VARES 2000

EN 54-16 / EN 54-4 / VDE 0833-4 / EN 50849 / VDE 0828

R·C·S®
AUDIO-SYSTEMS

EN 54-16 certified

EN 54-4 certified

Compatible with:
VARES 1500
VARES LOOP

VOICE ALARMING SYSTEM

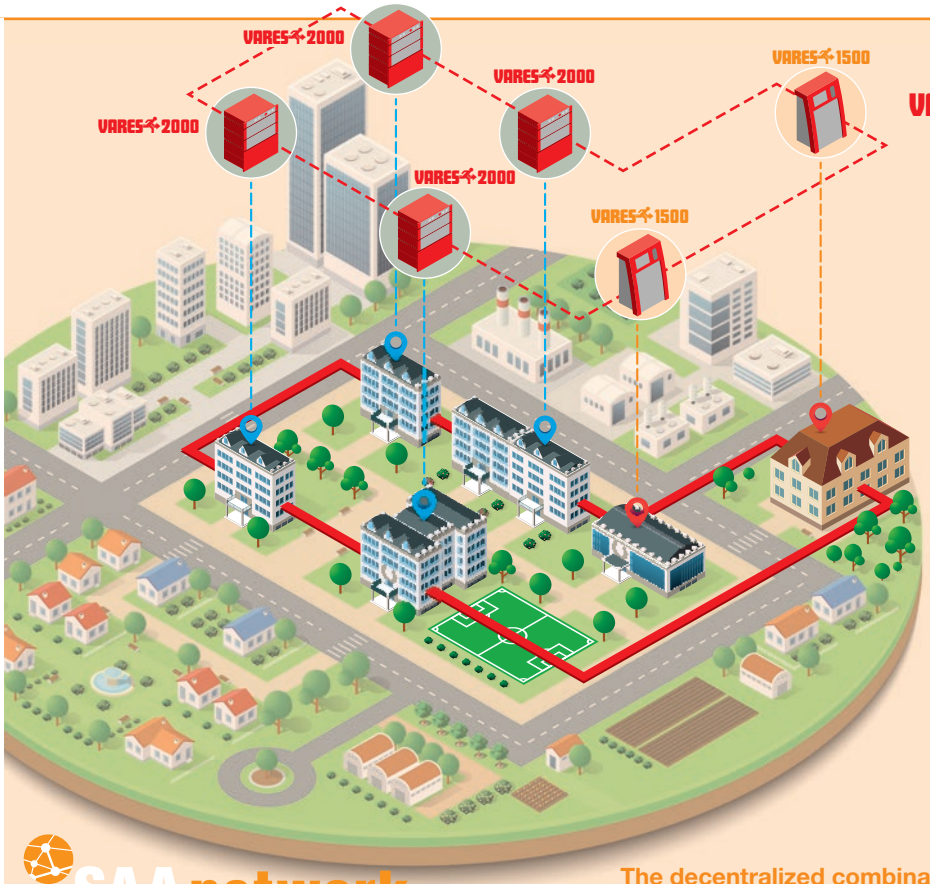
»EASY NETWORK«

for a maximum of system security

EASY NETWORK VARES-2000

EN 54-16 / EN 54-4 CERTIFIED SYSTEM / COMPLIANT TO VDE 0833-4 / DIN EN 50849 / VDE 0828

AT DIFFERENT LOCATIONS



NETWORKABLE VARES-2000 & VARES-1500

EXTENDABLE ON UP TO 255 NETWORK NODES PER PEER-TO-PEER SYSTEM (OPTIONALLY WITH OPTICAL FIBER CABLE)

max. Distance between the nodes:
250 m (standard Cat5 cable)
500 m (Cat7 cable)
2.000 m (fiber optic, optional)

SAA network

Special highlight:
The decentralized combination of the VARES-1500 & 2000 systems. This achieves the greatest possible security.

For planners and engineering companies

COST SAVINGS

The practical combination of voice alarm controller, external line modules and system power amplifiers with integrated emergency power management, makes each design of a system very simple.

FLEXIBILITY

Due to the digital networking of the VARES-2000 and VARES-1500, a simple extension or combination of both systems is also possible on a decentralized basis.

The VARES-2000 system monitors the speaker lines via impedance monitoring (EOL) or supports VARES-LOOP technology.

