



funkwerk OCP: Messages in plain text.

On-site radio messaging system

Security. Everywhere.

Funkwerk Enterprise Communications GmbH with its head office in Nuremberg is a leading manufacturer in Europe of professional network access and ITC solutions for companies, authorities, organisations and carriers.

The scope of services comprises the following technologies: Wireless LAN, IP-based routing, UTM, VPN, Voice over IP, Voice over VPN (VoVPN™) as well as highly integrated telecommunication systems. Moreover, we also offer mobile security and communication systems based on GSM and DECT™ technologies.

As one of the major producers of DECT™ units and personal emergency signal systems for professional and industrial uses, we manufacture around 250,000 mobile units per year in our Salzgitter factory.

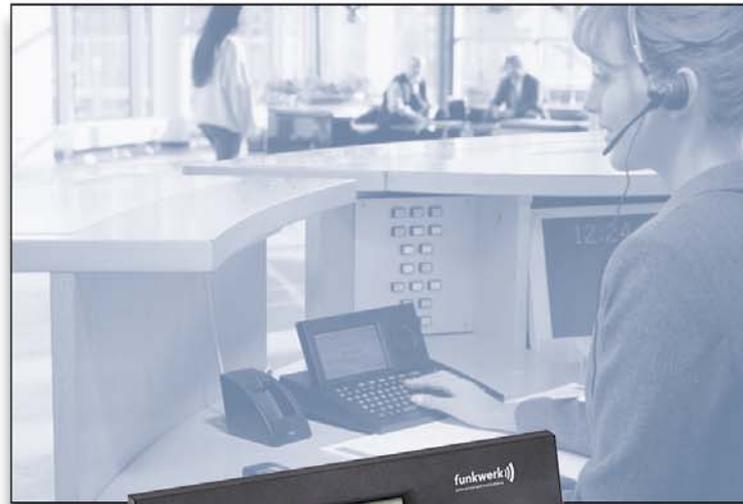
High investment safety and lasting operational readiness are guaranteed by our spare parts supply over many years and repair throughput times of mostly less than 24 hours.

The funkwerk OCP radio messaging system

Transmit information quickly, safely and at a reasonable price.

Permanent availability of communication paths in combination with unrestricted room to move is an important factor for work processes in the most varied branches of industry. With the radio messaging system comprising the funkwerk OCP (Onsite Communication Processor) and the radio paging receivers of the funkwerk MR series, Funkwerk Enterprise Communications GmbH offers an alphanumeric, radio-based information and messaging system meeting even the highest standards for your in-house communication infrastructure.

The system focus is on transmitting text messages having a length of up to 160 characters which can be triggered, entered and forwarded in many different ways.



Transmission of manually entered and automatically triggered calls is within a few seconds; the permanent system availability is ensured at any time. The Onsite Communication Processors of the funkwerk OCP series control transmission to specific users or to arbitrarily compiled groups of persons.

This tried-and-tested, flexible and versatile radio messaging system ensures quick and safe transmission of messages of all types. The funkwerk OCP system increases your flexibility in work processes and clearly increases efficiency.

funkwerk OCP: Transmit information quickly and efficiently.

The large range and the numerous individual extension options of the funkwerk OCP system enable reasonably priced, comprehensive radio coverage for industrial companies of almost any sector and size. If your employees need to be flexible and must receive information quickly, your company will benefit from the inexpensive and flexible information paths offered by the funkwerk OCP systems.

The system has been designed especially for

- ▶ industrial enterprises
- ▶ hospitals
- ▶ authorities and administrations
- ▶ retirement and nursing homes
- ▶ banks and insurances
- ▶ trade companies
- ▶ business enterprises
- ▶ municipal utilities and energy supply companies
- ▶ service providers and
- ▶ ports and airports.

Notify and react—without delay.

The funkwerk OCP radio messaging system allows you to transmit plain text messages of up to 160 characters within a few seconds. No matter if specific persons or groups of persons are to be addressed—urgent information is transmitted to the right address, quickly and safely.

