

## **Public Address & Voice Alarm Systems**



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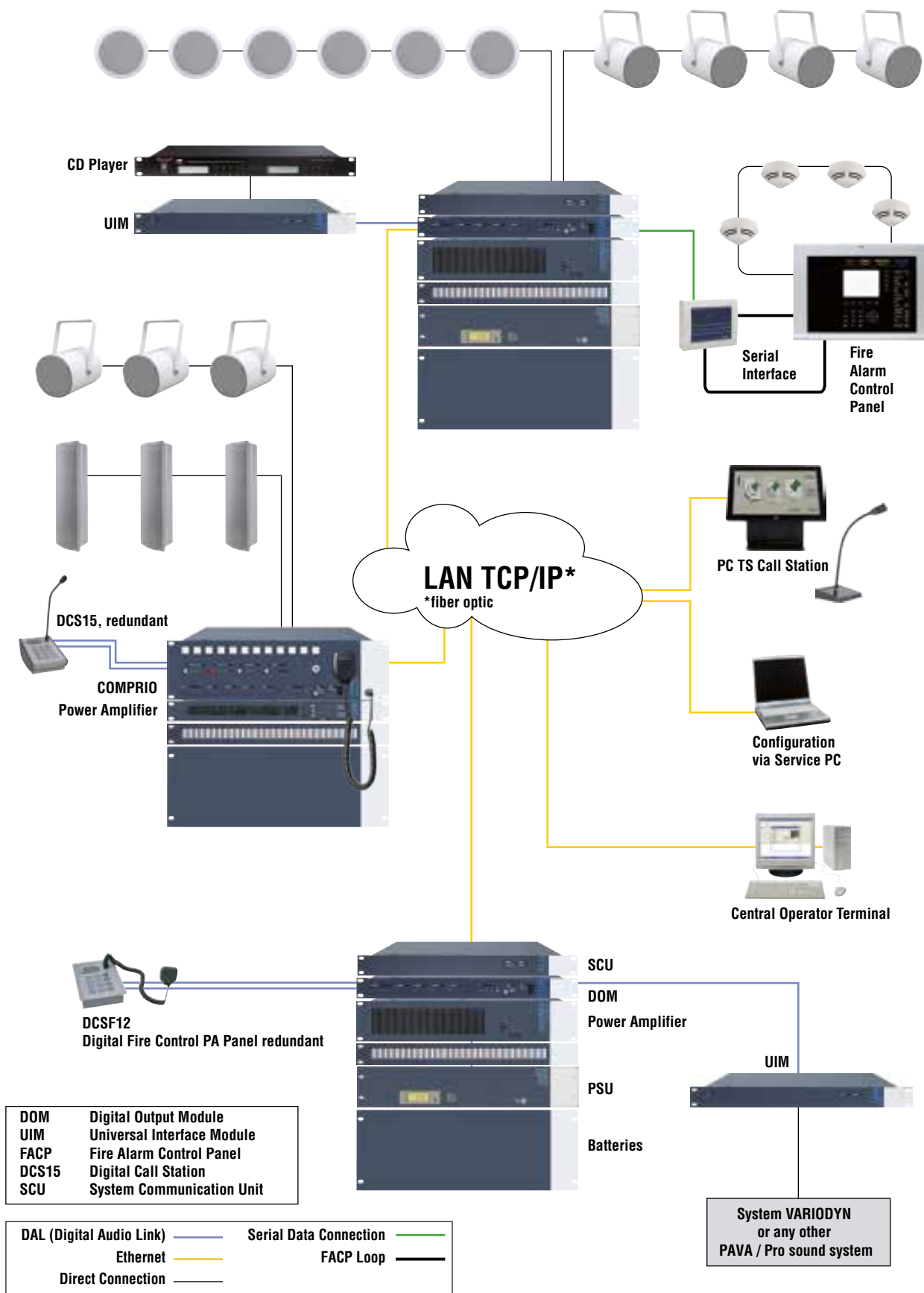




## VARIODYN D1

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# VARIODYN D1



VARIODYN D1 DOM firmware allows to connect up to 400 units and get advantage of the new logical functions, which make it much easier and efficient to configure the DOM. With the firmware comes also the option to connect call stations with a second cable. So it is now possible to do the cable connection to the call station in a redundant way.

VARIODYN D1 Designer, our graphical configuration tool, includes now cutting edge Boolean algebra like "and" and "or" functions to program advanced logical dependency. The program provides now some improved functions and features as well. We suggest to always use the latest edition for your projects.

The new DCS plus call station with DKM plus button extension offers a proven and increased handling for operators. It uses similar functions like DCS15 but an additional red LED ring, close to the microphone capsule, visually signalize "readiness to speak" also an additional LED shows fault of the system.

Our management system PAMMI is now in a new version available and enables the use of a microphone on the PC hosting the PAMMI software.

Please also refer to the information we have provided online. In the protected customer area, there are a wide range of resources relating to system setup and planning available for download. Finally, we would like to mention that it is always a good idea to view the areas of fire detection technology and voice alarm as a whole. For that reason, we also provide serial interfaces with great benefits in security and service.



