TOA

VOICE ALARM SYSTEM
VX-3000

EN 54

Safety and superior sound quality

We are experts in combining safety and sound. From professional sound reproduction to complex site supervision, TOA voice alarm systems offer built-in versatility and reliability. Our systems are extremely flexible, easy to expand and, in addition to their permanent monitoring function, also offer outstanding audio quality.

In order to achieve maximum safety, it is not only necessary to configure systems optimally, but also to consider complementary topics such as acoustics or security concepts. Whether in our training center in Hamburg or in your rooms we offer a successful combination of knowledge and practice in voice evacuation and acoustics. We regularly hold seminars and workshops for the entire spectrum of sound technology.

But not enough – our services for you also include:

- Provision of technical documentation (drawings, manuals, specifications, etc.)
- Planning support
- Acoustic simulation and consulting
- Project-related product configuration
- Support during installation and commissioning
- Repairs and technical customer service

Combined highly integrated voice alarm, public address and BGM system.

Safety is an important issue more than ever.

Our VX-3000 is a reliable and energy-saving voice alarm system certified on the European Standard EN54-16. It combines a lot of functions for PA/VA/BGM applicatons in one single unit frame. The reduction in the number of components required allows for a non-complex design and a much quicker and easier installation together with space saving and a reduction in cable runs and complexity. This enables rapid system configuration and makes the VX-3000 a cost-effective system.

It includes low loss modular class D amplifiers with 3 different output ratings. These can easily be removed or mounted simply by unplugging them so there is no need for special tools. By using low loss modular class D amplifiers and modern power supply switching technology, the system becomes much more energy efficient and enables low operating costs.

Due to its flexible and scalable system architecture, the VX-3000 system can be used for both small and large applications, with up to 1280 remote microphones, 640 audio sources and 2560 speaker lines. The system can be installed centralised as well as de-centralised, latter can reduce the cabling cost drastically. Different Ethernet switches provide a redundant network and a maximum distance between parts of the VA system of 30 km.

The automatic emergency announcements (pre-recorded messages) can be arranged in three phases, for example broadcasting a coded message first, then a warning and at the end an evacuation message. A simultaneous broadcast of warning and evacuation messages is also possible and can be initiated by a single activation. Since version 5 the system allows the setting of a sequential evacuation which is required sometimes in a big building complex.

Maximum System Capacity	
Output Power	320,000W
Speaker Zones	2560
Remote Mics	1280

The two remote microphone models can be set for normal, emergency and both modes with a different setting for the talk button (implemented zone selection or not, PPT or lock mode). In emergency mode, emergency messages can manually be assigned to broadcast areas. Built-in chimes or individually recorded chimes or tones can be set before and after paging, and different tones for normal and emergency broadcasts.

The input and output channels provide comprehensive DSP settings, please refer to the frame descriptions.

Different access levels (since version 5) restrict the access to the setting software according to the operator's education level. So the advanced user level allows the end user the setting of the built-in timer (since version 5) and changing audio files for general broadcasts, such as pause chimes in schools and factories, or general or advertisement announcements in shopping areas.

Also, the VX-3000 system passed the test on EN 50121-4 successfully. This standard covers the high EMC requirements for installations in railway stations. Please contact TOA Electronics Europe for further information.

AT A GLANCE

- Compact: All functions, all inputs and outputs in one unit
- Cost effective: Easy system configuration due to a small number of system components
- Flexible: Broadcast of many different audio signals to multiple zones simultaneously, flexible speaker driving from 1 zone per amplifier to up to 64 zones per amplifier
- Scalable: Up to 1280 remote microphones
- Light-weight and energy saving: Modern power supply switching technology and power efficient digital amplifiers
- Integration: Connectable with TOA's other system; NX-300 Network Adapter and IP-3000 Series IP Public Address System
- Battery saving: Standby function for low power consumption during battery backup reduces the required battery capacity
- Centralised and de-centralised installation
- If used decentralized: IP Network based
- Advanced ambient noise control (ANC)
- Reliable: Advanced failure detection and indication
- Comprehensive DSP functions for inputs and outputs
- Remote control: Remote protocol enables VX-3000 to be controlled by external devices. Furthermore VX-3000 complies with Modbus protocol
- Timer setting by end-user due to limited user level
- Optional simple setting mode for quick setting
- Automatic Feedback Suppressor

APPLICATIONS

- Office buildings
- Airports
- Hotels
- Factories
- Universities and Schools
- Hospitals
- Shopping centres
- Conference centres
- Exhibition halls
- Railway Stations
- Prisons
- Power Stations

EN 50 121-4

TOA's VX-3000 Series, IP-3000 Series and NX-300 got certified with EN 50121-4 (IEC62236-4), the electromagnetic standards which applies to a signaling and telecommunication apparatus installed in railway environment. Those systems can now be utilized in railway applications where EN 50121-4 is required.

EN 54-16

EN 54-16 specifies requirements, test procedures and performance characteristics for speech alarm control panels for use in fire detection systems installed in buildings where the alarm signal is transmitted in the form of tones and/or as a spoken message.

Certification No: 1134-CPR-195

Certification according to EN 54

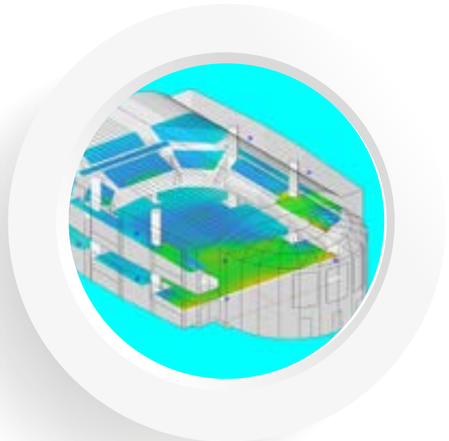
Fire Evacuation strategies can be improved with the integration of fire alarm system (FAS) and voice alarm system (VAS). The combination of FAS and VAS for alerting and evacuation enables targeted instructions in the event of fire – the resulting reduction in response time can be decisive in an emergency.
In this sensitive area, the legislator sets requirements by which the greatest possible safety is to be achieved. It thus starts at the planning stage and has also comprehensively regulated project planning, installation, maintenance and operation. An essential part of these requirements concerns the technical components of the FAS and VAS. TS 54-32 for example, stipulates that a voice alarm system must be planned and installed with certified products that comply with EN54 regulations. (EN54-4 power supplies, EN54-16 central technology, EN54-24 loudspeakers)

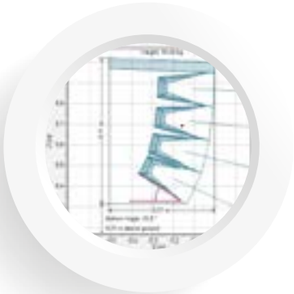
WHY EN 54 CERTIFICATION?

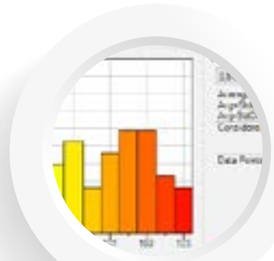
By choosing certified products, you are actively opting for safety - both in the planning and commissioning of your VAS and in the day-to-day operation and in the event of an emergency.

WHAT DOES TOA OFFER?

With TOA you have the choice between different fully EN54-certified voice alarm systems, which are optimized according to your project and your application. TOA's VAS combine maximum safety with uncomplicated handling through fully automatic operation in emergencies. In cooperation with your specialist planner, we support you in the planning phase with room acoustic simulations – full modelling of difficult environments – and the specification of the end users requirements. Take us at our word.







EXTREME FLEXIBILITY

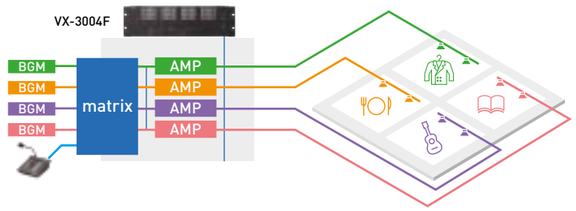
The underlying frames of the system are selectable according to the required broadcast pattern.

REQUIREMENTS

- The floor is divided into four zones.
- Individual background music for each zone
- Local broadcast (from local sources such as micro-phones in meeting rooms)
- Individual equalization per zone

VX-3004F Frame

- Up to 4 modular amplifiers mountable
- Multi-route architecture
- Each zone has an exclusive amplifier
- One of mounted amplifiers can serve as a standby amplifier

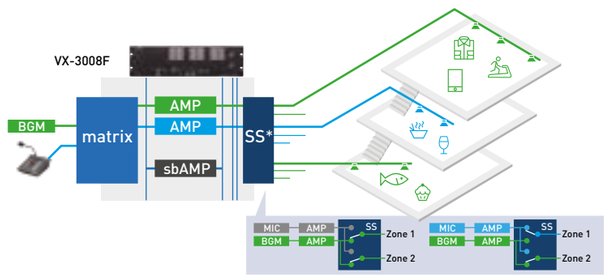


REQUIREMENTS

- The floor is composed of multiple zones.
- Common background music is delivered to all zones
- Announcement is sent to selected zone(s) without disrupting the background music in the other zones.

