

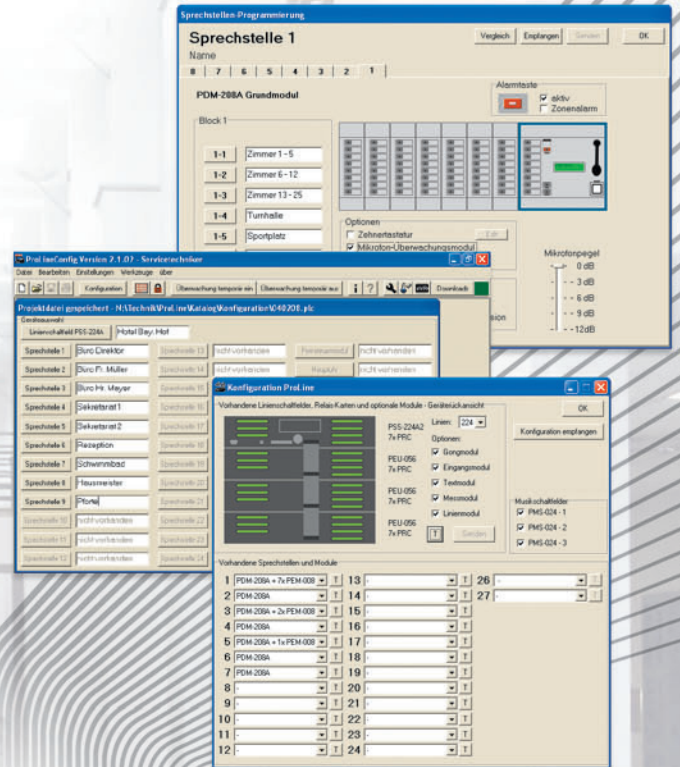
PROLINE

AUDIO- AND ALARMMANAGEMENT

Modular expandable from 8 to 224 speaker lines

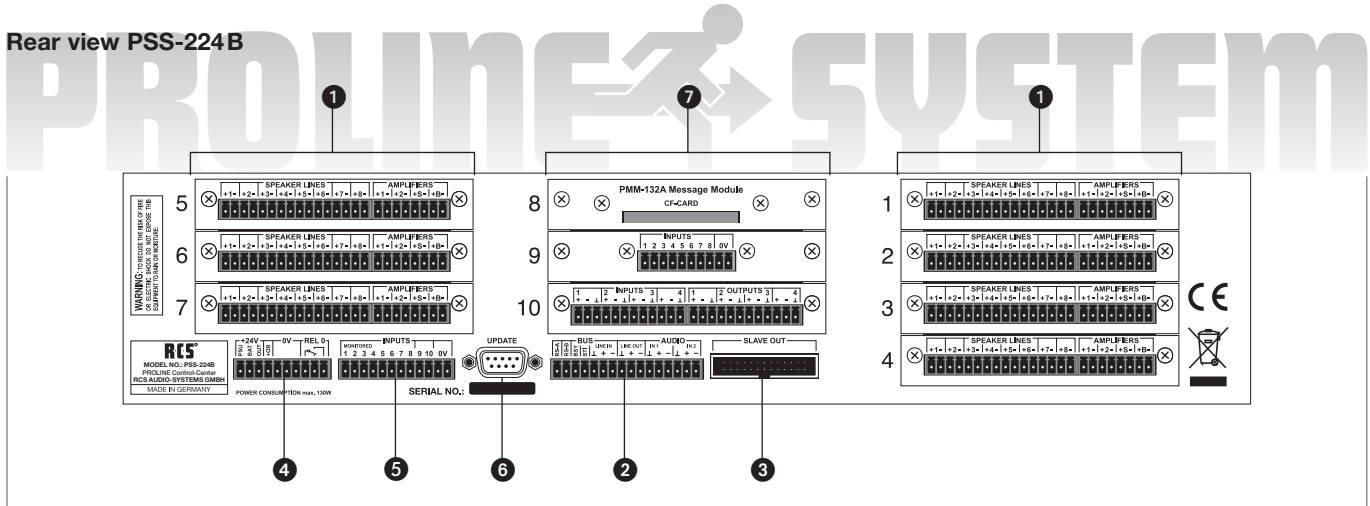
RCS®

AUDIO-SYSTEMS



- Compliant to IEC 60849 ■
- Expandable in steps of 8 up to 224 speaker lines ■
- Configuration by Windows™ software ■
- Settings storable on disk ■
- Up to 24 remote microphones ■
- Each speaker zone individually programmable ■

Rear view PSS-224 B



- 1 7 empty slots for mounting the relay cards PRC-008 B, PRC-108 A or PRC-408 A.
- 2 Bus connector RS-485, 3 symmetrical ground free audio inputs, input 1 as symmetrical ground free audio input or output, 1 symmetrical ground free audio output.
- 3 Extension connector for further slave devices in order to upgrade up to 224 lines and for connection with the music switch panels PMS-024.

- 4 Power supply connector 24 V and emergency power input, relay 0 for special functions.
- 5 8 isolated alarm inputs, 2 isolated switch inputs, freely programmable.
- 6 Connector for firmware update.
- 7 3 optional module slots for installment of additional modules, e.g. text- and signal memory PMM-132 A.

Extension Unit PEU-056 B



The control center PSS-224 B can manage a maximum of 224 different speaker lines or relay contacts.

Through the modular assembly even the extension unit can be adapted to the particular requirements. The basic version of the PEU-056 B will be delivered without relay cards. It can be extended with up to 56 line outputs in various designs. Very new regarding this is the use of the monitored relay card PRC-408 A according to IEC 60849.

The power supply and control comes from the center PSS-224 B. Therefore the relay cards PRC-008 B, PRC-108 A and PRC-408 A will be used just like for the PSS-224 B.

