

Emergency, Information and Security Technology GSM- and GSM-R-Communication Terminals

Product Overview,
Planning and Project
remarks



Emergency and Information Terminals



The Emergency (german - Notruf) and Information Terminals (NIS) give passengers the opportunity to get information and to call for help in case of emergency situations.

The main features of the Emergency and Information Terminals are:

- robust and attractive Stainless Steel housing for ground or wall installation
- customer specific design
- resistant against vandalism
- barriere-free design against DIN normative 124
- various communication technologies possible (analog, ISDN, VoIP, GSM, GSM-R)
- optimized free communication lines
- programmable direct dial buttons
- functional buttons with optical, acustical or tactical signaling features
- Roof top with maintenance free LED-light and integrated flash light
- optional with anti-graffiti colour

The NIS are built in modular way. Moduls can be exchanged locally very fast In case of maintenance.

The pillar housing of the standard NIS (picture above left: example Traffic Union Frankfurt/Main) is optically and functional structured in 3 sections:

- section basement
- section pillar with front-end
- section top end

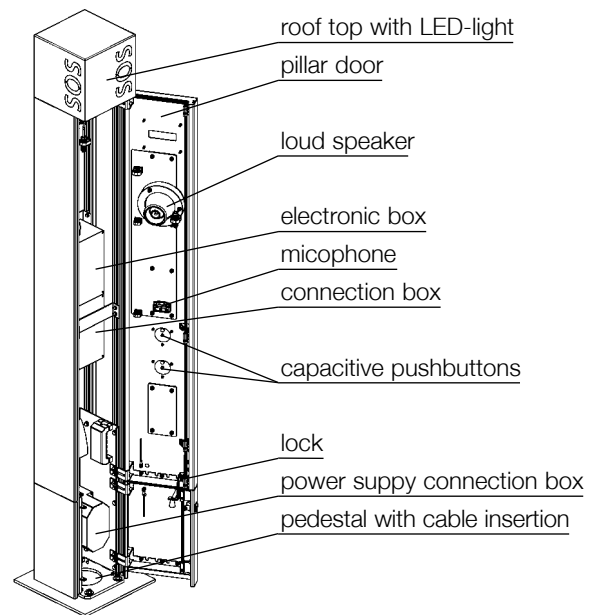


The **section basement** is 400 mm high and consists of a zinc coated steel feet, which is equipped with a back plate and a door. The back part and the door are made of stainless steel as well and can be offered optional painted or grinted. The back part is mounted to the base section via a profil bar. The door is mounted with indoor hinges to the basement sector (rightly mounted). The lock of the door is using a multi point locking system, which is attached to a side mount cylinder lock. In the steel feet you will find elements to eject the station uprightly and holes for further mounting options. The door is mounted with indoor hinges to the basement section (rightly mounted).

The **section pillar** is 1550 mm high and consists of back part and door (stainless steel, painted, foiled or anti-graffiti ready). The lock of the door is using a multi point locking system, which is handled through the open door of the section basement.

The front design is built according to specifications of front end. Additional functional housings or connecting units can be mounted variable via brackets at the back end.

Emergency and Information Terminals



The **front end** is the door area of the terminal. The front end has the following functional areas:

- serving elements (pushbuttons)
- audio elements (microphone, loudspeaker)
- labelling elements (labels, markings)

The **serving elements** (pushbuttons for emergency and for information) are located between 850 to 1050 mm from the under edge of the pillar corpus.

The serving elements have an active surface with a radius of 25mm. The buttons are showing a ring light. The pushbuttons are illuminated, with acoustic signal and vibration.

The labelling ring consists of stable material (color acc. to design and function) and has a radius of 100 mm. There are no outside fixing elements on the ring. The ring with the pushbutton is 10 mm elevated against the door front. It carries the relevant function (SOS) in elevated letters and in braille letters.

The **audio elements** are located behind an audio bar, which is presented as a perforated metal plate in the surface of stainless steel, colored or grinded. The advantage of this arrangement is the same level of comfort for all users, as the in and output elements are hidden. The audio bar is water resistant and protected against vandalism.

The section **roof top** is a quadrant (side length 250 mm) located on top of the housing. This quadrant is available in 2 versions:

- Stainless steel (grinded or colored) with the marking (e.g.: SOS) behind a plexiglass surface, lighting is integrated
- complete plexiglass quadrant with integrated lightning marking with sticker or fixed color print

The lightning (i.e. flash light) is powered via 12 to 24 V DC.

The access to the roof top section is arranged through the open door of the station sector.

