



Industrieelektronik - Nachrichtentechnik - Systemtechnik

TETRA Cab Radio Solutions



Product presentation
Radio Systems

TETRA radio systems are increasingly used for communication in public transport networks. Here, special requirements apply for TETRA systems and their radio components, in particular for the train equipment. Schnoor Industrielektronik has accepted this challenge and developed and supplied a variety of different cab radio solutions.

TETRA Cab Radio Solutions



This solution comprises a TETRA 19" frame with the built-in radio transceiver with antenna connector. Furthermore, a passenger announcement (PA) system interface, a connection for a control unit and an interface for a 2-wire connection to a second driver's cab are included. A ½ 19" frame is connected to the two-wire cable at the second driver's cab, the length of this cable may be up to a few hundred meters.

The driver's positions in each cab include a control unit DABT and a handset resp. microphone and loudspeaker. The appearance and use of this equipment in both cabs are exactly identical.

However, this solution requires only a single radio unit, antenna and interface to the PA system.

The driver may not only call the control center or other parties in the radio network, but also make announcements to passengers via the onboard PA system. The microphone in the driver's cab is switched over to be used either for radio communication or for passenger announcements. In addition the control center can directly access the PA system to make announcements without any driver action.

Cab Radios – perfect for new trains and retrofits

The installation of TETRA cab radios into different train types, in particular into older train types, requires specific solutions to meet technical needs and at the same time be economically reasonable.



- **Version 1**

A 19" frame version with all cables connected at the front allows installation in 19" cabinets with low depth. Photograph shows a version with Ethernet interface.



- **Version 2**

For older train types TETRA radio components are installed on a mounting plate to allow easy retrofit of previous analog radio equipment.



- **Version 3**

A dust- and splash water protected cabinet allows installation in vehicles where no suitable space for another installation method is available.

Installation



Installation of DABT in older train type driver's panel

The DABT allows ergonomic user-friendly installation also when installed in older train types.

Features DABT

- Highly reliable (small susceptibility to interference)
- illuminated keys for night operation
- High contrast transreflective graphic display
- Wide operating temperature range (-10°C ... 60°C)
- clear optical/ acoustical signals to user
- Wide range of adjustable volume; configurable minimum volume
- Volume control
- ON/OFF switch
- Transmit key (PTT)
- Emergency key (protected against accidental activation)



- Transmit/ receive indicator
- Keypad dialing
- Calling Number ID Display (CLI)
- Indication of speaker during group calls (TPI)
- Theft-proofing by firm mechanical installation

Features Radio Unit

- Mechanical package: 19"-frame with cable connections front or rear, mounting plate or train-specific cabinet.
- Power supply by built-in DC/DC converter for 110 V/72 V/ 36V oder 24 VDC, other voltages upon request
- Interface to the passenger announcement system (PA) on board with the following features and connections:
 - Connection driver microphone to PA for passenger announcement
 - Connection control center to PA for passenger announcement
 - Connection passenger to control center (emergency call door intercom)
- Transmission of vehicle diagnostic data (optional)
- Interface to onboard computer (according to product version):
 - On-board computer: RS 422
 - Connection for external V.24/V.28 data and control interface
 - Ethernet-Interface for bidirectional data

- Connection for detached driver's cab over 2-wire interface (version-dependent)
- Connection for control unit DABT
- Connection for handset / microphone and loudspeaker
- Connection for transmit key (push-to-talk)
- Connection for emergency call key (release from the driver)
- Connection for emergency call key, coupled with emergency brake preparation (for driverless operation)