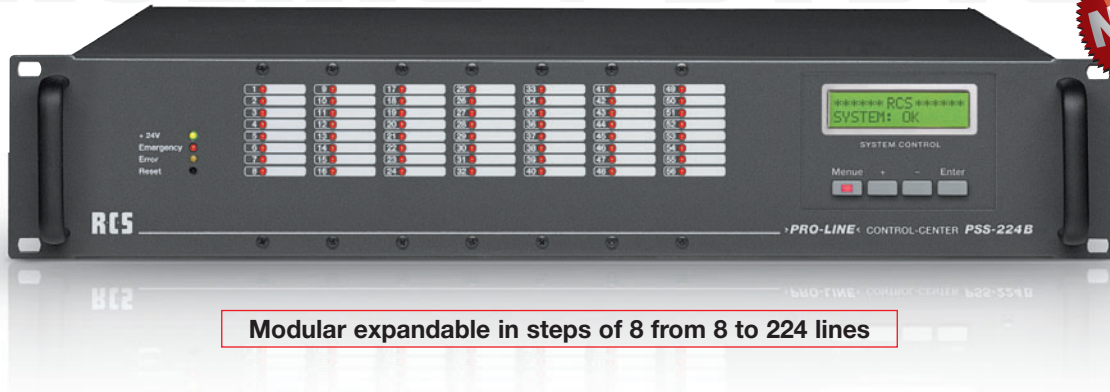
Description of Extension Unit

This digital extension unit PEU-056 B for further 56 speaker lines, is connected through the extension cable PFK-200 to the speaker selector PSS-224 B. A maximum of 3 extension units can be used per PSS-224 B.

Model designations

- „PRO-LINE“ Extension Unit, **PEU-056 B**
for PSS-224 B, 2 RU
- „PRO-LINE“ Extension Cable, **PFK-200**
connecting cable for PEU-056 and Music selector

Technical data	PSS-224 B Control-Center	PEU-056 B Extension Unit for PSS-224 B
Speaker lines	8 (max. 56)	8 (max. 56)
Bus connection	RS 485	-
Audio output level	0 dB / 775mV	-
Module slot	3 Module slot	3 Module slot
Power supply	24 V DC / max. 800 mA	24 V DC / max. 750 mA
Power source	Switching power supply / Battery	from PSS-224 B
Dimensions	483 x 89 x 270 mm, 2 RU	483 x 89 x 270 mm, 2 RU
Weight	3.3 kg (fully equipped 5.5 kg)	3.2 kg (fully equipped 5.1 kg)



Modular expandable in steps of 8 from 8 to 224 lines

Description Control Center

The digital, easy programmable and flexibly expandable center PSS-224 B of the PRO-LINE system takes over the audio- and alarm management for devices with up to 224 speaker lines, or switching contacts.

In connection with the extension unit PEU-056 B, of which a total of 3 units can be operated on one PSS-224 B, the project specific extension from 8 up to 224 lines in eight intervals is easily possible.

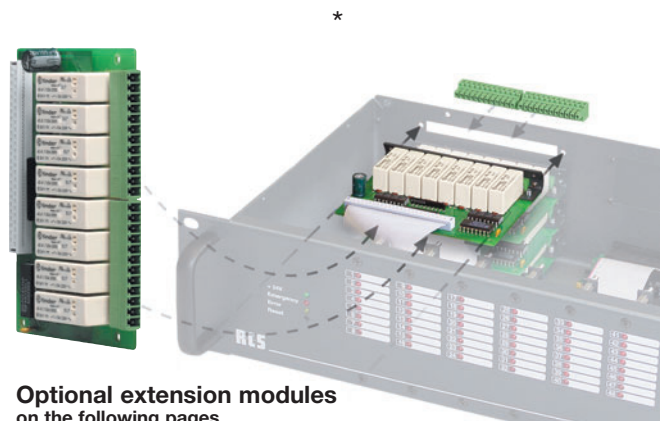
The basic device PSS-224 B and PEU-056 B are offered without a relay card, but depending on the requirements 3 different types are available. As an innovation the relay card PRC-408 A including the evaluation of the amplifier and loudspeaker monitoring according to IEC 60849.

8 monitored and 2 unmonitored isolated inputs enable a remote regulator of the PRO-LINE center. The easy programming of the center PSS-224 B is carried out via the computer software "ProLineConfig", as in all devices of the "PRO-LINE-system".

The most important characteristics combined:

- Monitoring of all system components according to IEC 60849.
- Activation and monitoring of up to 224 speaker lines (in connection with 3x PEU-056 B).
- Flexible usage of the relay cards PRC-008 B, PRC-108 A and PRC-408 A.
- Connection and monitoring of up to 112 power amplifiers (in connection with 3x PEU-056 B)
- 8 monitored and 2 unmonitored isolated inputs.
- Additional 8 isolated inputs with optional input module PIC-208 B.

- Monitored 24 V power supply- and emergency power inputs.
- Relay 0 for special functions.
- Obligatory call output 24 V 2 A.
- 3 symmetrical ground free audio inputs, input 1 as symmetrical ground free audio input or output, 1 symmetrical ground free audio output.
- Relay card 1 programmable for special functions such as alarm, error or obligatory call.
- Bus connector RS-485
- Integrated quartz clock for exact monitoring intervals, which can be synchronized via the DCF-receiver module PRR-077 A.
- Time related remoting of the PSS-224 B according to the main clock PTC-240 A.
- Optional module: display and button module, text- and chime module, measuring- and monitoring module, audio-matrix-module for audio routing and speaker line monitoring.

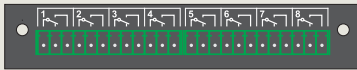


Optional extension modules on the following pages...