The texts can be entered either alphanumerically and directly on the funkwerk OCP 200 / OCP 250 Onsite Communication Processor or numerically on any telephone set connected with the internal telecommunication system (private branch exchange). As a matter of course, the system can also be PC-controlled (single-user workstations and networks).

Higher productivity and safety by automated calls

In the funkwerk OCP system, direct call or alarm contacts cause the automatic transmission of previously saved alphanumeric information to the mobile users in charge. Such transmissions can be triggered e.g. by emergency call buttons installed on hospital beds, failure contacts on machinery, level indicators fitted on tanks and many more. In chemical operations or laboratories, computers can use sensors or sensor data for triggering. The funkwerk OCP radio messaging system thus enables data to be transmitted automatically and specifically to the mobile users in charge (e.g. the technician on duty) before any damage occurs.

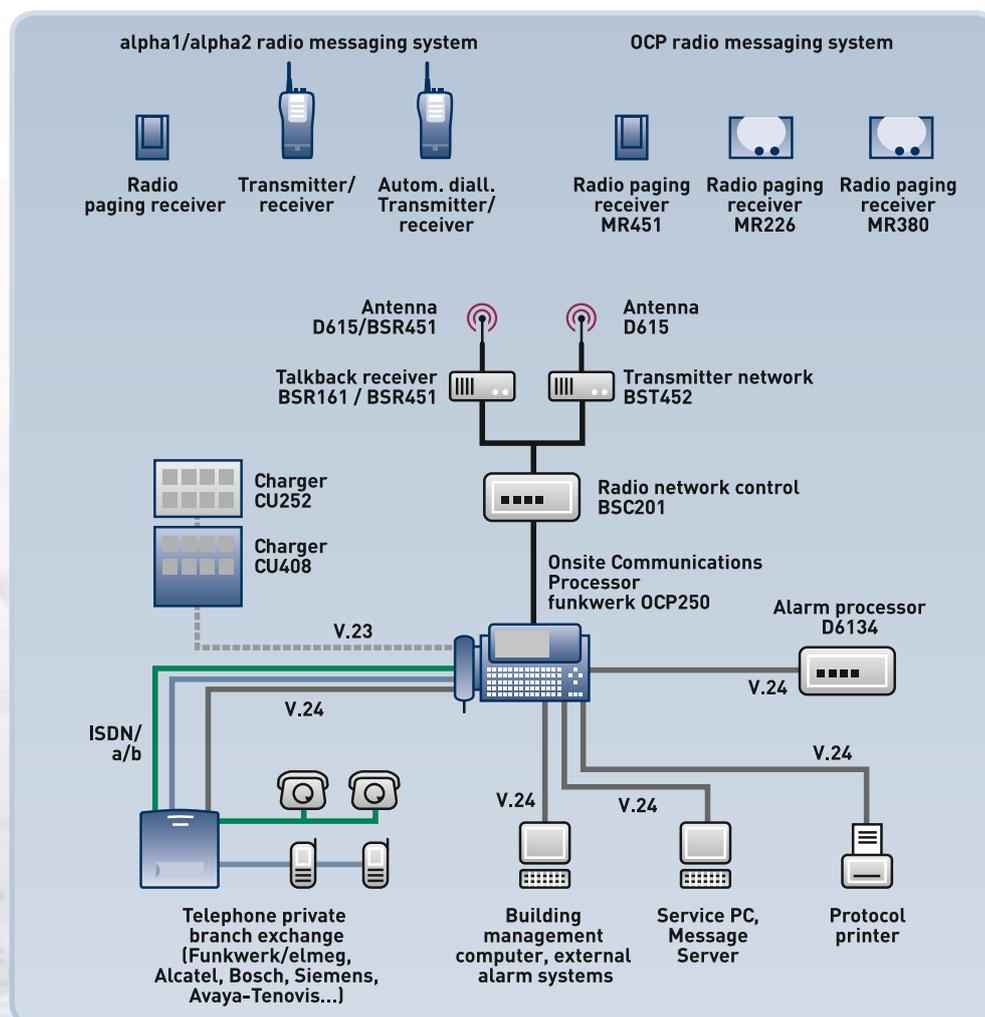


Cancellation call

A special feature offered by the funkwerk OCP system is the “Cancellation call” feature which is important especially for service or nursing personnel: When one person acknowledges an alarm, e.g. on the in-house system, the call is automatically and immediately cancelled for all units of the other group members.

