

IVO Compact Voice Alarm System

IVO Compact is a PA/VA System, dedicated to small and medium facilities, designed for wall mounting and Plug & Play experience - programmed and ready to start immediately after installation.

IVO Compact allows full phase evacuation (2 audio streams at the time) and up to 16 loudspeaker lines totaling of up to 1000 W of connected loudspeakers, equaling to classic voice alarm systems in terms of functionality, while reducing the cost of the system. Emergency power supply system allows to provide up to 24 hours of standby time and 30 minutes of alarming time. Additionally, it is possible to extend the alarming and standby time by additional housing with bigger capacity batteries.

The system is fully compatible with the flagship PA/VA IVO rack system, using the same range of console microphones and intercoms, as well can be networked with IVO PA/VA system.

The basic version can be extended by additional extension modules (KKOC, WAAC, KSSC).

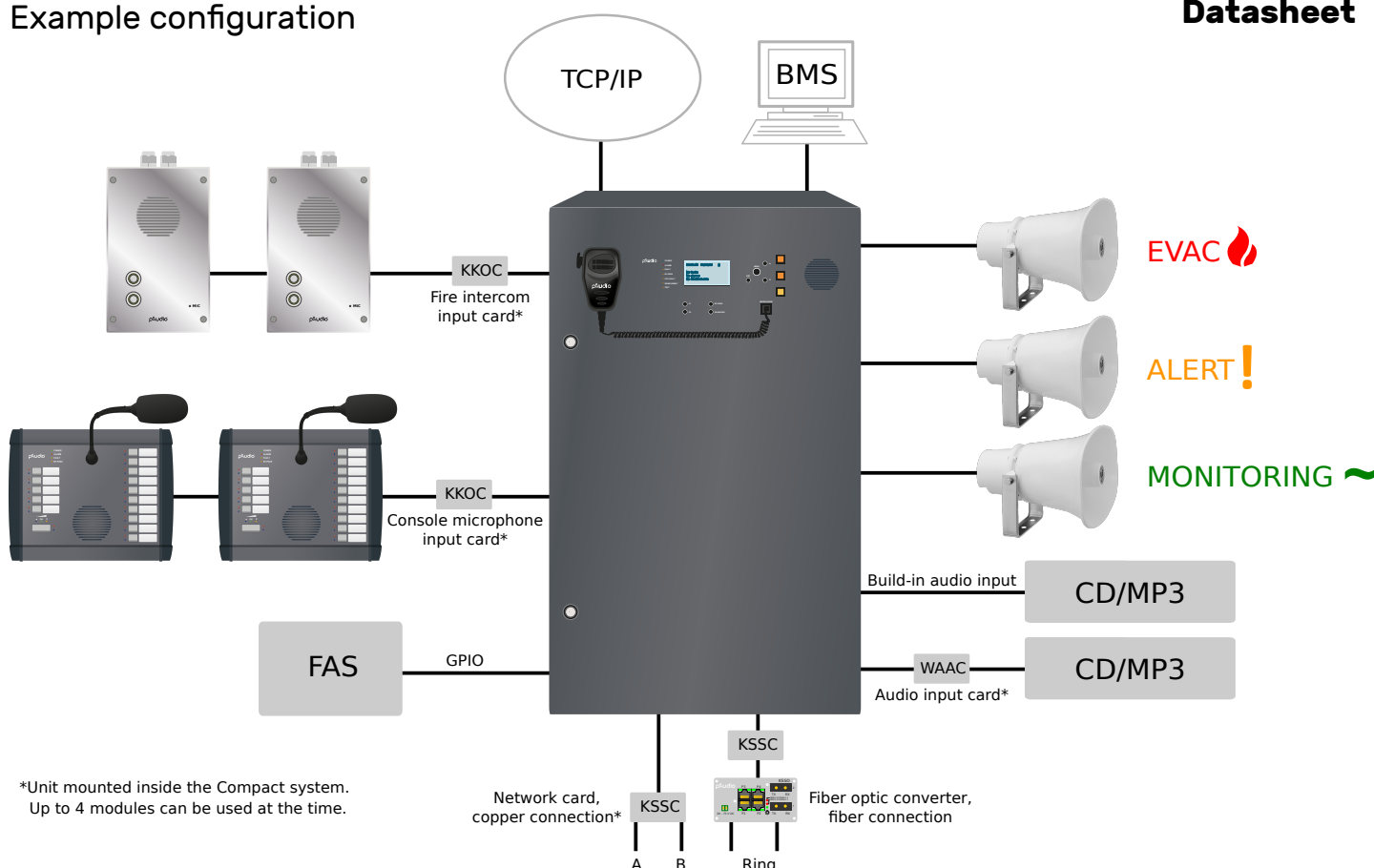


1438-CPR-0985

CoA 5266/2024

Features

- A fully equipped VACIE system
- Plug & Play
- Compliant with EN54 standards
- Up to 16 single or A/B loudspeaker lines
- Maximum 500 W or 125 W power load per line
- Maximum 1000 W power load per unit
- Phase evacuation with separate redundant amplifier
- Main processor with secondary bypass processor
- Real-time system monitoring
- 32-bit DSP audio processor
- Up to 32 subsystems in network
- Wide frequency response
- CD quality Audio
- Ultra-low quiescent mode
- Modbus for 3rd party integration
- 12 monitored control inputs
- 3 output relays
- Built-in LCD screen
- Built-in monitoring loudspeaker
- Built-in hand-held alarm microphone
- 4 slots for additional system cards
- Diagnostic USB port on the front

Datasheet**Example configuration****Technical specification****General**

Power supply	230 V AC, -15 % / +10 %
Total efficiency	> 86%
Idle consumption	< 5 W
Standards	EN54, CE
Mechanical	200 x 530 x 930 mm
Battery enclosure	200 x 530 x 200 mm (optional)
Operating temp.	-5 °C...+40 °C
Relative humidity	25%...90%
Indicators	Power, Alarm, Fault, Bypass, CPU fault, Disablement, Test

Connectors

Main supply 230 V AC,
12x control inputs, 3x relay
outputs, 1x RS232/485,
1x RS485, 1x Ethernet, 1x USB
1x symmetrical audio input

Audio specification

Frequency response	10 Hz...30 kHz (- 3 dB)
THD+N distortion	< 0,1 % (1 kHz)
Signal / noise ratio	> 86 dB
Digital audio format	PCM 16 Bit/ 48 kHz

Others

3rd party integration	1x RS232/RS485 (Modbus)
Maintenance	1x USB, 1x Ethernet
Log event buffer	2048
Enclosure type	Metal, IP30
Max. battery capacity	Depends on the power supply
Extensions	KKOC microphone input card WAAC audio input card KSSC network card
Color	RAL7015 (Custom RAL available)

Specification per version

Datasheet

1-channel system, 500 W RMS

C-04-500-1	4 lines - (4x500 W)*, handheld microphone, redundant/monitoring amplifier (IVO C0, UIC, MR, 4SGC, 2x WB501, power supply + battery charger, wall-mount housing)
C-08-500-1	8 lines - (8x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C8, UIC, MR, 2x WB501, power supply + battery charger, wall-mount housing)
C-12-500-1	12 lines - (4x500 W, 8x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C8, UIC, MR, 4SGC, 2x WB501, power supply + battery charger, wall-mount housing)
C-16-500-1	16 lines - (16x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C8, UIC, MR, 8SGC, 2x WB501, power supply + battery charger, metal wall-mount casing)

1-channel system, 1000 W RMS

C-04-1000-1	4 lines - (4x500 W)*, handheld microphone, redundant/monitoring amplifier (IVO C0, UIC, MR, 4SGC, 3x WB501, power supply + battery charger, wall-mount housing)
C-08-1000-1	8 lines - (8x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C0, UIC, MR, 8SGC, 3x WB501, power supply + battery charger, wall-mount housing)
C-12-1000-1	12 lines - (4x500 W, 8x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C8, UIC, MR, 4SGC, 3x WB501, power supply + battery charger, wall-mount housing)
C-16-1000-1	16 lines - (16x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C8, UIC, MR, 8SGC, 3x WB501, power supply + battery charger, wall-mount housing)

2-channels system, 500 W RMS

C-04-500-2	4 lines - (4x500 W)*, handheld microphone, redundant/monitoring amplifier (IVO C0, UIC, MR, 4SGC, 3x WB501, power supply + battery charger, wall-mount housing)
C-08-500-2	8 lines - (8x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C0, UIC, MR, 8SGC, 3x WB501, power supply + battery charger, wall-mount housing)
C-12-500-2	12 lines - (4x500 W, 8x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C8, UIC, MR, 4SGC, 3x WB501, power supply + battery charger, wall-mount housing)
C-16-500-2	16 lines - (16x125 W)*, handheld microphone, redundant/monitoring amplifier (IVO C8, UIC, MR, 8SGC, 3x WB501, power supply + battery charger, wall-mount housing)

* Maximum load per loudspeaker line

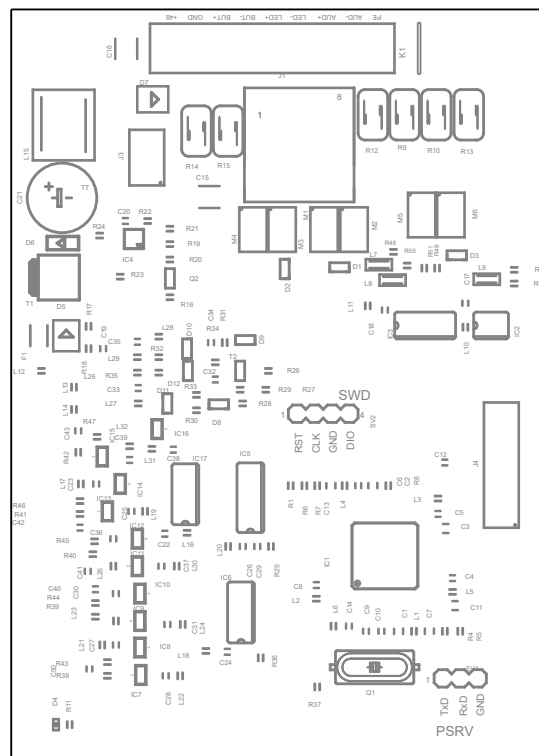
Extension modules

KKOC - console microphone card

KKOC card allows to connect alarm (MA, MAR), paging (MI) console microphones and fire intercoms (INT) to IVO Compact.

Features

- Support of up to 8 microphone consoles or 8 intercoms
- 32-bit DSP audio processor
- Digital communication
- Maximum cable length 1200 m (RS485)
- Optional redundant fiber connection with alarm microphones
- Wide frequency response
- Ultra-low quiescent mode
- Direct supply of connected units (copper connection)
- Over voltage, over current and short circuit protection

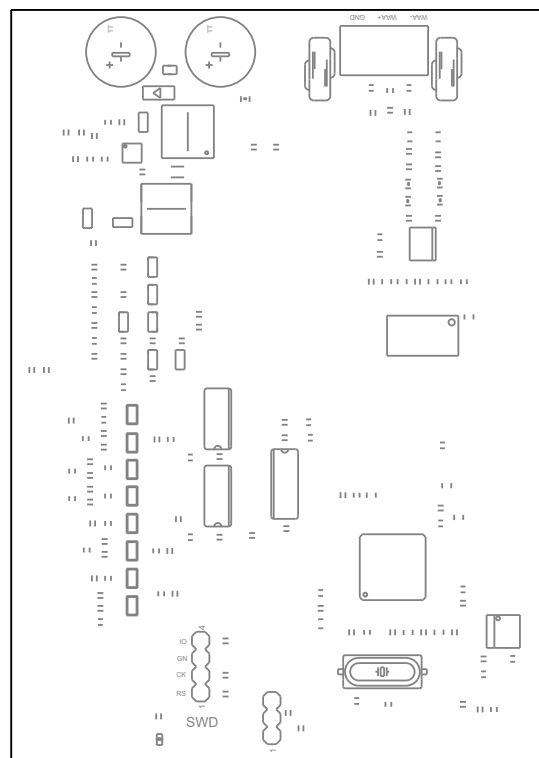


WAAC - audio input card

WAAC card allows to connect any kind of analog audio sources and background measurement microphones (MPT) to the IVO Compact.