Model designation

„PRO-LINE“ Control-Center, 2 RU PSS-224 B

Relay card 8 lines

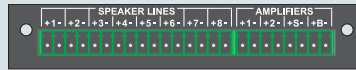


Relay card for 8 speaker lines, to be built into the PSS-224 B and PEU-056 B.

The relays of the cards are equipped with AgCdO-contacts and are prior-ranking with regard to switching off middle inductive demands up to 600 VA.

Relay Card **PRC-008 B**

Relay card 8 lines + 4 amplifiers



Monitored relay card for 8 speaker lines, to be built into the PSS-224 B and PEU-056 B.

It is possible to connect 2x 4 speaker lines each with one speaker amplifier as well as one spare and one background music amplifier for all 8 lines. This card realizes the routing of the line and amplifier monitoring and the spare amplifier according to the IEC 60849.

Relay Card **PRC-408 A**

Relay card 8 lines gold contacts

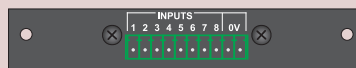


Relay cards for 8 switching options, to be built into the PSS-224 B and PEU-056 B.

The relays of the PRC-108 A are equipped with AgNi and 5 µm gold plating and are perfectly suitable for switching signals and small loads.

Relay Card, with gold contacts **PRC-108 A**

Input module

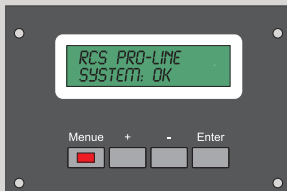


The PIC-208 B enables 8 different allocations via contacts of programmed line conditions including chime- or text selection, provided that the according modules are installed.

Each single input can be configured as background- or normal input, each being the opener or closer.

Input Module **PIC-208 B**

Display- and button module



With this display module actual operating conditions, system- and error messages

can be directly displayed on the PRO-LINE center PSS-224 B via a 16x2 LCD as well as the setting of some important parameters directly on the device. The module has to be handled with 4 buttons on the front side of the module.

Display- and Button Module **PLC-400 A**

Audio matrix



This audio-matrix module is being built into the partial back side of the center PSS-224 B as an optional module. This enables the routing of 4 symmetrical audio- or control signals onto 4 symmetrical outputs simultaneously.

Switching over results from e.g. a tenner key pad of a microphone as program selector switch of the background music.

Audio Matrix **PAX-404 A**

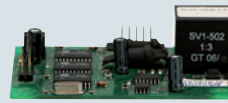
Measuring and monitoring module



The measuring module is able to measure the levels of various audio- and test signals for line-, microphone- and amplifier monitoring according to the IEC 60849.

Measuring and Monitoring Module... PMO-200 A

Chime and Alarm

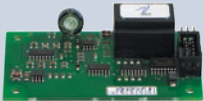


Internal module in order to assembly into the PSS-224 B below the PMO-200 A and PMO-300 A.

Seven kinds of chime (1-sound, 2-sound up or down, 3-sound up or down, 4-sound up, 4-sound Westminster), 4 measuring frequencies of 200Hz, 1kHz, 15kHz and 20kHz and a siren according to DIN 33404 are available.

Chime and Alarm Modul PCM-100 B

Line monitoring



Internal module to be built into the PSS-224 B on top of the PCM-100 B and the PMO-200 A

The line- and earth connection monitoring according to IEC 60849 goes through the relay card PRC-408 A. These are routed on to the speaker lines of the measuring bus.

Line Monitoring Module PMO-300 A

Microphone monitoring

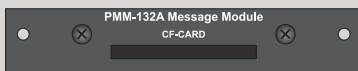


The microphone monitoring module according to IEC 60849 can be built into one of the following optional modules: **PRM-108 A, PDM-208 A**

The microphones according to IEC 60849, PFM-208 A (fire brigade table-microphone) and the PFM-330 A (fire brigade wall-microphone) this module is integrated in series already.

Microphone Monitoring Modul PMO-400 A

Text- and Signal memory



The text and signal speaker is built into the rear panel of the center PSS-224 B and enables playing 32 individual announcements texts or attention signals in mp3 format.

Monitoring according to IEC 60849 is carried out through the module PMO-200 A.

The memory medium is a CompactFlash-Memory-card.

Message-Module PMM-132 A

TCP/IP telecommunication module



This module enables telecommunication, remote maintenance and error transmission via intra- or internet. Configuration and maintenance can be done via a computer with "ProLineConfig" from any location.

TCP/IP Telecommunication Module... PRS-500 A

PROLINE SYSTEM



PMS-024 music switch panel

The PMS-024 music switch panel enables to select up to 24 different background music zones manually, which were configured by software beforehand.

The switch panel is connected to the PSS-224B as an extension unit. Up to 3 music switch panels can be combined.

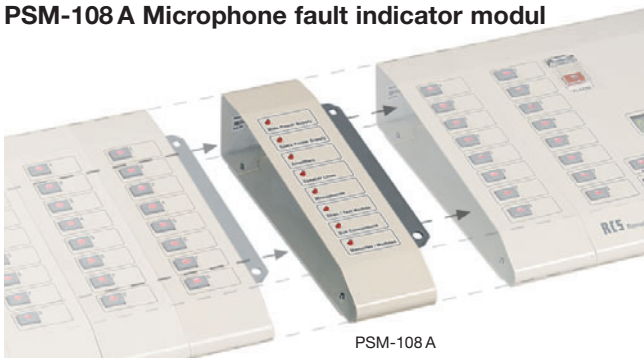
Technical data

PMS-024

Music zones	24 zones
Current consumption	15 mA
Power supply	24 V DC (from PSS-224B)
Dimensions (W x H x D)	483 x 44 x 200 mm, 1 RU
Weight	2,3 kg

„PRO-LINE“ Music Selector, music switch panel (1 RU)	PMS-024
„PRO-LINE“ Extension Cable, connecting cable for PEU-056 B and Music Selectors	PFK-200

PSM-108 A Microphone fault indicator modul



This microphone fault indicator modul displays selectively numerous appearing errors according to IEC 60849 directly on one selected microphone. The module is mounted to the microphone as extension unit.