System features:

- ▶ Graded features of system components and modular layout of central units enable flexible adaptation to the user's requirements.
- ▶ Extensive radio coverage, even of large areas, is achieved by multi-transmitter layout.
- ▶ Call triggering and entry at the funkwerk OCP 200 / OCP 250 Onsite Communication Processor or with a private branch exchange telephone set.
- ▶ Transmission of text messages via PC (mobile E-mail), even within networks.
- ▶ Triggering of pre-programmed alphanumeric calls by integrated direct call contacts.
- ▶ Triggering of pre-programmed alphanumeric calls by contact scanning from external alarm processors.
- ▶ Triggering of alphanumeric calls by external computer systems such as fault message systems, alarm systems or nurse call systems.
- ▶ Variable adaptation of external systems by V.24 third-party protocol analysis of serial printer interfaces.



The funkwerk OCP series Onsite Communication Processors: The core of the system.

The intelligent and versatile multi-function processor

The funkwerk OCP Onsite Communication Processor is the central control unit of the entire system, enabling control, administration and monitoring of all activities. This unit also serves as a transfer station for radio messages triggered by

- ▶ the local private telecommunication system,
- ▶ a PC or a PC network,
- ▶ the connected direct call and alarm contacts,
- ▶ external computers,
- ▶ other external alarm or messaging units.

Graded features and the modular layout enable flexible adaptation to the most varied user situations. Easy, quick and reasonably priced—a system that grows along with your requirements. Extensions are available e.g. for:

- ▶ S₀ interfaces for connecting to ISDN telecommunication systems
- ▶ a/b interface for connecting to analogue telecommunication systems: with one trunk and one user connection each and both being usable at the same time if needed
- ▶ Multi-I/O modules: for all current serial data interfaces, direct call contact inputs and control outputs

MODEL VERSIONS

funkwerk OCP 100 Onsite Communication Processor

Basic version of Onsite Communication Processor without display and keyboard. The unit works without an operator and serves as a transfer station exclusively. Programming and parameterisation are realized via the data interface of the service PC.

funkwerk OCP 200 Onsite Communication Processor

Comfortable version with large LCD display and QWERTZ or QWERTY keyboard. This unit serves both as a transfer station and as a operator workstation. Call triggering and programming is by a comfortable and menu-driven operator interface. Access to programming and administration functions can be protected by passwords.

funkwerk OCP 250 Onsite Communication Processor

This central unit serves as a voice-compatible operator workstation and therefore is the optimum solution as an additional link with partners for which voice connections make sense. The operator workstation can be called like any other telephone extension and enables direct brokering between radio/radio and telephone/radio.

As compared with the funkwerk OCP 200 model, the funkwerk OCP 250 Onsite Communication Processor is equipped with a listening/talking unit consisting of a hands-free talking unit, a telephone handset with a tray and an audio module. This configuration allows not only voice connections with suitably equipped mobile units, but also telephone connections with private branch exchanges. All other features are the same as for the funkwerk OCP 200 Onsite Communication Processor.

