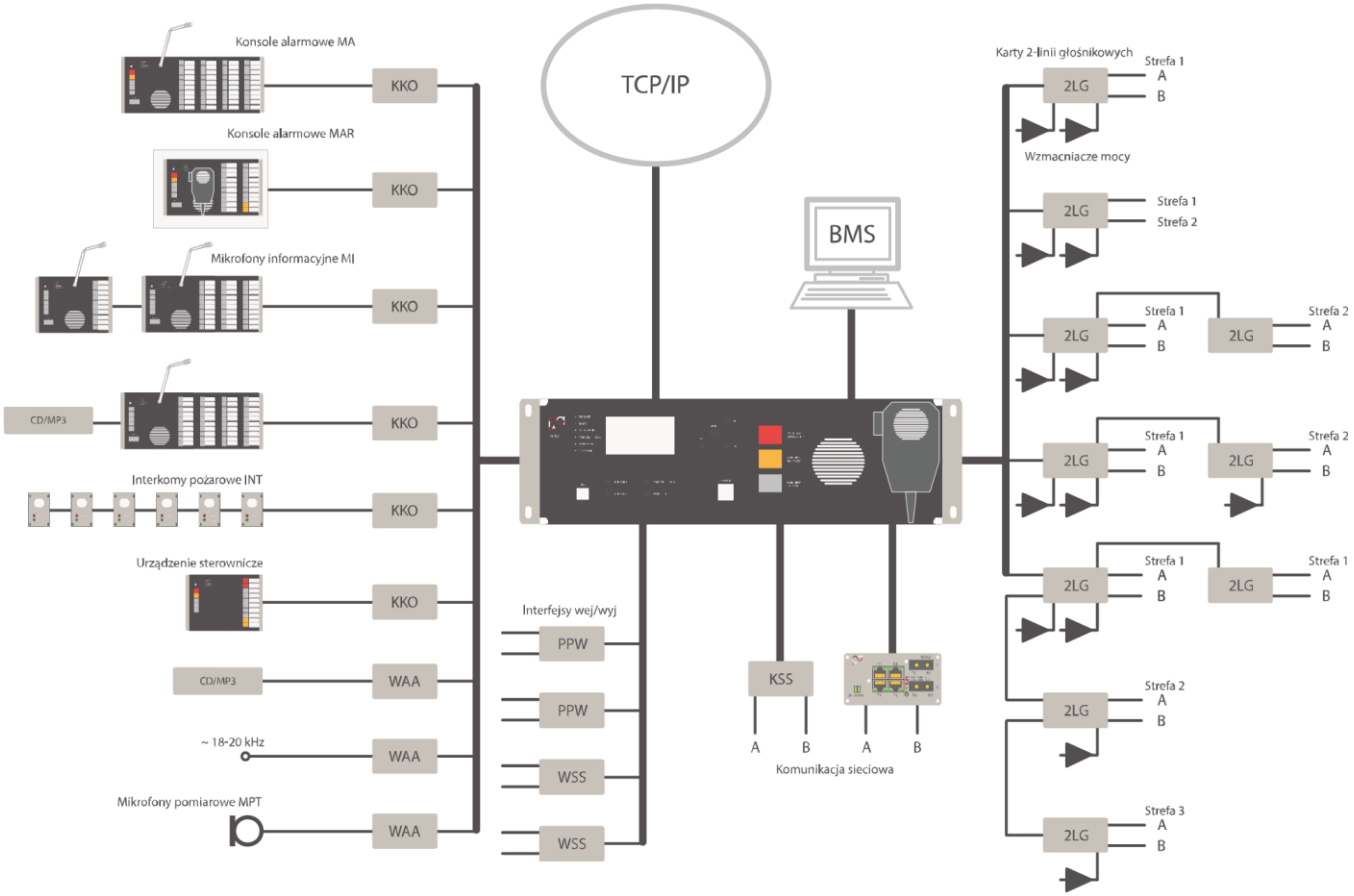
IVO
Voice alarm system

Innovative solutions

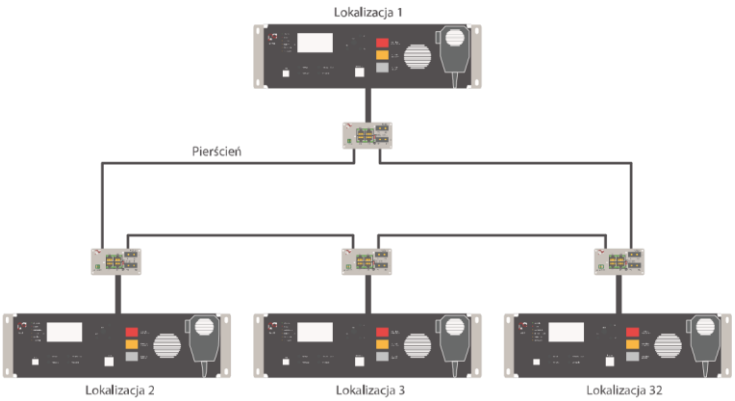
Polish construction
PN-EN 54-16:2011
www.paudio.pl