Features

- Symmetrical 0 dB input
- Phantom power
- 32-bit DSP audio processor
- Wide frequency response
- Ultra-low quiescent mode



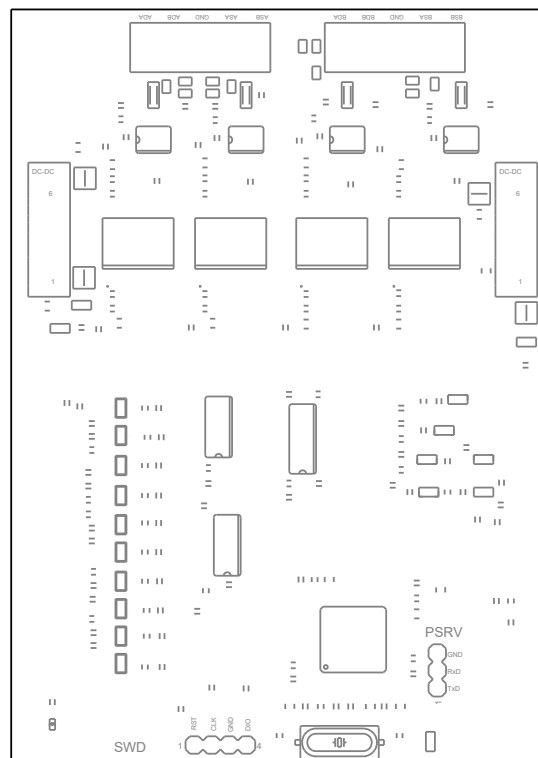
Extension modules

KSSC - network card

The KSSC card allows to link and communicate IVO Compact with any other IVO system..

Features

- Up to 32 subsystems in network
- Redundancy of transmission path
- No significant audio signal delays between subsystems
- Full synchronization of messages between main units
- Galvanic isolated circuits
- Digital communication
- Maximum cable length between subsystems 1200 m (RS485)
- Point-point, multi-point or ring configuration
- Ultra-low quiescent mode
- Over voltage, over current and short circuit protection



IVO compatible equipment

Console microphones

MA10	Emergency gooseneck microphone, 5+10 buttons, speaker built-on, digital communication, 24/48 V DC, ALU
MA20	Emergency gooseneck microphone, 5+20 buttons, speaker built-on, digital communication, 24/48 V DC, ALU
MA30	Emergency gooseneck microphone, 5+30 buttons, speaker built-on, digital communication, 24/48 V DC, ALU
MA40	Emergency gooseneck microphone, 5+40 buttons, speaker built-on, digital communication, 24/48 V DC, ALU

MAR10	Emergency hand-held PTT microphone, 5+10 buttons, speaker built-on, digital communication, 24/48 V DC, wall installation
MAR20	Emergency hand-held PTT microphone, 5+20 buttons, speaker built-on, digital communication, 24/48 V DC, wall installation
MAR30	Emergency hand-held PTT microphone, 5+30 buttons, speaker built-on, digital communication, 24/48 V DC, wall installation
MAR40	Emergency hand-held PTT microphone, 5+40 buttons, speaker built-on, digital communication, 24/48 V DC, wall installation

MAR10K	MAR10 emergency microphone in metal housing, IP30
MAR20K	MAR20 emergency microphone in metal housing, IP30
MAR30K	MAR30 emergency microphone in metal housing, IP30
MAR40K	MAR40 emergency microphone in metal housing, IP30

MAR10KR	MAR10 emergency microphone, metal housing, IP30, redundant fiber digital communication, 24 V DC/7 Ah power supply
MAR20KR	MAR20 emergency microphone, metal housing, IP30, redundant fiber digital communication, 24 V DC/7 Ah power supply

MI10	Paging gooseneck microphone console, 5+10 buttons, speaker built-on, digital communication, 24/48 V DC
MI20	Paging gooseneck microphone console, 5+20 buttons, speaker built-on, digital communication, 24/48 V DC
MI30	Paging gooseneck microphone console, 5+30 buttons, speaker built-on, digital communication, 24/48 V DC
MI40	Paging gooseneck microphone console, 5+40 buttons, speaker built-on, digital communication, 24/48 V DC

Fire intercoms

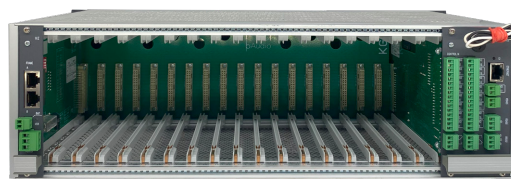
INT2P	Fire intercom, in-wall installation, 2 backlit buttons, digital communication, 24/48 V DC
INT2N	Fire intercom, wall installation, 2 backlit buttons, digital communication, 24/48 V DC

Accessories

PP	Cable connection ABS box unit for microphones consoles connection
MPT	Background noise microphone for automatic gain control, ABS
KSSO24	Network or emergency redundant microphone fiber optic module, ring connection, max distance 20 km, 24 V DC, DIN (TS35)



KG-ETH-MAR main controller with handheld microphone (front)



KG-ETH main controller (back)



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025



EN54 16

FEATURES

- Main processor with bypass redundancy
- Manage audio and control data
- Real-time system monitoring
- 32-bit DSP audio processor
- Up to 4 alarm audio channels per main controller
- Up to 64 non-alarm audio channels per main controller
- Up to 32 main controllers per system
- Wide frequency response
- Audio CD quality
- Ultra-low quiescent mode
- Modular structure
- Hot-swap functionality
- BMS Modbus communication
- 17 monitored control inputs
- 2 output relays (fault and freely programmable)
- Built-in LCD screen
- Built-in KG-UI user interface, KG controller, BP backplane and WZ digital bus modules
- 68HP expansion slots for system cards
- Diagnostic USB port on the front
- KG-ETH-MAR version with alarm microphone MR
- Audio message storage up to 1GB (48 KHz - 16bit)
- Supports real-time setting adjustment without system interruption or system restart
- internal monitoring with output suppression

OVERVIEW

The KG-ETH is the main control unit required in every IVO system. Most system events are processed by its internal processor. The unit consists of:

- KG main controller
- KG-UI user interface
- KAS frame (including BP backplane module and WZ digital bus card)

The KG-ETH features a modular architecture, providing 17 card slots for system expansion. Unused slots can be protected with MAS blank covers. Each unit can process up to four independent audio signals simultaneously via the main digital bus, broadcasting them to any individual loudspeaker line or group of lines.

The integrated KG controller module manages all system events, including receiving and processing control signals from the fire alarm system, handling audio distribution, and coordinating the operation of installed system cards. A built-in monitoring loudspeaker allows verification of any selected audio signal without broadcasting it to the zones, thanks to a disable mode that isolates monitoring from live output.

KG Controller Module

- 17 potential-free NO/NC control inputs for direct connection to fire alarm system relay outputs, with fault detection for short circuits and open lines.
- Built-in bypass controller enabling automatic or manual limited operation in case of main processor failure.
- SD card slot for storing pre-recorded messages, chimes, and other audio files.
- RS232 and RS485 ports for integration with external systems such as fire alarm or building management, supporting Modbus protocol or ASCII mode (registry lists available on request).
- LAN/WAN port for remote maintenance, monitoring, and diagnostics over the internet.

KG-UI User Interface

Located on the front panel, the KG-UI includes an LCD display, LED status indicators, a monitoring loudspeaker for audio and intercom functions, and manual control buttons. The LCD main screen displays:

- Current date and time
- Number of system faults
- Number of active alarms
- Number of disablements
- Status of the uploaded program

TECHNICAL SPECIFICATION

GENERAL

Power supply	24 V DC $\pm$ 20 % 48 V DC $\pm$ 15 %
Idle consumption	< 2 W
Standards	EN54, CE
Mechanical	3 U, 19"
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	Power, alarm, fault, bypass, CPU fault, disablement, ID
Connectors	17x control inputs, 2x relay outputs, 1x RS232, 2x RS485, Ethernet, USB Type B, PSU fault, power

AUDIO SPECIFICATION

Frequency response	10 Hz - 30 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 86 dB

OTHERS

Digital audio format	PCM 16-bit / 48 kHz
3rd party integration	1x RS232, 2x RS485 (Modbus)
Control and supervision	1 x USB, 1x Ethernet (TCP/IP)
Log event buffer	2048

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.

KKO – MICROPHONE CONSOLE CARD

FEATURES

- Support of up to 8 microphone consoles, 8 intercoms or 1 control devices
- Manage audio and control data
- 32-bit DSP audio processor
- Digital communication
- Maximum cable length 500 m
- Optional redundant connection with alarm microphones
- Wide frequency response
- Ultra-low quiescent mode
- Direct power supply of connected units
- Hot-swap functionality
- Overvoltage, overcurrent and short circuit protection



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025



EN54 16

OVERVIEW

The KKO card enables the connection of up to eight microphone consoles or fire intercom units in a bus configuration. It can be installed in either KG-ETH or KAS units. Communication with connected devices is handled via a dual RS485 protocol, with only one device permitted to transmit audio on the bus at a time.

For increased reliability, redundant connections to non-emergency microphones can be established using additional KSSO fiber optic converters.

TECHNICAL SPECIFICATION

GENERAL

Power supply	24 V DC $\pm$ 20 % 48 V DC $\pm$ 15 %
Idle consumption	< 0,08 W
Standards	EN54, CE
Mechanical	3 U, 4 HP
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	ID, power
Connectors	2x digital BUS + power

AUDIO SPECIFICATION

Frequency response	10 Hz - 30 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 86 dB

OTHERS

Digital audio format	PCM 16-bit / 48 kHz
3rd party integration	Modbus

All rights reserved.

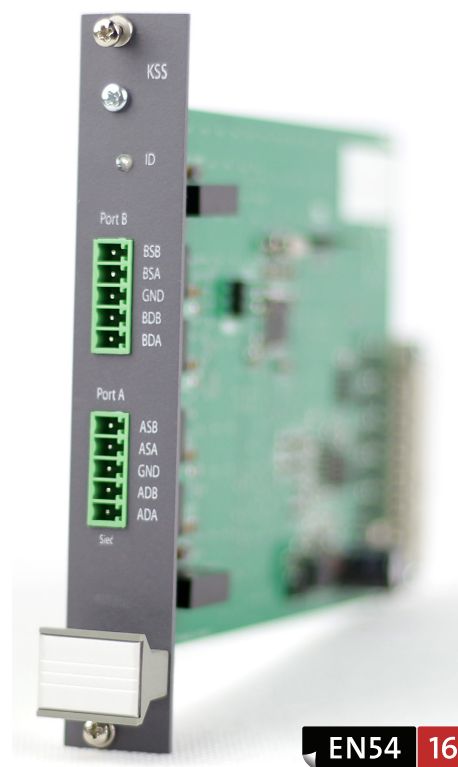
The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.

FEATURES

- Up to 32 subsystems in network
- Redundancy of transmission path
- Optional Star topology
- No significant audio signal delays between subsystems
- Full synchronisation of messages between subsystems
- Galvanically isolated circuits
- Digital communication
- Maximum connection length between subsystems 500 m
- Ultra-low quiescent mode
- Hot-swap functionality
- Overvoltage, overcurrent and short circuit protection



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025



EN54 16

OVERVIEW

The KSS card enables communication between two KG-ETH main controllers, whether located in the same facility or at separate sites, forming an integrated networked system. It can be installed in either KG-ETH or KAS units.

Communication is based on the RS485 protocol. Connections can be made via copper cables in point-to-point or daisy-chain topology, or via fiber optic cables in a ring topology using KSSO converters.

In standard fiber optic configurations, the KSS card supports simultaneous transmission of system commands, status signals, and a single audio channel.

The card can operate in one of two modes: MASTER (transmitter) or SLAVE (receiver). Communication from MASTER to SLAVE includes control commands, system status

information, and audio signals. Return communication from SLAVE to MASTER is limited to general fault notifications – no other data is transmitted upstream.