VX-3008F Frame

- Up to 3 modular amplifiers mountable, one as standby amplifier
- 2 bus lines and 8 swithed zones
- 2 amplifiers cover multiple zones
- Zone expansion by up to 3 additional frames without amplifiers



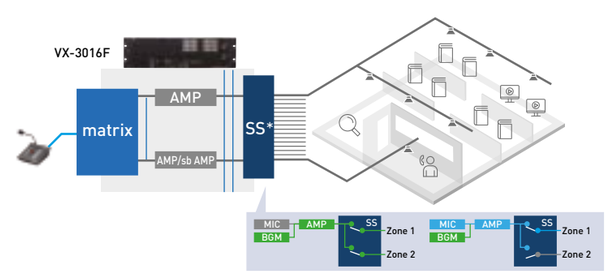
*SS stands for speaker selector

REQUIREMENTS

- The floor is divided into multiple small zones
- Background music disruption accepted
- Announcement is sent to selected zone(s)

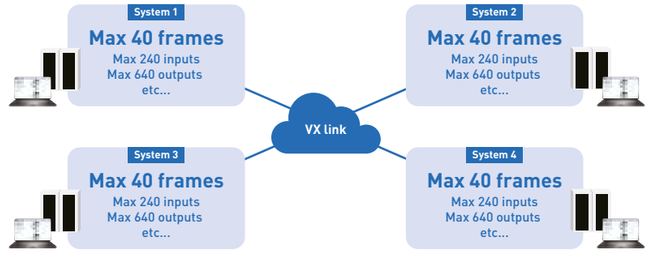
VX-3016F Frame

- Up to 2 modular amplifiers mountable for zones or one as standby amp, 16 switched zones
- Broadcasting to multiple zones with only one amplifier is possible
- Zone expansion by up to 3 additional frames without amplifiers



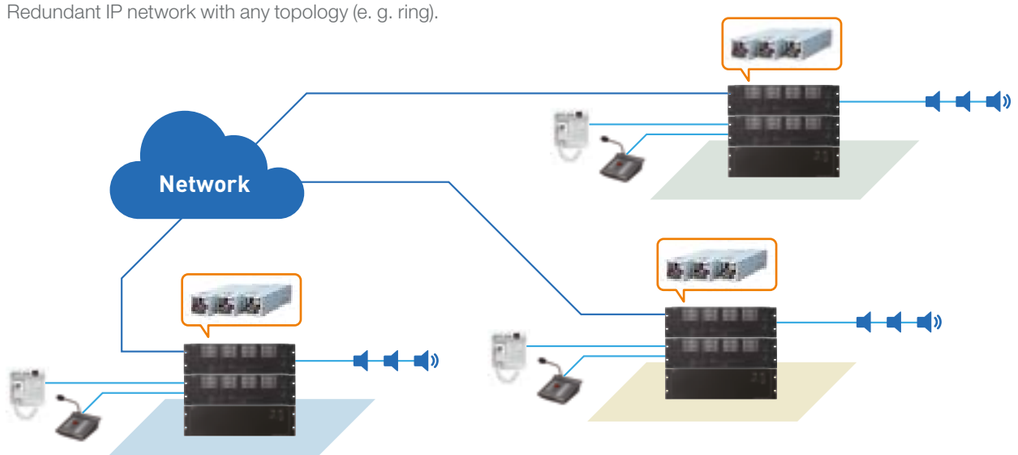
SCALABILITY

One system can be configured with max 40 frames, one of which serves as a master frame. Up to 4 systems can be integrated via VX link, allowing to configure one large–scale system with maximum 640 audio inputs, 1,280 remote microphones and maximum 2,560 zones.



DECENTRALIZED

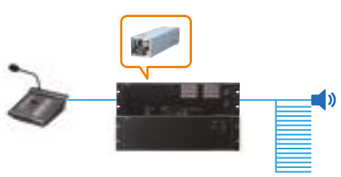
Redundant IP network with any topology (e. g. ring).



COST EFFECTIVE / SPACE SAVING

All important functions for PA/VA are incorporated in a single unit frame.

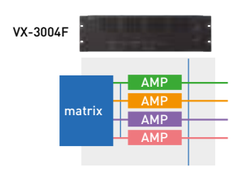
MINIMUM COMPONENTS



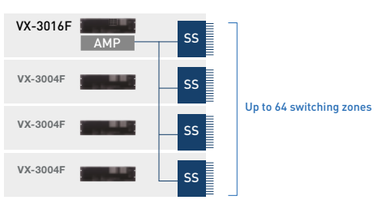
SYSTEM EXPANDABILITY

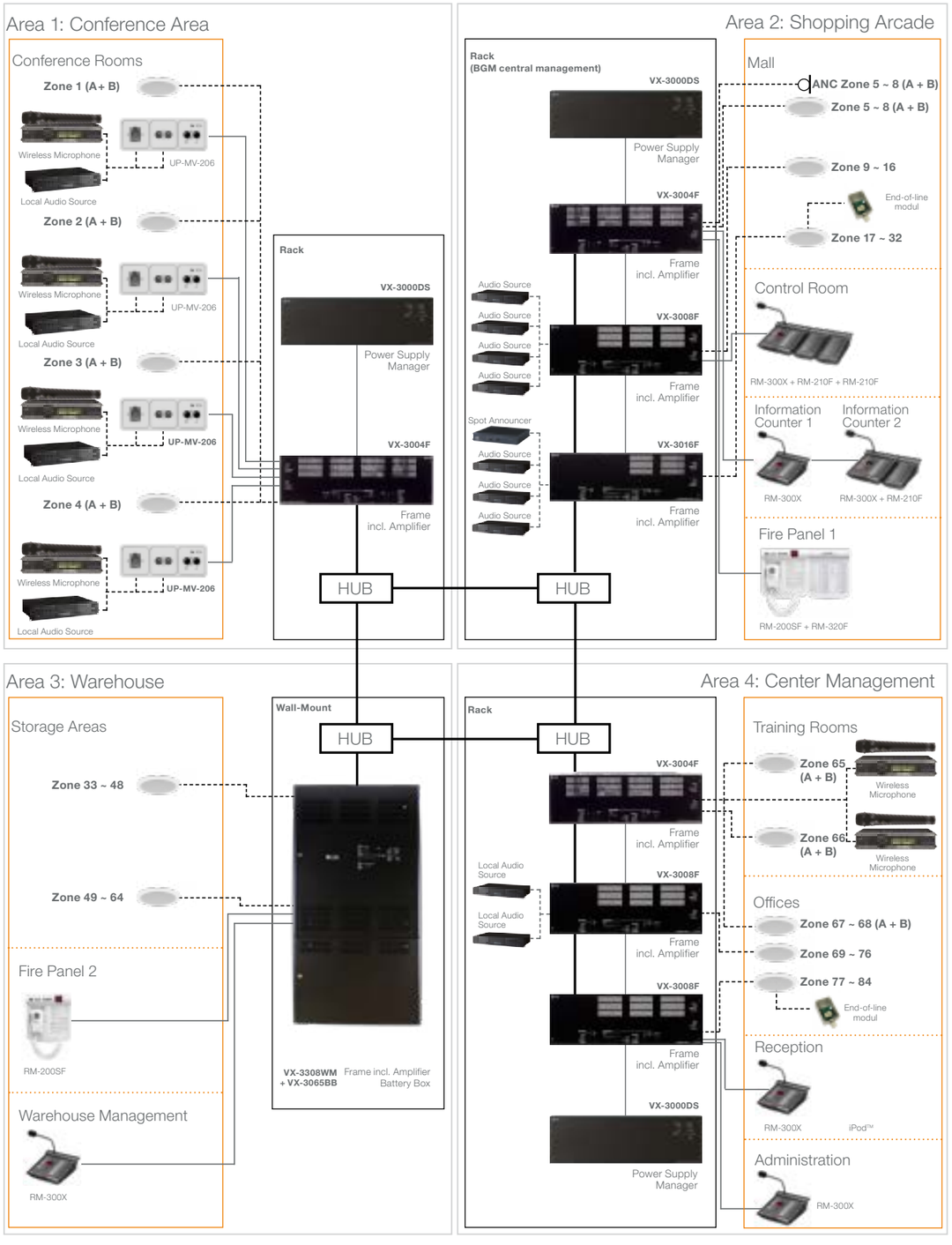
Flexible speaker driving from 1 zone per amplifier up to 64 zones per amplifier

1 zone per amplifier



Speaker selector expansion





REMOTE MICROPHONE

RM-200SF

RM-320F

RM-300X

RM-210F

AMPLIFIER

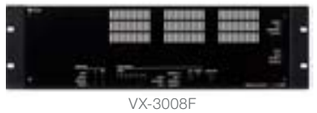
VX-015DA / VX-030DA / VX-050DA

POWER SUPPLY

VX-3000DS / VX-3150DS

FRAMES

VX-3004F



VX-3008F

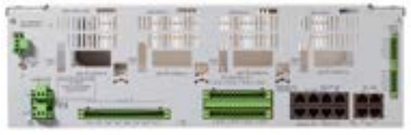
VX-3016F

WALL-MOUNT DEVICE WITH FRAME + POWER SUPPLY

VX-3308WM + VX-3065BB

VX-3000 Series / Frame / **VX-3004F / VX-3008F / VX-3016F**

VX-3004F



VX-3004F

VX-3008F

VX-3016F

EN 54-16

Features

- VX-3004F: up to 4 amps (1 zone - 1 amp, 4 AB-zones or 3 AB zones + standby amp)
- VX-3008F: up to 3 amps (8 zones switching between 2 amps + standby amp or 8 zones freely assignable to 1 or 2 amps)
- VX-3016F: up to 2 amps (16 switched zones + standby amp or 2 x 8 switched zones)
- All mandatory indications and controls by EN54-16
- Status indication for each speaker line
- Input DSP: different filter types, compressor, feedback suppressor, voice controlled broadcast
- Output DSP: different filter types, compressor and delay up to 2.7 sec.
- Ambient noise control (ANC)

Options

- Q-SX-200EL: End-of-line module (VX-3004F)
- VM-300SV: End-of-line module (VX-3008F / VX-3016F)
- VX-300SM-EB: End-of-line controller (VX-3008F / VX-3016F)
- VX-300SV-EB: End-of-line module (VX-3008F / VX-3016F)