The following malfunctions are signalled:

- ❶ Failure of main power supply
- ❷ Failure of emergency power supply
- ❸ Failure of an amplifier
- ❹ Change of impedance of a speaker line
- ❺ Failure of a microphone or its cable
- ❻ Failure of the siren or text module
- ❼ Bus interruption or failure of a device
- ❽ Memory error or failure of a module

„PRO-LINE“ Mic Fault Indicator Module ... **PSM-108 A**
Substation extension unit for PRM-108 A or PDM-208 A

PZM-310 ten keys pad



Ten keys pad as extension unit of the substation PDM-208 A, for selection of single or less used zones. By the use of the PZM-310, the substation remains compact and clear.

All speaker lines are separately selectable. Similarly speaker groups can be configured.

„PRO-LINE“ Microphone Extension Unit, ... **PZM-310**
Substation extension unit ten keys pad

PROLINE SYSTEM

PDM-208A with 7 PEM-008A units.



PRM-108A

Remote microphones description

With the basic version of the digital remote microphone PRM-108 A or PDM-208 A, 8 loudspeaker groups or speaker lines can be controlled.

The module for the extension of remote microphones (PEM-008 A) increases the switching possibility for 8 further buttons in order to enable extension by 64 memory buttons.

Alternatively it can be expanded by a tenner keyboard PZM-310 (only for PDM-208 A)

The remote microphone PDM-208 A is additionally equipped with a LCD-display with plain text, via which diverse information can be displayed.

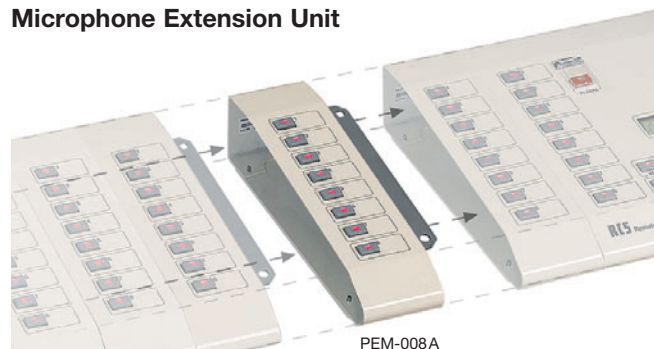
- Each tact switch function is individually programmable. This means every tact switch can be dedicated to every speaker line or speaker group. In addition different chimes and alarm functions are possible.
- The Microphone amplifier has a built-in gate to reduce background noise and a built-in compressor to improve speech transmission.
- Big talk button with busy light, All Call button with indicator and covered alarm button with light.
- A standard Cat. 5 cable can be used as bus cable, which enables a bus length up to 1 km without additional amplification, an easy and low priced installation. Additional cable for bus feed depends on current consumption, only at longer distances.

- Power supply for remote microphones via bus cable (25 pin D-sub connector PBA-, PWS-, PAS-300A).
- Configuration of the remote microphones is possible by the software „Pro-Line Config“ via every bus connection.
- Firmware update by connecting remote plug.

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Technical data	PRM-108A / PDM-208A
Frequency response	100 ~ 15000 Hz
Characteristics	Cardioid (Electret)
Power supply	24 V DC / 55 mA
Power source	from PSS-224B (via bus cable)
Dimensions	211 x 42 x 181 mm
Weight	1.1 kg

Microphone Extension Unit



PEM-008A

Model designations

- „PRO-LINE“ Remote Microphone, with 8 switches **PRM-108A**
- „PRO-LINE“ Display Remote Microphone, with 8 switches and LCD **PDM-208A**
- „PRO-LINE“ Microphone Extension Unit, with 8 switches **PEM-008A**
- „PRO-LINE“ Extension Cable, Microphone Extension Unit connecting cable **PFK-101**

Fire Brigade remote microphone



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All call remote microphone



Description

This fire brigade remote microphone PFM-308 A with a red cabinet is monitored electronically according to **IEC 60849**. Up to 8 speaker line groups can be switched on via these memory buttons as well as prepared texts from the text module PMM-132 A of the PSS-224 B. In case of an alarm a building can be evacuated effectively. Easy installation and intuitive operation is self explanatory.

- Remote microphone with integrated monitoring module PMO-400 A for microphone monitoring according to **IEC 60849**.
- The pre amplifier for the microphone is equipped with a gate in order to blank side tones, a compressor for improved comprehensibility and blasting.
- Large speak button with integrated busy-indicator, all call button as well as a covered alarm button.
- Freely programmable configuration of each individual memory button, which means that any speaker line or group can be assigned to a button simultaneously.
- Additionally a variety of chime and alarm functions are to be assigned.
- Configuration of the remote microphones via „ProLineConfig“ software possible from each bus connector.
- Update of the firmware via remote connector on the device.

Technical data	PFM-308 A
Power supply	from PSS-224B (via bus cable), DC 24V
Frequency range	100 - 15.000 Hz
Bus connections	25-pin. sub-D cable, Bus connectorsocket PBA-, PWS-, PAS-300 A
Memory buttons	8
Characteristics	Cardioid
Dimensions (W x H x D)	221 x 42 x 181 mm,
Weight	1,1 kg

„PRO-LINE“ Fire Brigade Remote Mic..... **PFM-308 A**

Description

This addressable all call remote microphone is suited for building the intercommunication system with up to 200 participants.

The remote microphone has a busy LED and integrated in a parallel way into the PRO-LINE bus. In case you speak on a PTM-101 A, a BUSY-LED lights up and the busy line will be occupied for all other remote microphones.