Due to RS485 protocol limitations, only one KSS card within a network can function as a MASTER. If bidirectional transmission (e.g., control or audio from both KG-ETH units) is required, the system must be duplicated – including network infrastructure, devices, and cabling – in each KG-ETH unit or rack cabinet intended to serve as a signal transmitter.

TECHNICAL SPECIFICATION

GENERAL

Power supply	24 V DC $\pm$ 20 % 48 V DC $\pm$ 15 %
Idle consumption	< 0,7 W
Standards	EN54, CE
Mechanical	3 U, 4 HP
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	ID, power
Connectors	2x terminal block (digital BUS)

AUDIO SPECIFICATION

Frequency response	10 Hz - 30 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 86 dB

OTHERS

Communication delay	< 10 ms
Digital audio format	PCM 16-bit / 48 kHz

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.



KSS0 – FIBER OPTIC CONVERTER FOR THE NETWORK SYSTEM

FEATURES

- Compatible with KKO and KSS cards
- Redundant transmission path
- Adjustable audio signal delay between units
- Full synchronization of messages across subsystems
- Digital communication
- Maximum connection length between units: up to 20 km
- Supports single-mode and multi-mode fiber
- Configurable as point-to-point, multi-point, or ring topology
- Ultra-low quiescent power mode



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025

EN54 16

OVERVIEW

KSS024 module are used to establish fiber optic connections within the IVO system, enabling robust and long-distance communication.

These converters support the creation of RS485 network links using fiber optic cables in conjunction with:

- The KSS card, for interconnecting up to 32 KG-ETH units
- The KKO card, for connecting non-emergency microphone consoles to the KKO card

The KSS024 module is compatible with both single-mode and multimode fiber optic cables, and it enables RS485 communication between networked rack cabinets arranged in a ring configuration for enhanced redundancy, and reliability.

TECHNICAL SPECIFICATION

GENERAL

Power supply	24 V DC $\pm$ 20 % 48 V DC $\pm$ 15 %
Idle consumption	< 2,4 W
Standards	EN54, CE
Mechanical	103 x 77 x 53 mm
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	Power, signal missing optic 1, 2, communication on ports 1, 2, 3, 4
Connectors	Power, 4x optic S.C. (9/125 μ m or 62,5/125 μ m), 4x RJ45 (digital BUS)

AUDIO SPECIFICATION

Frequency response	10 Hz - 30 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 86 dB

OTHERS

Communication delay	< 10 ms
Digital audio format	PCM 16-bit / 48 kHz
Switches	DIP switches (ring configuration)

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.

MA – DESKTOP PAGING CONSOLE MICROPHONE

FEATURES

- Goosneck microphone
- High performance microphone capsule
- 32-bit DSP audio processor
- Reliable mechanical buttons
- 5 buttons for automatic messages activation
- Up to 150 additional buttons for any purpose
- 2 status LED indicators per button
- Freely programmable buttons
- Power, Alarm, Fault, Bypass notification LED indicators
- Adjustable sensitivity for microphone
- Advance control of IVO PAVA system
- Aluminium housing
- Built-in audio input
- Built-in loudspeaker
- Intercom functionality
- Wall-mounting option
- Digital communication
- Maximum cable length: 500 m
- Gain control
- Direct power supply from the IVO PAVA system
- Wide frequency response
- Ultra-low quiescent mode
- Password protection



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025



MA20



Back panel

EN54 16

Options:

- MA10 – 5 + 10 buttons
- MA20 – 5 + 20 buttons
- MA30 – 5 + 30 buttons
- ...
- MA150 – 5 + 150 buttons
- Mlxx – Non-alarm version of the console microphone, equipped with all-grey buttons (same specification as MAxx)

OVERVIEW

The MA range of desktop paging microphones is part of the IVO EN54-16 certified system. Each unit is equipped with a gooseneck microphone and a 32-bit processor for efficient handling of all voice initiation tasks, including non-emergency paging announcements and live emergency broadcasts to guide the public during fire incidents, security threats, or natural disasters.

In addition, the MA series supports half-duplex communication with other MI, MA, MAR, or INT units, ensuring reliable two-way communication during critical situations.

Each microphone is fitted with programmable buttons for input source selection, volume adjustment, and triggering of pre-recorded messages. A bypass function and password protection are also supported, ensuring secure and uninterrupted operation.

MA units connect to the IVO system's main controller via the KKO card, using either daisy-chain or star topology configurations.

TECHNICAL SPECIFICATION

GENERAL

Power supply	24 V DC $\pm$ 20 % 48 V DC $\pm$ 15 %
Idle consumption	< 2 W (MA20)
Standards	EN54, CE
Mechanical	230 x 185 x 60 mm (MA10) 230(+n) x 185 x 60 mm (MA20), n = 60 mm ... 230(+14*n) x 185 x 60 mm (MA150)
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	Power, alarm, fault, bypass, 3x LED speech level, 2x LED (system status) each button
Connectors	Digital BUS + power, external power supply, 0 dB RCA audio input

AUDIO SPECIFICATION

Frequency response	150 Hz - 16 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 75 dB

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.

FEATURES

- Simplifies connection of console microphones (MA, MAR, MI) to IVO and IVO Compact PAVA systems
- Converts rigid fire cables to flexible F/UTP cables
- Enables creation of a digital bus with up to 8 console microphones on a single KKO card
- High-resistance IP67-rated casing

**EN54 16**

Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025

OVERVIEW

The PP junction box is designed to simplify the connection of console microphones (MA, MAR, MI) within the IVO and IVO Compact PAVA systems. It converts a rigid fire cable into a flexible F/UTP copper cable, making it easier to place console microphones, for example on a desk.

In addition, the PP enables the creation of a digital bus with up to eight console microphones connected to the same KKO card. The unit is equipped with termination DIP switches, allowing proper termination of the microphone bus.

Housed in a high-resistance IP67-rated casing, the PP junction box is suitable for operation even in harsh environmental conditions.

TECHNICAL SPECIFICATION

GENERAL

Standards	EN54, CE
Mechanical	115 x 90 x 55 mm, 2x PG11 cable gland
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	Power
Connectors	2x terminal block (Digital BUS), 1x RJ45 (console microphone connection)

OTHERS

IP protection	IP67
Switches	Digital BUS termination

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.

pAudio® WAA - GLOBAL AUDIO INPUT CARD

FEATURES

- Symmetrical 0 dB input card
- Phantom power
- 32-bit DSP audio processor
- Wide frequency response
- Ultra-low quiescent mode
- Hot-swap functionality
- 3-band parametric equalizer
- Equipped with VOX functionality
- Pilot tone detection (18 kHz, 20 kHz, 22 kHz)



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025



EN54 16

OVERVIEW

The WAA card is an audio input module designed for integration within the IVO system. It can be installed in both KG-ETH and KAS units.

The module features a balanced audio input with optional phantom power. Incoming analog signals are digitized and distributed via the system's digital bus, ensuring reliable and high-quality audio transmission.

Audio received through the WAA card can be broadcast to any loudspeaker lines connected to 2LG2 cards or 16SG modules within the system.

TECHNICAL SPECIFICATION

GENERAL

Power supply	24 V DC $\pm$ 20 % 48 V DC $\pm$ 15 %
Idle consumption	< 0,6 W
Standards	EN54, CE
Mechanical	3 U, 4 HP
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	ID, power
Connectors	Symetrical audio input (terminal block)

AUDIO SPECIFICATION

Frequency response	10 Hz - 30 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 86 dB
Phantom power	48 V

OTHERS

Digital audio format	PCM 16-bit / 48 kHz
Equalization	3 band Equalization

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025

EN54 16

FEATURES

- Class D amplifier technology
- Transformerless 100 V output
- True RMS power
- 24 V DC direct supply
- Independent audio channels
- Dynamic, high-quality sound
- Wide frequency response
- Ultra-low quiescent mode
- Fully isolated stages
- Compact size and weight
- Overvoltage, overcurrent, short circuit and thermal protection
- Ideal for speech and background music

OVERVIEW

The WB Series Amplifiers are high-efficiency, transformerless multi-channel amplifiers designed for use within the IVO system. They amplify 0 dB audio signals from 2LG2 cards or 16SG modules to the 100 V level required for loudspeaker lines. Each amplifier is equipped with a dedicated microprocessor for continuous monitoring and control of operational functions.

With idle power consumption as low as 2 W, WB amplifiers place minimal demand on backup batteries, making them highly efficient for systems with emergency power requirements.

Powered by 24 V DC from the ZDSOP24 power supply unit, each channel is individually protected, and one channel can be configured as a redundant backup while the others operate as primary outputs.

Each amplifier channel is equipped with LED indicators for power, signal, clip, and protection status. Channel-specific DIP switches provide gain adjustment (0 / -3 dB), while integrated cooling fans ensure reliable thermal management.

TECHNICAL SPECIFICATION

GENERAL

Power supply	24 V DC $\pm$ 20 %
Idle consumption	< 1 W
Standards	EN54, CE
Mechanical	1U, 19"
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	Power, operate, communication, fault, each channel: ready, signal, clip, protect
Connectors	2x Power, amplifier enable mode, RS485, fault, For each channel: symmetrical 0 dB audio input, 100 V output

AUDIO SPECIFICATION

Frequency response	10 Hz - 30 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 92 dB
Output voltage	0 - 140 V

OTHERS

Switches	For each channel: input signal attenuation 0 / -3 dB, hi-pass filter 0 / 210 Hz Global: Amplifier address (t.b.i.)
----------	---

SPECIFICATION PER UNIT	RATED OUTPUT POWER [W]	TOTAL EFFICIENCY
WB1500	1x 500	86 %
WB2200	2x 200	89 %
WB2500	2x 500	86 %
WB4150	4x 150	91 %
WB4200	4x 200	89 %
WB4500	4x 500	86 %
WB8150	8x 150	91 %

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.

ZDSOP24 – IVO SYSTEM POWER SUPPLY



Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025

EN54 16

FEATURES

- High efficiency: up to 90 %
- High-power rated output up to 3460 W
- Compact size
- Direct 24 V DC output
- Modbus communication
- Maximum battery capacity: 2 × 230 Ah
- Over voltage, over current, short circuit and temperature protection

OVERVIEW

The ZDSOP24 power supply unit is designed to provide uninterrupted and stabilized 24 V DC power to IVO system components. It supports a modular configuration with power supply modules ranging from 500 W up to 3460 W.

The unit features independently protected outputs for up to eight amplifiers, one system controller (bridgeable with KG-ETH, KAS, and 16SG modules), and one auxiliary device. Housed in a standard 19" rack-mount enclosure, the ZDSOP24 operates from a 230 V AC mains supply via a single-phase, three-wire connection (phase, neutral, ground). In case of mains power failure, the system automatically switches to a 24 V DC battery backup, ensuring continuous operation of all connected devices.

The ZDSOP24 supports maintenance-free Sealed Lead-Acid (SLA) batteries, including both AGM and gel types. Depending on the version, it can accommodate one or two battery strings, each with a capacity of up to 230 Ah, providing a maximum backup capacity of 460 Ah.

An advanced battery resistance monitoring function enables independent supervision of each battery string, ensuring optimal performance and compliance with both regulatory and project-specific requirements.

TECHNICAL SPECIFICATION

GENERAL

Power supply	230 V AC -15 % / +10 %
Total efficiency	> 87 %
Idle consumption	< 6 W
Standards	EN54, EN12101, CE
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	AC main, DC, fault, each output: DC status
Connectors	230 V AC, Outputs: 1x 24 V DC AUX, 1x 24 V DC controller, 8x 24 V DC amplifiers, EPS fault (230 V AC loss), PSU general fault, temperature sensor, RS485

OTHERS

Output voltage	20 - 29 V DC
----------------	--------------

BATTERY

Max. battery capacity	2x 230 Ah
-----------------------	-----------

SPECIFICATION PER VERSION RATED OUTPUT POWER BATTERY LINES MECHANICAL

ZDSOP24-05	500 W	1	1U, 19"
ZDSOP24-1-1	1000 W	1	1U, 19"
ZDSOP24-1-2	1000 W	2	1U, 19"
ZDSOP24-2-1	2000 W	1	1U, 19"
ZDSOP24-2-2	2000 W	2	1U, 19"
ZDSOP24-3-2	3000 W	2	2U, 19"
ZDSOP24-4-2	3460 W	2	2U, 19"

All rights reserved.

