BCOM
Voice over IP

- High-quality digital voice transmission
- Integration of voice into the existing Ethernet data network
- Software replaces elaborate copper wiring
- Highly available due to redundant network and battery buffering
- Malfunction-related downtimes are minimised
- Centralised aboveground network management
- Savings in regard to expert personnel
Performance features

In mining, fibre-optic networks are increasingly replacing the classic data transmission for control and logistics. The worldwide Ethernet standard is used.

The new network technology has only been used for data transmission until now. The telephone and intercom network installed parallel must continue to be managed elaborately constructed with its own wiring.

For the first time, BCOM VoIP integrates data and voice transmission in a common network. The innovative voice communication system thus revolutionises voice communication in mining.

The basis of the entire system is voice transmission via Voice over IP.

Voice over IP (VoIP) is telephony via computer networks. In the process, the voices are digitised, broken down into small packets, transferred, and reassembled at the receiver. The result is a high voice quality without interference.

A further advantage of Voice over IP is the possibility to save in regard to expert personnel and thus costs, as well. The installation, documentation, and care of separate copper networks are no longer necessary with BCOM VoIP. The entire system can be configured and maintained aboveground.

Functions

BCOM VoIP integrates all known functions from classic telephony and intercom technology into a digital network on an Ethernet basis. BCOM also offers many new functions that can be realised for the first time using digital technology.

Connection of intrinsically safe telephones

Existing intrinsically safe telephones (FHF IVT3) can be connected to BCOM. You can still be reached in the telephone system with your normal telephone number as before.

Telephone numbers for intercoms

Due to the integration of the intercom and telephone into one system, you can reach an intercom with its own telephone number from any telephone.
Interconnection of Intercoms

Customers want to be able to speak to certain parts of the mine from above-ground (such as the main conveyor section) or have a permanent underground voice connection between the main and auxiliary drive of a working face. If this has been implemented using wiring until now, plants have been able to be interconnected permanently or as required in any configuration.

Employee warning

If the employees should be warned, you can speak into the entire intercom system using a central call.

Central mine control station call

If the signal tone on an intercom is activated for a longer period of time, BCOM VoIP automatically calls a parameterised telephone number. The origin of the call can be displayed on the telephone (e.g., „Conveyor 5 Intercom“). If this number is busy, an alternative number can be dialled automatically.

Intercom Terminal BCOM IT

Every control station is equipped with a loudspeaker and microphone for communication with the underground intercom. In the case of BCOM VoIP, this task is assumed by the BCOM IT voice terminal. The voice terminal can be connected to any Ethernet port. In addition to the control station, service and programming workstations can thus be equipped with BCOM IT and contact any other point in the mine. Using the touch screen, a maximum of 64 communication targets can be selected.

With two voice buttons, you can speak to two destinations alternatingly or at the same time (working face and conveyor system).
Datasheet

Voice over IP

**BCOM VoIP 4/1**

BCOM VoIP 4/1 connects existing intercoms and telephones to the digital network.

Existing underground telephones and intercoms should be integrated into the Voice over IP voice transmission without change. This makes sure the installed technology remains future-proof.

The BCOM VoIP 4/1 was developed to connect these devices. It integrates all necessary functions for the connection of the existing communication technology.

Features:

- Intrinsically safe device with 12V supply via a separate power supply unit
- Battery buffering in case of power failure guarantees employee warning in case of danger
- Connection to a ring network guarantees highly available data transmission
- According to the structure, two or four analogue connections for the telephone and intercoms
- Every connection for the telephone or intercom is freely parameterisable
- Third fibre-optic connection with 100Mbps for additional network subscribers (e.g. MIN-COS MMC control system or other systems)

**Explosion Protection**

| Type of protection | I M1 Ex ia op is I |

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