Main functions of funkwerk OCP radio messaging systems

Data calls to mobile units: Entering and triggering by

- ▶ funkwerk OCP 200 / OCP 250 Onsite Communication Processor
- ▶ telecommunication users (internal extensions)
- ▶ operator PC
- ▶ external devices

Readout and triggering of stored texts by

- ▶ funkwerk OCP 200 / OCP 250 Onsite Communication Processor
- ▶ Telecommunication users (internal extensions)
- ▶ Direct call contacts
- ▶ Alarm processor external computer
- ▶ External messaging units

Special call processing

- ▶ Call repetition
- ▶ Manual and automatic absence message
- ▶ Manual and automatic call redirection

Modular extension:

External modules:

- ▶ DCF 77 receiver (radio clock module): For synchronising the OCP system to the official time, separate interface (DCF)

Interface modules:

- ▶ Message server
- ▶ Chargers
- ▶ Log printers
- ▶ Transmitters

Explosion-protected version:

The radio receivers of the funkwerk MR series are also available as explosion-protected versions for use in explosion-hazardous areas.

Special features of radio messaging system:

- ▶ Message length: 160 alphanumeric characters max.
- ▶ Dynamic memory management: up to 32 messages of 64 characters each
- ▶ LCD display with status/symbol line (26 characters for MR 226, 80 characters for MR 380)



*funkwerk OCP 250 Onsite Communication Processor:
Small size, compact design, functional features and clear layout.*

The funkwerk MR 226 and funkwerk MR 380 pagers: Small and convenient, yet powerful.

The funkwerk MR 226 and funkwerk MR 380 radio paging receivers combine all the benefits: state-of-the-art technology, excellent display image, easy operation, compact dimensions and low weight. Incoming messages can be signalled either as a call tone or by a vibration alarm in order to avoid acoustic disturbance. Moreover, incoming messages can be stored so that no important information can get lost.

Ergonomic and flexible operation.

The user is guided through an easy-to-understand and clearly arranged menu by pushing a button. This allows intuitive operation and programming even without a manual or time-consuming settling-in period. The operating menu can also be individually adapted to the user's wishes: This makes the most frequently needed functions available quickly (open menu); all other functions remain hidden (hidden menu), but can be called up at any time.

Function overview of funkwerk MR380 pager:

- ▶ Acoustic, optical and vibration signalling
- ▶ Flexible, individual menu layout (open menu / hidden menu)
- ▶ Trash can function
- ▶ Mailbox function
- ▶ Standby message with user name display
- ▶ Display of weekday, date and time
- ▶ Message time stamp
- ▶ Alarm timer
- ▶ Automatic switching ON/OFF Cancellation call (e.g. for hospitals)
- ▶ Battery level indicator



All important information at a glance when it's urgent: MR 380 radio paging receiver.

Charging and storage units for funkwerk MR mobile units

funkwerk CU 401 tabletop charger:

Tabletop charger with plug-type power supply unit, accommodating one MR 226/MR 380 pager.

funkwerk CU 401 V tabletop charger:

Tabletop charger with additional serial interface, for connecting a printer for call logging.

A suitable software enables application-related programming of mobile units.



funkwerk CU 408 M multiple charger:

Accommodates up to eight funkwerk MR 226 / funkwerk MR 380 pagers. Allows automatic absence message with call redirection and/or substitute connection after putting down the pager.

funkwerk CU 408 S multiple charger:

Extension of the CU 408 M multiple charger to 16 charging compartments. The funkwerk CU 408 M multiple charger can be extended by up to 50 pcs. CU 408 S, enabling central charging and storage of up to 400 pagers.



