

Manual PVA 4307, PVA 4310, PVA 4316 Video conferencing loudspeaker



Video conferencing loudspeaker with RS 232/485 communication

The PVA 4307, PVA 4310, PVA 4316 loudspeaker is especially designed for video conferencing. The built in amplifier has a RS 232/485 communication feature which makes remote control and operation possible. This can be done in combination with other video conferencing equipment.



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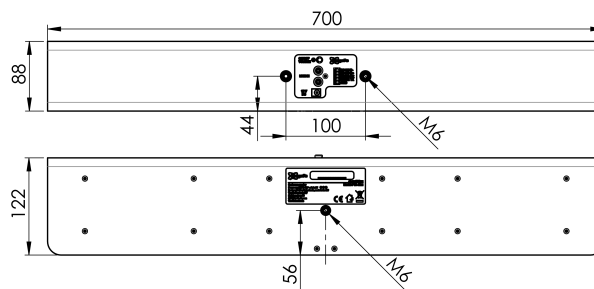
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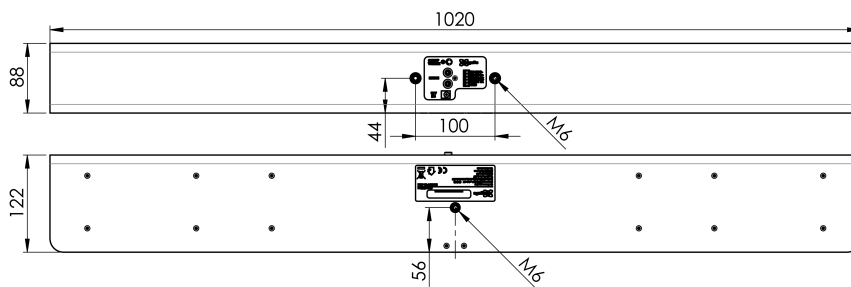
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Schematic drawings

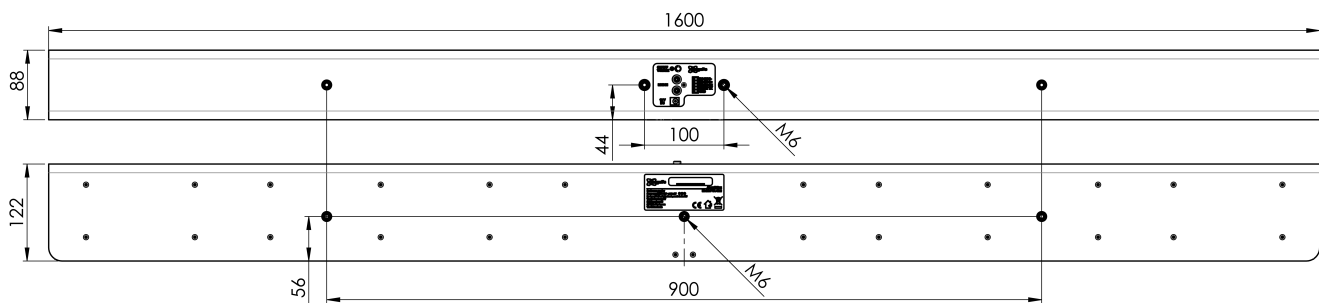
PVA 4307



PVA 4310



PVA 4316



Content of box

- 1x PVA 43xx loudspeaker
- 1x Operating manual
- 1x 12 V - 5 A power supply unit (for PVA 4307 and PVA 4310)
- 1x 12 V - 7 A power supply unit (for PVA 4316)
- 1x Stereo audio cable (jack 3.5 - cinch)
- 4x Anti skid pads

Connecting the loudspeaker



- First connect the loudspeaker to the audio source with the supplied audio cable.
- Then connect the 12V plug from the power supply. Only use the supplied power supply.
- For RS 232/485 connection: see next page.

Note:

- The Loudspeaker will always start in standby mode and is ready to switch on when there is audio input.
- The small connector on the left of the Volume knob is only for service.
- To remove power from the speaker unplug the 12V plug from the speaker or unplug the power supply.

Manual operation:

- Turn on: push volume button until LED turns blue.
- Turn off: push and hold volume button until LED turns red.
- Volume up: turn volume knob right, clockwise.
- Volume down: turn volume knob left, counter clockwise.

Automatic operation:

- The amplifier will automatically switch on when there is audio input (higher than -60dB @ 1kHz). Then the volume knob LED will turn blue.
- The amplifier will automatically switch off when there is no audio input (lower than -60dB @ 1kHz) for 15 minutes. Then the volume knob LED will turn red. This is part of the power saving function.