The electret condenser microphone, with cardioid characteristic, and the built-in microphone amplifier with gate and compressor function guarantees perfect speaker comprehensibility without blasting.

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Technical data	PTM-101 A
Power supply	from PSS-224 B (via bus cable), DC 24V
Frequency range	100 - 15.000 Hz
Bus connections	25-pin. sub-D cable, Bus connectorsocket PBA-, PWS-, PAS-300 A
Microphone level	0dB to -12dB internal switchable
Characteristics	Cardioid
Dimensions (W x H x D)	131 x 42 x 181 mm,
Weight	850 g

„PRO-LINE“ All Call Remote Microphone... **PTM-101 A**

PROLINE SYSTEM



Description of the remote microphone

This fire brigade wall remote microphone PFM-330 A in a red, lockable sheet steel housing with a viewing window is in accordance with the norm ÖNORM F 3033 and is electronically monitored according to IEC 60849. Five alarm announcements can be called in five freely configurable zones, via illuminated buttons from the text module PMM-132 A of the PSS-224 B. Through this, in case of an emergency, a directed evacuation can be initiated.

The device was especially developed for its intended use and was optimized for the operator (rescue worker). Easy installation and intuitive operation are a matter of course.

Please consider the following features:

- Device is in accordance with **ÖNORM F 3033**.
- 5 standardized illuminated buttons for emergency announcements.
- Standardized illuminated button for clear.
- Standardized, covered illuminated button for reverse, switching off the active alarm announcement.
- Visual signal of the operating condition of the PFM-330 A (operation, failure, bus busy)
- Pre-amplifier for the microphone with gate to blank side noise and compressor for better comprehensiveness and blasting.

- Monitoring of the microphone, (module PMO-400 A integrated on main board) the signal ways and the speak button according to **IEC 60849**.
- Easy mounting, caparison- and flush-mounting are possible.
- Robust, lockable sheet steel housing with Plexiglass.
- Easy programming / allocation of the alarm announcements via the "ProLineConfig" software.
- Program interface for firmware updates.
- Exchangeable lock in a standard half cylinder format.

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Technical data	PFM-330 A
Frequency range	300Hz – 6kHz
Characteristics	cardioid
Power supply	from PSS-224 B (via bus cable), DC 24V
Bus connection	8-pin. system plug
Microphone	dynamic hand microphone with talk button
Dimensions	300 x 200 x 70 mm
Weight	1,7 kg

Model designation

„PRO-LINE“ fire brigade wall remote microphone..... **PFM-330 A**

PROLINE SYSTEM



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Description

This latest process-controlled Conversation-Unit provides an expansion to our already successful “PRO-LINE” system. It offers further interesting as well as important application possibilities.

This “PRO-LINE” Conversation-Unit PWM-101 processes an integrated, controllable electret-condenser-microphone on the front, shaped in the cardioid characteristic. The line allocation results from the input-card PIC-208 B of the PSS-224 B, and is being activated via a status line through a certain speaking condition. This Conversation-Unit possesses excellent speaking comprehensibility through a broadband 5”-speaker-chassis.

Once it is being spoken via a PWM-101, the “Busy”-LED will light up and the busy line will be occupied for all other desktop-microphones. At the same time the internal speaker will be turned off, for as long as the speaking-button remains pushed.

Please consider the following features:

- integrated pre-amplifier with voice-operated gate function.
- high-quality compressor for equal microphone sound level.
- 3-stage microphone amplifier input gain switch and a microphone amplifier volume trim pot.
- 6 W 5”- loudspeaker including 100 V transformer.
- up to 200 PWM-101 can be used parallel on a BUS.
- Transformer symmetrical NF-output.
- Can be connected directly via BUS-line (Cat 5).

- Programmable line allocation for PSS-224 B via module PIC-208 B.
- Built on power-coated, perforated steel plate front panel equipped with a red “busy”-LED.
- Available as surface or flush-mounting.

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Examples of use:

- Calling patients in hospitals, nursing homes, etc.
- Conversation-Unit for class rooms, offices, etc.
- Department-Store information point
- Speaking device for workstations

Technical data	PWM-101 A/101 U
Power rating (music power handling)	6 W (10W)
Adjustments at 100 V (in Watt)	6 – 3 – 1,5 W
Power Supply	24V / 50mA
Microphone capsule / Characteristic	Electret; Cardioid
Sound pressure at 1W/1m	95 dB
Nominal gauge	775mV
Nominal impedance	600 ohm
Dimensions (W x H x D); Weight; Colour	180 x 180 x 65 mm; 1 kg; white

Model designations

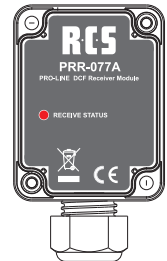
- „PRO-LINE“ Conversation-Unit, for surface mounting **PWM-101 A**
 „PRO-LINE“ Conversation-Unit, for flush mounting **PWM-101 U**

PROLINE  **SYSTEM**

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DCF-Receiver module
PRR-077 A



Description

This master clock makes it possible to drive and control up to 130 side clocks on 2 side clock lines. These operate independently from each other in impulse operation, and control up to 240 switching contacts dependent on time (in connection with PRO-LINE center PSS-224 B).

The PTC-240 A is equipped with the relay card PTC-008 B and can additionally be expanded with one further relay card (PTC-008 B or PTC-108 B) with up to 16 relay switching outputs.

Operation of this device is carried out through 4 buttons on the front panel. The LCD-display with clear text allows the setting of important parameters directly on the device. The computer software "ProLineConfig" makes easy programming of the master clock possible.