Specifications

	VX-3004F	**VX-3008F**	**VX-3016F**
Power Source	31VDC (operating range: 20 – 40VDC)		
Speaker Output	4 AB Zones	8	16
Power Amplifier	4	3	2
Audio Input	4 (Line: -20dBV / Mic: -60dBV, phantom power selectable)		
Remote Microphone Link	2 (max. 8 RM)		
LAN	2		
Control Input	16 + 2 (voltage-controlled)		
Control Output	8 + 3 (CPU OFF)		
Relay Control Output	8	8	16
Finish	Panel: Surface treated steel plate, black, 30% gloss, paint		
Dimensions (W x H x D)	482 x 132.6 x 345mm (19", 3U)		
Weight	7.6kg	7.9kg	

VX-3000 System Amplifier + Switches / **VX-015DA/VX-030DA/VX-050DA/IES-2000/IES-3000**

VX-015DA VX-030DA VX-050DA

EN 54-16

Features VX-015DA / VX-030DA / VX-050DA

- Low loss modular class D amplifiers
- Modules to be mounted into the frame units
- Three different power levels: 150W, 300W or 500W
- Can easily be mounted or removed
- Dust filter, easy to clean
- 100/70/50V Output without transformer resulting in light-weight units
- Fuse easily accessible from rear

IES-2000 Series / IES-3000 Series

- Managed Ethernet Switches
- Several redundancy modes: STP, RSTP, ring
- Mounting on DIN rail

Specifications

	VX-015DA	**VX-030DA**	**VX-050DA**
Power Source	31VDC (operating range: 20 – 40VDC)		
Amplification System	Class D		
Rated Output Power	150W (100V)	300W (100V)	500W (100V)
Supported Output Voltages	50V / 70V / 100V		
Frequency Response	40Hz – 16kHz ± 3dB		
Distortion	1% or less (at 100V line, A-weighted)		
Finish	Surface-treated steel plate		
Dimensions (W x H x D)	79 x 91 x 358.2mm		
Weight	1.4kg		

	IES-2042FX-MM-SC	**IES-2042FX-SS-SC**	**IES-2060**
Supply Voltage	12 – 48VDC		
Power Consumption (typ.)	7W		5W
Network Ports	4 x RJ45, 2 x SC		6 x RJ45
Fiber optical cable type	Multi-mode; 62.5/125 µm 50/125 µm	Single-mode 9/125 µm	-
Max. Cable Lengh	RJ45: 100m, SC: 2km	RJ45: 100m, SC: 30km	RJ45: 100m
Fault Output	Relay, 24 VDC, 1 A		
Dimensions (W x H x D)	54.2 x 154.4 x 106.1mm		
Weight	0.67kg		0.66kg

	IES-3080	**IES-3062GT**	**IES-3062FX-MM-SC**	**IES-3062GF-MM-SC**	**IES-3062FX-SS-SC**	**IES-3062GF-SS-SC**
Supply Voltage	12 – 45VDC, 2 redundant inputs, removable screw terminal					
Power Consumption (typ.)	5W	8W	9W	7W	9W	7W
Network Ports	8 x RJ45, 10/100TX	6 x RJ45, 10/100TX, 2 x RJ45 1000 Base-T	6 x RJ45, 10/100TX, 2 x SC, 100FX	6 x RJ45, 10/100TX, 2 x SC, 1000SX	6 x RJ45, 10/100TX 2 x SC, 100FX	6 x RJ45, 10/100TX 2 x SC, 1000LX
Fiber optical cable type	-		Multi-mode (850nm, 50/125µm to 62.5/125 µm)		Single-mode (1310nm (9/125 µm))	
Max. Cable Lengh	RJ45: 100m		RJ45: 100m, SC: 2km	RJ45: 100m, SC: 550m	RJ45: 100m, SC: 30km	RJ45: 100m, SC: 10km
Fault Output	NO contact, 24 VDC, 1 A, removable screw terminal					
Dimensions (W x H x D)	56 x 144.3 x 106.1mm					
Weight	0.71kg	0.722kg	0.735kg	0.74kg	0.735kg	0.74kg

VX-3000 Series/Power Supply/**VX-3000DS/VX-3150DS-EB**

VX-3000DS

EN 54-4

Features VX-3000DS/VX-3150DS-EB

- DC power supply to all system components
- VX-3000DS: Combination of two built-in power supply units with a high-performance charger
- Automatical switch to auxiliary battery power if the AC power supply is down
- VX-3000DS/VX-3150DS: EN54-4 certified, Certificate No: 1134-CPR-137

Specifications

	VX-3000DS	**VX-3150DS-EB**
Power Source	220 – 230 V AC, 50 / 60 Hz	
Power Consumption	2800 W max. in total (at rated output with charging), 350 W max. each (EN 60065)	Approx. 1460 W max. in total (at rated output with charging), 460 W max. each (EN 60065)
DC Power Output (AC mode)	Rated output: 2300 W (31 V, 72.5 A, total DC power output), Peak output: 2780 W (29 V, 96 A, total DC power output)	Rated output: 1140 W (31 V, 36.2 A, total DC power output), Peak output: 1280 W (29 V, 48 A, total DC power output)
DC Power Output	8 x 31 V (19 – 33 V) 25 A max. each, M4 screw terminal, distance between barriers: 11 mm 3 x 31 V (19 – 33 V) 5 A max. each, removable terminal block (3 x 2 pins) 1 x 24 V (16 – 25 V) 0.3 A max., removable terminal block (1 x 2 pins)	
Charging Method	Temperature compensated trickle charging	
Charging Output Voltage	27.3 V ±0.3 V (at 25˚C), Temperature correction coefficient: -40 mV/˚C	
Battery Connection	One each positive and negative terminal, applicable cable diameter: AWG 6 – AWG 0 (AWG 1/0) (16 mm^2 – 50 mm^2) Line resistance within 4 mΩ / total	
Control Connector DS LINK IN/OUT	RJ45 female connector for connecting the system and cascade connection Shielded Twisted-pair straight cable (TIA/EIA-568A standard) Type of control signal: Battery check, AC power status, DC power status, charging circuit failure, battery failure, and communication	
Panel Indicator	AC power IN 1, IN 2 (Green), Charging (Green), Battery power (Green), Battery connect (Green), Battery condition (Green)	AC power IN 1, Charging (Green), Battery power (Green), Battery connect (Green), Battery condition (Green)
Finish	Panel: Surface-treated steel plate, black, 30 % gloss, paint	
Dimensions (W x H x D)	482 x 132.6 x 400.5 mm (19", 3U)	
Weight	11.8 kg	9 kg

VX-3000 Series/Wall-Mountable VA device/**VX-3308WM**

EN 54-16 EN 54-4

Features

- Compact: All functions, all inputs and outputs in one unit
- Cost effective: All components supplied connected, only external components need to be connected
- Flexible: Broadcast of many different audio signals simultaneously, flexible zone assignment to amplifiers and overlap assignment
- Light-weight: Modern supply switching technology and digital amplifiers
- Scalable: up to 1280 remote microphones
- Energy saving: Standby function for low power consumption during battery backup reduces the required battery capacity
- Decentralized: IP Network based
- Advanced ambient noise control (ANC)
- In emergency mode, emergency message broadcast is not affected on the other components when a component fails

Applications

- Sports and fitness centres
- Auditoriums
- Houses of Worship
- Community centers
- Retail centres
- Zoos
- Exhibition halls
- Train stations

Options

- VX-3065BB: Battery box
- VX-300SM-EB: End-of-line controller
- VX-300SV-EB: End-of-line module
- VM-300SV: End-of-line module
- IES 2000/3000 series

Specifications

	VX-3308WM
Power source	220 - 230 V AC, 50 / 60 Hz (AC mains)
Frequency response	40 Hz - 20 kHz (±1 dB)
Power consumption	1100 watts (at rated output incl. charging), 460 watts (EN 60065)
S/N ratio	60 dB (A) (or more, at DA control link)
Control input	16 (contact), 2 (voltage controlled), all with surveillance
Control output	8 (open collector, no-voltage make contact, control current max. 10 mA, withstand voltage 28 V DC, on RJ45 jack). 8 (no-voltage make contact, relay contact (NC, NO, C), control current: 2 mA to 5 A, withstand voltage: 125 V AC, 40 V DC, Connector: removable terminal block (12 pins)
Dimensions (W x H x D)	550 x 700 x 200 mm
Weight	33.1kg

VX-3000 Series/Emergency Remote Microphone/**RM-200SF/RM-320F**

RM-200SF

RM-320F

EN 54-16

Features

- For general and emergency broadcast
- Zone selection or all call
- PC-programmable system software permits desired functions to be assigned to individual function keys (equipped with 2 LED indicators)
- CPU-switch for emergency broadcast to all zones in case of a CPU error
- Up to 4 Key Extension Units per Emergency Remote Microphone
- For mounting on wall

Options

- RM-320F: Key Extension Unit

Specifications

	RM-200SF	**RM-320F**
Power Source	24VDC (operating range: 15 – 40VDC), supplied from the audio input unit or DC input power supply connector	From RM-200SF
Distortion	Under 1%	-
Frequency Response	200Hz – 15kHz	-
Signal-to-Noise Ratio	Over 55dB	-
Audio Output	0dBV, 600Ω, balanced	-
Microphone	Unidirectional dynamic microphone AGC	-
Volume Control	Microphone, speaker	-
Key Extension	Max. 4 RM-320F	20 keys, freely assignable
Maximum Cable Length	1200 m	-
Finish	ABS resin, bluish gray (PANTONE 538 or its equivalent)	
Dimensions (W x H x D)	200 x 215 x 95mm	175 x 215 x 70mm
Weight	1.48kg	700g

VX-3000 Series/Remote Microphone/**RM-300X/RM-210F**

RM-300X

RM-210F

EN 54-16

Features

- For both emergency and general broadcast
- Zone selection or all call
- PC-programmable system software permits desired functions to be assigned to individual function keys (equipped with 2 LED indicators)
- Input for BGM source or external microphone
- For desktop or wall-mount use
- RM-210F: Key Extension Unit with 10 additional keys (up to 7 units can be used with each RM-300X Remote Microphone)