Chosen technical data of IVO, based on one KG-ETH controller

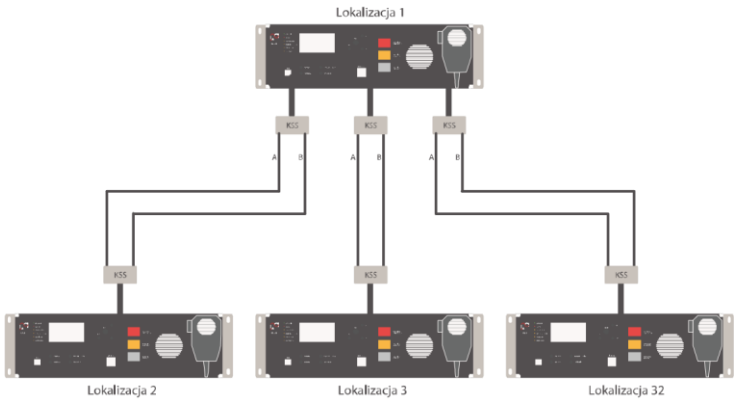
The number of simultaneously processed audio signals	4
The format of digital messages (playback and recording)	PCM
System event memory	2048
Frequency response (-3 dB)	20..20kHz
Signal / noise ratio	>80 dB
Distortion THD (1kHz)	<0,5%
Service interfaces	1 x USB, 1 x Ethernet
The number of supported loudspeaker lines	128 (64 A/B)
Number of supported microphone consoles	8
Number of binary input	64(WSS) + 18(KG-ETH)
Number of relay outputs	64(PPW) + 2(KG-ETH)
The number of supported analog audio signal inputs	4
Speaker Line Monitoring Method	Impedance or using a remote control signal
The number of supported network configuration subsystems	32
Network system topology	Chain or ring
Configuration of power amplifiers	1x 1000W, 1x 500W, 1 x250W, 2x 500W, 2x 250W, 4x 250W, 8x 125W, 8 x 60W
Maximum power of the power system	6300 W
System voltage	20..60 V DC 600x800, 24 do
Dimensions of rack	600x800, 24 do 50U



Konfiguracja podstawowa



Konfiguracja sieciowa (światłowody)



Konfiguracja sieciowa (przewody miedziane)

Ivo system was developed by Polish engineers, who know the market well and requirements for Voice alarm systems and instalation VAS. Creators of the system, for many years participated in the design, lunching of real instalations on facilities.

the developing of the system involved well-known engineering companies with many years of expierience in designing electronic devices for fire protection systems.

Thanks to the use of modern components, the funcionality can be extended without developing new electronics. Great emphasis was put on the use of elements and technologies, significantly affecting the reduction of energy consumption during operation and standby of the system.

The control panel has a modular construction. The basic element is KG-ETH main controller, equiped with a set of obligatory inputs and outputs. Expansion of the control panel requires adding a modular card to the system extension box.

Main controller menages the other system cards operations, and the flow of sound streams.
Includes main processor and by-pass controller. It has build-in module of messages and alarm signals. It also registers verbal announcements broadcast by system operators. It supports functions related to integration via the Modbus protocol or in the ASCII operation mode. The main controller, in addition to the mandatory control inputs and outputs, is also equipped with RS232 / RS485 ports and LAN / WAN. The KG-ETH controller supports up to 4 different audio streams at the same time. On the KG-ETH-MAR front, there is a handheld alarm microphone, a monitor loudspeaker and a number of configuration buttons that can be programmed

The control panels cooperate with MA and MAR and MI alarm microphones. The console in the basic version consists of a main part equipped with a set of obligatory indicators and a set of 5 quick access buttons and 10 programmable buttons. Other models have 20, 30, 40 and more programmable buttons. Microphone consoles allow advanced control of the control panel functions. MA and MI consoles have a microphone on a flexible "Goose neck".

The MAR console is equipped with a hand-held microphone instead of a microphone on the goose neck. The handheld microphone is equipped with a push-to-talk button that makes it easy to use the set. In addition, the MAR microphone can be locked in a OME metal casing equipped with a key lock that can be opened with a light fireman’s axe.

Fire intercoms are intended for voice communication with other intercoms, the main controller KG-ETH and microphone consoles. They are equipped with a maximum of 5 programmable backlit buttons.
Communication on the bus is in the digital domain. Intercoms are powered directly from the ZDSO48.

MPT measuring microphones are designed for measuring acoustic background and automatic adjustment of the volume of audio signals on loudspeaker lines.

Audio signal transmission between modules, consoles and control panels of the network system takes place digitally. A copper fire wire is used to connect elements of the focused and network systems. Main controllers of The Voice alarm system in network connection can also be connected using a fire-resistant fiber optic cable in the ring configuration.

The KSS card is used for communication between the IVO units in a network system. KSS has a dual port for transmission of audio and control streams. KSSO converters are designed to connect the network system's panels using a fire-resistant fiber. Parameters of KSSO modules enable transparent and without delay, simultaneous transmission of several high quality audio streams.

The network modules enable connection between the IVOs of the network system in a chain or ring configuration.

The WSS card is mainly intended for connection with potential-free zone outputs of fire alarm system devices. Activation of the binary inputs of the card enables advanced control of the VAS - IVO unit. The PPW relay output card is used to control external fire devices and building automation.

2LG modules are designed to support loudspeaker lines. One module enables connection of two loudspeaker lines in A / B configuration or operating as independent zones 1 and 2. The system enables supplying from one power amplifier of one loudspeaker line, two lines of the same zone (in A / B configuration) or any number of loudspeaker lines. Mixed work is also possible.

2LG cards are also adapted for operation with VCT regulators, used to adjust volume on the IVO loudspeaker line.

You can choose from a wide range of energy-saving amplifiers. WM amplifiers are powered by 48 V DC directly from the ZDSO48 battery cell and include a family of 1- to 8-channel devices, with power (per channel) of 60, 125, 250, 500 and 1000 W RMS.

ZDSO48 is a family of power plants with a rated output voltage of 48 V DC and a maximum power of 7. Main device of the IVO together with the ZDSO48 powering system is placed in a 19 " Rack with a height from 24 to 50U.