

Technical information

GSM communication pillars

General

The GSM communication pillars enable a pre-programmed voice connection between the GSM communication pillar and any other subscriber with the help of the GSM network.

The GSM communication pillars can be used universally and can also be integrated into existing wire-bound emergency call systems, amongst other things, as emergency call pillars.

The benefits of the GSM communication pillars are in particular that no investments are necessary for the laying of cables, as solar or battery supply enables use free of cables.

Possibilities of use of the GSM communication pillars:

- as a communication point at exposed locations on the railways, e.g. at level crossings
- on platforms
- at goods terminals
- as relay stations and in technical rooms
- in workshops
- in warehouses and storage rooms
- as emergency call pillars
 - on bridges and in tunnels
 - along motorways, trunk and country roads, supply lines, waterways,
 - on public areas and squares, leisure facilities and sports areas
- as temporary communication and emergency call systems on building sites
- to secure large-scale public events
- as communication devices for monitoring and operating doors and gates
- as announcement and information terminals
 - at stations and stops
 - on public squares
 - at trade fairs and exhibitions
- as speech output modules for remote inquiry of information
 - e.g. timetable information, weather, snow heights

Set-up

Main component parts of the GSM communication pillars are:

- pillar body made of plastic with two doors or made of stainless steel with one door
- electronic unit comprising
 - main board with GSM module
 - antenna
 - loudspeaker/microphone
- unit for energy supply

The plastic pillar is divided into two access areas with doors stopping on the left (angle of opening 120° or 180°). The stainless steel pillar has one door (angle of opening 90°). The electronic unit and its operating elements can be found in the upper part of the communication pillar.

The GSM communication pillars are designed as hands-free systems and have 3 target selection keys.

For the plastic pillars, there is a version with a hand-held device available as an alternative.

The construction part of the energy supply can be found in the lower part of the communication pillar.

The configuration of the GSM communication pillars and the programming of the target numbers is done by the customer. The GSM communication pillars are equipped with a dual-band device, i.e. not only GSM 900, but also DCS 1800 can be used.

The antenna is integrated into the housing and is not visible from the outside.

The door has a square closure.

The GSM communication pillars are marked on the outside with retro-reflecting signs in accordance with their functionalities.

Mode of function

After a target key has been pressed, a voice connection to the required subscriber is built up via the GSM network.

1 to 3 target keys are available for the operation of the GSM communication pillars. Optionally, an SMS to acknowledge the call can be sent parallel to the voice connection, or there is a redundant report transmission by SMS in the event of the voice channel not being set up. Up to 4 target numbers, which are used in the programmed order if the other subscriber is engaged or only for the transmission of an SMS message, as the case may be, can be assigned to each target key.

A sabotage detection automatically triggers a call or transmits an SMS message in the event of the electronic unit being broken open or dismantled.

Status reports can periodically report the state of the GSM communication pillar by SMS, the interval can be freely programmed. As a default, loudspeaker, microphone, battery voltage and temperature are tested.

Thanks to energy supply via a solar panel and an intelligent power management, the GSM communication pillars can be operated completely autonomously. The possibility of connecting an external rechargeable battery for an extension of capacity also exists. Naturally, there is also the possibility of supplying the GSM communication pillars with energy via a mains connection (AC 230 V).

Operation

Making a call

- Open the top door (only for plastic pillar)
- Press target key
After the target key has been pressed, the connection is automatically made and signalled by a message. The message is:
"Your call has been registered. Please wait."
This message can also be provided with a specific text.
Optionally, operation of the target keys can be signalled by a flashing LED.
The message is repeated until the other subscriber answers. The dialling tone can be heard in the loudspeaker.
- Make the call
An active connection is displayed by the LED in the key lighting up.
- No connection
If no connection comes about, the following sequence can be configured, for example:
After 1 min. (configurable), the message "The connection was not possible. Please press the key again" can be output. If the target key is pressed again, a new call set-up can be started.

Expecting a call

- The GSM communication pillars are in sleep mode as a matter of principle, i.e. incoming calls can only be accepted within a pre-programmed period of time after a call has been made.
- The call is accepted automatically. When a call is recognised, a gong is heard in the GSM communication pillar. Communication with the other subscriber is possible immediately.

Ending the call

- The call is ended either by the other subscriber, by pressing the target key again or by exceeding the time requirement for the connection period (configurable). The LED in the target key goes off.
- Close the upper door (only for plastic pillar).

Assembly and commissioning

When the GSM communication pillars are erected, the location-specific requirements of the area of use in question must be observed.

The location must be selected in such a way that a secure and disturbance-free connection to the GSM network is guaranteed.