Technical data

Onsite Communication Processors

funkwerk OCP 100 / funkwerk OCP 200 / funkwerk OCP 250

Address capacity:	6 characters max./up to 999,999 users (5 characters/up to 99,999 users when system identification is activated)
Information transmission capacity per call:	160 alphanumeric characters
Input keyboard*:	Alphanumeric, for entering calls and for programming user-specific system parameters, fixed texts and direct calls
Function keys*:	10, can be freely assigned by macro recorder
Display*:	Alphanumeric LC display, 11 lines of 40 characters each, for user guidance and display of incoming information
User file (call target list):	1,600 users
Group call memory for sequential groups:	50 groups of 50 users each
Text memory:	25 alphanumeric fixed texts
Fixed call memory:	10 complete calls
Direct call memory:	16 complete calls, can be activated by 8 contact inputs (NC contact / NO contact function)
Alarm processor direct calls:	256 complete call entries
Data backup in case of mains failure:	Memory buffering by integrated lithium battery
Absence memory:	For all users covered by user administration
Mains power supply:	230 – 240 V AC, 40 – 70 Hz
Power consumption:	0.16 VA max.
Allowed ambient temperature:	+5 – +40 °C
Dimensions (W x H x D)**:	295 x 147 x 220 mm
Weight**:	1.5 kg (without optional boards)
Conformity acc. to EU regulation:	1999/5/EG
Label:	CE

Programming:

funkwerk OCP 100:	Via telephone or a temporarily connected service PC
funkwerk OCP 200 and OCP 250:	With dedicated keyboard and display, menu-driven operation

Possible connections:

3 transmitters max. directly, can be extended by active modulation and reference distributors
1 ISDN-S ₀ interface or 2 analogue telephone inputs (MFV/ESPA)
8 Direct call contacts
4 V.24 interfaces (service PC, message server, external computer, VIP call, printer)
2 V.23 interfaces (chargers/storage units)
1 DCF 77 interface
ESPA 4.4.4
AZS
Log analysis

**) funkwerk OCP 200 and funkwerk OCP 250 only **) funkwerk OCP 200*

funkwerk MR 226 / funkwerk MR 380 / funkwerk MR 380 D radio paging receivers

HF section

Frequency ranges (Germany):	MR 226, MR 380, MR 380 D:	466,490 – 466,650 MHz
	MR 226, MR 380, MR 380 D:	468,350 – 469,150 MHz
	MR 380 D (FR operation):	443,0125 – 443,1125 MHz
	MR 380 D (FR operation):	448,0125 – 448,1125 MHz
Receiving frequencies:	Programmable, 440 – 470 MHz (PLL synthesizer)	
Modulation type:	F1D / $\pm 2,4$ / 4,0 / 4,5 kHz swing	
Sensitivity:	Typically 14 μ V/m	
Antenna:	Integrated frame-type antenna	

Digital section

Address capacity:	6-character addresses max.	
Number of call addresses:	5 calling addresses, 1 system address	
Inform. transmission capacity per call:	MR 226, MR 380, MR 380 D:	160 alphanumeric characters
	MR 380 D (FR operation):	60 alphanumeric characters
Memory capacity:	32 messages of 64 characters each	
Display:	26-characters (MR 226) / 80 characters (MR 380), LCD display with dot matrix and status line, background lighting	
Call signalling:	Call tone, light call, vibration	
Acoustic signalling:	Swelling melody, muting	
Loudness at a distance of 30 cm:	> 82 dBA	

General Data

Dimensions (B x H x T):	70 x 55 x 25 mm	
Weight:	90 g (incl. batteries)	
Power supply:	2 NiMH storage batteries or 2 batteries (AAA)	
Charging:	Intelligent, with energy balance	
Allowed operating temperature range:	–10 – +55 °C	
	–10 – +40 °C (for explosion-protected versions)	
Degree of protection:	IP 54 (dustproof and splashproof)	
For explosion-protected versions:	EG prototype certificate:	TÜV 99 ATEX 1397 X (gas) IB ExU 00 ATEX 1071 X (dust)
	approvals for hazardous gases:	⚠ II 2G EEx ib IIC T6 (storage battery operation) EEx ib IIC T4 (battery operation)
	Approval for hazardous dusts:	⚠ II 2D T 80 °C

Charger funkwerk CU 401 / funkwerk CU 408

Power supply:	230 V AC, 50 Hz	
Allowed operating temperature range:	0 – +40 °C	
Dimensions (B x H x T):	funkwerk CU 401:	87 x 95 x 80 mm
	funkwerk CU 408:	332 x 200 x 66 mm
Weight:	funkwerk CU 401:	320 g
	funkwerk CU 408:	1,5 kg

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