Options

- AD-246: Power Supply Unit
- WB-RM200: Wall Mounting Bracket

Specifications

	RM-300X	**RM-210F**
Power Source	24VDC (operating range: 15 – 40VDC), supplied from the audio input unit or DC input power supply connector (when the optional AD-246 Power Supply Unit used)	From Remote Microphone
Audio Output	0dBV, 600Ω, balanced	-
External Microphone Input	-40dB, 2.2kΩ, unbalanced, mini jack, phantom powering	-
Frequency Response	100Hz – 20kHz	-
Distortion	Under 1%	-
Signal-to-Noise Ratio	Over 60dB	-
Volume Control	Microphone volume control, Monitor speaker volume control	-
Key Extension	Max. 7 RM-210F	10 keys, freely assignable
Maximum Cable Length	800m	-
Finish	ABS resin, black	
Dimensions (W x H x D)	190 x 76.5 x 215mm (gooseneck microphone excluded)	110 x 76.5 x 215mm
Weight	850g	350g

VX-3000 Series / Audio Network Adapter / **NX-300W**

NX-300W

EN 54-16

NX-300W* features

- Audio network adapter for transmitting audio and control signals via LAN
- Dual-channel capable of bi-directional (full-duplex) dual mono signals
- Up to 500 NX-300s can be connected to each other via LAN
- Up to 1,000 links can be established
- 1 input audio signal can be streamed to max. 16 NX-300W (unicast) or max. 64 NX-300W (multicast) simultaneously

Specifications when used with the VX-3000 system

- Audio network adapter for transmitting audio signals from VX-3000 via LAN
- Dual-channel broadbast from VX-3000
- Up to 8 NX-300 can be connected to the VX-3000 system

Options

For installation in cabinet racks:

- MB-15B-BK: Half Width Blank Panel (installation of one unit)
- MB-15B-J: Rack Joint Bracket (installation of two units)

* Please note that some of these functions are not available or may vary when integrated into the VX-3000 system.

Specifications

	NX-300W
Applicable Model	VX-3000 system
Supply Voltage	24VDC
Current Consumption	310mA
Audio Input	Balanced, sensitivity -58/0dBV selectable
Audio Output	Balanced, 0dBV, min. 600Ω
Control Inputs	8 (12VDC, 10mA)
Control Outputs	8 (open collector, 30VDC, 50mA), 2 Relais
Network Connection	RJ45, 10BASE-T/100BASE-TX, automatic
Finish	Steel plate, painted black
Dimensions (W x H x D)	210 x 44.7 x 188mm (1/2 19", 1U)
Weight	1.2kg

VX-3000 Series /3-Wire EOL-Surveillance/ **VX-300SM / VX-300SM**

VX-300SV

VX-300SM

IP65

Features

- Applicable with any speaker type
- Easy installation of monitor VX-300SM in cabinet rack on DIN rails
- Suitable for VX-3008F and VX-3016F
- EOL module in IP65 box
- Ceramic clamps
- Thermal fuse

Specifications

	VX-300SM
Power source	19 - 33 V DC
Current consumption	max. 100 mA
Operating Temperature	-5°C to + 45°C (23°F to 113°F)
Dimensions	133(W) x 72(H) x 20(D)mm (5.24'' x 2.83'' x 0.79'')
Application	With VX-3000 system
	VX-300SV
Speaker line input	Max. voltage 100 V RMS (applicable only for 100 V speaker lines)
Speaker line	Max. cable length: 500 m (546.81 yd.), max. load: 100W
Dimensions	137(W) x 79(H) x 57(D)mm (5.39'' x 3.11'' x 2.24'')
Protection	IP65
Application	With VX-3000 system

Extensive range of certified speakers for a large variety of applications.

In many buildings a voice evacuation system according to EN54 is mandatory. For this purpose, our certified speakers shall be used. All speakers marked with the icons below have passed comprehensive tests resulting in a certificate from an independent approved testing institution.

Our extensive range of certified speakers include:

- Ceiling Speakers
- Cabinet Speakers
- Horn Speakers
- Projection Speakers
- Design Speakers
- Compact Array Speakers
- Pendant Speakers
- Slim Line Array speakers

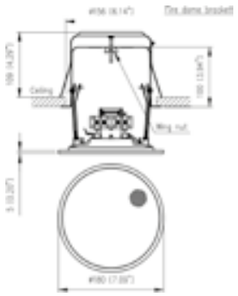
This icon indicates that the speaker is EN 54-24 certified and is therefore legalised for use in conjunction with fire detection systems.

This icon indicates that the speaker is fully compliant to the BS5839 part 8 code of practice.

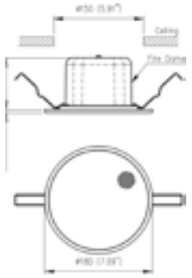
This icon indicates that the speaker complies by the Ingress Protection standard (IP) and the stated rating. These icons will help show how the speaker can perform within different types of weather conditions.

This icon indicates that ease data is available for this speaker.

The ProSound category of TOA refers to Hi-Fi products designed and manufactured by professionals for professionals. From the small clubhouse to the large show stage, there is high-quality, high-performance equipment for every application.



PC-1860BS / PC-1860BS-C



PC-1865BS

Common Features

- 6W rated input
- Flat front panel
- Quick and easy installation

PC-1860BS / PC-1860BS-C / PC-1865BS

- Ceramic screw terminal block and thermal fuse
- 12 cm speaker
- PC-1860BS-C with additional DC blocking capacitor
- Fire dome made of steel

Applications

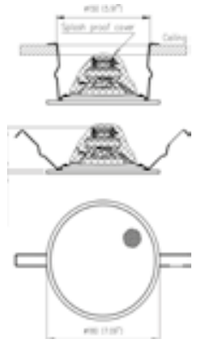
- Public buildings
- Supermarkets
- Office buildings
- Hotels
- Health clubs

Specifications

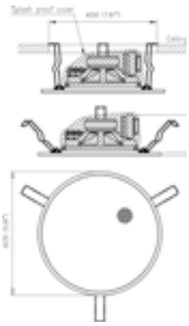
	PC-1860BS	PC-1860BS-C	PC-1865BS
Rated Input	6W (100V), 3W (70V)		
Tappings	6 / 3 / 1.5 / 0.8W (100V), 3 / 1.5 / 0.8 / 0.4W (70V)		
Sensitivity (1W, 1m)	95dB	94dB	95dB
Frequency Response	170Hz – 20kHz		200Hz – 20kHz
Mounting Hole Diameter	156mm ±3mm		150mm ±3mm
Speaker Component	5" cone-type		
Connection	2-Steatite connecor (3 pole)		2-Steatite connecor (2 pole); 1 screw connection for earth
Colour	Traffic white (RAL 9016 or equivalent colour)		
Dimensions (ø x D)	180 x 105mm	180 × 95,6mm	180 × 70mm
Weight	1.1kg	0.86kg	0.56kg

EN 54 Certified Ceiling Speakers/**PC-1860EN /PC-2360EN/PC-1860EN-FT/PC-2360EN-FT**

PC-1860EN / PC-1860EN-FT



PC-2360EN / PC-2360EN-FT



PC-1860EN / PC-2360EN

- 6W rated input
- Flat front panel
- Quick and easy installation
- Snap in cable terminal
- 12/16 cm speaker
- Dripping-water protection cover

PC-1860EN-FT* / PC-2360EN-FT*

- 6W rated input
- Flat front panel
- Quick and easy installation
- Steatit cable terminal
- Termal fuse

Applications

- Public buildings
- Supermarkets
- Office buildings
- Hotels
- Health clubs

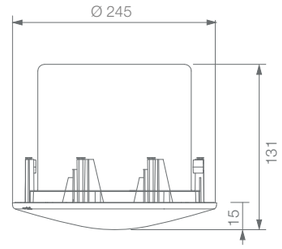
* Available as of Q2/2020

Specifications

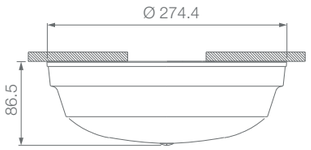
	PC-1860EN/PC-1860EN-FT*	PC-2360EN/PC-2360EN-FT*
Rated Input	6W (100V), 3W (70V)	
Tappings	6 / 3 / 1.5 / 0.8W (100V), 3 / 1.5 / 0.8 / 0.4W (70V)	
Sensitivity (1W, 1m)	94dB	
Frequency Response	80Hz – 20kHz	60Hz – 20kHz
Mounting Hole Diameter	150mm ±3mm	200mm ±3mm
Speaker Component	5" cone-type	6" cone-type
Connection	Push wire connection; PC-1860EN-FT / PC-2360EN-FT: Steatit terminal (Bridging terminal – 2 branch type)	
Colour	Traffic white (RAL 9016 or equivalent colour)	
Dimensions (ø x D)	180 x 70mm	230 × 76mm
Weight	0.56kg	0.74kg

EN 54 Certified AB Ceiling Speakers/**PC-245AB-EB/PC-275AB-EB**

PC-245AB-EB



PC-275AB-EB



PC-245AB-EB

- A/B wiring
- Firedome prevents the flames from reaching into the ceiling
- 2 separate 100V transformer and 2 x 6W speaker
- Easy installation

PC-275AB-EB

- A/B wiring
- Only 86mm depth
- 2 separate 100V transformer and 2 x 6W speaker
- Quick-mount

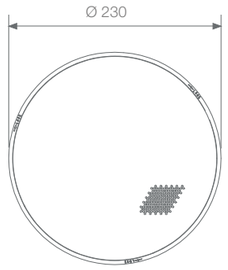
Applications

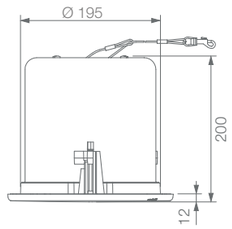
- Public buildings
- Traffic terminals
- Supermarkets
- Office buildings
- Hotels
- Health clubs

