

# VARES 3000

# RCS®

VDE-0833-4 / VDE-0828 / DIN EN-60849

AUDIO-SYSTEMS



## DIGITAL VOICE-ALARMING-SYSTEM

for a maximum of system security

# VARES 3000

## Advantages of voice alarming systems

### Lifesaving in the case of an emergency!

In the case of an alarm, an electroacoustic emergency warning system may avoid panic by understandable speaker announcements, which are, contrary to the howling of a siren, a much more efficient way of initiating the evacuation of a building.

Certainly, the availability and safe working of such systems has to be guaranteed at any time by monitoring the complete signal path. The standard IEC 60849 defines the requirements for such systems..

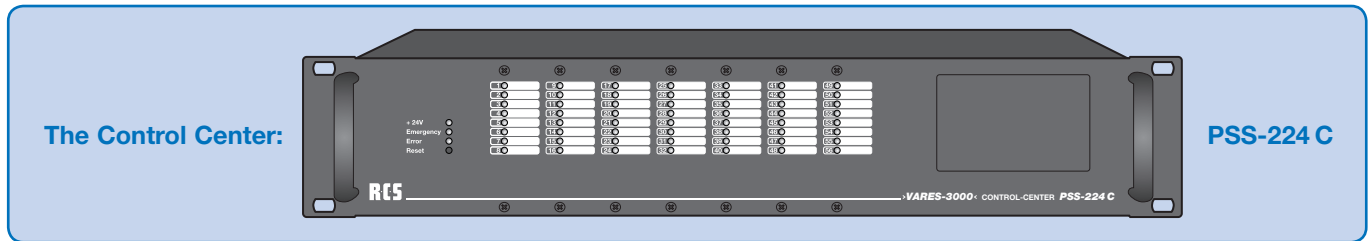
## Main features of the VARES-3000-SYSTEM

- According to EN 60849 / IEC 60849
- Extendable in 8 steps for up to 224 lines
- Configuration through computer software
- Archiving of set data
- Up to 24 remote microphone units
- Freely programmable allocation of individual lines
- System and product training possible

## Operational area – any busy public location

- Office- and industrial buildings
- Hotels, shopping malls
- Educational institutions such as schools, universities, etc.
- Multi-purpose arenas, sport facilities
- Train stations, hospitals
- Theaters, Museums, Cinemas
- Larger recreation locations, parks
- Swimming pools, thermae

## THE VARES-3000 SYSTEM AT A GLANCE



### System-components regarding usage as »DIGITAL CALL SYSTEM«

- PSS-224 C CONTROL-CENTER [see page 4-5](#)
- PEU-056 B EXTENSION-UNIT [see page 4](#)
- PTC-240 B REMOTE MAINLOCK [see page 13](#)
- PHM-802 A AMPLIFIER MONITORING [see page 15](#)
- PPS-024 A PROGRAM SWITCH PANEL [see page 14](#)
- REMOTE MICROPHONES & EXTENSIONS
  - PTM-101 B [see page 8-9](#)
  - PEM-008 B [see page 8-9](#)
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- EXTENSION MODULES
  - PRC-008 C [see page 10](#)
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  - PMM-132 B [see page 6-7](#)
  - PRS-500 A [see page 6-7](#)
  - PLC-400 A [see page 11](#)

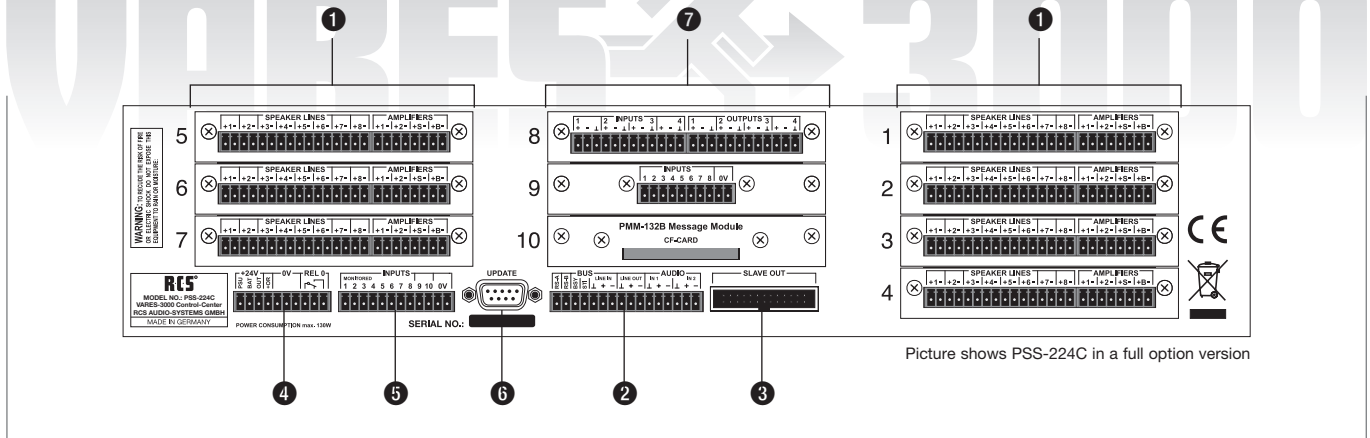
### System-components regarding usage as »VOICE ALARMING SYSTEM«