Please consider the following features:

- Monitoring of the NU-lines regarding overload or short circuit.
- Monitored 24 V emergency power input and 24 V power supply input.
- Freely programmable allocations of all relay contacts for up to 253 orders of events.
- Card 1 can be used for special functions (error, chime).
- The DCF-receiver module PRR-077 A is a compact, independent additional module. It synchronise all devices at the bus, which need a correct system time. Mounting is possible on any position of the PRO-LINE bus within 1 km. Power supply of the module results from the bus as well.

- Time and date of the internal quartz clock can be synchronized optionally through the external DCF-receiver module PRR-077 A in configurable cycles.
- The PRR-077 A can be mounted in outside areas as well for better reception, because the housing equivalent protection class IP 65.

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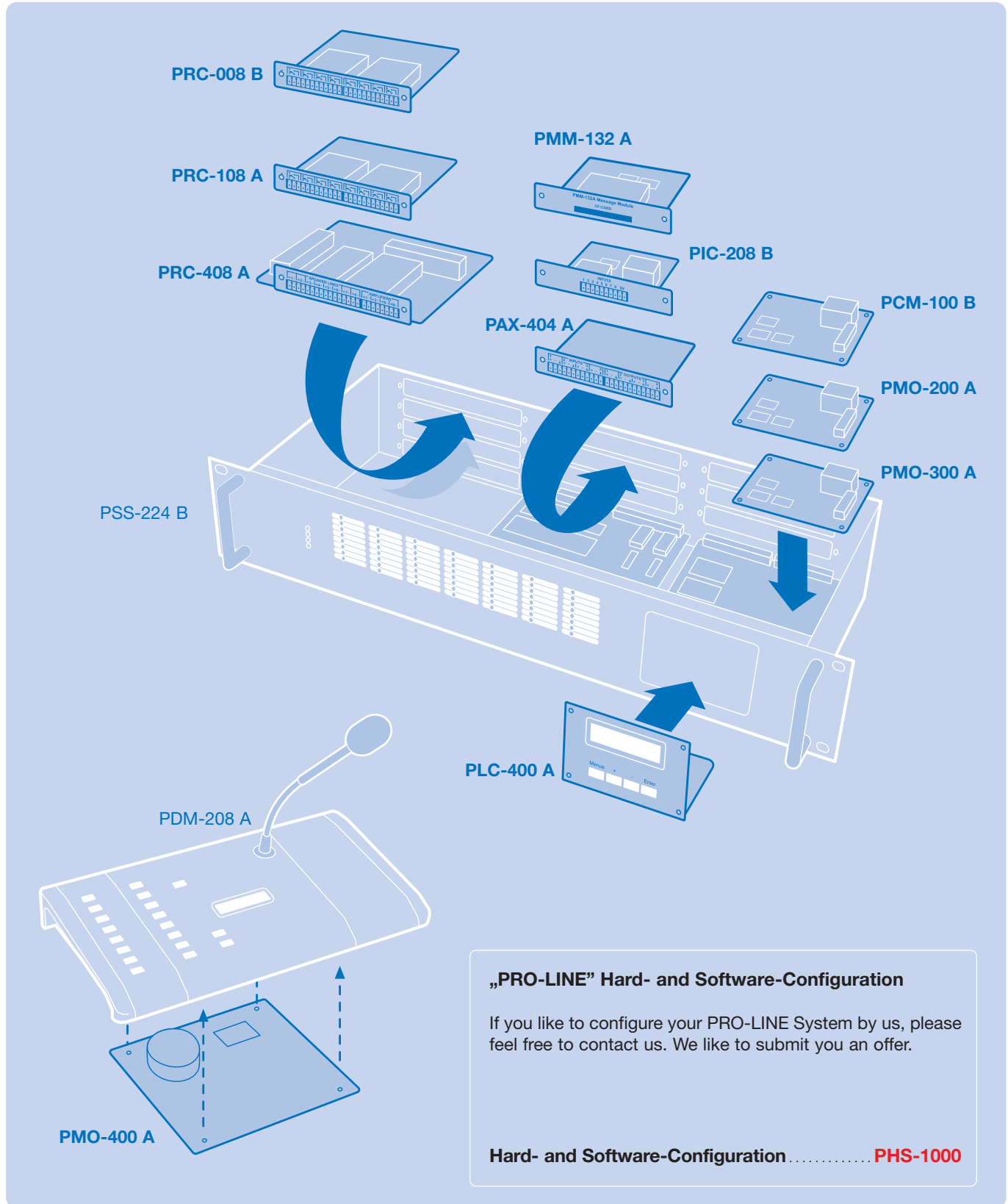
Technical data	PTC-240 A
Display	2-line LCD-Display, cleartext
Power reserve	10 years
Capacity / Number of NU-Lines	0,5 A/linie; 65 auxiliary clocks per line
Operation mode NU-Lines	sec./half min./min. pulse/0,3-2s
Pulse repetition	Normal: 1/min. adjust: 10/min.
Relay contacts	8 (max. 16), changer
Pulse length	1 – 59 seconds (digital switchable)
Contact capacity	6A/160 V each channel
Interfaces	RS-485-Bus
Memory capacity	253 (events)
Time base	Quarz, optional DCF-77
Power supply	DC 24V / max. 2 A
Dimensions / Weight	483 x 44 x 171 mm, 1 RU / ca. 2 kg