The fixation of the pillar (free-standing) is done in using 4x M16 screws.

In case of direct ground fixing (concrete), we supply a special steel plate, which supports the easy opening of the basement section door and carries holes and rubber tubes for the safe installation of the cables. As an option we can supply a steel plate with an tube attached (1000 mm) to make use of a socket foundation available. This mounting plate will be screwed together with the steel feet of the basement section.

Security Terminals



The security terminal is used as mobile or fixed device in security relevant areas in industry, in building areas or during big events (available as well as a GSM device - see page 6). The communication with any other line (central office) and the alarming in case of damages, fire or necessary first aid are the main functions of the security terminal. The modular mechanical design and many variants for configuration allow the easy adaption to any given infrastructure.

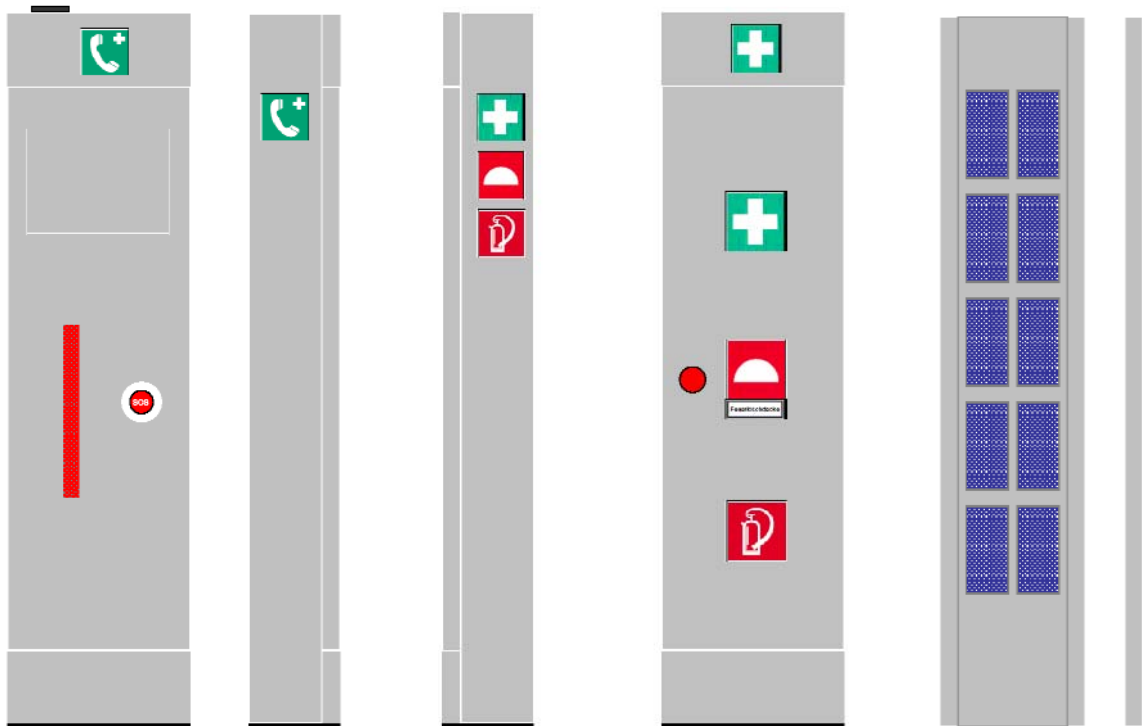
Mechanical and functional layout

As basis you have a stabile housing made of grinded stainless steel. The front side consists of 3 sections. The lower part is for the socket. A central cylinder lock in the socket section is used to lock the pillar. The other section doors can be opened via the internal locking mechanism, when the socket door is open.

The middle section consists of the function elements according to a configuration variant. The front side of the middle section holds the communication and audio devices (microphon, loudspeaker), if the station is used as active system. Those devices are behind an audio bar, which is presented as a perforated metal plate made of grinded stainless steel. The pushbuttons may vary in quantity and model. An LED display is used for signalling.

The upper section is used as a status and information area. You have there transparent fields or pictograms, which can be lighted up with either an LED block (with flash function) or an xenon flash light. A sound generator is integrated in this section as well. All sections are connected to the housing via indoor hinges. An exception is the modul door "Help", where you have a push button to open it. Within the housing of the pillar you see assembly sheets for installation of the functional elements. Those elements could be based on GSM technology, VoIP or as well on customer demand - analog, ISDN or GSM-R. The installation of the pillar is fixed to the ground and possibly in addition to a wall. In mobile use we supply a stabile metal ground plate with which the pillar can be installed separately. A back plate installation and fixation is possible as well.