COMPLIANT TO VDE 0833-4 / VDE 0828 / EN 60849

- PSS-224 C CONTROL-CENTER [see page 4-5](#)
- PEU-056 B EXTENSION UNIT [see page 4](#)
- PTC-240 B REMOTE MAINLOCK [see page 13](#)
- PHM-802 A AMPLIFIER MONITORING [see page 15](#)
- PPS-024 A PROGRAM SWITCH PANEL [see page 14](#)
- REMOTE MICROPHONES & EXTENSIONS
  - PAM-130 A [see page 8-9](#)
  - PZM-310 B [see page 8-9](#)
  - PSM-108 B [see page 8-9](#)
  - PMO-400 B [see page 8-9](#)
  - PDM-208 B [see page 8-9](#)
  - PFM-308 B [see page 10](#)
- FIRE BRIGADE REMOTE MICROPHONES
  - PWM-101 B [see page 11](#)
  - PFM-330 B [see page 11](#)
- CONVERSATION-UNIT
  - PLC-400 A [see page 12](#)



## Rear view PSS-224C



- 1 7 empty slots for mounting the relay cards PRC-008 C, PRC-408 B or PRC-508 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 program selector PPS-024.
- 4 Power supply connector 24 V and emergency power input, relay 0 for special functions.
- 5 10 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 B.

## Extension Unit PEU-056 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 C.

A maximum of 3 extension units can be used per PSS-224C. The control center PSS-224C 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 B according to **IEC 60849**.

The power supply and control comes from the center PSS-224C. Therefore the relay cards PRC-008 C, PRC-408 B and PRC-508 A will be used just like for the PSS-224C.

### Model designations

„VARES-3000“ Extension Unit, ..... **PEU-056 B**  
for PSS-224 C, 2 HE

„VARES-3000“ Extension Cable, ..... **PFK-200**  
connecting cable for PEU-056 and Program selector

Technical data	PSS-224C CONTROL-CENTER	PEU-056B EXTENSION UNIT FOR PSS-224C
Speaker lines	8 (fully equipped til 56)	8 (fully equipped til 56)
Bus connection	RS485-Bus	-
Audio output level	0 dB / 775 mV	-
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-224C
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)



Picture shows PSS-224C in a full option version

**Modular expandable in steps of 8 from 8 to 224 lines**

## Description Control-Center

The digital, easy programmable and flexibly expandable center PSS-224 C of the VARES-3000 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 C, the project specific extension from 8 up to 224 lines in eight intervals is easily possible.

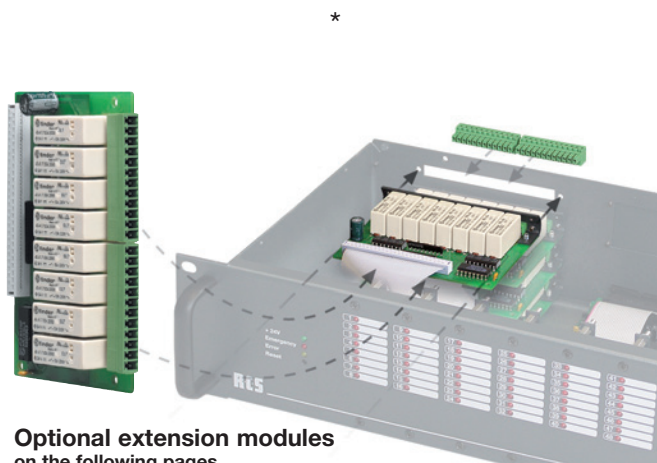
The basic device PSS-224 C and PEU-056 B are offered without a relay card, but depending on the requirements 3 different types are available. As an innovation the relay card PRC-508 B including the evaluation of the amplifier and loudspeaker monitoring according to IEC 60849.

10 monitored and 2 unmonitored isolated inputs enable a remote regulator of the VARES-3000 center. The easy programming of the center PSS-224 C is carried out via the computer software "ConfigV3000", as in all devices of the "VARES-3000 System".

The most important characteristics combined:

- Monitoring of all system components according to VDE 0828/ EN 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 C, PRC-408 B and PRC-508 A.
- Connection and monitoring of up to 160 power amplifiers (in connection with 16x PHM-802 A)
- 8 monitored and 2 unmonitored isolated inputs.
- Additional 8 isolated inputs with optional input module PIC-208 B.

- Monitored 24V power supply- and emergency power inputs.
- Relay 0 for special functions.
- Obligatory call output 24 V 2 A.
- 3 symmetrical ground free audio inputs and 1 symmetrical ground free audio output.
- Relay card PRC-308 C programmable for special functions or the PRC-308C-II card for 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 C according to the main clock PTC-240 B.
- Optional module: display and button module, text- and chime module, measuring- and monitoring module, audio-matrix-module for audio routing.