The information contained in this document is believed to be accurate; however, no representation or warranty is given, and pAudio Technologies assumes no liability regarding its accuracy or completeness.

6 Watts Metal Wall Mounted Cabinet Loudspeaker

APPLICATION

- Public Address and Voice Alarm
- Outdoor application
- Background Music

AREA OF USE

- Health • Education • Retail • Hospitality
- Stadiums • Transportation • Theme parks • Military



EN 54 24

- All-metal construction
- Vandal-proof
- BS 5839

OVERVIEW

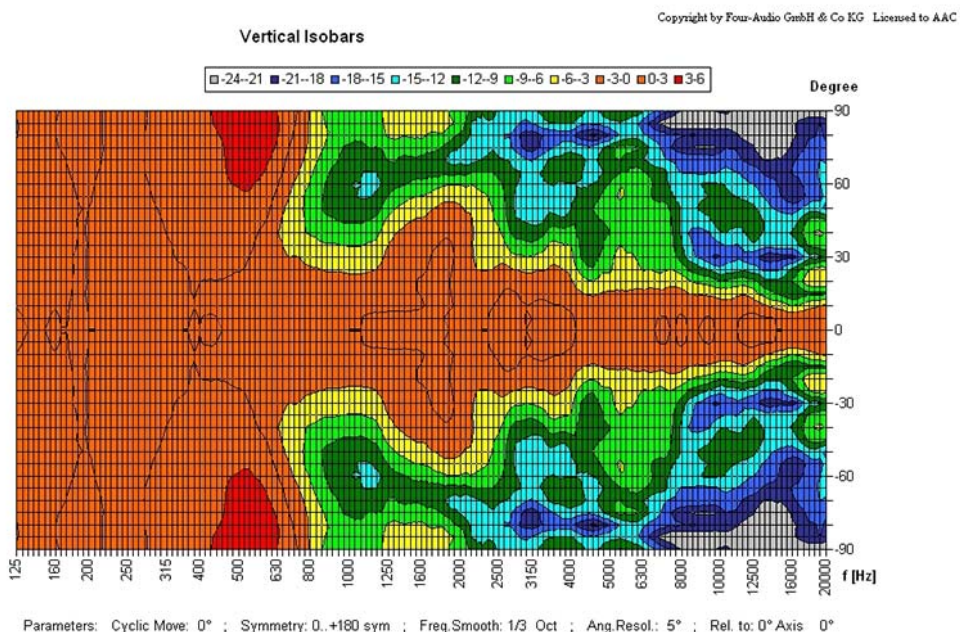
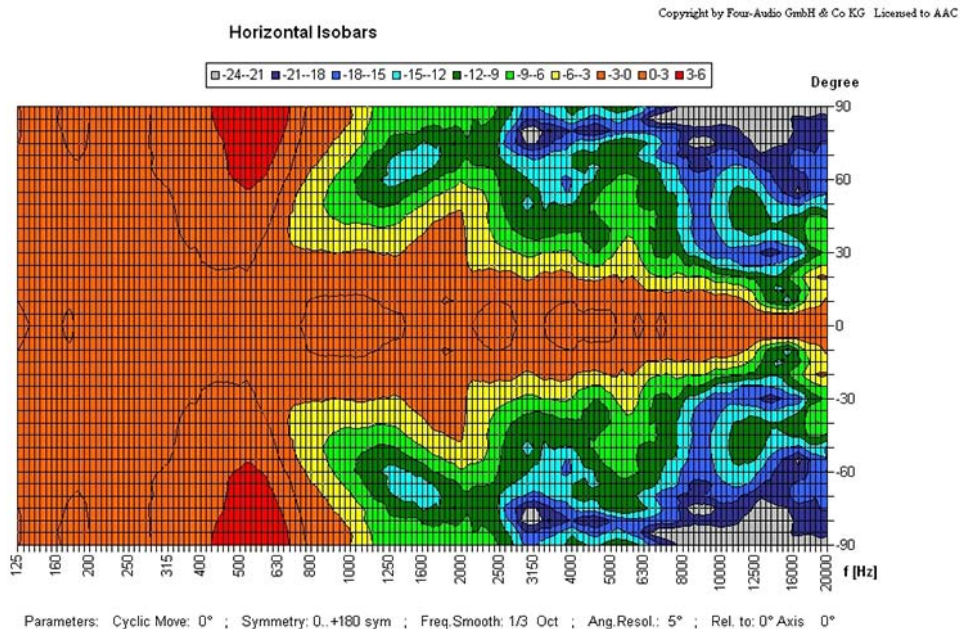
This speaker is the best choice for sensitive installations like in prisons or industrial projects where plastic and wooden materials cannot be used.

The 6W powered speaker is equipped with a 165mm full-range loudspeaker chassis and a 100V transformer with 3 power adjustments. The extremely stable metal housing in RAL 9010 with corrosion-resistant powder coating, offers tremendous resilience in unobtrusive design. For additional reliability, a 2 pin-ceramic block, a thermal fuse is provided and the speaker chassis is impregnated against wetness.

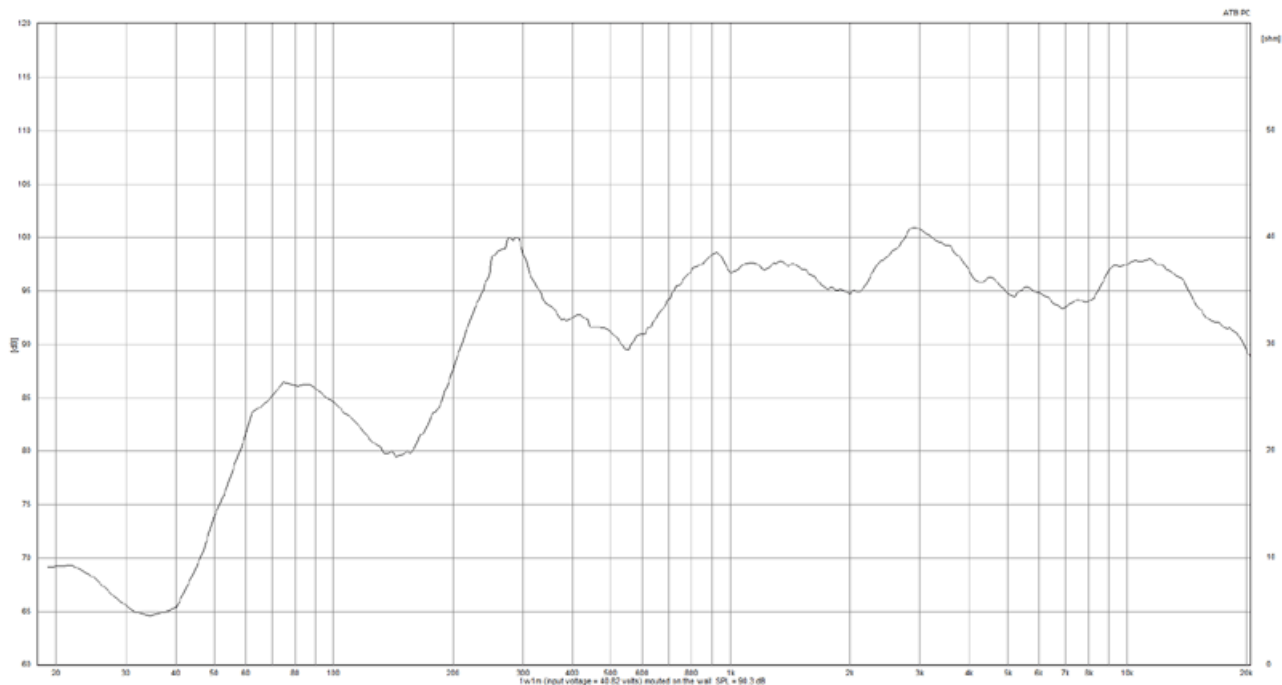
The speaker is also secured with protection class IP 21C against the risks of environmental influences. The speaker is also compliant with the British Standard BS 5839, Part 8.

Quick and easy mounting with screws.

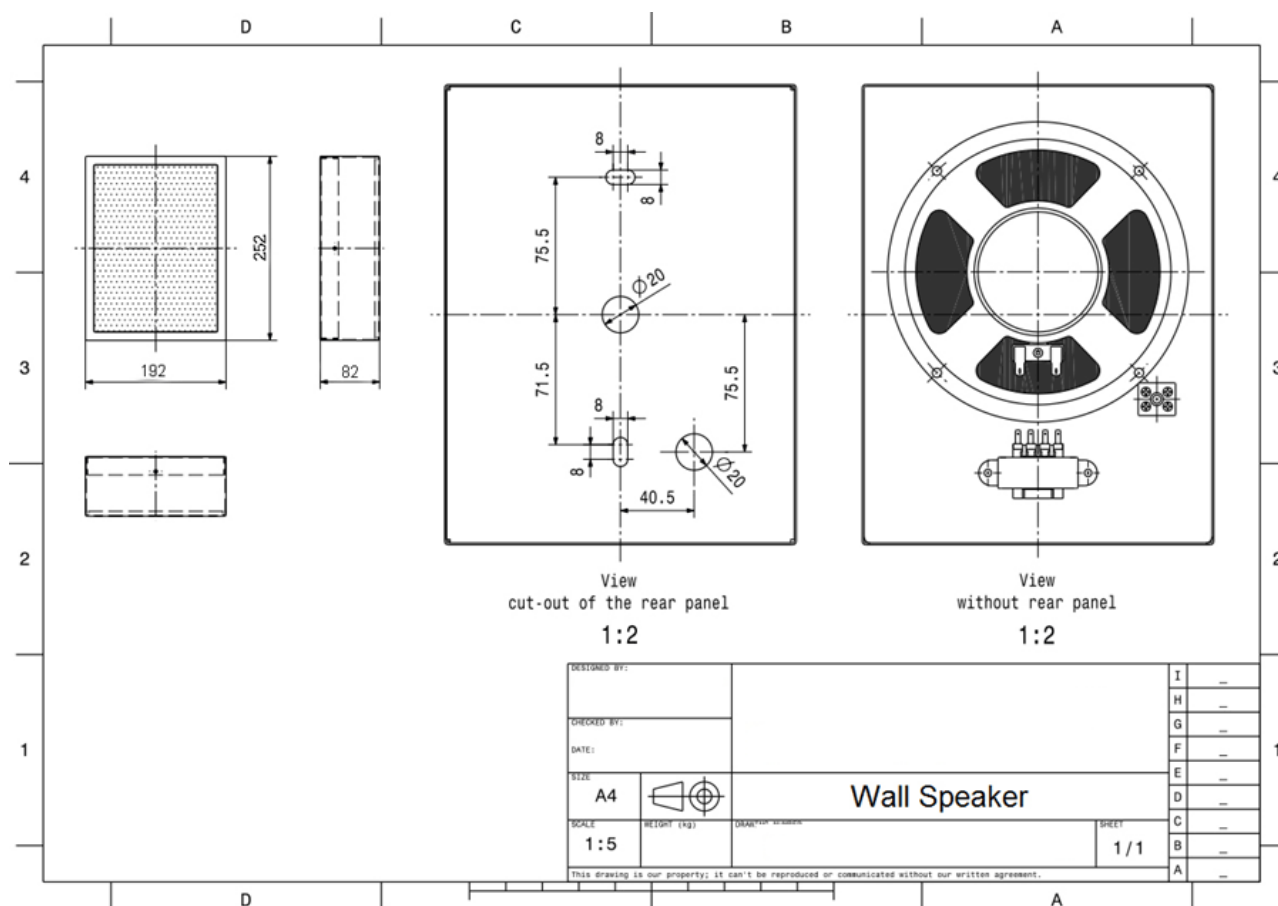
POLAR DIAGRAMS



FREQUENCY RESPONSE DIAGRAMS



TECHNICAL DIAGRAMS



HS-10W-ABS

10 Watts Horn Loudspeaker

APPLICATION

- Public Address and Voice Alarm
- Outdoor application
- Background Music

AREA OF USE

- Health • Education • Retail • Hospitality
- Stadiums • Transportation • Theme parks • Military



EN 54 | 24

- High sound pressure level
- Weather-proof
- BS 5839

OVERVIEW

The 10W powered speaker is equipped with a 100V line transformer with 4 power adjustments, also low-impedance operation (20 ohm) is possible. The impact-resistant ABS housing UL94V0 in RAL 7035 guarantees long-term stability. For additional reliability, a ceramic block and a thermal fuse is provided.