Specifications

	PC-245AB-EB	PC-275AB-EB
Rated Input	2 x 6W (100V)	
Tappings	6 / 3 / 1.5W (100V)	
Sensitivity (1W, 1m)	91dB	
Frequency Response	150 Hz – 20 kHz (-10 dB)	180 Hz – 20 kHz (-10 dB)
Mounting Hole Diameter	220mm	Depending on back box
Speaker Component	2x5"x 3" full range dual cone (A/B 2-lines)	2 x 6" full range, dual cone (A/B 2-lines)
Connection	2 ceramic push terminals, thermal fuse	
Colour	Off-white (RAL 9010 or equivalent colour)	
Dimensions (ø x D)	245 × 131mm	274.4 × 86.5mm
Weight	2.05kg	1.49kg

F-2322CEN





EN 54-24 | PRO Sound | EASE data | IP21C

F-2322CEN*

- 30W full range speaker
- Flat front panel
- High power
- Quick and easy installation
- Heat-resistant back can

Options

- HY-AH1: Anchor Hanging Bracket
- HY-BC1: Back Can
- HY-TB1: Tile Bar Bridge
- HY-TR1: Trim Ring

Applications

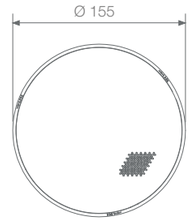
- For medium ceiling height (2 to 4 m)
- Corridors in shopping malls, hotels and office buildings

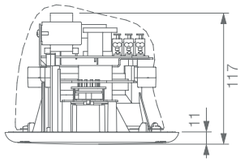
* Available as of Q2/2020

Specifications

	F-2322C
Rated Input	30W (100V)
Power Handling Capacity	Continuous pink noise: 60 W (8 Ω), 30 W (16 Ω), Continuous program: 120 W (8 Ω), 60 W (16 Ω)
Tappings	30 / 10 / 3 / 1W (100V), 30 / 15 / 5 / 1.5 / 0.5W (70V)
Sensitivity (1W, 1m)	90dB
Frequency Response	70Hz – 20kHz
Mounting Hole Diameter	200mm
Speaker Component	Low: 12cm cone-type, High: Balanced dome-type
Finish	Enclosure: Steel plate, plating / Baffle: Fire-resistant ABS resin, black / Rim: Fire-resistant ABS resin, white / Punched net: Steel plate, white, paint
Dimensions (ø x D)	230 x 200mm
Weight	3.7kg

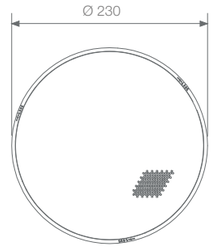
F-1522SCEN

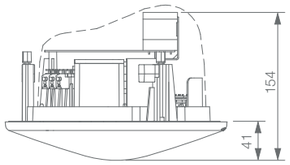




EN 54-24 | PRO Sound | EASE data | IP21C

F-2352SCEN





EN 54-24 | PRO Sound | EASE data | IP21C

F-1522SCEN*

- Cost-effective full range speaker
- Flat front panel
- 106 mm mounting depth
- Easy installation
- Input selector switch permits easy verification and change of current impedance settings, even after installation

F-2352SCEN*

- 2-way wide range speaker
- 113 mm mounting depth
- Easy installation
- Diffuser for wide dispersion of high frequencies

Applications

F-1522SC
- For medium ceiling height (2 to 4 m)
- Especially for low profile ceilings with limited depth and applications with low power requirement

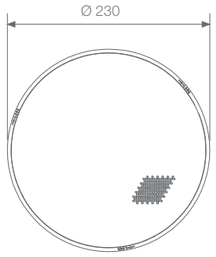
F-2352SC
- Low power applications and medium ceiling height (2 to 4m)
- Without back for low profile ceilings with minimal depth

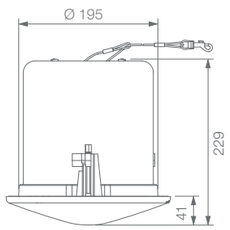
* Available as of Q2/2020

Specifications

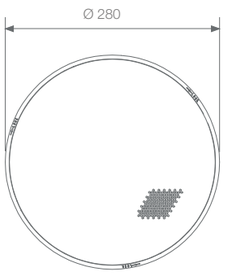
	F-1522SC	**F-2352SC**
Rated Input	6W (100V)	
Power Handling Capacity	Continuous pink noise: 9 W (8 Ω), 6 W (16 Ω), Continuous program: 18 W (8 Ω), 12 W (16 Ω)	
Tappings	6 / 3W (100V), 6 / 3 / 1.5W (70V)	6 / 3 / 1 / 0.5W (100V), 6 / 3 / 1.5 / 0.5 / 0.25W (70V), 16Ω, 8Ω
Sensitivity (1W, 1m)	88dB	89dB
Frequency Response	65Hz – 18kHz	80Hz – 20kHz
Mounting Hole Diameter	135mm	200mm
Speaker Component	10cm cone-type	Low: 12cm cone-type, High: Balanced dome-type
Finish	Baffle: Fire-resistant ABS resin, black / Rim: Fire-resistant ABS resin, white / Punched net: Steel plate, white, paint / Dust proof bag: Artificial fiber, black	
Dimensions (ø x D)	155 x 117mm	230 x 154mm
Weight	1kg	1.5kg

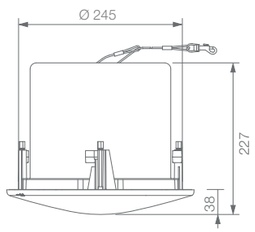
F-2352CEN





F-2852CEN





F-2352CEN*

- 2-way speaker
- High power
- Quick and easy installation
- Overload protection
- Heat-resistant back can
- Diffuser for wide dispersion of high frequencies

Options

- HY-AH1: Anchor Hanging Bracket, HY-BC1: Back Can, HY-TB1: Tile Bar Bridge, HY-TR1: Trim Ring

F-2852CEN*

- 2-way speaker
- High power
- Quick and easy installation
- Overload protection
- Heat-resistant back can
- Diffuser for wide dispersion of high frequencies

Options

- HY-AH1: Anchor Hanging Bracket, HY-TB1: Tile Bar Bridge

Applications

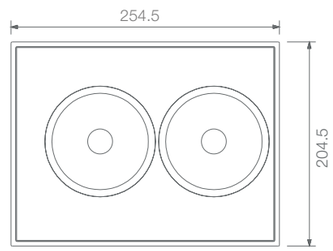
F-2352C
- For medium ceiling height (2 to 4 m)

F-2852C
- For high power (60 W) applications
- Locations with higher ceilings (3 to 6 m)
- Halls, corridors, stairways

* Available as of Q2/2020

Specifications

	F-2352C	**F-2852C**
Rated Input	30W (100V)	60W (100V)
Power Handling Capacity	Continuous pink noise: 60 W (8 Ω), 30 W (16 Ω), Continuous program: 120 W (8 Ω), 60 W (16 Ω)	Continuous pink noise: 90 W (8 Ω), 60 W (16 Ω), Continuous program: 180 W (8 Ω), 120 W (16 Ω)
Tappings	30 / 10 / 3 / 1W (100V), 30 / 15 / 5 / 1.5 / 0.5W (70V),16Ω, 8Ω	60 / 30 / 15 / 3W (100V), 60 / 30 / 15 / 7.5 / 1.5W (70V),16Ω, 8Ω
Sensitivity (1W, 1m)	90dB	91dB
Frequency Response	70Hz – 20kHz	60Hz – 20kHz
Mounting Hole Diameter	200mm	250mm
Speaker Component	Low: 12cm cone-type; High: Balanced dome-type	Low: 16cm cone-type, High: Dome-type
Finish	Enclosure: Steel plate, plating / Baffle: Fire-resistant ABS resin, black / Rim: Fire-resistant ABS resin, white / Punched net: Steel plate, white, paint	
Dimensions (ø x D)	230 x 229mm	280 x 227mm
Weight	3.7kg	5.1kg



BS-250AB-EB

- A/B wiring
- For indoor applications
- 2 separate 100V transformer and 2 x 6W speaker
- Wide temperature range of -10°C to +55°C
- Fire resistant according to UL 94-V0

Applications

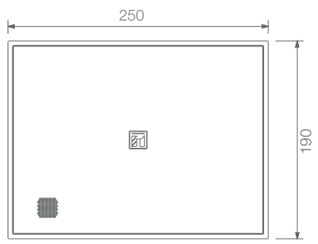
- Public buildings
- Traffic terminals
- Supermarkets
- Office buildings
- Hotels
- Health clubs

Specifications

	BS-250AB-EB
Rated Input	2 x 6W (100V Line)
Tappings	2 x 6 / 3 / 1.5W (100V), 2 x 3 / 1.5 / 0.8W (70V)
Sensitivity (1W, 1m)	92dB (both speakers driven)
Frequency Response	150Hz – 20kHz
Mounting Hole Diameter	220mm
Speaker Component	2 x 4“ full range dual cone (A/B 2-lines)
Connection	Ceramic screw terminals, thermal fuse
Colour	Off-white (RAL 9010 or equivalent colour)
Dimensions (W x H x D)	254.5 x 204.5 x 87.5mm
Weight	1.75kg

BS-678BSB

BS-678BSW



EN 54-24 BS IP21C EASE data

Features

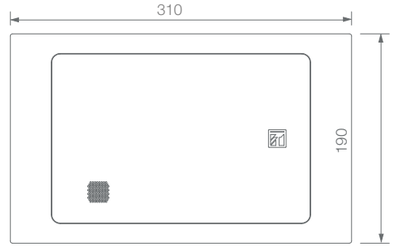
- Stylish, compact and unobtrusive design
- Quick and easy wall-mount installation
- Cost-effective
- Horizontal and vertical mounting
- Easy impedance selection
- Bridge wiring possible