PVA 43xx RS232/RS485 operation:

The PVA 43xx series Video Conferencing speakers are equipped with a RS232 / RS485 compatible port for remote control purposes.

Supported commands:

- BCS commands are used as much as possible, however for some functions there exist no BCS codes, for these functions dedicated commands are used.

Description	Command	Response	Protocol
Volume control (system must be turned on)	COVA^^^T	COVA^^^T	BCS
Volume status request (system must be turned on)	SOVAT	SOVAT(^^^)	BCS
Switch off	COVMT	COVMT	BCS
Switch on	COVUT	COVUT	BCS
Status request (system must be turned on)	SOST	SOST	B15

- ^^ Volume in dB (value -100 tot 0), where 0 is maximum volume and -100 is minimum volume.
- Commands are not case sensitive.
- Commands can be cancelled by sending an 'X' before the 'T' character, if the 'T' character has been sent before, the command will be executed.
- The implemented command set is compatible with the Vogel's PVA 43xx series conference speakers.
- If the PVA 43xx Conference Speaker does not recognize a command as valid, a '?' character is returned and the receive buffer is flushed.
- The volume control is controlled by both manual and remote commands, the last command determines the selected volume.

Status reply:

- The SOST command is replied by the PVA 43xx speaker with one of the following states:

Answer	Meaning
Ok	Everything working okay
E	Internal error
W	Internal warning (possibly overtemperature)
EW	Internal error and warning

RS232 / RS485 settings:

- The amplifier is operated by readable ascii commands.
- These commands can be sent and viewed by a terminal emulation program like PuTTY
 - o 9600 baud
 - o 8 bits
 - o No parity
 - o 1 stop bit
- The operation is based on the Basic Control Structure (BCS) Protocol of AMX/Crestron/Extron/Neets.

Hardware:

- The amplifier support both RS232 and RS485. When power is applied to the conference speaker, the speaker will scan both ports for activity. Once a valid character has been received the scanning is stopped and the conference speaker continuously listens to the activated port.
- Connection pinout:

Pin	RS232 operation	RS485 operation
RS485 D-	<i>Do not connect</i>	Data -
RS485 D+	<i>Do not connect</i>	Data +
RS232 RX	Receive data (input)	<i>Do not connect</i>
RS232 TX	Transmit data (output)	<i>Do not connect</i>
GND	Ground	Ground

- RS232: Cable: "FTDI USB-RS232-0.0" The contra-connector for the PVA 43xx speaker range is a 5 pole, 3.81mm pitch, pluggable terminal block. A Würth Elektronik 69136130005 connector is advised.
- To connect the PVA 43xx Conference Speaker directly to a PC, either for testing communication or for control, one of the following USB adaptor cables is advised:

Pin	RS232 operation
RS485 D-	<i>Do not connect</i>
RS485 D+	<i>Do not connect</i>
RS232 RX	Orange
RS232 TX	Yellow
GND	Black

RS232: Cable: "FTDI USB-RS485-WE"

Pin	RS485 operation
RS485 D-	Yellow
RS485 D+	Orange
RS232 RX	<i>Do not connect</i>
RS232 TX	<i>Do not connect</i>
GND	Ground

Specifications PVA 4307:

Type of amplifier: Class D
 Input: +4 dBu
 Output power: max SPL 89 dB(A) @ 1 m, 3 W rms, <1% THD, 1 kHz
 Frequency range: 40-20000 Hz
 Audio input: stereo cinch
 Operating voltage: 100-240 Volt, 50/60 Hz, 1.4A
 Output: 12V, 5 A, 60 W max
 Standby: > 0.5W
 Max. operating temperature: 35°C (95°F)
 Weight: 3.8 kg

Specifications PVA 4310:

Type of amplifier: Class D
 Input: +4 dBu
 Output power: max SPL 92 dB(A) @ 1 m, 6 W rms, <1% THD, 1 kHz
 Frequency range: 40-20000 Hz
 Audio input: stereo cinch
 Operating voltage: 100-240 Volt, 50/60 Hz, 1.4A
 Output: 12 V, 5 A, 60 W max
 Standby: >0,5W
 Max. operating temperature: 35°C (95°F)
 Weight: 4.8 kg

Specifications PVA 4316:

Type of amplifier: Class D
 Input: +4 dBu
 Output power: max SPL 92 dB(A) @ 1 m, 6 W rms, <1% THD, 1 kHz
 Frequency range: 40-20000 Hz
 Audio input: stereo cinch
 Operating voltage: 100-240 Volt, 50/60 Hz, 1.3A
 Output: 12V, 7A, 80 W max
 Standby: > 0.5W
 Max. operating temperature: 35°C (95°F)
 Weight: 8 kg