The speaker is also secured with the high protection class IP 66 against the security risks of environmental influences. The speaker is compliant with the British Standard BS 5839, Part 8.

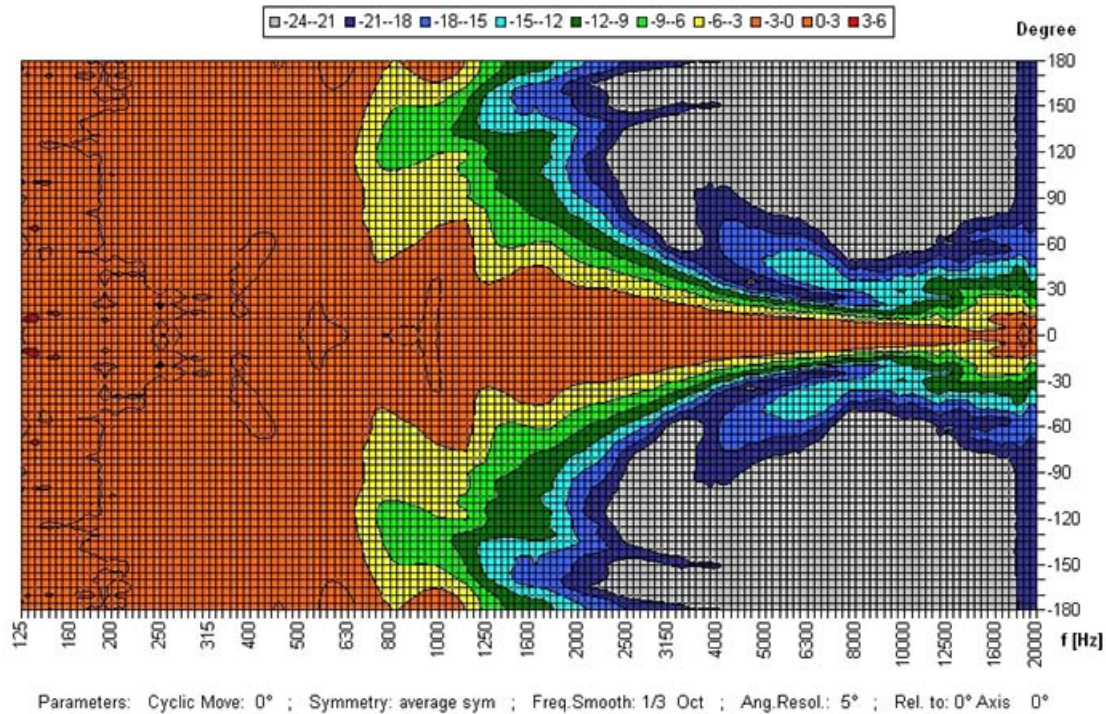
The PG11 cable glands on the back of the speaker allow quick and easy connection.

Included is a U-shaped, stainless steel universal mount for flexible installation. Optionally available is a mast bracket (MB) for about 90 - 200mm mast diameter.

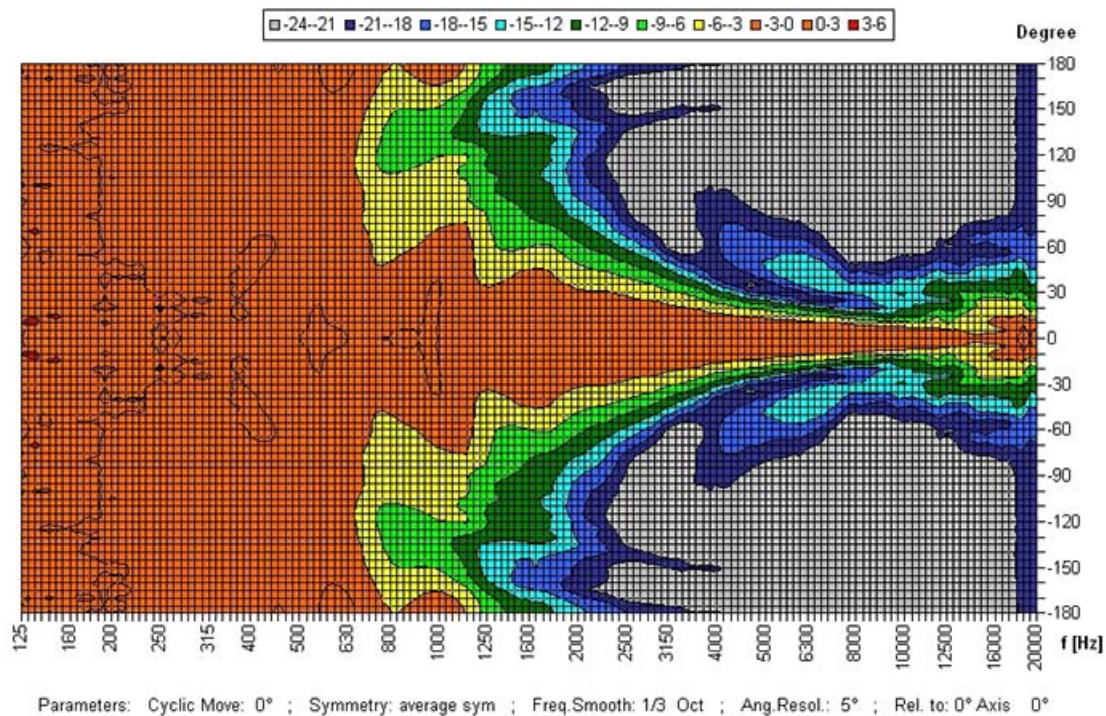
To operate the product according to EN 54-24, an equalizer has to be used as described in the user manual.

POLAR DIAGRAMS

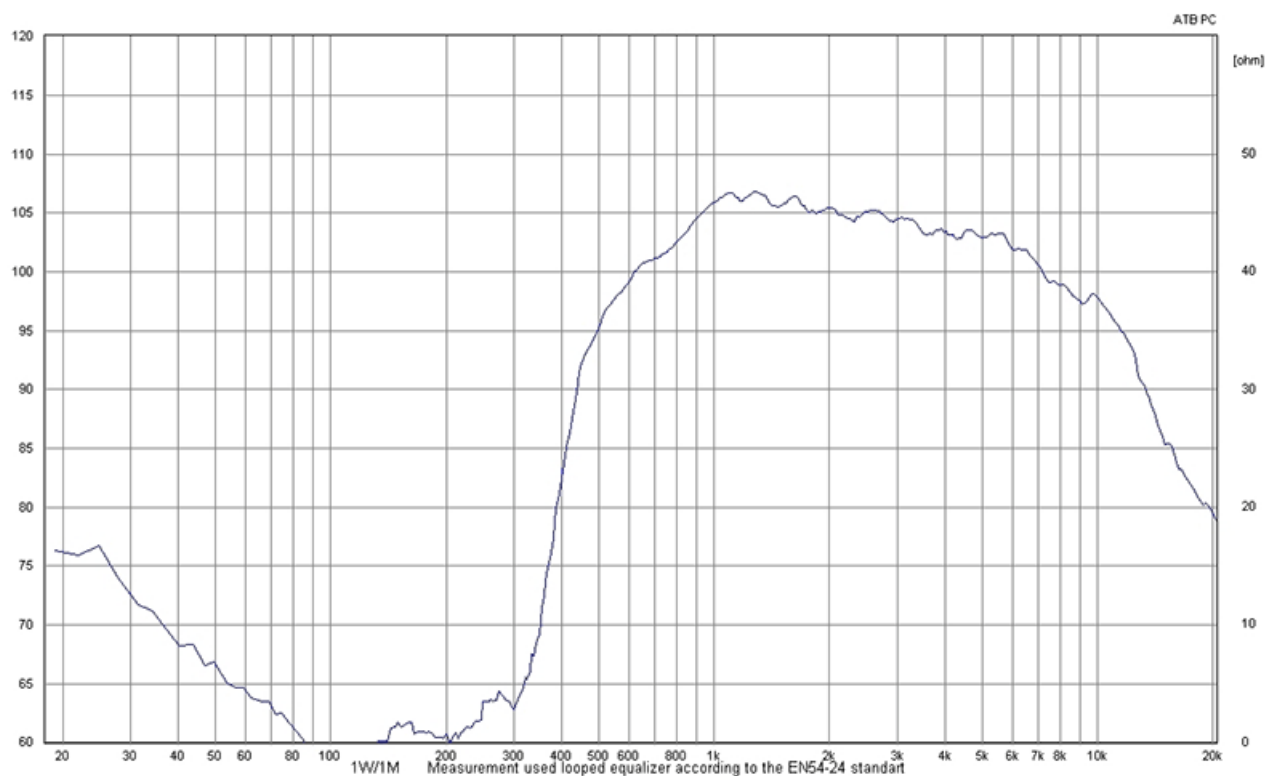
Copyright by Four-Audio GmbH & Co KG Licensed to AAC



Copyright by Four-Audio GmbH & Co KG Licensed to AAC



FREQUENCY RESPONSE DIAGRAMS





6 Watts Splash-proof Ceiling Loudspeaker

APPLICATION

- Public Address and Voice Alarm
- Outdoor application
- Background Music

AREA OF USE

- Health • Education • Retail • Hospitality
- Stadiums • Transportation • Theme parks • Military



EN 54 24

- splash-proof
- frameless design
- WAGO connector 221

OVERVIEW

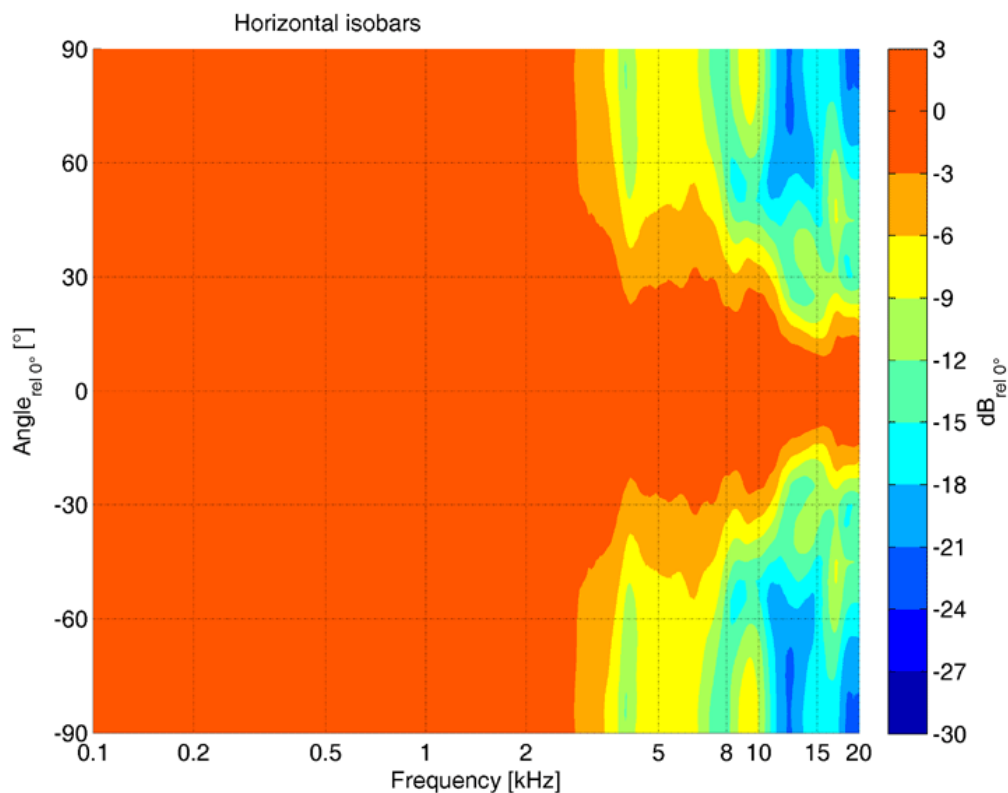
The CSSP-06W-140 is splash-proof which is perfect for installation in bathrooms, pool areas, e.g. The 6W powered speaker is equipped with a 100mm full-range loudspeaker and a 100V transformer with 3 power adjustments. The powder-coated metal in RAL 9016 guarantees long-term stability.