SAFETY

The VARES-2000 system, in combination with the VARES-1500, offers complete safety. Even in the case of faults within the redundant network, the distributed systems in the building continue to operate autonomously thanks to the decentralized alarm concept, the area-by-stage alarm remains ensured.

VARES-2000 EASY NETWORK

EN 54-16 / EN 54-4 CERTIFIED SYSTEM / COMPLIANT TO VDE 0833-4 / DIN EN 50849 / VDE 0828

EN 54-16 certified

MADE IN EUROPE

NEW

+ **Easy networking – without master/slave principle**
+ **Monitoring of all functions to maintain the VA system**
+ **Up to 1.440 lines or 255 call groups can be extended**
+ **Max. 240.000 W power possible**

Description

The Control Center is the heart of the VARES-2000 system. It manages all the functions of a voice alarming system, incoming information and audio signals. It controls the network amplifiers, the A/B channels and the monitored line extensions according to the requirements. This also includes managing of audio streams coming from the network.

The VARES-2000 control center processes the inputs according to its own signal priority table and distributes the audio signal to a maximum of 16x NDA-1000 A per control center amplifier via the digital AMP link module, which manages two prioritized streams via a dynamic allocation technique.

The remote-controlled line extensions (NLE-406A) work directly with the NCC-2000 A. These devices route the audio from the A/B channels of the amplifier to the required speaker areas or zones.

Two simultaneous audio signals are managed via an extensible switch matrix. This can range from a minimum of 6 speaker lines to a maximum of 1.440 speaker lines that can be grouped into a maximum of 255 virtual call zones.

The controller has monitored GPI and unmonitored GPO interfaces, global and local network ports. The monitored AMP connection communicates via the VARES-2000 data bus with the NDA-1000 A amplifiers.

The VARES-2000 system uses the same configuration software as the VARES-1500 system which makes the combination of both systems simple and uncomplicated.

Please consider the following features:

- AudioAudio matrix function with DSP.
- Up to 255 network nodes per system with peer-to-peer System redundant (ring technology).
- Mains voltage and battery monitoring.
- Supports loop technique and EOL (end-of-line).
- Amplifier and microphone monitoring.
- Text Module & Digital Speech Memory.
- Priority channel with second and/or backup channel.
- 16 monitored or unmonitored inputs, freely configurable via software.

*

Technical data	NCC-2000 A
Speaker lines expandable (with NLE-406 A)	6 to 1,440 individual circles (grouped into a maximum of 255 virtual call groups)
Connections	1x AMP-Link (NDA-1000 A), 2x Global-Network, 3x Local-Network
Input contacts (monitored)	16x Inputs (with NIM-116 A erweiterbar)
Audio inputs	2x BGM (analog) symmetrical 0dBu (with NIM-116 A erweiterbar)
Output contacts	1x alarm contact, 1x error contact (Relais), 8x duty call output (open collector)
Speech memory	22 announcements of 5 minutes each (17 free)
Frequency (local network)	50 - 20.000 Hz (-3 dB)
Frequency (global network)	100 - 12.000 Hz (-3 dB)
Signal-to-noise ratio	better than 90 dB
THD at 1kHz	± 0,05%
Power supply	24V DC / 300 mA
Dimensions (WxHxD)	483 x 44,2 x 365 mm; 1 RU
Weight	approx. 2,5 kg

Model designation

»VARES-2000« Network Control-Center, (Audio-Matrix), 1 RU ..... **NCC-2000 A**

»VARES-2000« Network Control-Center Expander, (Audio-Matrix Extension for NCC-2000 A), 1 RU ..... **NCE-2000 A**