Applications

- Universal use – especially if a future expansion of the system is expected

Specifications

	BS-678BSB	BS-678BSW
Rated Input	6W (100V)	
Tappings	6 / 3 / 1.5 / 0.8W (100V), 3 / 1.5 / 0.8 / 0.4W (70V)	
Sensitivity (1W, 1m)	94dB	
Frequency Response	150Hz – 18kHz	
Speaker Component	6" cone-type	
Connection	Ceramic screw terminals, thermal fuse	
Colour	Black (RAL 9011 or equivalent colour)	White (RAL 9010 or equivalent colour)
Dimensions (W x H x D)	250 × 190 × 110mm	
Weight	1.7kg	



EN 54-24 BS IP21C EASE data

Features

- Surface or flush-mounting
- High sound quality & sound pressure
- Bridge wiring possible
- Full metal housing

Applications

- Universal use – especially if a future expansion of the system is expected

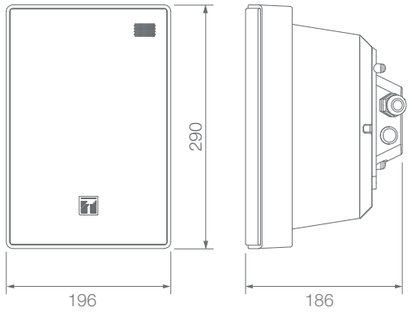
Specifications

	BS-680FC
Rated Input	6W (100V), 3W (70V)
Tappings	6 / 3 / 1.5 / 0.8W (100V), 3 / 1.5 / 0.8 / 0.4W (70V)
Sensitivity (1W, 1m)	94dB
Frequency Response	150Hz – 20kHz
Speaker Component	6" double cone-type
Connection	Ceramic screw terminals, thermal fuse
Colour	Off-white (RAL 9010 or equivalent colour)
Dimensions (W x H x D)	310 x 190 x 90mm
Weight	2.6kg

EN 54 Certified Speakers / Box Speakers / **BS-1015BSB / BS-1015BSW / BS-1034EN**

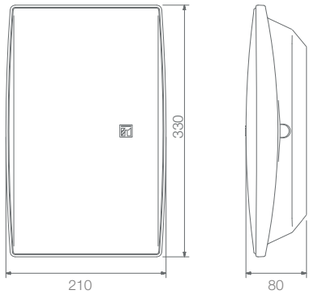
BS-1015BSB

BS-1015BSW



EN 54-24 | BS | IP21C | EASE data

BS-1034EN



EN 54-24 | IP21C | EASE data

BS-1015BSB / BS-1015BSW

- 2-way hi-fi speaker
- Easy and quick installation
- Fits architecturally sophisticated environments
- Options:
  SP-410: Wall/Ceiling Mounting Bracket, SP-420: Flush Mounting Frame, ST-16A: Speaker Stand

BS-1034EN

- Easy and quick installation
- Attractive design based on the Golden Ratio
- Input impedance selector with rotary switch
- Fire resistant according to UL 94-V0
- Fits architecturally sophisticated environments

Applications

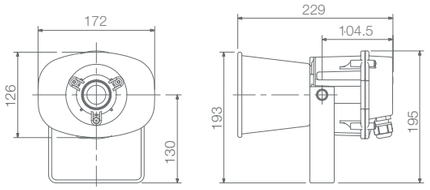
- Public buildings
- Traffic terminals
- Supermarkets
- Office buildings
- Hotels
- Health clubs

Specifications

	BS-1015BSB	**BS-1015BSW**	**BS-1034EN**
Rated Input	15W (100V), 7.5W (70V)		10W (100V), 10W (70V)
Tappings	15 / 10 / 5W (100V), 7.5 / 5 / 2.5W (70V)		10 / 5 / 3 / 1W (100V), 10 / 5 / 2.5 / 1.5 / 0.5W (70V)
Sensitivity (1W, 1m)	90dB		89dB
Frequency Response	80Hz – 20kHz		120Hz – 20kHz
Speaker Component	Low: 5" cone-type High balanced dome tweeter		
Connection	Ceramic screw terminals, thermal fuse		Wall mounting bracket with plug-and-socket connector
Colour	Black (RAL 9011 or equivalent colour)	White (RAL 9010 or equivalent colour)	
Dimensions (W x H x D)	196 × 290 × 186mm		210 × 330 × 80mm
Weight	2.4kg		1.4kg

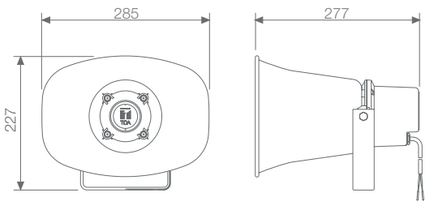
EN 54 Certified Speakers / Horn Speakers / **SC-615BS / SC-630M EB-Q**

SC-615BS



EN 54-24 | BS | IP32 | EASE data

SC-630M EB-Q



EN 54-24 | IP65 | EASE data

SC-615BS

- All weather durabilty
- Very rugged and durable construction ensures long term reliable operation
- Excellent speech clarity
- High SPL
- Wide frequency response
- Easy impedance selection

SC-630M EB-Q

- All weather durabilty
- Unique oval shape
- Excellent speech clarity
- High SPL

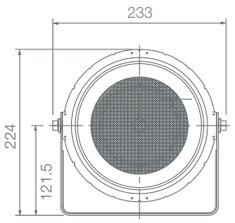
Applications

- Factory premises
- Ships
- Park houses
- Stations
- Stadiums
- Open air pools

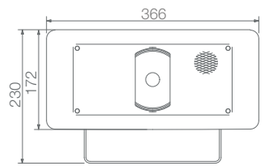
Specifications

	SC-615BS	**SC-630M EB-Q**
Rated Input	15W (100V)	30W (100V)
Tappings	15 / 10 / 5 / 3W (100V), 15 / 7.5 / 5 / 2.5 / 1.5W (70V)	30 / 15 / 10 / 5W (100V), 30 / 15 / 7.5 / 5 / 2.5W (70V)
Sensitivity (1W, 1m)	109dB	113dB
Frequency Response	315Hz – 12.5kHz	250Hz – 10kHz
Connection	Steatit screw terminal with thermal fuse	Cable with 2 wires
Colour	Horn flare: Aluminium, off-white, powder coating / Reflector horn: ABS resin, off-white / Bracket: Stainless steel	
Dimensions (W x H x D)	172 × 195 × 229mm	285 × 227 × 277mm
Weight	1.5kg	2kg

CS-64BS



CS-154BS



CS-64BS

- Round projection speaker for outdoor use
- Lightweight and rugged construction
- Exponential horn for improved directivity
- High SPL
- Complete with stainless steel bracket

CS-154BS

- Square weatherproof speaker for outdoor use
- High SPL
- Combined exponentiel and CD-horn
- Impact-proof light weight
- Complete with stainless steel bracket

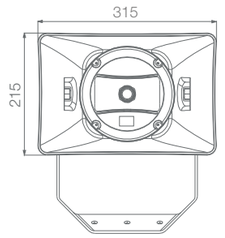
Applications

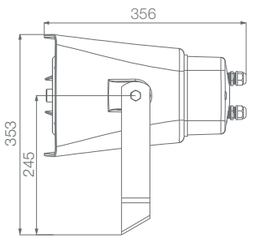
- Plants
- Park houses
- Stations
- Stadiums
- Outdoor areas

Specifications

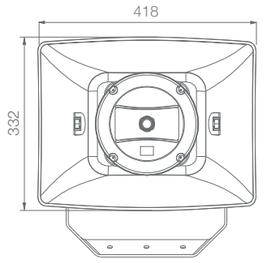
	CS-64BS	**CS-154BS**
Rated Input	6W (100V)	15W (100V)
Tappings	6 / 3 / 1W (100V), 6 / 3 / 1.5 / 0.5W (70V)	15 / 10 / 5W (100V), 15 / 7.5 / 5 / 2.5W (70V)
Sensitivity (1W, 1m)	96dB	97dB
Frequency Response	130Hz – 13kHz	150Hz – 15kHz
Connection	Ceramic screw terminals, thermal fuse	
Colour	Horn, cover: off-white / Punched net: dark-grey	
Dimensions (W x H x D)	233 × 224 × 249mm	366 × 230 × 310mm
Weight	1.7kg	3kg

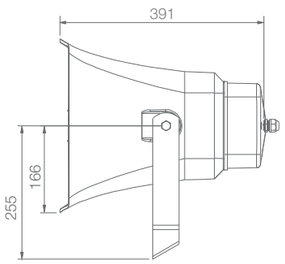
CS-530BS-EB





CS-660BS-EB





CS-530BS-EB / CS-660BS-EB

- Highly intelligible 2-way speaker system
- All weather durability, water and dust protection
- Impedance change available by tapping changing located inside the terminal cover

Applications

- Parking spaces
- Railway stations
- Outdoor playgrounds
- Sports fields

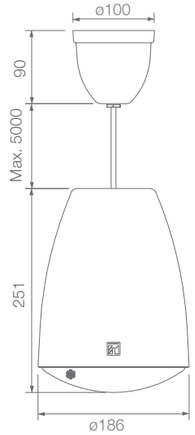
Specifications

	CS-530BS-EB	**CS-660BS-EB**
Rated Input	30W (100V)	60W (100V)
Tappings	30 / 15 / 7.5 / 3.75W (100V)	60 / 30 / 15 / 7.5W (100V)
Sensitivity (1W, 1m)	96dB	97dB
Frequency Response	120Hz – 20kHz	100Hz – 20kHz
Connection	Screw terminal	
Colour	Horn and terminal cover: ABS resin, light grey (RAL7035 or equivalent) / Brackets and screws: Stainless steel	
Dimensions (W x H x D)	315 × 215 × 356mm	418 × 332 × 391mm
Weight	4.7kg	7.1kg