The speaker is secured with protection class IP 54 against the risks of environmental influences. For additional reliability, the speaker is impregnated against wetness. Fast and easy installation by WAGO 221 connector and strong spring clamps with protective caps for vibration damping. The connecting cables can be supplied by rubber grommets in the fire dome

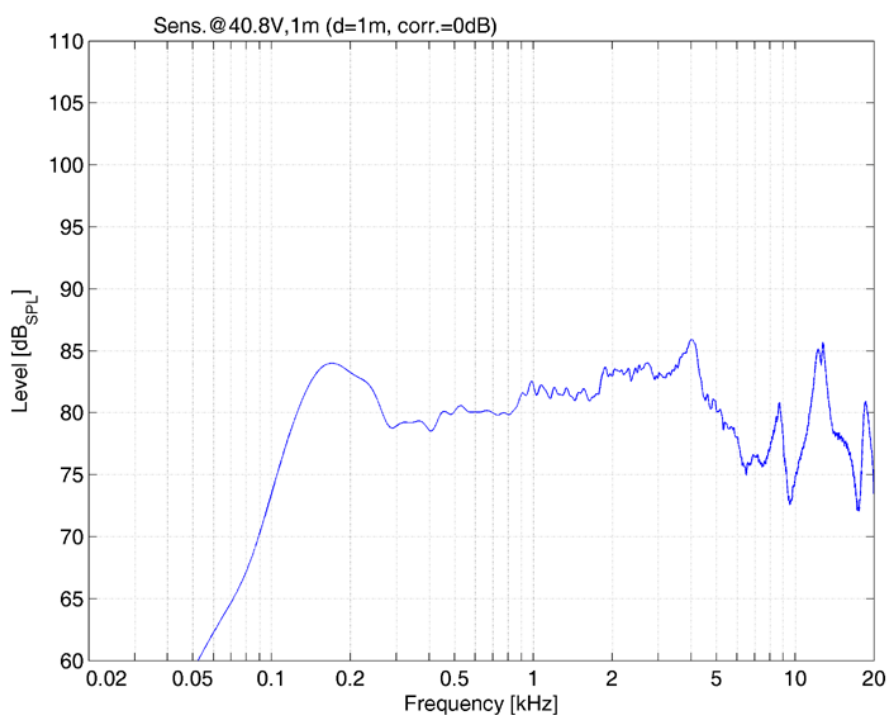
Special paint of the speaker in 4-digit RAL- or NCS- colour is available at extra cost. The ABS fire dome is included in the delivery.

This speaker is suitable for a ceiling strength of about 1-45 mm. Our specification is primarily related to solid ceilings, for ceilings with soft materials higher ceiling thicknesses could be necessary. In addition, stronger cables and other fittings may also result in changes in the appropriate setup. Regarding the variety of materials and manufacturers, we recommend building a sample of the speaker to match the requirements accurately

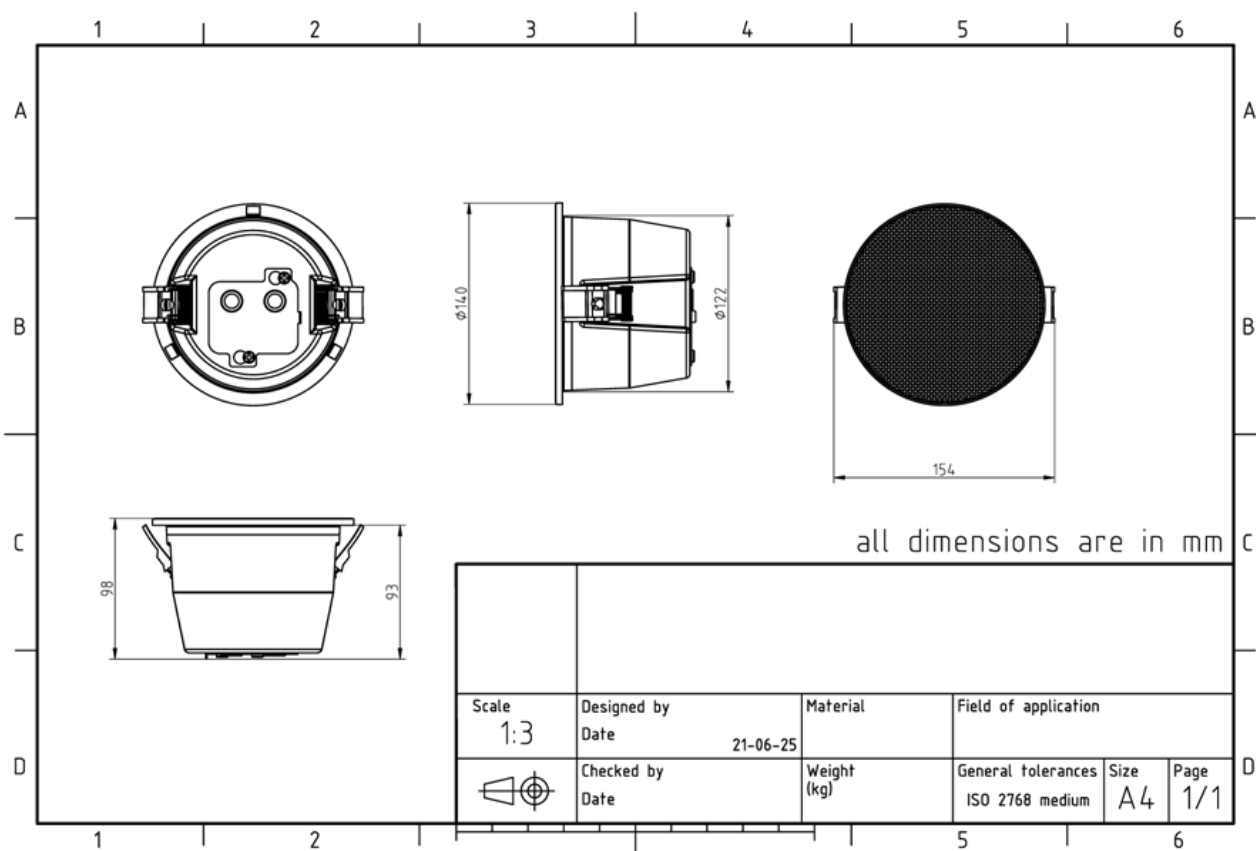
POLAR DIAGRAMS



FREQUENCY RESPONSE DIAGRAMS



TECHNICAL DIAGRAMS



TECHNICAL DATA (ELECTRICAL)

Description	CSSP-06W-140
Power	6/3/1,5 W
Impedance (100V)	1667/3333/6667 ohm
Frequency Range	98 - 20.000 Hz
Frequency Response	93 - 20.100 Hz
Sensitivity, IEC268-5, 1W/1m	91 dB
Sensitivity, EN54-24, Pmax./4m	84,7 dB
Sensitivity, rated noise power / 4m	79,1 dB
Sensitivity EN54-24, 1W/4m	68,5 dB
Sensitivity EN54-24, 1W/1m	80,5 dB
Sensitivity 1W/1m @ 1KHz	89 dB
Dispersion -6dB, 500Hz	h/v 180°
Dispersion -6dB, 1KHz	h/v 180°
Dispersion -6dB, 2KHz	h/v 180°
Dispersion -6dB, 4KHz	h/v 81°

TECHNICAL DATA (MECHANICAL)

Dimensions	140x98 mm
IP Rating	IP54
Weight (net)	0,7 kg
Ceiling Cut-out	129 mm
Temperature range	-10 / +55 °C
Mounting	Quick fit mounting
Connector	WAGO 221 connector
Maximum cable cross section	4mm ²
Max. cable cross section loop	4mm ²
Colour	RAL 9016

All rights reserved.

Information contained in this document is believed to be accurate, however no representation or warranty is given and pAudio Technologies assumes no liability with respect to the accuracy of such information.

TECHNICAL DATA (ELECTRICAL)

Description	HS-10W-ABS
Power	10/5/2,5/1,25 (20) W
Impedance (100V)	1000/2000/4000/8000 ohm
Frequency Range	569 - 7.000 Hz
Frequency Response	370 - 13.600 Hz
Sensitivity, IEC268-5, 1W/1m	106,7 dB
Sensitivity, rated noise power / 4m	91,0 dB
Sensitivity EN54-24, 1W/4m	83,0 dB
Sensitivity EN54-24, 1W/1m	95,0 dB
Sensitivity 1W/1m @ 1KHz	102 dB
Dispersion -6dB, 500Hz	h/v 360°
Dispersion -6dB, 1KHz	h/v 360°
Dispersion -6dB, 2KHz	h/v 105°
Dispersion -6dB, 4KHz	h/v 50°

TECHNICAL DATA (MECHANICAL)

Dimensions	142x256 mm
IP Rating	IP66
Weight (net)	1,9 kg
Temperature range	-25 / +70 C°
Mounting	Mounting bracket
Connector	ceramic block
Maximum cable cross section	8mm ²
Max. cable cross section loop	2x2mm ²
Colour	RAL 7035

All rights reserved.

Information contained in this document is believed to be accurate, however no representation or warranty is given and pAudio Technologies assumes no liability with respect to the accuracy of such information.

TECHNICAL DATA (ELECTRICAL)

Description	WMS-R-06W-M
Power	6/3/1,5 W
Impedance (100V)	1667 / 3333 / 6667 ohm
Frequency Range	170 - 18.500 Hz
Frequency Response	70 - 23.500 Hz
Sensitivity, IEC268-5, 1W/1m	94,0 dB
Sensitivity EN54-24, Pmax/4m	90,0 dB
Sensitivity EN54-24, 1W/4m	82,0 dB
Sensitivity EN54-24, 1W/1m	94,0 dB
Sensitivity 1W/1m @ 1KHz	99 dB
Dispersion -6dB, 500Hz	h=180° v=180°
Dispersion -6dB, 1KHz	h=160° v=160°
Dispersion -6dB, 2KHz	h=120° v=120°
Dispersion -6dB, 4KHz	h=76° v=76°

TECHNICAL DATA (MECHANICAL)

Dimensions	252x192x81 mm
IP Rating	IP21
Weight (net)	2,04 kg
Temperature range	-10 / +55 C°
Connector	2-pin ceramic block
Mounting	Screws
Connector	2-pin ceramic block
Terminal diameter	3,2 mm
Maximum cable cross section	8mm²
Colour	RAL 9010

All rights reserved.

Information contained in this document is believed to be accurate, however no representation or warranty is given and pAudio Technologies assumes no liability with respect to the accuracy of such information.

6 Watts Frameless Ceiling Loudspeaker

APPLICATION

- Public Address and Voice Alarm
- Outdoor application
- Background Music

AREA OF USE

- Health • Education • Retail • Hospitality
- Stadiums • Transportation • Theme parks • Military



EN 54 24

- frameless design
- suitable also for very thin ceilings
- WAGO connector 221

OVERVIEW

Inspired by the look of contemporary LED lights, the frameless design of the new 6W loudspeakers has all the makings of an instant classic. The 6W powered speaker is equipped with a 130mm full-range loudspeaker and a 100V transformer with 3 power adjustments. The powder coated metal in RAL 9016 guarantees long-term stability. For additional reliability the speaker is impregnated against wetness.