**Optional extension modules**  
on the following pages...

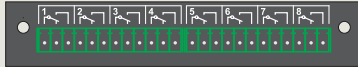
## Model designation

„VARES-3000“ Control-Center, 2 RU

PSS-224 C

## OPTIONAL MODULES FOR »DIGITAL CALL SYSTEMS«

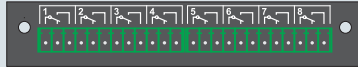
### Relay card 8 lines



- Relay card for 8 speaker lines
- Equipped with AgCdO-contacts
- Prior ranking with regard to switching off middle inductive demands up to 600 VA
- The work and break contacts can be coupled for faster wiring with internal jumpers

Relay card ..... **PRC-008 C**

### Relay card with special functions



- Relay card for special functions
- Programmable for alarming, error indication and emergency call
- Switching option as error indication during power failure
- Programming of the direct contacts switched via buttons of the call station
- Condition of the relay indicated on the display
- 2 relay cards can be installed simultaneously (the operating mode can be selected via jumper)

Relay card ..... **PRC-308 C**

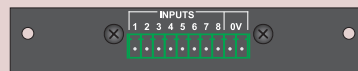
### Configuration Program Adaptor



- Configuration program adaptor for VARES-3000
- The connection is established by using the USB port on your laptop or PC
- The adaptor is plugged by a bus connection socket PAS-300A
- Programming of the system at every point of the bus

Configuration Program Adaptor ..... **PCA-500**

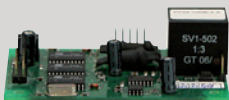
### Input module



- 8 single input can be free programmable
- Chime or text selection at
- Each single input can be configured as background or normal input, each being opener or closer

Input Module ..... **PIC-208 B**

### Chime and Alarm



Internal module to assembly into the PSS-224C

- Seven kinds of chime
- 1-sound, 2-sound up or down, 3-sound up or down
- 4-sound up, 4-sound Westminster
- Signal chime according to **DIN 33404**

Chime and Alarm ..... **PCM-100 C**

### Audio module

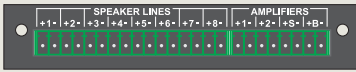


- This audio module is being built into the partial back side of the center PSS-224 C
- Single or simultaneous switching of 4 inputs to 4 outputs
- Execution as balanced audio connection
- Control over buttons of the remote microphone
- Control possible over ten key pad

Audio Module ..... **PAX-404 A**

## OPTIONAL MODULES FOR »DIGITAL VOICE-ALARMING-SYSTEMS«

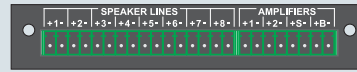
### Relay card 8 lines + 4 amplifiers



- Monitored relay card for 8 speaker lines
- Connection of 2 amplifiers (announcement or alerting)
- Connection of backup amplifier and amplifier for background music
- Realize the routing of the amplifier monitoring and backup monitoring
- Monitoring of the speaker lines according to **VDE 0828/EN 60849**
- For the monitoring function you need the measuring and monitoring module PMO-350 A

Relay card ..... **PRC-408 C**

### Relay card 8 lines + 4 amplifiers



- Monitored relay card for 8 speaker lines
- Connection up to 4 amplifiers
- Adjacent power amplifiers connected with jumper at the board
- Line Monitoring according to **VDE 0828/EN 60849**
- 2-pole speaker cut-off at measurement of the lines
- Automatic cut-off at failure of the lines
- For the monitoring function you need the measuring and monitoring module PMO-350 A
- Amplifier monitoring

Relay card ..... **PRC-508 A**

### Display- and button module



With this display module actual operating conditions, system- and error messages can be directly displayed on the VARES-3000 center PSS-224 C 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**

### Text- and Signal memory



- Built into rear panel of the PSS-224 C
- Recording 32 individual announcements texts or attention signals in mp3 format
- Recording on a compact-flash memory-card
- Alerting text on the card
- Signal chime according to **DIN 33404**
- Seven several chime available
- Monitoring according to **VDE 0828/EN 60849** via PMO-350 A

Message Module ..... **PMM-132 B**

### Measuring and monitoring module



- Internal module for all measuring and monitoring operations
- Module for measuring and monitoring
- Evaluates different audio and test signals
- Necessary for line, microphone and amplifier monitoring
- Compliant to **VDE 0828/EN 60849**
- Impedance Tester

Measuring and monitoring module .. **PMO-350 B**

### Microphone monitoring



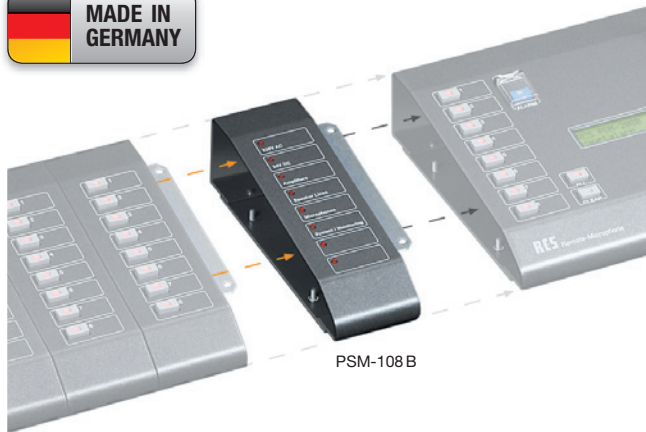
- Optional module for built in PDM-208 B
- Microphone monitoring according to **VDE 08028/EN 60849**
- Included in PFM-308 B and PFM-330 B
- Monitoring in combination with PMO-350 A

Microphone monitoring ..... **PMO-400 B**





## Microphone fault indicator module PSM-108 B



### Description

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

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Technical data	PSM-108B
Power supply	via cable PFK-101 (5V)
Current consumption min./max.	150 µA / 5 mA
Fault indicators	8
Dimensions (W x H X D)	55 x 45 x 182 mm
Weight	300 g

Microphone fault indicator module ..... **PSM-108 B**  
 Substation extension unit for PDM-208 B

## Microphone Extension Unit PEM-008 B



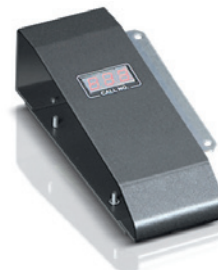
A maximum of up to 7 extension units PEM-008 B may be connected modularly to the remote microphone PDM-208 B.