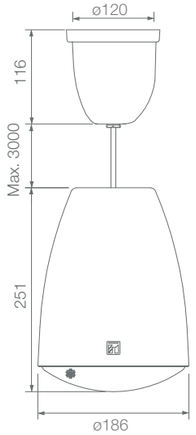
EN 54 Certified Projection Speakers/**PE-154EN/PE-154EN-BK Q/PE-154BS/PJ-154BS**

PE-154EN-BK

PE-154EN/
PE-154BS

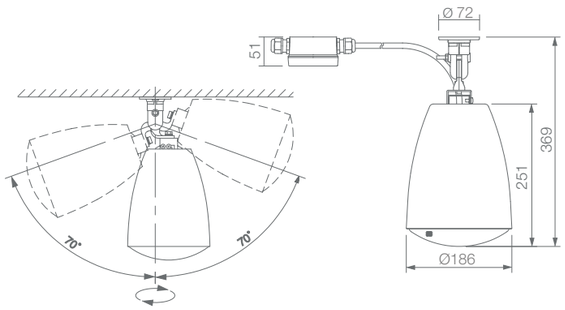


PE-154EN/
PE-154EN-BK



PE-154EN-BS

PJ-154BS



(Horizontal)
360°

PE-154EN/ PE-154EN-BK Q/PE-154BS

- Special design to blend with lighting equipment
- Rugged HIPS resin enclosure
- Excellent sound quality
- 5 m cable (PE-154EN) or 3 m fire resistant cable (PE-154BS)
- PE-154BS according british standard BS 5839-8

PJ-154BS

- Wide range frequency response
- Complete with mounting bracket for easy installation
- Supplied swivel bracket allows flexible speaker angle adjustment

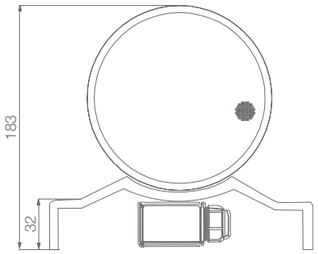
Applications

- Supermarkets
- Shopping malls
- Restaurants & bars
- Public buildings & schools

Specifications

	PE-154EN-BK Q	PE-154EN	PE-154BS	PJ-154BS
Rated Input	15 W (100 V)			
Tappings	15 / 10 / 5 W (100 V), 7.5 / 5 / 2.5 W (70 V)			
Sensitivity (1 W, 1 m)	91 dB			
Frequency Response	70 Hz – 20 kHz			
Speaker Component	Low: 5" cone-type, High: 1" balanced dome tweeter			
Connection	Ceramic screw terminals, thermal fuse			Ceramic screw terminals, thermal fuse-in, external connection box
Colour	RAL 9011	Off-white (RAL 9010 or equivalent colour)		
Dimensions (W x H)	186 × 251 mm			
Weight	2.1 kg		2.33 kg	2.1 kg

EN 54 Certified Speakers/Projection Speakers/**PJ-202DL-EB**



PJ-202DL-EB

- Bi-directional
- 2 x 5“ cone speaker + HC
- Ceramic screw terminal
- Rugged bracket included
- Extreme wide temperature range: -25 °C to +70 °C

Applications

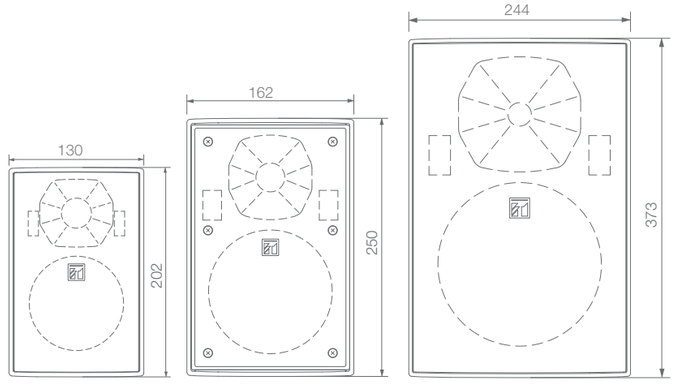
- Parking spaces
- Railway stations
- Outdoor playgrounds
- Corridors

Specifications

	PJ-202DL-EB
Rated Input	20 W (100 V)
Tappings	20 / 10 / 5 W (100 V), 10 / 5 / 2.5 W (70 V)
Sensitivity (1W, 1m)	89 dB
Frequency Response	120 Hz – 20 kHz
Speaker Component	5“ P.P. cone x 2
Connection	Ceramic screw terminals, thermal fuse
Colour	Off-white (RAL 9010 or equivalent colour)
Dimensions (ø x D)	146 × 186 mm
Weight	3.2 kg

EN 54 Certified Speakers/Design Speakers/**F-1000/F-1300/F-2000**

F-1000BTWP EB-Q F-1000WTWP EB-Q



F-1000BTWP EB-Q/ F-1000WTWP EB-Q

F-1300BTWP EB-Q/ F-1300WTWP EB-Q

F-2000BTWP EB-Q/ F-2000WTWP EB-Q

EN 54-24 IP44 EASE data PRO Sound

Features

- 15W, 30W or 60W
- EN54 Type A for indoor applications
- 2-way speaker with high quality
- Octagonal horn for clear, wide-area sound coverage
- Large variety of brackets available
- Easy impedance selection by rotary switch
- F-2000 with horn adapter for 80° x 80° coverage
- Pan + tilt wall/speaker bracket included

Options

- Matching Subwoofers: HB1/FB-120B/FB-120W (for F-1000/F-1300)
- ST-16A: Speaker Stand
- HY-CL10B: Cluster Bracket, black
- HY-CL10W: Cluster Bracket, white
- HY-CM10B: Wall / Ceiling Bracket, black
- HY-CM10W: Wall / Ceiling Bracket, white
- (for F-2000)
- HY-CL20B: Cluster Bracket, black
- HY-CL20W: Cluster Bracket, white
- HY-CM20B: Wall / Ceiling Bracket, black
- HY-CM20W: Wall / Ceiling Bracket, white

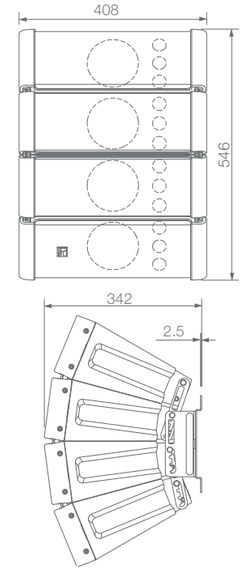
Applications

- Boutiques
- Shopping malls
- Restaurants & bars
- Public buildings & schools

Specifications

	F-1000BTWP EB-Q/ F-1000WTWP EB-Q	**F-1300BTWP EB-Q/ F-1300WTWP EB-Q**	**F-2000BTWP EB-Q / F-2000WTWP EB-Q**
Rated Input	15W (100V)	30W (100V)	60W (100V)
Tappings	15 / 5 / 3 / 1W (100V), 15 / 7.5 / 2.5 / 1.5 / 0.5W (70V)	30 / 10 / 3 / 1W (100V), 30 / 15 / 5 / 1.5 / 0.5W (70V)	60 / 30 / 15 / 5 / 3W (100V), 15 / 7.5 / 2.5 / 1.5 W (70V)
Sensitivity (1W, 1m)	87dB	90dB	92dB
Frequency Response	85Hz – 20kHz	80Hz – 20kHz	65Hz – 20kHz
Speaker Component	Low: 10cm cone-type High: 2.5cm balanced dome-type	Low: 13cm cone-type High: 2.5cm dome tweeter	Low: 20cm cone-type High: 2.5cm dome tweeter
Connection	Push-in terminal		
Finish	Enclosure: HIPS resin, black or white / Punched net: Surface-treated steel plate, black or white, paint		
Dimensions (W x H x D)	130 x 202 x 131mm	162 x 250 x 161mm	244 x 373 x 235mm
Weight	2kg	3.6kg	7.4kg

EN 54 Certified Speakers/Variable Array Speakers/**HX-5B-WP EB-Q/HX-5W-WP EB-Q**



EN 54-24 IP44 EASE data PRO Sound

Features

- Variable dispersion speaker system
- Four speaker modules ensure high power and high quality
- Weather- & ball-proof
- The changeable orientation of each of the four speaker modules independently allows the directivity angle of the speaker system to be adjusted

Options

- MT-200: Matching Transformer (Tappings: 60 / 120 / 200W)
- Subwoofer FB-120B/W
- Hy-PF1B/HY-PF1W: Rigging Frame
- HY-PF1WP: Rigging Frame, outdoor use
- HY-CW1B/HY-CW1W: Ceiling Mounting Bracket
- HY-CW1WP: Ceiling Mounting Bracket, outdoor use
- HY-WM1B/HY-WM1W: Wall Mounting Bracket
- HY-WM1WP: Wall Mounting Bracket, outdoor use
- HY-WM2B/HY-WM2W: Wall Mounting Bracket
- HY-WM2WP: Wall Mounting Bracket, outdoor use
- HY-CN1B/HY-CN1W: Extension Bracket
- HY-CN1BWP/HY-CN1WWP: Extension Bracket, outdoor use
- HY-ST1: Speaker Stand Adapter

Applications

- Auditoriums
- Houses of worship
- Banquet halls
- Community centres
- Sport bars
- Shopping malls
- Boardrooms
- Gyms & health clubs
- Exhibition halls
- Train stations

Specifications

	HX-5B-WP EB-Q / HX-5W-WP EB-Q
Power Handling Capacity	Continuous pink noise: 200W, Program: 600W
Rated Impedance	8Ω
Sensitivity (1W, 1m)	96dB (60° mode), 97dB (45° mode), 98dB (30° mode), 99dB (15° mode)*
Frequency Response	95Hz – 20kHz (-10dB) (60° mode), 100Hz – 20kHz (-10dB) (45° mode), 105Hz – 20kHz (-10dB) (30° mode), 110Hz – 20kHz (-10dB) (15° mode)
Speaker Component	Low: 5" cone-type x 4, High: balanced dome-type x 12
Connection	Integrated cable
Colour	black or white
Dimensions (W x H x D)	408 x 546 x 342mm
Weight	16kg

