

Container Monitoring – the plug & play solution



Communication Center

Autarkic GPS-/GSM-Container
Container Monitoring via CSB®
(Container Security Box)



The System.

CSB® is a GPS/GSM supported system for the monitoring of containers including indoors. In a trapeze-shaped IP65-protected box, CSB® stores a GPS/GSM board computer, a passive-IR-receiver and components for his own power supply. By means of this autarkic working system and in co-operation with the Monitoring Center of Bosch Communication Center, valuable goods can be monitored during transport. CSB® is attached at the upper side of the container via magnetic adhesion. A radio infrared-sensor allows monitoring of the indoors and is also magnetically fixed at the interior wall of the container.

Operating method.

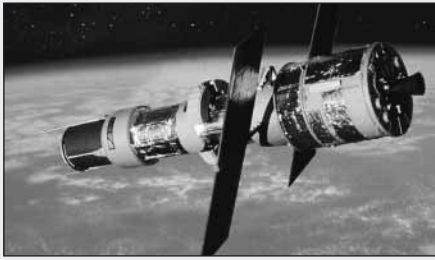
A 12-volt battery with a capacity of 2.2 ampere hours provides power for the entire CSB® equipment. The battery is recharged either by a solar cell fixed at the upper side of the box or by an external battery charger. The operating time of CSB® depends on the operation mode that has been selected according to the intended purpose. For a cyclical operation mode (sleep mode) the power consumption is of approx 3 mA. In case of an hourly recording of the GPS location data and the daily transmission of those data to the Monitoring Center (recording time) CSB® power will last approx. 30 days without any recharge.

Depending on the lighting of the solar cell by daylight, operating time extends accordingly. In case of a possible continuous operating mode as e.g. short transports with permanent monitoring, the power consumption of CSB® is of approx. 60mA. Hence, an operating time over a long period is possible without need of recharge.

Mode of operation.

CSB® is located via GPS and data are transmitted via SMS within the GSM network. In principle, the system is meant to remain in sleep mode at all time. An event as e.g. fixing of the CSB® on a container, removal of the CSB® from the container or the opening of the container extracts the CSB® out of the sleep mode. The alarms /events are transmitted to the Monitoring Center. For each alarm, a date and time stamp and the corresponding location information is available. Thus, the notification of the Monitoring Center of Bosch Communication Center about an unauthorized removal of the CSB® from the container or an unauthorized opening is granted without delay, provided that the GSM net is available and the GPS signals can be received without restrictions.

Overview



GPS
Global Positioning System



Alarm
Position data
(SMS/GSM)



Co-ordination and Monitoring
of Emergency measures
e.g. notification of the police



Bosch Communication Center
Monitoring Center

Alarm Management.

The containers that have been equipped with CSB® are located via the Global Positioning System (GPS). A satellite identifies the exact position of the container. In case of a sabotage regarding the location device or if the door is opened without request, an alarm is activated immediately. The alarm is transmitted to the Monitoring Center via GSM. The appropriate measures are co-ordinated at once by the staff of Bosch Communication Center (e.g. notification of the police, operational head office or other intervention by third parties).

CSB® is a registered brand of
Rainer Koch Kommunikation GmbH

Technical Data CSB®

Measures	766 mm x 122 mm x 28 mm
Weight	2.25 kg
Adhesive force of the magnets	2 x 500 N
Power supply	12-V-battery, solar cell 4 Wp
GPS-receiver	16 channels
Data transmission	SMS via GSM (Quad mode)
Temperature	-20°C to +55°C
Protection	IP 65
TÜV-Certified (German Technical Inspection Authority)	CSC-compliant

Technical Data IR-Motion Detector

Measures	200 mm x 65 mm x 70 mm
Weight	425 g
Internal battery	3 x Alkaline R6 (AA)
Radio frequency	868.35 MHz
Coding	24-bit
Registration area	15 m x 15 m / 90°

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* 0,12 EUR per minute