Thus up to 64 speaker lines may be addressed individually or in groups with a fully extended microphone unit.

Any of the freely programmable buttons may be programmed for individual zones of groups with multiple speaker lines. The buttons may also be programmed as „direct buttons“.

Microphone Extension Unit, with 8 switches ..... **PEM-008 B**  
 Substation Extension Unit for PDM-208 B

## Adress module PAM-130 A



This address module is suited for mounting to the remote microphone types PDM-208 B and PTM-101 B.

The module displays the internal address (e.g. room number) which is sent by the caller of a different remote microphone.

The addresses of the remote microphone PTM-101 B and the conversation-unit PWM-101 B are being evaluated through the connected main line, as well as the three-digit display.

Adressmodul ..... **PAM-130 A**  
 Substation Extension for PDM-208 B

## Ten keys pad PZM-310 B



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 configurated. The background music of each line can be independently enabled or disabled.

Ten keys pad ..... **PZM-310 B**  
 Substation extension unit for PDM-208 B





## 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)

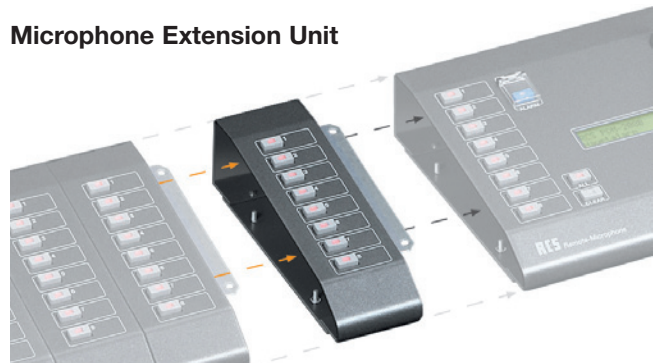
The remote microphone PDM-208 A is additionally equipped with a LCD-display with plain text, via which diverse information can be displayed.

- 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 „VARES-3000 Config“ via every bus connection.
- Firmware update by connecting remote plug.

*	
Technical Data	PDM-208B
Frequency response	100 ~ 15.000 Hz
Characteristics	Cardioid (Electret)
Power supply	24V DC / 55 mA
Power source	from PSS-224C (via bus cable)
Dimensions	211 x 42 x 181 mm
Weight	1,1 kg

## Microphone Extension Unit



## Model designations

„VARES-3000“ Display Remote Microphone, mit 8 switches and LCD ..... **PDM-208B**

„VARES-3000“ Extension Cable, Microphone Extension Unit connecting cable for PEM-008B ..... **PFK-101**

## All call remote microphone



## Fire Brigade remote microphone



### 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 is connected via status line to the PSS-224C. Each time you press the Talk button, the address is transmitted to the VARES-3000 system. 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.

Please consider the following features:

- A noise-compensated C-condenser-capsule with cardioid characteristic is built into the gooseneck.
- Desktop microphone is symmetrically built and powered with 24 V DC.
- The remote microphone has a very low back-coupling ratio and has a pop- and wind screen. It has a 5 m connection cable provided with the according connector.

\*

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

„VARES“ All call remote microphone ..... **PTM-101 B**

### 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 C. 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 „ConfigV3000“ software possible from each bus connector.
- Update of the firmware via remote connector on the device..
- Update der Firmware über Update-Buchse am Gerät.

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

„VARES“ Fire Brigade remote microphone. **PFM-308 B**



## 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-224C. 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 inte-

grated 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 "ConfigV3000" software.
- Program interface for firmware updates.
- Exchangeable lock in a standard half cylinder format.

\*

Technichal Data	PFM-330B
Frequency range	300Hz-6kHz
Characteristics	Cardioid
Power supply	from PSS-224C (via bus cable) 24V DC
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

„VARES-3000“ Fire Brigade Wall remote microphone ..... PFM-330 B





**Examples of use::**

- amok alarm for classrooms, offices etc.
- intercom for nurses in hospitals and retirement homes
- information point in shopping areas
- broadcast system for workplaces



**Description**

PWM-101 acts as a very versatile extension of the digital VARES-3000 system. Besides a classic talk-back functionality it offers the functionality to serve as an essential security asset for **precisely targeted alarms in any case of emergency**. Especially in amok situations it provides a secure and prioritised communication channel between the calling point and the head office.

It is possible to send an alarm message from a classroom only to the secretariat without alerting the whole building. Each PWM-101 is equipped with an individual address code, so the secretariat is informed about the origin of the incoming call in the very moment the push-to-talk button on PWM-101 is pressed. Reactions can be initiated very quickly and targeted this way.

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 7).
- Programmable line allocation for PSS-224C via module PIC-208 B.
- Addressable status-output in order to evaluate the according area of speech.

- Built on power-coated, perforated steel plate front panel equipped with a red "busy"-LED.
- Available as surface or flush-mounting.

\*



Technical Data	PWM-101B/101U
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**

„VARES-3000“ Conversation-Unit, ..... **PWM-101 B**  
 optional Accessories .....  
 Surface-mount housing, for UPM-421 ..... **UPG-400**  
 Flush-mount housing, for UPM-421 ..... **APG-101**



DCF-Busmodul  
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 VARES-3000 center PSS-224 C).