EN 54 Certified Speakers/Variable Arrays/HX-7 Series/**HX-7B-WPEN/HX-7W-WPEN**

EN 54-24 | IPX4 | EASE data | PRO Sound

Features

- High power handling
- Speaker design consists of four integrated modules that can be adjusted individually to optimize the vertical dispersion angle
- Built-in isophasic wavefront control horn with compression driver ensures precise HF control and superior reproduction of HF sounds
- 0° mode facilitates the most effective line array set-up

Options

- FB-150B/FB-150W: Subwoofer
- MT-200: Matching Transformer (Tappings: 60 / 120 / 200W)
- HY-60DB/DW/DB-WP/DW-WP: angle adjustment bar
- HY-CN7W/7W-WP/7B/7B-WP: speaker connection bracket
- HY-PF7W/7B: Rigging frame
- HY-VM7W/7B: Rigging bracket
- HY-WM7W/7B: Wall mounting bracket
- HY-MT7: Matching transformer adapter
- HY-ST7: Speaker stand adapter

Applications

- Stadiums/arenas
- Houses of worship
- Theatres
- Indoor sports facilities
- Auditoriums

Specifications

	HX-7B-WPEN / HX-7W-WPEN
Enclosure	Sealed type
Power Handling Capacity	Continuous pink noise: 250W (IEC60268-5: 350W) / Continuous program: 750W
Rated Impedance	8Ω
Sensitivity (1W, 1m)	100dB
Frequency Response	105Hz – 20kHz
Crossover Frequency	1.7kHz
Directivity Angle	Horizontal: 100°, Vertical: Depending on directivity angle mode
Speaker Component	Low frequency: 13cm cone-type x 8 High frequency: Wave front control horn with compression driver x 4
Input Terminal	M4 screw terminal x1, 4-p. Speakon x2
Water Protection	IPX4 (Install with every speaker module tilted downward from the horizontal.)
Finish	Enclosure: Polypropylene, black or white (HX-7B/W-WPEN flame-retardant class 5VB), Punched net: Surface-treated steel plate, black & white (HX-7B/W-WP), rust proof coating
Dimensions (W x H x D)	497 x 664 x 274 mm
Weight	30kg

EN 54 Certified Speakers/Line Arrays/Type S/**SR-S4L EB-Q/SR-S4S EB-Q**

SR-S4L EB-Q

SR-S4S EB-Q

EN 54-24 | IPX4 | EASE data | PRO Sound

Features

- 2-way line array speaker with 8 x 10cm (4") woofers and 24 tweeters, installed vertically
- Sync-Drive technology creates ideal linear sound source
- Clear sound with reduced attenuation over distance
- Speakers are reflection-free and feedback resistant
- Bi-amp or single amp drive possible
- Wide variety of mounting brackets available

Options

- MT-S0601: Matching Transformer for high-impedance operation
- SR-FB4: Flying Bracket
- SR-EP4 / SR-EP4WP: Extension Plate
- SR-WB4 / SR-WB4WP: Wall Mounting Bracket
- SR-TB4WP / SR-TB4: Wall Tilt Bracket
- SR-SA4: Stand Adapter
- SR-PP4: Protection Pad

Applications

- Houses of worship
- Exhibition halls
- Gymnasiums & other sport facilities
- Lecture rooms
- Theatres
- Houses of worship
- Meeting/conference rooms

Specifications

	SR-S4L EB-Q	**SR-S4S EB-Q**
Power Handling Capacity	Continuous program: 600W	
Rated Impedance	8Ω	
Sensitivity (1W, 1m)	94dB	93dB
Frequency Response	70 Hz – 20kHz	
Crossover Frequency	3.5kHz	
Directivity Angle	Horizontal: 90°, Vertical: 0° (within the range of speaker height)	Horizontal: 90°, Vertical: 10°
Speaker Component	Low frequency: 10cm cone-type × 8, High frequency: 2.5cm balanced dome-type × 24	
Input Connector	-	
Connected Cable	Direct cable withdrawal from internal speaker: ø8.6mm, conductor cross section: 1.25mm², 4-core cable, 3m	
Water Protection	IPX4	
Finish	Enclosure: Plywood, white, urethane coating Front grill: Punched stainless steel (SUS304), white, paint	
Dimensions (W x H x D)	160 × 895 × 255mm	160 × 892 × 303mm
Weight	16kg	

TZ-200BS-EB

TZ-400BS-EB

TZ-200BS-EB* / TZ-400BS-EB*

- Nice slim design
- Wide horizontal and narrow vertical dispersion
- Weatherproof IP-66; EN54 type B
- Speakers coming with pan/tilt wall-mounting bracket
- Crisp sound thanks to built-in tweeter
- Ceramic screw connector and thermal fuse for BS 5839-8

Applications

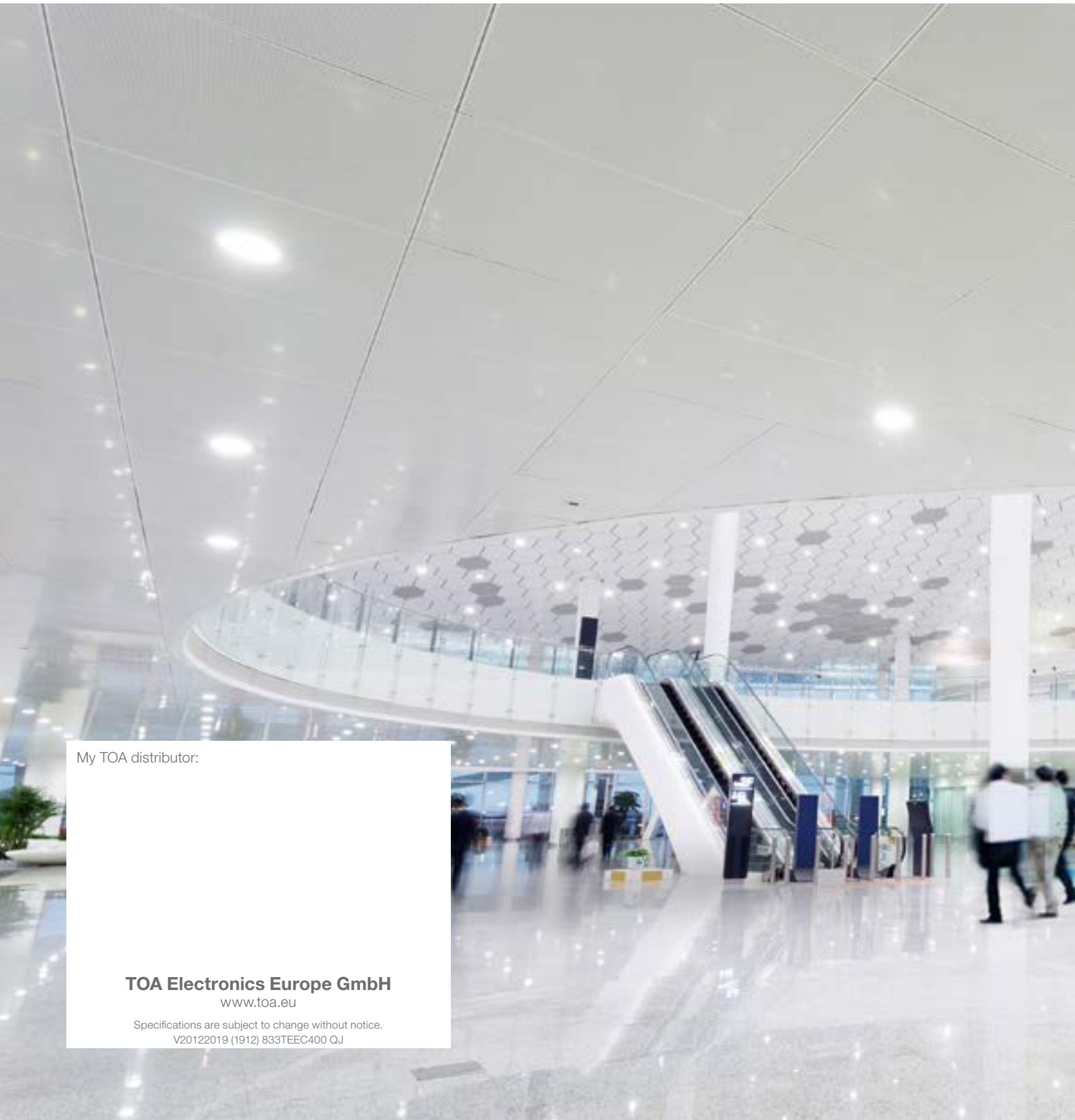
- Lecture rooms
- Houses of worship
- Auditoriums
- Outdoor swimming pools

* Available as of Q2/2020

Specifications

	TZ-200BS-EB	**TZ-400BS-EB**
Rated input power	20 W	40 W
Tappings	20/10/5/2.5 W (100V) 20/10/5/2.5/1.25 W (70V)	40/20/10/5 W (100V) 40/20/10/5/2.5 W (70V)
Sensitivity (1 W, 1 m)	92 dB	93 dB
Frequency Response	140 Hz - 20 kHz	
Speaker Components	Woofer 9 cm x4, Tweeter x1	Woofer 9 cm x8, Tweeter x1
IP Code	IP-66	
Finish	Enclosure and grille: aluminum, painted white or black	
Dimensions (W x H x D)	114 x 620 x 96 mm	114 x 995 x 96 mm
Weight	4.5 kg	7.3 kg

We supply sound, **not equipment.**
www.toa.eu



My TOA distributor:

TOA Electronics Europe GmbH
www.toa.eu

Specifications are subject to change without notice.
V20122019 (1912) 833TEEC400 QJ