or prohibited areas can be defined on the FM6. When a wearer accesses a prohibited area, he will be first informed by a voice announcement and then prompted to leave the area. If they do not return to a permitted area within the specified pre-alarm time, an appropriate alarm is triggered.

System components

FM Beacon
Precise localisation

Precise localisation

- A lone worker requires rapid assistance in the event of an incident. Once an emergency call has been triggered by the FM6, the location of the incident must be transmitted to the first responders immediately so that no time is wasted in needlessly searching entire buildings or the factory site. The FM Beacon provides this precise localisation information.

  For this purpose, the beacon is permanently installed and transmits an identifier at intervals of seconds. As soon as an FM6 is within range, it stores the identifier and forwards this together with the emergency call message in the event of an emergency. Should the battery voltage dwindle, an appropriate message is transmitted via the FM6 in good time.

Guard rounds

- The movement of personnel during guard rounds can be logged precisely; for example, patrol routes on expansive factory premises or entrance/exit movements at warehouses or factory gates. Positioning data can also be transferred at specific time or distance intervals (for example, every 500 metres) or only when an alarm is activated.

Features

- Beacon with internal antenna
- Small and compact design
- Power-independent thanks to battery operation, cable-free installation
- Adjustable transmitter power
- Transmission of a “battery low” signal
- Intuitive operability and start-up
- Network ID to differentiate from neighbouring installations
- Parameterisable by means of FM service stick or on the device

FM Repeater
Range enhancement and localisation

FM-Repeater

- In workspaces without GSM coverage such as basements, tunnels, shafts, etc., distress calls emanating from an FM6 personal emergency signal device that has triggered an alarm are relayed via the FM6 Repeater to an FM Gateway or an FM Wallbox along a direct or indirect path (cascaded repeaters). This also enables alarm notifications to be forwarded to places in which there is no mobile radio coverage. Received ISM alarms are relayed on the protected ISM band at maximum transmitter power.

  Bi-directional communication between the FM devices ensures that no alarms are lost. Proper functioning can be checked and assured by means of lifecheck notifications.

Localisation

- The FM Repeater provides the full range of functions of an FM beacon and can be configured in an equally comprehensive manner.

Features

- Maximum transmitter power is used when alarms that have been received are then relayed
- Cascadable for large installations
- Autonomous infrastructure for alarm forwarding without a mobile phone network
- Integrated beacon function (localisation beacon)
- Power supplied by 230 V plug-in power supply
- Parameterisable by means of an FM service stick or on the device

System components

FM Gateway
ISM band alarm actuator and localisation

Alarm reporting

- If an alarm is detected on the ISM band within the reception range, a configurable relay output (potentialfree) is available on the funktel Gateway. Lamps, hooters and other signalling devices as well as I/O interfaces can be operated.

  A possible component failure is indicated by means of a separate fault reporting relay. Our FM Switch can be used in the case of existing legacy systems.en.

Localisation

- The FM Gateway also transmits cyclic localisation signals at a configurable strength.

Features

- Receipt of alarms on the ISM band
- Relay operation as a normally closed or normally open contact
- Integrated beacon function (localisation beacon)
- Power supplied by 230 V plug-in power supply

FM Wallbox
ISM ➤ GSM Gateway

Interface for areas without mobile radio coverage

- If an alarm that has been triggered by an FM6 or FM Repeater is received, it is then forwarded via the GSM network by the device installed in the Wallbox. Naturally, all relevant information regarding the device that has triggered the alarm, such as the type of alarm, point at which the alarm was triggered and localisation details, is relayed.

  In order to have uninterrupted operation, the device uses a plug-in power supply.

Features

- Robust protective housing to mount an FM6 personal emergency signal device
- IP 65 protection class
- Separate power supply
- Access-protected operation of the GSM personal emergency signal device
- Alarm forwarding function

Nucleus personal emergency signal control centre

- Features a graphic display of the alarm location and an acknowledgement and reset function, in parallel with voice communication between the person making the emergency call and the control centre telephone.

Features

- Multi-user client-server concept
- Automatic function check of logged in devices
- Emergency call display and processing
- Monitoring and logging of emergency call processing
- Professional messaging for the transmission of individual, predefined notifications with various priorities*
- Contact reporting and relay control
- Cost-effective versions available for small systems
- funktel API for third-party systems
- Automatic relaying of alarms to other mobile devices*
- Silent alarms
- Hostage (switch-off) function*
- Alarm location tracking
- Configurable evacuation measures
- Eavesdropping function (in the event of an emergency)
- Automatic telephone functions for secure communication in the event of an emergency*

* only in conjunction with DECT or TETRA systems

Safety & Communication

MORE THAN 50 YEARS OF EXPERIENCE

Personal security

Guard control

Localisation

Explosion protection

Evacuation

Messaging

Based in Salzgitter, funktel GmbH is a leading manufacturer of professional security and communication solutions based on DECT, GSM and TETRA technology for industry, utilities and public authorities.

We are specialists in the field of personal emergency signal devices and have built up over 50 years of know-how in the development and production of terminals that comply with the directives of the (Federal German) Employers' Liability Insurance Association and with requirements for explosion protection.

As one of the largest manufacturers of handsets for professional and industrial applications, our facility in Salzgitter develops and produces mobile terminals and certified personal emergency signal systems based on DECT and TETRA.

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We reserve the right to make technical changes without prior notice.