MADE IN EUROPE

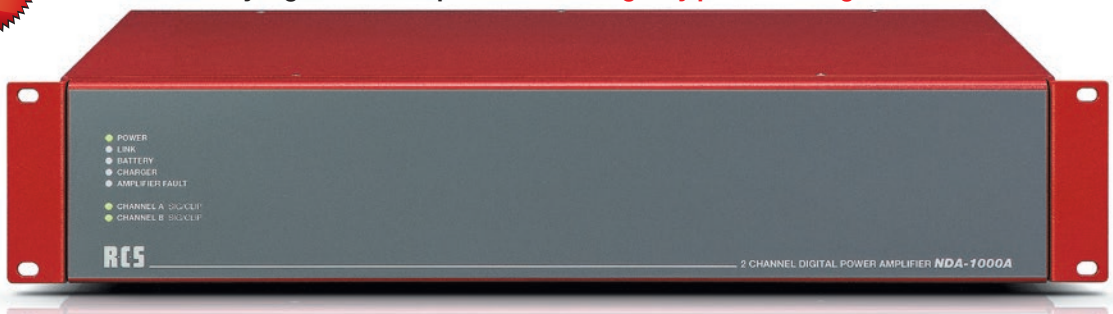
NEW

NDA-1000 A
2x 500 W

EN 54-16 certified

EN 54-4 certified

Fully digital 100V amplifier with emergency power management



energy-saving

Description

The Network Digital Power Amplifier offers powerful audio amplification to EN 54-16 and an integrated emergency power supply to EN 54-4 standards.

Depending on configuration, the power amplifier supplies 2x 500 W output power in a 2 RU 19″ rack casing. It differs from conventional power amplifiers in its fully digital system architecture and its three redundant power supplies.

Multiple NDA-1000 A amplifiers can be connected together on one battery pack. The active charger charges the battery pack that forms the backup power supply. In addition, an external 24 V connection is available for supplying additional modules.

Please consider the following features:

- Digital power amplifier with integrated emergency power supply. The scalable battery charger has a temperature sensor and is certified to EN 54-4.
- Displays: Power; Link; Battery; Charger, error message CH A SIG / CLIP; CH B SIG / CLIP.
- The following connections are available: 2x Global Network Connection (Amp Link), 2x 500 W power outputs.
- Battery pack connection and 24 V DC output for external components.
- Network fault monitoring with switch to emergency power operation.
- The amplifier has two BGM inputs for stand-alone operation and one AUX input (mono, balanced) or 2-Channel mode Stereo (unbalanced), each (analogue) 0dBu
- Monitoring battery failures (with internal resistance measurement).
- Monitoring of power outputs.

Technical data	NDA-1000 A
Output power	2x 720/500 W (Program/RMS)
Output load	4Ω min.; 20Ω @Output power
Input sensitivity	max. 775 mV (RMS) / 0dBu symmetrisch
Output voltage	100 V
Frequency response	3 ~ 35.000 Hz (better than -3 dB)
Signal-to-noise ratio	better than 90 dB
THD at 1kHz	better than 0,1%
Crosstalk (20 Hz – 20 kHz)	< -100 dB
Power consumption	max. 1350 W
Inrush current	max. 6A @ 230V AC
DC Stromaufnahme	max. 45A @ 24V DC
Idle current	24 W (active) / 0.9 W (standby)
Idle current consumption (DC)	1 A (active) / 34 mA (standby)
Efficiency	89% @ 230V AC / 93% @ 24V DC
DC output (external devices)	max. 60W / 2A
Charging voltage	max. 27.9V DC
Charging current	max. 4A
Dimensions (WxHxD)	483 x 88,5 x 350 mm; 2 RU
Weight	approx. 16,5 kg

Model designations

»VARES-2000« Network Digital Power Amplifier, 2x 500 W, (full digital, with emergency power management) ..... **NDA-1000 A**

optional accessories:

Lead Acid Battery-Set, (45 Ah); Weight: 28,6 kg **BA-080**
Lead Acid Battery-Set, (65 Ah); Weight: 42,6 kg **BA-140**
Lead Acid Battery-Set, (78 Ah); Weight: 55,0 kg **BA-160**

VARES 2000 EASY NETWORK

EN 54-16 / EN 54-4 CERTIFIED SYSTEM / COMPLIANT TO VDE 0833-4 / DIN EN 50849 / VDE 0828

R·C·S

System intercom station with 6 zone buttons and a PTT talk button. The individual zone keys can be programmed as desired and used for individual, group or all zones calls.

The microphone unit is connected directly to the control unit NCC-2000 A. For higher security requirements, it can be redundantly integrated into the network.

The gooseneck microphone with hyper-cardio characteristic ensures the best voice quality.

›VARES‹ Desktop Microphone, with 6+1 Buttons ..... **NTM-106 A**
Dimensions (DxWxH): 270x220x80 mm; weight: 350 g

Network Desktop Microphone
with 6 line buttons and talk button

This system intercom station has a 7″ touch screen which allows a clear and uncomplicated programming of all functions.