The PTC-240 B can additionally be expanded with one further relay card (PTC-008 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 "ConfigV3000" 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 VARES-3000 bus within 1 km. The monitored DCF-receiver module connected to the Main Clock by using a screened 4-pin cable.

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

\*

Technical Data	PTC-240B
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 optional 8/16
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	24 V DC / max. 2 A
Dimensions / Weight	483 x 44 x 171 mm, 1 RU / ca. 2 kg

## Configuration Programming adapter PCA-300

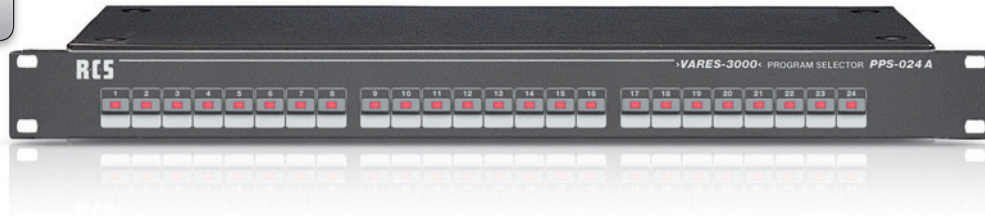
Programming adapter to configuring VARES-3000 Main Clock PTC-240 B (if Main Clock PTC-240 B is in use without the PSS-224C).

## Model designations

„VARES-3000“ Main Clock, incl. side clock control, second output, etc..... **PTC-240 B**  
 „VARES-3000“ DCF-Receiver Module, dimensions 68x45x21 mm. .... **PRR-077 A**

### optional Accessories

„VARES-3000“ Relay Card, for Main Clock PTC-240 B. .... **PTC-008 B**  
 „VARES-3000“ Main clock Programming adapter, for main clock PTC-240 B ..... **PCA-300**  
 „VARES-3000“ Main clock AC adaptor plug 24 V, 1A, for main clock PTC-240 B ..... **PSU-024/24**



### Description

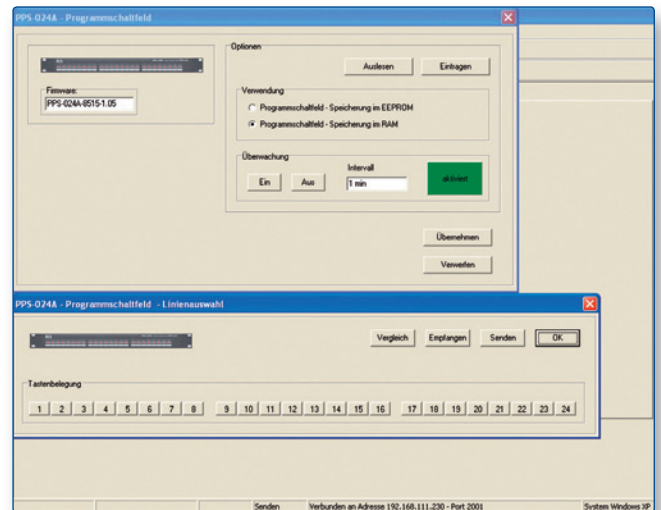
With the PSS-024A, 24 differently programmed background music zones can be switched on and off manually. Thus each individual button of the PPS-024 A may be assigned to one relay of the control center. Groups of speaker lines can be programmed for each individual button. The straight forward programming of the individual buttons is carried out through the computer software ConfigV3000.

Please consider the following features:

- Up to 3 program control panels PPS-024 A may be operated from the control center.
- Connection of the program control panels similar to extension unit through extension cable PFK-200 onto the SLAVE-connection PSS-224 C.
- The program control panel PPS-024A may additionally be removed from the 19" rack through an additional internal bus module PBS-400 A. Thus it may be used remotely on any spot of the VARES-3000 bus.
- Connection to a bus- connector socket PBA-300A through connector cable PMC-0xx.

- The bus connection may be monitored via the control center PSS-224C. The actual monitoring function can be switched on or off via **ConfigV3000**.
- Each button can be programmed for groups of speaker lines or individual speaker lines through ConfigV3000.

\*



Technischal Data	PPS-024A
Power supply	via. Bus cable PFK-200 (5V)
Power consumption all off	7mA
Power consumption all on	20mA
Connecting plug „SLAVE IN“	terminal strips 26-pol.
Dimensions (B x H x T)	483 x 45 x 185 mm, 1 RU
necessary installation depth	200mm
Weight	2,3kg

### Description Bus module

The PBC-400 B bus module is necessary in order to remove the program control panel PPS-024 A from the VARES-3000 main device PSS-224C locally. It may be used remotely on any spot of the VARES-3000 bus.

**Bus module** ..... **PBC-400B**

### Model designation

- „VARES-3000“ Program Selector, 1 RU ..... **PPS-024 A**
- „VARES-3000“ Extension Cable, connecting cable for PEU-056 B and PPS-024 A ..... **PFK-200**





For 8 call amplifiers and 2 spare amplifiers



## Description

PHM-802A digital amplifier switchover unit is designed to monitor up to 10 power amplifiers simultaneously. Up to 8 amplifiers can be configured as call amps, backed up by up to 2 spare amplifiers.

PHM-802A works self-sustaining and independent of other components. Alternatively, it can be integrated into a VARES-3000 system.