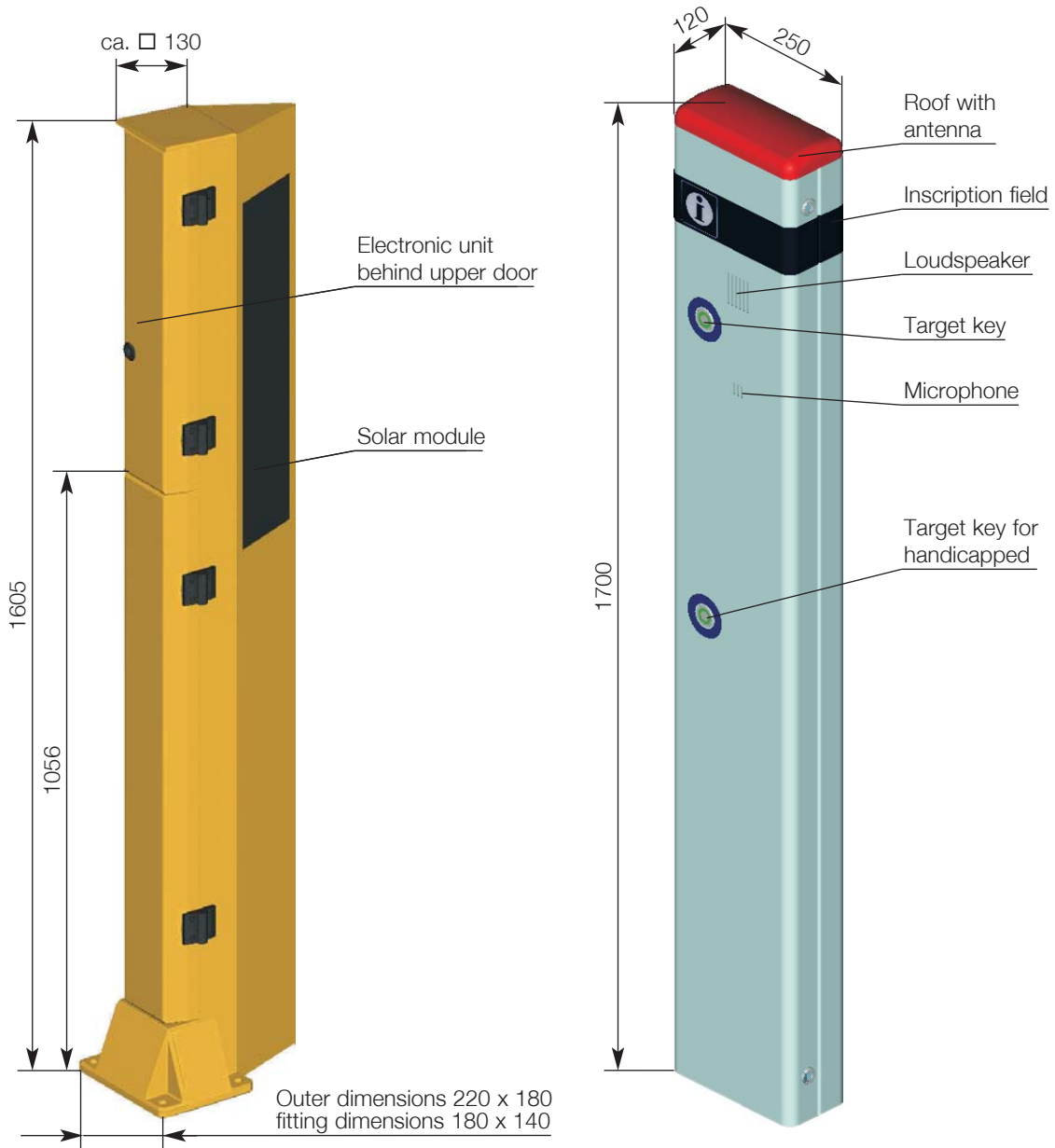
The erection accessories are not part of the scope of delivery for GSM communication pillars and are to be ordered separately. Concrete or steel ground feet are available as erection accessories. Wall and pylon fitting modules are also available for GSM communication pillars without solar units.

After connection of the electricity supply, the GSM communication pillars are ready for operation immediately and can be configured. The configuration is maintained if they are removed from the energy supply.
The functionality has to be tested with a control call.

Technical data

Temperature range	Operation	-25 bis +55 °C
	Transport and storage	-25 bis +70 °C
Energy supply	Current consumption	
	- Active mode of operation	approx. 300 mA
	- Standby mode of operation	approx. 15 mA
	- Sleep mode of operation	approx. 250 µA
Frequency band and transmission output	GSM 900	Class 4 / 2 W
	DCS 1800	Class 1 / 1 W
Reception sensitivity	-102 dBm	
Loudspeaker	volume configurable, up to 100 dB/ 0.30 m	
Microphone	Sensitivity configurable	
Duration of speaking	average of 4 minutes per day in mains-independent operation	
Target keys	3 target keys, optionally with up to 4 numbers each	
Voice reports	Memory capacity about 100 s	

Dimensions (only for information)



Dimensions in mm