Model designations

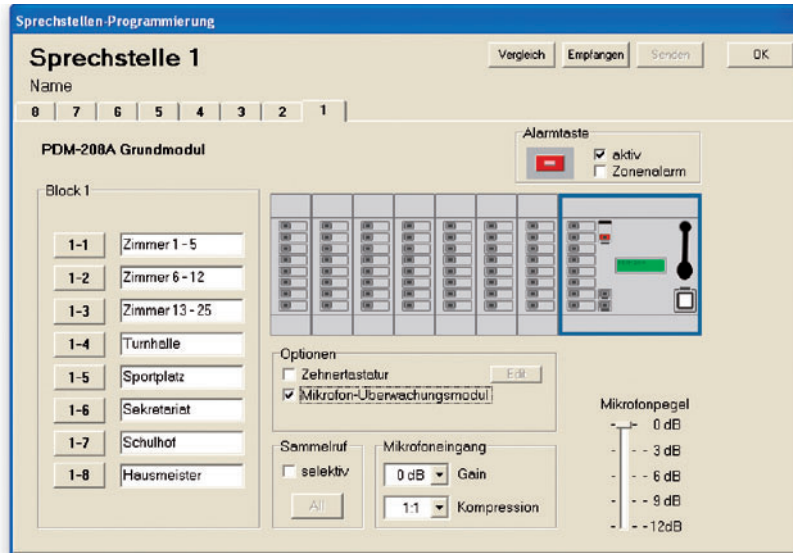
„PRO-LINE“ DCF-receiver module, dimensions 68x45x21 mm	PRR-077 A
„PRO-LINE“ Main Clock	PTC-240 A
„PRO-LINE“ Relay Card, for Main clock PTC-240 A	PTC-008 A
„PRO-LINE“ Relay Card Gold Contacts, for Main clock PTC-240 A	PTC-108 A

PROLINE SYSTEM

EXAMPLE: Expand a PRO-LINE System with installation of optional Modules



PROLINE SYSTEM



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PRO-LINE software description

With this new and improved „ProLineConfig“ software, the entire system can be clearly configured in a comfortable way within a minimum amount of time.

The software is adaptable to any computer with a USB-slot (Windows software) and is connected via the „Configuration-Program-Adapter“ PCA-500.

Each speaker line can be labeled clearly and then be selected in groups for background music, all call and main alarm.

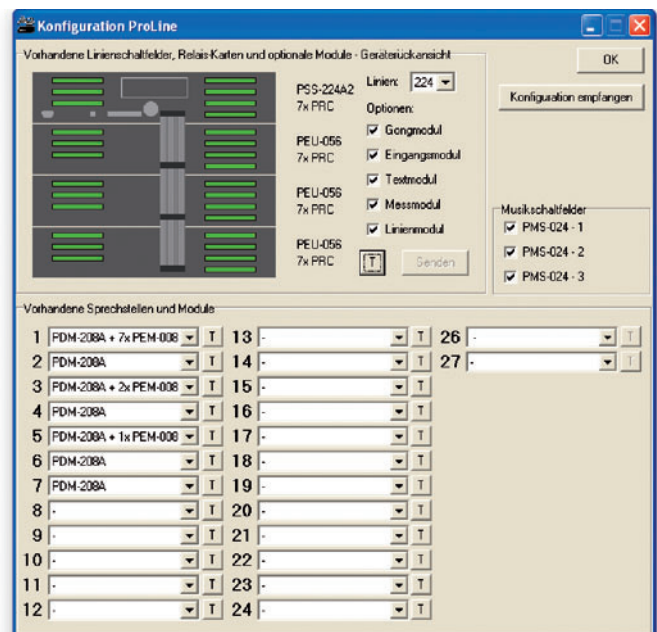
Regarding the speaker line configuration, each button can be allocated to any number of lines. For each single remote microphone, microphone level, compressor gain and pre gain can be set up separately.

Please consider the following features:

- As the user, administrator or service technician with various authorizations login via a password.
- Archiving the setting data of each connected device and labeling options of the remote microphones, speaker lines and single buttons.
- Global programming of the chime and text levels.
- The readout of existing configurations and copying the remote microphone configurations is possible.
- Allocation of special functions such as alarm, error and obligatory call on relay 0 to 8.
- Programming a button as direct button with impulse or switching function.

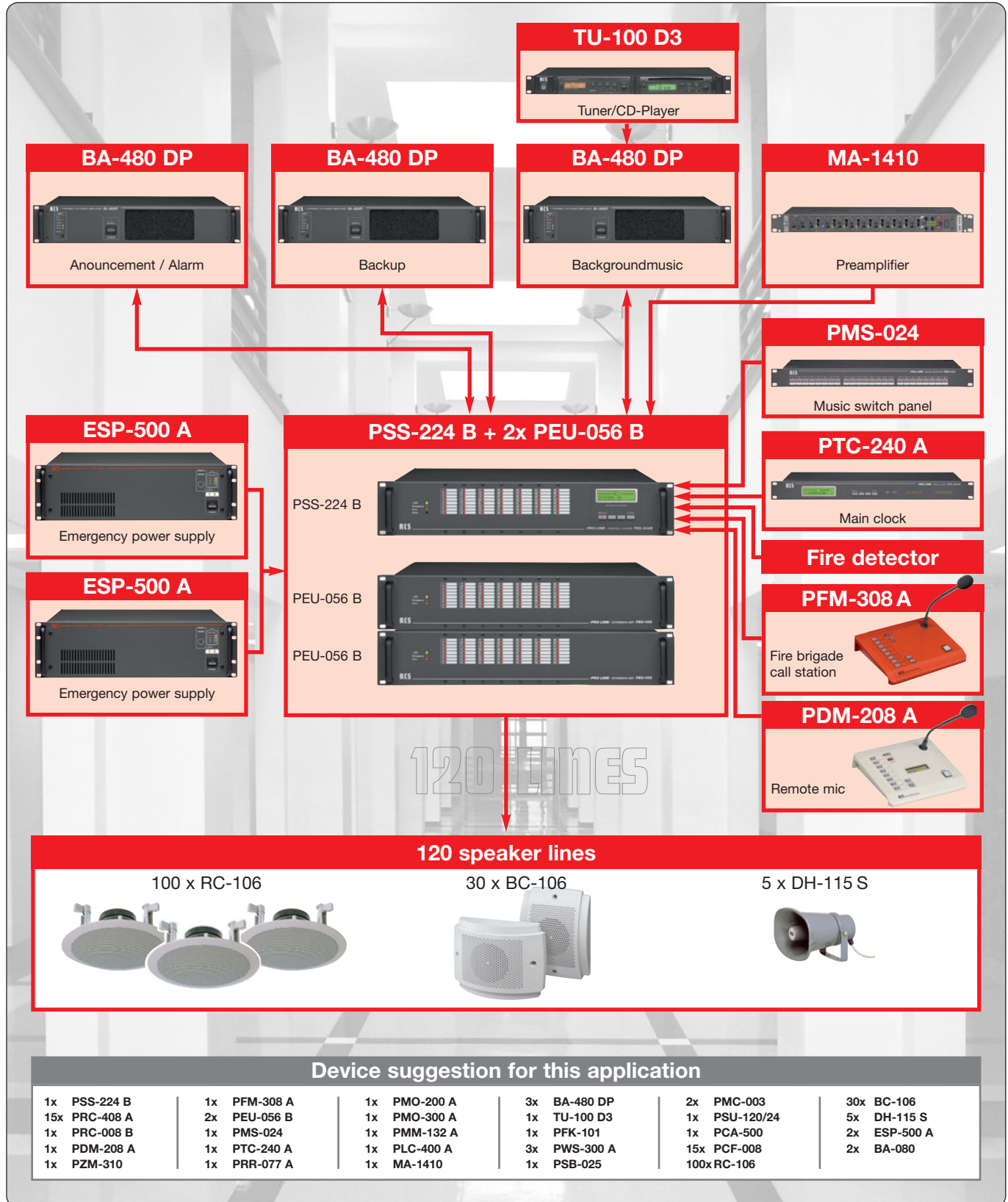
- Service menu with error statistics, relay and button control.
- Alarm button for each remote microphone can be deactivated.
- A significant test function of the individual components is possible.
- Calibrating the speaker lines and testing the amplifier is possible as well as calibration of the additional module (measuring module, text module, chime module, line module).
- Configuration of master clock.