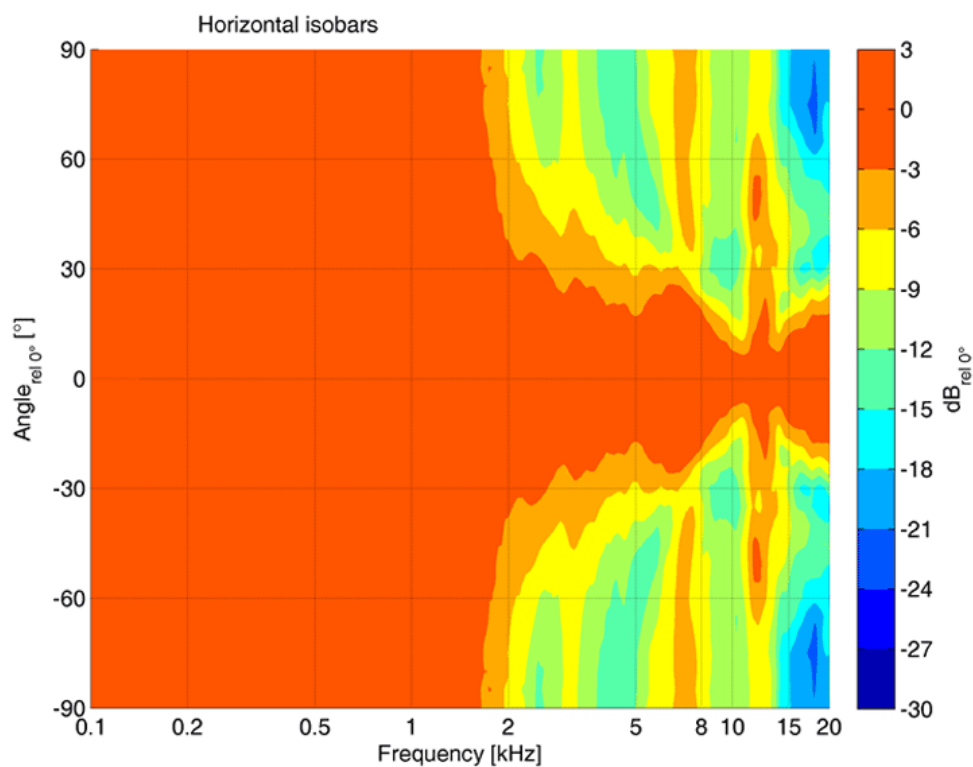
The speaker is also secured with protection class IP 21C against the security risks of environmental influences. Fast and easy installation by WAGO 221 connector and strong spring clamps with protective caps for vibration damping. The connecting cables can be supplied by rubber grommets in the firedome.

Special paint of the speaker in 4-digit RAL- or NCS- colour available at extra cost.

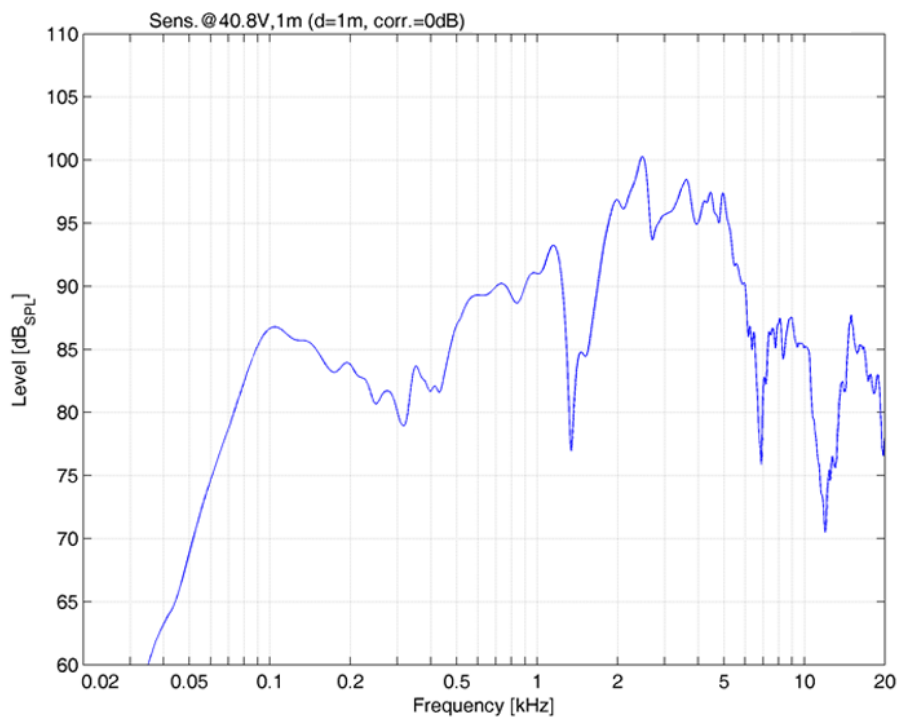
The firedome is included in the delivery.

This speaker is suitable for a ceiling strength of about 1 – 45 mm. Our specification is primarily related to solid ceilings, for ceilings with soft materials a higher ceiling thicknesses could be necessary. In addition, stronger cables and other fittings may also result in changes of the appropriate setup. With regard to the variety of materials and manufacturers, we recommend to build in a sample of the speaker to match the requirements accurately.

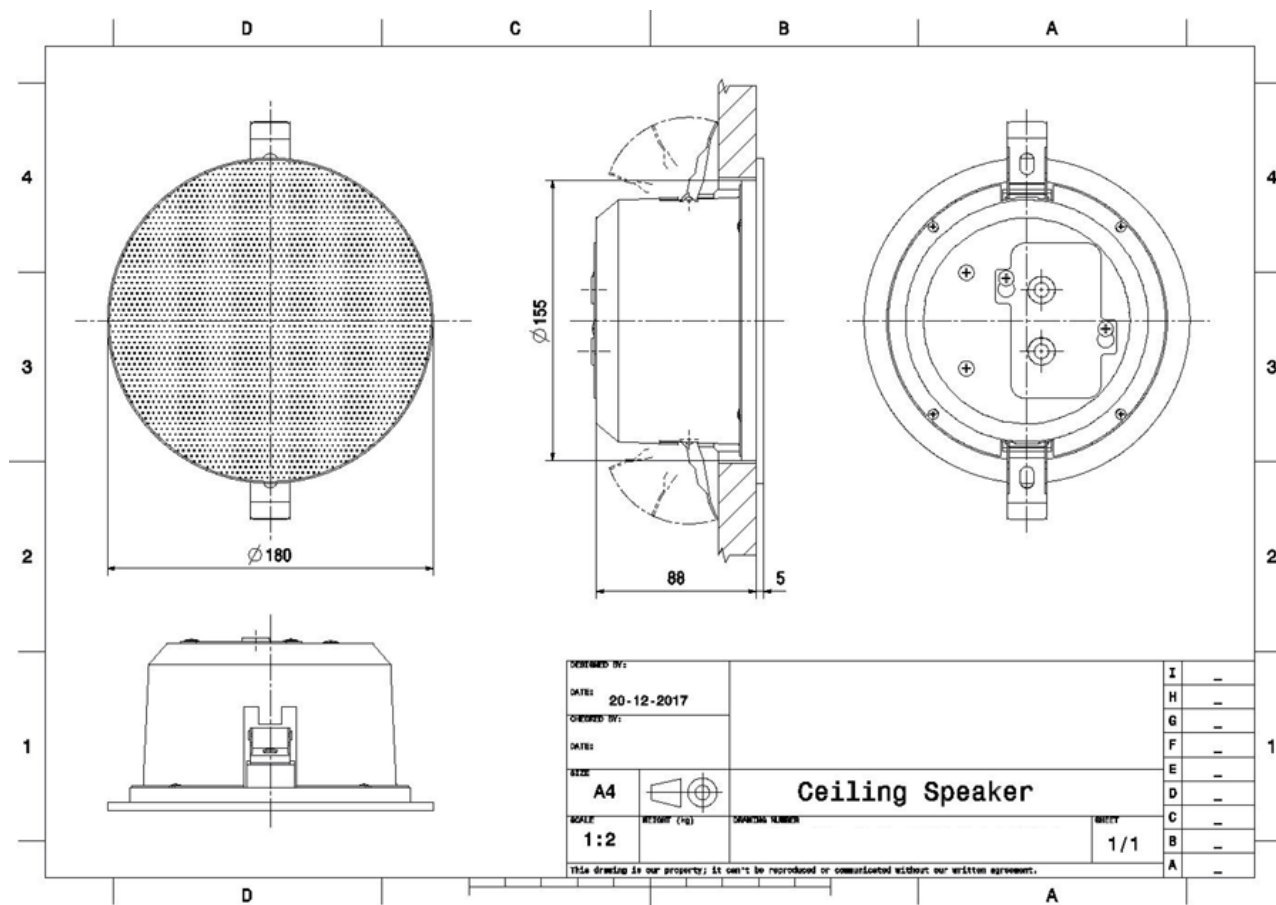
POLAR DIAGRAMS



FREQUENCY RESPONSE DIAGRAMS



TECHNICAL DIAGRAMS



TECHNICAL DATA (ELECTRICAL)

Description	CSFLD-06W-130
Power	6/3/1,5 W
Impedance (100V)	1667/3333/6667 ohm
Frequency Range	80 - 20.000 Hz
Frequency Response	64 - 21.500 Hz
Sensitivity , IEC268-5, 1W/1m	90,0 dB
Sensitivity , rated noise power / 4m	85,0 dB
Sensitivity EN54-24, 1W/4m	78,0 dB
Sensitivity EN54-24, 1W/1m	90 dB
Sensitivity 1W/1m @ 1KHz	91 dB
Dispersion -6dB, 500Hz	h/v 180°
Dispersion -6dB, 1KHz	h/v 180°
Dispersion -6dB, 2KHz	h/v 150°
Dispersion -6dB, 4KHz	h/v 75°

TECHNICAL DATA (MECHANICAL)

Dimensions	180x99 mm
IP Rating	IP21
Weight (net)	0,78 kg
Ceiling Cut-out	161 - 167 mm
Temperature range	-10 / +55 °C
Mounting	Quick fit mounting
Connector	WAGO 221 connector
Maximum cable cross section	4mm ²
Max. cable cross section loop	4mm ²
Colour	RAL 9016

All rights reserved.

Information contained in this document is believed to be accurate, however no representation or warranty is given and pAudio Technologies assumes no liability with respect to the accuracy of such information.

CLS-20W-AL

20 Watts Column Loudspeaker

APPLICATION

- Public Address and Voice Alarm
- Outdoor application
- Background Music

AREA OF USE

- Health • Education • Retail • Hospitality
- Stadiums • Transportation • Theme parks • Military



EN 54 24

- Aluminium housing
- Weather-proof
- BS 5839

OVERVIEW

The 20W powered speaker is equipped with four 77mm full-range loudspeaker chassis and a 100V transformer with 4 power adjustments. The powder coated and shock-resistant aluminium housing in RAL 9006 guarantees long-term stability. For additional reliability, a 2 pin-ceramic block, a thermal fuse is provided and the speaker chassis is impregnated against wetness. Furthermore sturdy cable glands 2 x PG9 are also provided.