Security Terminals



Power supply

We offer the following variants of power supply:

- via 230 V AC
- via battery Packs
- via solar moduls
- via fuel cell

According to energy needs, there are combinations of power supply variants possible. The solar moduls can be installed on the back side or at the sides of the pillar.

Basic Modules

Module "Help"

- pillar housing with closed middle door
- door and housing side with pictograms
- door with manual push button
- housing with installation plate for first aid box, fire blanket and fire drencher.
- above section with steady LED or Flash light and sound generator

Module "Communication"

- middle door with audio elements and push button
- push button illuminated, with acustic signal and vibration
- door to be opened via socket door
- above section with steady LED or Flash light

- housing equipped with GSM module, incl. integrated Antenna, VoIP etc.
- power supply according to customer preference
- implemented face plate for module "traffic"

Module "Ground Plate"

- stable ground plate 1 m²
- bulb sheet, fire cinned
- capable for installation of the pillar or a combination of it

Additional Modules

Module "Traffic"

- LED display, implemented in module "communication"
- controlled via cable or GSM-module

Module "Solar"

- solar module for installation on rear side of the pillar or with combined terminals on both sides of the pillars
- installation without visible fixing elements
- solar moduls secure against vandalism

Module "Energy"

- power supply 230 V DC via power adapter to 12/24 V DC
- power supply with battery packs 12 V / 24 Ah
- power supply via fuel cells 12 V / 65 Ah

GSM Communication Terminals



The GSM communication terminals can be used universally and may also be integrated as emergency call pillars into existing fixed emergency call systems. One of the main advantages of the GSM communication terminal is that no investment must be made into ground installation of cables since solar or battery power allows for wireless usage. The plastic housing is particularly suitable for railway locations, but stainless steel housing is also a possibility.

The main parts of the GSM-Terminals are:

- pillar body
 - plastic pillar with two doors
HxWxD [mm] 1605x130(220)x130(180)
 - stainless steel housing with 2 doors
HxWxD [mm] 2200x250x250
- electronic unit comprising
 - mainboard with GSM module
 - inside antenna (plastic pillar)
 - out side flat antenna (stainless steel pillar)
 - loudspeaker / microphone
- up to 3 direct dialing buttons
- power supply unit
- GPS-modul with antenna as option

The main features of the GSM stations are:

- triband technology for GSM 900/1800/1900
- hands-free set
- free configuration of each direct dialing button with up to 4 direct numbers
- optical display of dialing status with LED
- implemented speech memory for locally given acoustic advise, calm down messages or common information
- free programmable voice messages
- independent power supply with battery packs or solar panel possible
- periodic self monitoring
- remote control if required
- redundant messaging via SMS if voice connection failed
- Automatic failure message via SMS in case of hardware failure
- Transmission of GPS coordinates per SMS as option

GSM-R Communication Terminals



Network dependet

Network independet



GSM-R stations are used for communication throughout a railway network. In using the GSM-R functionalities you can communicate to any other remote station (i.e. emergency centre, movements inspector, train conductor or operating centre)

The main parts of the GSM-R-Terminals are:

- pillar housing, made of fibreglass reinforced polyester with 2 doors, HxWxD [mm] 1605x130x290
- electronical unit consisting of
 - mainboard with GSM-R modul
 - inside integrated antenna
 - loudspeaker / microphone
 - up to 3 direct dialing buttons
 - power supply unit
- GPS-modul with antenna as option

The main features of the GSM-R stations are:

- triband technology for GSM 900 incl. R- and E-Band, 1800 and 1900 MHz
- hands-free set
- free configuration of each direct dialing button with up to 4 direct numbers
- optical display of dialing status with LED
- implemented speech memory for locally given acoustic advise, calm down messages or common information
- free programmable voice messages
- independent power supply with battery packs or solar panel possible
- periodic self monitoring
- remote control if required
- redundant messaging via SMS if voice connection failed
- Automatic failure message via SMS in case of hardware failure
- Transmission of GPS coordinates per SMS as option

Brochure overview

- Emergency, Information and Security Technology, GSM- and GSM-R-Communication Terminals
- Communication Technology LB, CB, GSM, GSM-R
- Distribution Technology, indoor
- Distribution Technology, indoor (railways)
- Distribution Technology, weatherproof
- Fastening Elements for the installation of cables along rail tracks

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The Quality Assurance of
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