Please consider the following features:

- Setting up PHM-820A is done easily via a clearly represented menu that is displayed on the big front display. All the programming work is done by just four function keys, a computer is not necessary to configure PHM-802A.
- The menu is available in English or German language.
- The health status of each connected amplifier is displayed.
- Faults will be indicated until the cause of the problem is repaired.
- An output to forward fault indications to other components is integrated.
- All connectors are service-friendly pin-and-socket-connector types that are perfectly suited for installed audio equipment.
- 8 call amps can be linked with 1 spare amp, or two groups made of 4 call amps each can be linked to 2 spare amps (1 spare amp per group).
- A bigger number of amplifiers can be monitored by using several PHM-802A.
- PHM-802A offers an input for 230 V AC switching power supply (switched to 24V) and an additional input for 24 V DC emergency power.

- The volume of the pilot tone can be adjusted to each 100V amplifier individually. This is adjusted via PHM-802A setup menu.
- A variety of pilot tones is available, ranging from 19 kHz to 25 kHz.

\*

## Busoption PHM-485

With this interface modification option the amplifier monitoring can be integrated in the VARES-3000-System. The monitoring of the device is guaranteed by the bus cable, as well as different configurations of the software „ConfigV3000“.

**Busoption** ..... **PHM-485**

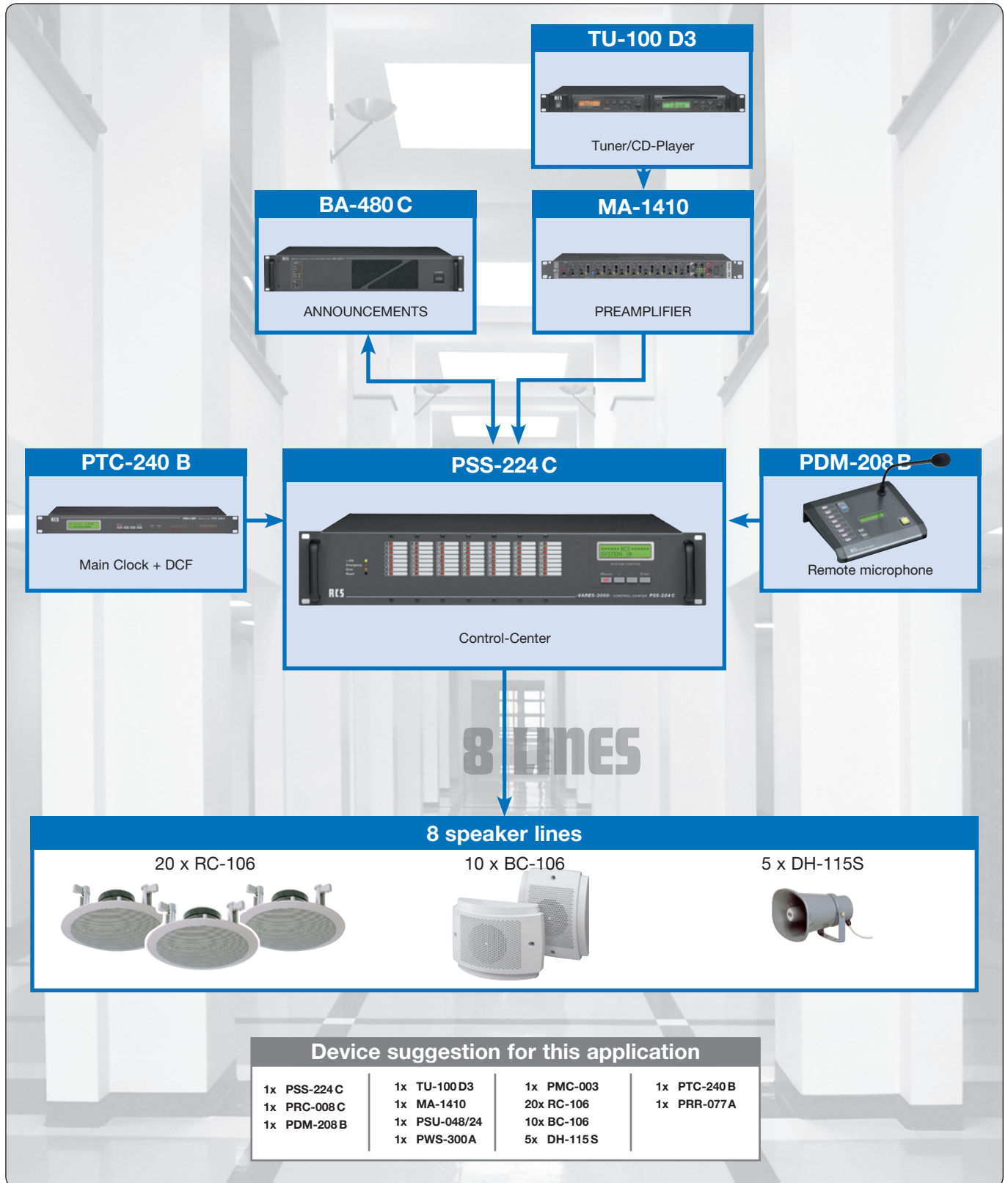
Technical Data	PHM-802A
Display	LCD Dot Matrix 2x24, illuminated, adjustable contrast.
Monitored Amplifier	8 + 1 (Spare) or 2x 4 + 2x 1 (Spare)
Pilot tone	19/19,5/20/20,5/21/21,5/22/22,5/23/23,5/24/24,5/25 kHz
Sample rate	adjustable 15/30/45/60/90 sec. (5 sec. with Bus option)
Power consumption	5 W
Bus connection	RS485-Bus (optional), Failure announcement output, SUB-D9 for Firmware-Update
Switching capacity	6 A each channel
Power supply	24V DC
Power source	Switching power supply / Battery (24 V)
Dimensions (B x H x T)	483 x 44 x 171 mm (1 RU)
Weight	1,5 kg