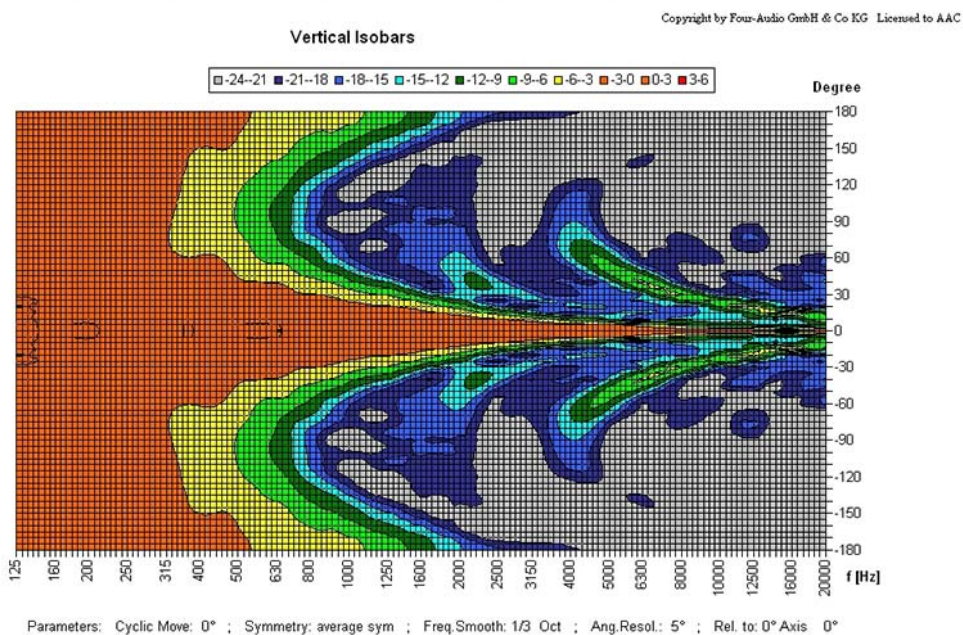
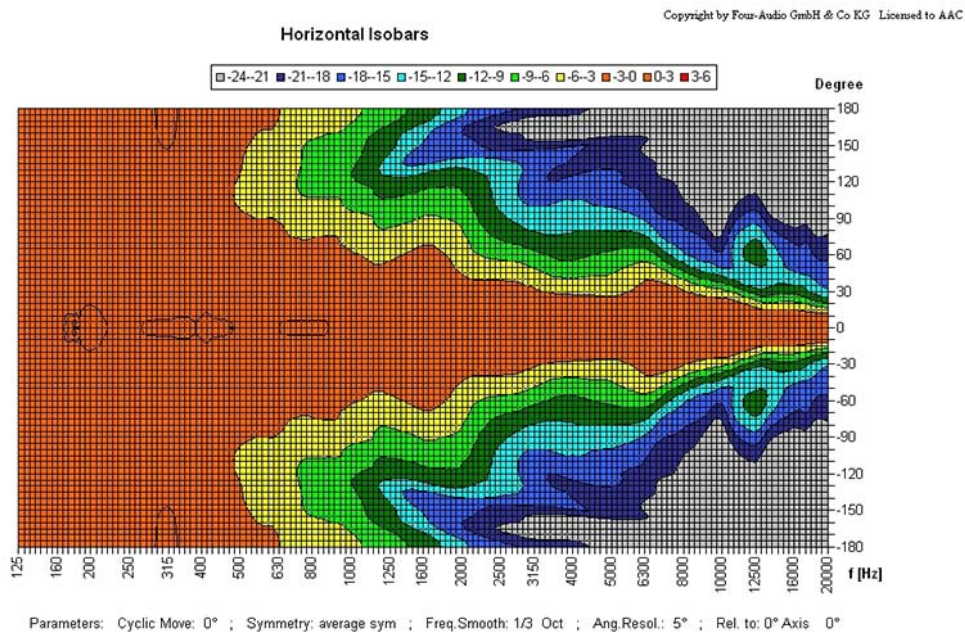
The speaker is also secured with the high protection class IP 66 against the security risks of environmental influences.

The speaker is compliant with the British Standard BS 5839, Part 8.

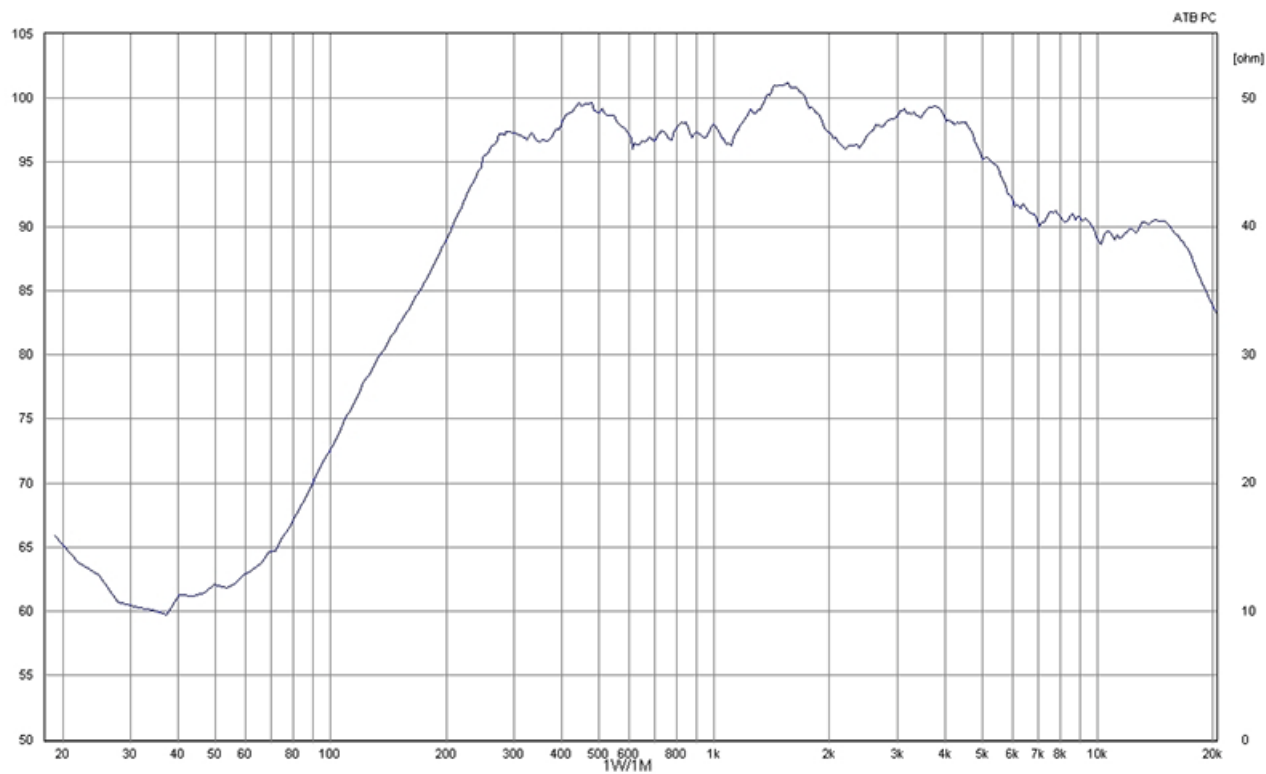
The easy mounting with the included swivel bracket provides much flexibility for the installation. Special paint of the speaker in 4-digit RAL- or NCS- colour available at extra cost.

The ball proof compliance of the sound column can only be guaranteed if a wall bracket is used. This can be ordered separately.

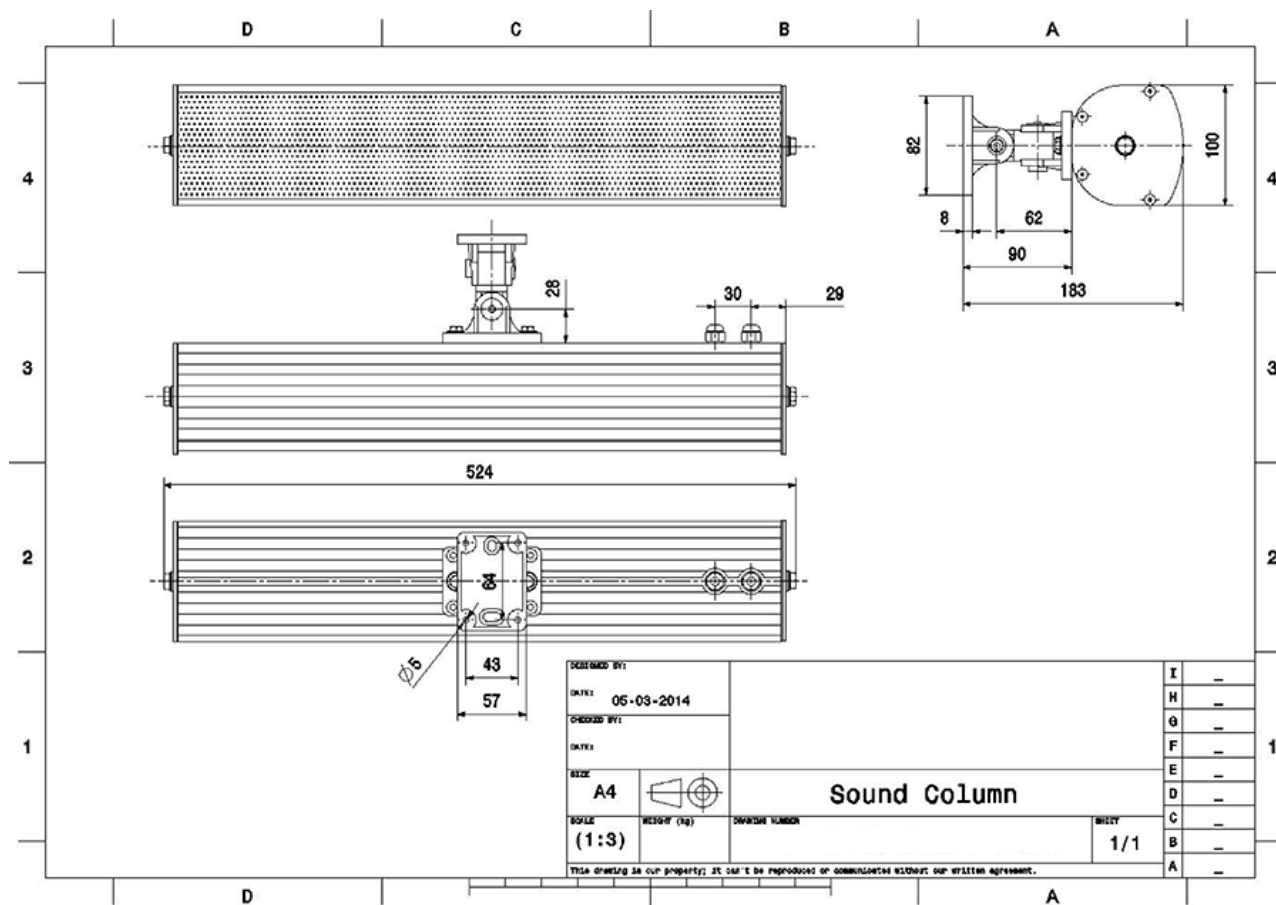
POLAR DIAGRAMS



FREQUENCY RESPONSE DIAGRAMS



TECHNICAL DIAGRAMS



TECHNICAL DATA (ELECTRICAL)

Description	CLS-20W-AL
Power	20/15/10/5 W
Impedance (100V)	500/667/1000/2000 ohm
Frequency Range	217 - 16.900 Hz
Frequency Response	147 - 23.500 Hz
Sensitivity , IEC268-5, 1W/1m	92 dB
Sensitivity SPL, rated noise power / 4m	94,0 dB
Sensitivity EN54-24, 1W/4m	80,5 dB
Sensitivity EN54-24, 1W/1m	92,5 dB
Sensitivity 1W/1m @ 1KHz	96 dB
Dispersion -6dB, 500Hz	h360° / v124°
Dispersion -6dB, 1KHz	h188° / v65°
Dispersion -6dB, 2KHz	h149° / v38°
Dispersion -6dB, 4KHz	h86° / v14°

TECHNICAL DATA (MECHANICAL)

Dimensions	510x100x92 mm
IP Rating	IP66
Weight (net)	2,90 kg
Temperature range	-25 / +70 C°
Mounting	Swivel bracket
Connector	2-pin ceramic block
Maximum cable cross section	8mm ²
Max. cable cross section loop	2x2mm ²
Colour	RAL 9006

All rights reserved.

Information contained in this document is believed to be accurate, however no representation or warranty is given and pAudio Technologies assumes no liability with respect to the accuracy of such information.