In addition to the display of different status information, the touch screen offers the possibility of special functions on individual fields, such as playing stored audio files. The display also provides optimum reading and usability conditions by unfavorable lighting.

The hypercardioid microphone, in combination with the obtained compressor, ensures the best voice quality.

›VARES‹ Desktop Microphone, w. Touch-Screen ..... **NTM-124 A**
Dimensions (DxWxH): 270x220x80 mm; weight: 350 g

Network Desktop Microphone
with Touch-Screen

This desk or wall emergency call station with high priority and fault monitoring can be addressed to all zones or individual zone areas throughout the system, including all address calls, for highest priority voice alert. It is equipped with a hand-held microphone and a monitored PTT or TALK button.

The device is only intended for emergencies and can be used by the fire brigades, rescue teams and authorized security personnel. As an emergency microphone according to EN 54-16, it offers integrated monitoring of the microphone unit, a PTT button and the network connection.

›VARES‹ Fireman Wall Microphone ..... **NFM-100 A**
for all call, Dimensions (WxHxD): 270x220x80 mm, 250 g

Fireman Wall Microphone
for all call

The fire brigade station according to DIN14664 (only available in Germany) is equipped with a noise-suppressing handheld microphone unit and has 5 buttons and 4 status LEDs. In case of an emergency the microphone allows a live fire announcement. Alternatively, the stored evacuation and warning announcements can also be activated.

The red housing (RAL-3000) corresponds to the specifications of fire alarm systems and has a lockable door in which a profile half cylinder according to DIN 18252 can be installed.

›VARES‹ Fireman Wall Microphone (FES) ..... **NFM-200 A**
with control panel (compliant to DIN 14664), Dimensions (WxHxD): 253x185x59 mm, 3,2 kg

Fireman Wall Microphohe
with control panel (**DIN 14664**)

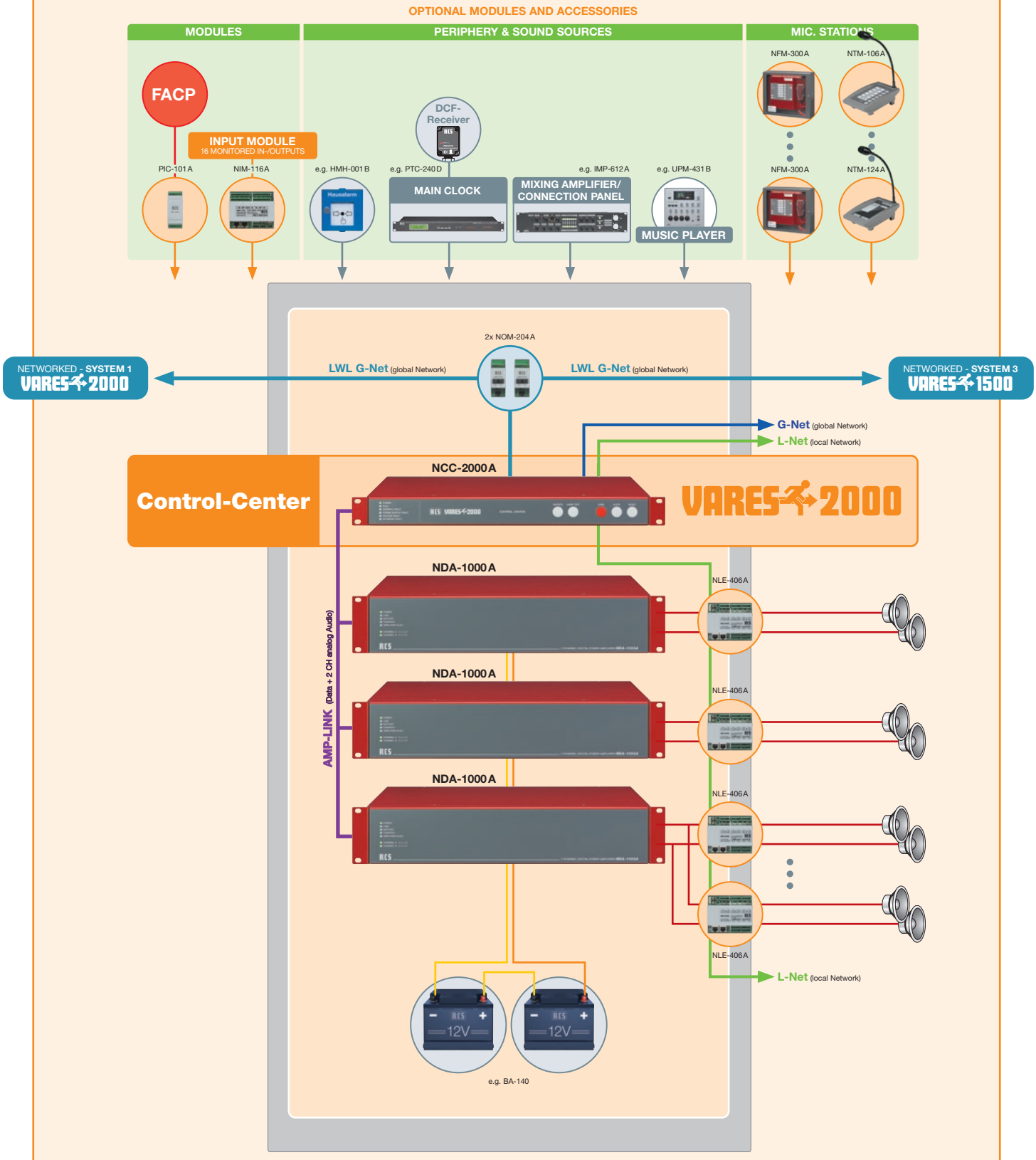
The multi-zone fire brigade wall microphone is equipped with a noise-suppressing handheld microphone unit, zone selection buttons for announcements and triggering of recorded voice messages. The microphone unit within the VARES-2000 architecture is used by the emergency services to assist evacuation of persons from a building during an emergency.