## Model designations

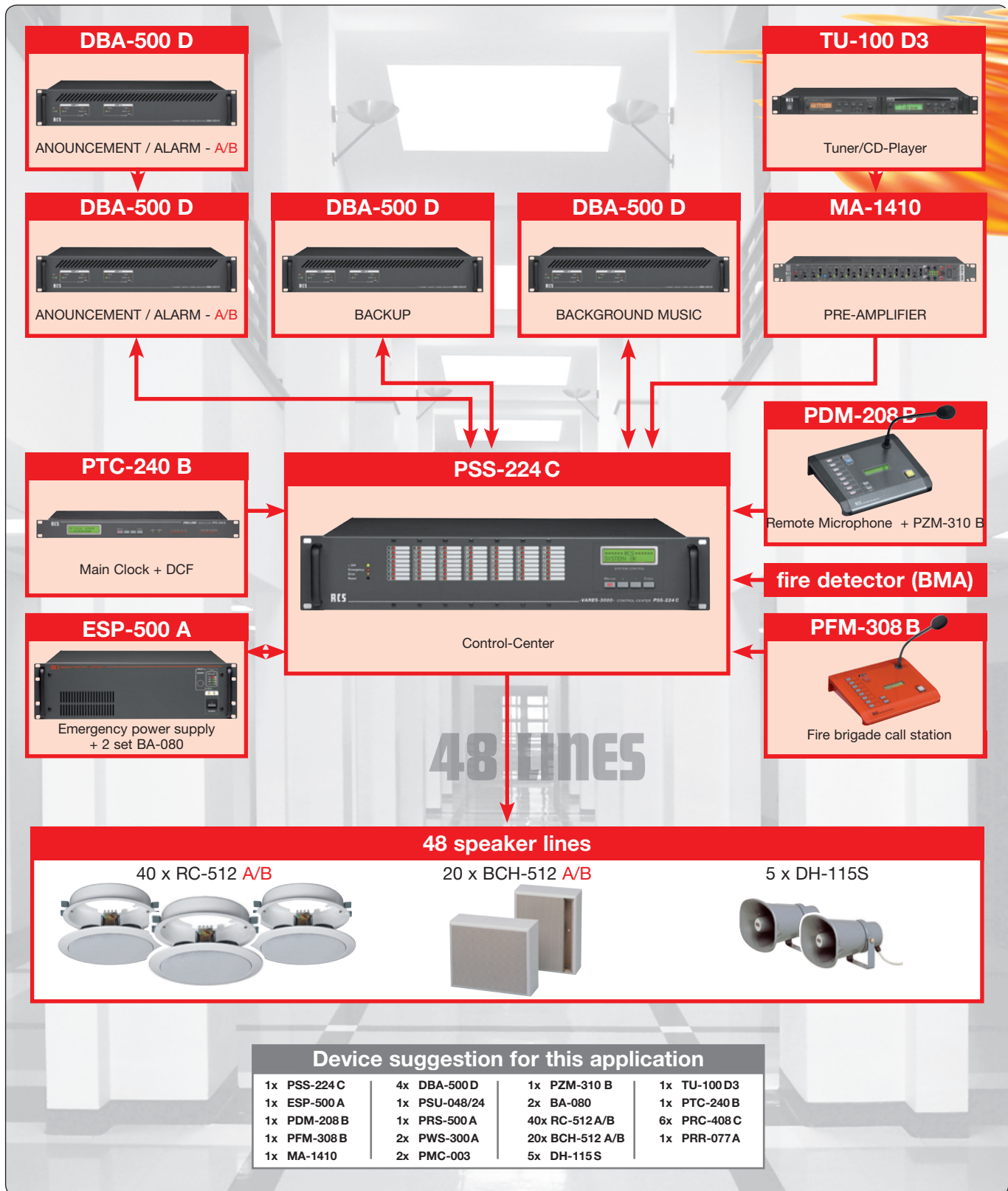
„VARES-3000“ Amplifier Monitoring, (1 RU) ..... **PHM-802A**

# VARES 3000

**EXAMPLE OF USE: SCHOOL CALL SYSTEM** with 8 speaker lines, for single call, background music, break-time chime and announcements



## EXAMPLE OF USE: SCHOOL ALARMING SYSTEM with 48 speaker lines, Background music, break-time chime, announcements and alarm compliant to IEC 60849





# VARES-3000

## „VARES-3000“ VARIABLE SYSTEM-ACCESSORIES

### TCP/IP Telecommunication Module

Configuration and maintenance of the VARES-3000 via PC or laptop.

Remote maintenance and telecommunication via software „ConfigV3000“.

The PRS-500A consists of a shielded metal housing with brackets for hat rail mounting.