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PROLINE SYSTEM

EXAMPLE OF USE: SCHOOL with 120 speaker lines,
Background music, break-time chime, announcements and alarm compliant to IEC 60849.



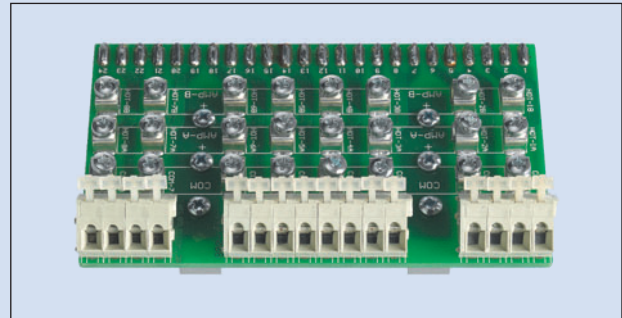
PROLINE SYSTEM MADE IN GERMANY

„PRO-LINE“ Accessories

PCF-008 Speaker connection panel

The PCF-008 is a click-on DIN rail speaker connection panel. It simplifies to connect and bridge through up to eight speaker lines as well as power amplifier outputs.

The connection cable to the relay cards of the PSS-224 B has to be connected with the added 12-pin connector. The wiring in this way is very clear, time saving, flexible and service friendly at the same time.



„PRO-LINE“ Speaker connection panel, PCF-008
(L x W x H) 108 x 64 x 40 mm; Length connection cable 2 m

PBA-300 A



PWS-300 A



PAS-300 A



Easy to install Sub-D 25 socket for connecting remote microphones with the bus.

„PRO-LINE“ Bus Connector, PBA-300 A
25-pin connecting socket

„PRO-LINE“ Flush Mount Socket, PWS-300 A
25-pin connecting box for in-wall mounting

„PRO-LINE“ Surface Mount Socket, PAS-300 A
25-pin connecting box for on-wall mounting

„PRO-LINE“ Short Bridge Connector PSB-025
„Short Bridge “ for PBA/PWS/PAS-300A, to bridge unassigned bus connector females

„PRO-LINE“ Terminating Plug PRB-025
„Terminating Plug“ for PBA/PWS/PAS-300A, to check the data bus

„PRO-LINE“ Microphone Cable, 3 m PMC-003
for substations

„PRO-LINE“ Microphone Cable, 5 m PMC-005
for substations

„PRO-LINE“ Microphone Cable, 10 m PMC-010
for substations

Power supply for the current supply of the appropriate PRO-LINE systems.

„PRO-LINE“ Power Supply, 48 VA PSU-048/24
24 V power supply

„PRO-LINE“ Power Supply, 120 VA PSU-120/24
24 V power supply

„PRO-LINE“ Power Supply, 240 VA PSU-240/24
24 V power supply

Firmware Programming Adaptor PPA-001
Cable to update the Firmware

Configuration Programme Adaptor PCA-500
Device for configuration

Technical data	PSU-048/24 Power Supply	PSU-120/24 Power Supply	PSU-240/24 Power Supply
Input voltage	85-264V AC	88-132V AC / 176-264V AC	88-132V AC / 176-264V AC
Output voltage	24V DC	24V DC	24V DC
Output current	2A DC	5A DC	10A DC
Tolerance	± 1%	± 1%	± 1%
Ripple & noise	480 mV	80 mV	80 mV
Efficiency	80%	84%	84%
Can be used for	1x PSS-224 B +15x PRM-108 A	1x PSS-224 B + 2x PEU-056 B +15x PRM-108 A + 7x PEM-008 A	1x PSS-224 B + 3x PEU-056 B +15x PRM-108 A + 7x PEM-008 A
Weight	0.31 kg	0.79 kg	1.20 kg