To provide operational security for the user, the network fire brigade wall microphone is equipped with LEDs on the front panel to display the following states: Status, All Call Only,Speak Now and Busy. The microphone unit is fully monitored.

›VARES‹ Fireman Wall Microphone ..... **NFM-300 A**
with control panel, Dimensions (WxHxD): 440x385x140 mm, 6 kg

Fireman Wall Microphohe
with control panel

SYSTEM OVERVIEW



Input-/Output modules

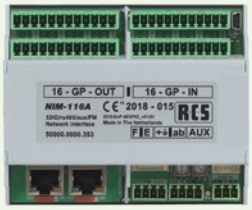
Fiber optic converter module

- Module for DIN rail mounting
- Connection for multimode fiber optic cable (820 nm / SC plug / double fiber)
- Max. Distance between the modules 2.000 m

FO Converter, for network ..... **NOM-204 A**
Dimensions (WxHxD): 36 x 90 x 62 mm

Network interface (monitored)

- Module for DIN rail mounting
- 16 monitored inputs (normally open or normally closed)
- 16 outputs (per output individually as normally open or normally closed), switching capacity 40 V / 150 mA per channel
- 1 AUX input
- 1 error contact (NC)
- 1 alarm contact (NO)



Input-/Outputmodule ..... **NIM-116 A**
for monitored inputs and outputs; Dimensions (WxHxD): 118 x 90 x 65 mm

FACP/VAS Interface

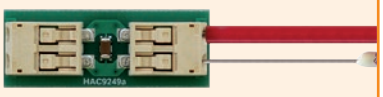
- Module for DIN rail mounting
- FACP (BMZ)/VAS according to VDE 0833-4 Appendix G
- Control voltage of fire alarm system
- Resistor-monitored normally open contact for faults in VAS

FACP/VAS Interface, according to VDE 0833-4 ..... **PIC-101 A**
Dimensions (WxHxD): 36 x 90 x 62 mm

Line modules

End-of-Line module

- The end-of-line module (EOL) monitors the conduction path for short circuits, disruption and ground faults. The module will be at the end of the line at the last speaker connected.
- Adjustable total power of the monitored loudspeaker line from 10 to 200 W.
- Test noise monitored with 20 KHz.