„VARES-3000“ TCP/IP Telecommunication Module  
(L x W x H) 150x150x60 mm; Connectors: System-plug (Bus 5 pin.) , Network (RJ 45)

**PRS-500A**

PBA-300 A



PWS-300 A



PAS-300 A



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

„VARES-3000“ Bus-Connector, ..... **PBA-300A**  
25-pin connecting socket

„VARES-3000“ Flush Mount Socket, ..... **PWS-300A**  
25-pin connecting box for in-wall mounting

„VARES-3000“ Surface Mount Socket, .. **PAS-300A**  
25-pin connecting box for on-wall mounting

„VARES-3000“ Microphone Cable, 3 m ..... **PMC-003**  
for substations

„VARES-3000“ Microphone Cable, 5 m ..... **PMC-005**  
for substations

„VARES-3000“ Microphone Cable, 10 m ..... **PMC-010**  
for substations

Power supply for the current supply of the appropriate VARES-3000 systems.

„VARES-3000“ Power Supply, 48 VA ..... **PSU-048/24**  
24 V power supply

„VARES-3000“ Power Supply, 120 VA ..... **PSU-120/24**  
24 V power supply

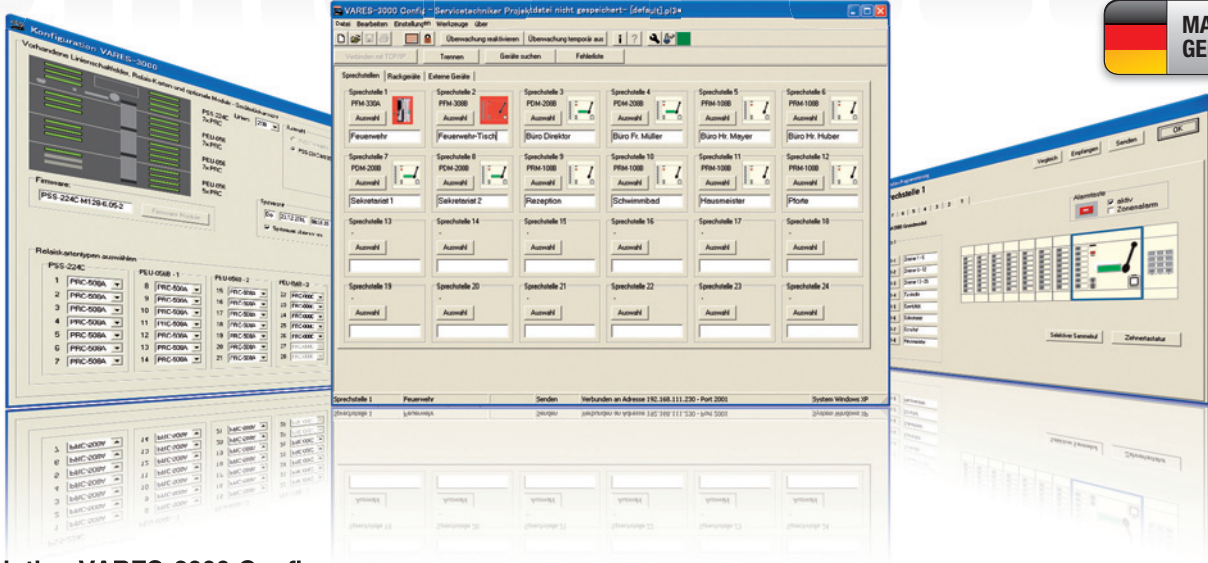
„VARES-3000“ Power Supply, 240 VA ..... **PSU-240/24**  
24 V power supply

### „VARES-3000“ Short Bridge Connector

„Short Bridge “ for PBA/PWS/PAS-300A, to bridge unassigned bus connector females

**PSB-025**

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 C +15x PDM-208 B	1x PSS-224 C + 2x PEU-056 B +15x PDM-208 B + 7x PEM-008 B	1x PSS-224 C + 3x PEU-056 B +15x PDM-208 B + 7x PEM-008 B
Weight	0,31 kg	0,79 kg	1,20 kg



**Description VARES-3000 Config**

With this new and improved „ConfigV3000“ 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 standard network (Windows software) and is connected via the „TCP/IP Telecommunication Module“ PRS-500A .

Alternatively the „Configuration-Program-Adapter“ PCA-500 can be connected to any computer with a USB-slot connection and thus the VARES-3000 center can be configured with it.

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

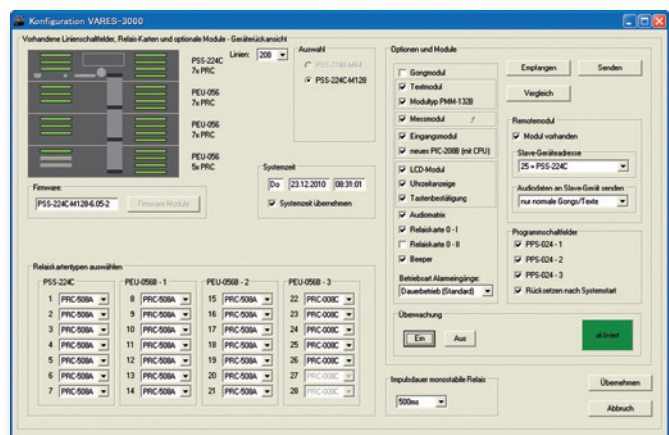
Regarding the speaker line configuration, each button can be allocated to any number of lines. For each single remote microphone, microphone level, compressor gain and pre gain can be set up separately.

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 with the relay card PRC-308C.
- 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; calibrating the controlled amplifier.
- Configuration of master clock.

\*





### „VARES-3000“ Hard- and Software-Configuration

If you like to configure your VARES 3000 System by us, please feel free to contact us. We like to submit you an offer.

Hard- and Software-Configuration..... **PHS-1000**



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