End-of-Line Modul ..... **NLM-200 A**
Dimensions (WxHxD): 40 x 20 x 5 mm

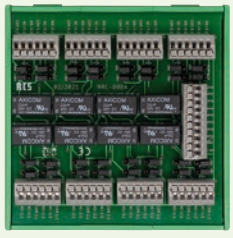
Modul for Line extension

- Module for DIN rail mounting
- The switching module is connected directly to a single amplifier output (1-Channel) or two outputs (2-Channel) and shares the power for announcements, background music and alerting to three monitored A / B lines
- The total output per module is max. 2x 500 W.

Line Extension, for 6 single or 3 A/B linies ..... **NLE-406 A**
Dimensions (WxHxD): 118 x 90 x 65 mm

GPO Relay-Output module

- Module for DIN rail mounting
- 8-fold GPO outputs
- The variables potential-free contacts or duty call (duty call voltage of 24-29V) are possible for each GPO output.



GPO Relay-Output module, 8-fold for GPO ..... **NRC-008 A**
Dimensions (WxHxD): 112 x 112 x 38 mm

USB programming adapter

To configure and troubleshoot the VARES-2000 Network Control-Center (NCC-2000 A) via a PC or laptop.

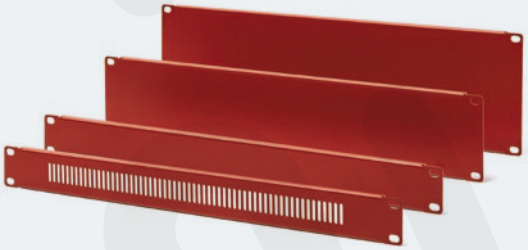
The PC or laptop for error diagnosis is connected directly to the NVC and can be done on site with the associated software.

›VARES‹ Network Programing Adapter USB, with USB cable and CAT5e crossover patch cable (1m) ..... **NPA-150 A**

further system accessories

19˝ Blank Panels

These 19˝ blank panels made of 1.3 mm steel serve to fill empty spaces or ventilation (NLF-001) in 19˝ rack cabinets.



19˝-Vent Panel, 1 RU (weight: 0,28 kg) **NLF-001**
19˝-Blank Panel, 1 RU (weight: 0,34 kg) **NLP-001**
19˝-Blank Panel, 2 RU (weight: 0,59 kg) **NLP-002**
19˝-Blank Panel, 3 RU (weight: 0,85 kg) **NLP-003**

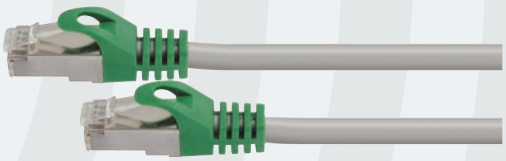
Network Patch Cable

The patch cables are designed for use in the VARES-1500 or VARES-2000 network.

Patchcable CAT6a, 0.5 m, yellow, (for VARES-1500/2000) **NPC-005**
Patchcable CAT6a, 1.0 m, yellow, (for VARES-1500/2000) **NPC-010**
Patchcable CAT6a, 3.0 m, yellow, (for VARES-1500/2000) **NPC-030**

Network Crossover Patch Cable

The crossover patch cables are designed for use in the VARES-1500 or VARES-2000 network.



Crossover-Cable CAT6, 0.5 m, gray, (for VARES-1500/2000) **NCC-005**
Crossover-Cable CAT6, 1.0 m, gray, (for VARES-1500/2000) **NCC-010**
Crossover-Cable CAT6, 2.0 m, gray, (for VARES-1500/2000) **NCC-020**
Crossover-Cable CAT6, 3.0 m, gray, (for VARES-1500/2000) **NCC-030**
Crossover-Cable CAT6, 5.0 m, gray, (for VARES-1500/2000) **NCC-050**

You can find your contact person at:
www.rcs-audio.com

VARES-2000 system is used as

Flexible solution in: Hotels, skyscrapers, office and industrial buildings, schools, multi-purpose halls, swimming pools and other leisure facilities and much more

RCS AUDIO-SYSTEMS GmbH
Gewerbepark Markfeld 5
D-83043 Bad Aibling

Telefon: +49 (0) 8061-3501-0
Telefax: +49 (0) 8061-3501-2901

info@rcs-audio.com
www.rcs-audio.com

Mitglied der Leistungsgemeinschaft Beschallungstechnik im ZVEI-Fachverband Sicherheitssysteme

Mitglied im BHE

TÜV certified
ISO 9001:2015 and **DIN 14675:2020-01**

EN-V24.05.2022