583361.22

Digital Output Module DOM4-8



**Features**

- Compliant with EN 60849 and EN 50849
- EN 54-16 certified
- 16 audio slots giving a total of 1 hour memory
- 4 independent amplifier channels suitable for use with spurs, zones or loop technology. Built in parametric equalizer, compressor limiter and delay function (upto 9.9 seconds)
- All functions of an alarm and evacuation system
- Network into a large system via Ethernet connection
- Offers full monitoring of the system functions
- Automatic and dynamic switching to redundant emergency amplifiers
- Automatic volume control (AVC) even during announcements
- Remote monitoring and configuration via the network
- 24 V DC emergency power supply

**Part of EN 54-16 approval**

The DOM (Digital Output Module) is the central control element of VARIODYN D1. It has interfaces to all input/output assemblies, administers, and monitors the loudspeaker circuits for voice alarm systems and electro-acoustic emergency warning system per EN 60849 and EN 50849. Large or complex system configurations can be implemented through the networking of multiple DOMs via Ethernet. The DOM offers a high level of automatic and constant monitoring as standard. All connected power amplifiers are permanently monitored by the DOM and if a power amplifier becomes faulty, it can be replaced dynamically by a backup amplifier or a backup amplifier channel. The switchover is done automatically by the DOM. The loudspeaker lines are permanently monitored for short circuit, ground fault, and failure as well as impedance deviation. Faulty loudspeaker zones are separated in a non-reacting manner. A DOM contains storage capacity for preset announcements, which can be used for alarm texts and signals (escape alarm, caution signal) and warning signals (gongs). The volume of each source and each amplifier channel can be controlled. Additional filters like parametric equalizer, high-and low pass filter are available. All errors are recognized, displayed and recorded within few seconds meeting the standards. For special applications such as e.g. tunnel, a delay in all four channels can be programmed up to 9.9 sec.

With the available firmware it is to connect up to 400 units and get advantage of the logical functions which make it much easier and efficient to configure the DOM.

The control unit DOM4-8 is equipped with 4 independent amplifier channels in order to operate 8 loudspeaker areas or 4 loudspeaker circuits in VARIODYN D1 loop technology. There is also the option of mixing loop and spur technology with a DOM.

<b>Technical Data</b>	
<b>Audio output:</b>	
Output type	symmetrically
Nominal level	0 dBu
max. Outputlevel	< 6 dBu
Transmission range	20 ... 20000 Hz
Harmonic distortion at nominal level	< 0.03 % @ 1 kHz
Signal/Noise ratio	> 70 dB/75 dB (A)
Output impedance	> 5 kΩ, < 500 pF
<b>Sensor Input (AVC):</b>	
Input type	symmetrically
Nominal level	-51 dBu
Nominal level for emergency telephone station	0 dBu
Transmission range	100 ... 8000 Hz
Harmonic distortion at nominal level	< 0.02 % @ 1 kHz
Signal/Noise ratio	> 60 dB/65 dB (A)
Load impedance	typ. 200 Ω
<b>Common technical data:</b>	
Rated voltage	90 .. 264 V AC
Rated frequency	47 ... 63 Hz
Emergency power supply	24 V DC
Power consumption	40 / 70 W (@230 V, w/o / with 4 x DAL)
Contact load relay	100 V DC/1 A
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 % (non-condensing)
Weight	approx. 5.7 kg
Dimensions	W: 483 mm H: 44 mm D: 345 mm (1 HU, 19")
Declaration of Performance	DoP-20997130701

**Accessories**

- |           |  |
|-----------|--|
| 583451.21 | Cable for cabinet rear panel DOM4-8                              |
| 583486A   | Patch cable CAT5, 1 m yellow (Ethernet)                          |
| 583487A   | Patch cable CAT5, 2 m yellow (Ethernet)                          |
| 583488A   | Patch cable CAT5, 3 m yellow (Ethernet)                          |
| 583496    | End-of-line module (EOL)   |
| 581310    | Measuring microphone for D1 AVC in a 5" recessed ceiling housing |
| 581316    | Microphone, for AVC  |
| 583703    | Mounting set 1   |
| 583342    | Loop Isolator Module   |
| 583708.HO | Ventilation panel 1 HU with Honeywell logo                       |

583362.22

Digital Output Module DOM4-24



**Features**

- Compliant with EN 60849 and EN 50849
- EN 54-16 certified
- 16 audio slots giving a total of 1 hour memory
- 4 independent amplifier channels suitable for use with spurs, zones or loop technology. Built in parametric equalizer, compressor limiter and delay function (upto 9.9 seconds)
- All functions of an alarm and evacuation system
- Network into a large system via Ethernet connection
- Offers full monitoring of the system functions
- Automatic and dynamic switching to redundant emergency amplifiers
- Automatic volume control (AVC) even during announcements
- Remote monitoring and configuration via the network
- 24 V DC emergency power supply

**Part of EN 54-16 approval**

The DOM (Digital Output Module) is the central control element of VARIODYN D1. It has interfaces to all input/output assemblies, administers, and monitors the loudspeaker circuits for voice alarm systems and electro-acoustic emergency warning system per EN 60849 and EN 50849. Large or complex system configurations can be implemented through the networking of multiple DOMs via Ethernet. The DOM offers a high level of automatic and constant monitoring as standard. All connected power amplifiers are permanently monitored by the DOM and if a power amplifier becomes faulty, it can be replaced dynamically by a backup amplifier or a backup amplifier channel. The switchover is done automatically by the DOM. The loudspeaker lines are permanently monitored for short circuit, ground fault, and failure as well as impedance deviation. Faulty loudspeaker zones are separated in a non-reacting manner. A DOM contains storage capacity for preset announcements, which can be used for alarm texts and signals (escape alarm, caution signal) and warning signals (gongs). The volume of each source and each amplifier channel can be controlled. Additional filters like parametric equalizer, high-and low pass filter are available. All errors are recognized, displayed and recorded within few seconds meeting the standards. For special applications such as e.g. tunnel, a delay in all four channels can be programmed up to 9.9 sec.

With the new Firmware it is now possible to connect up to 400 units and get advantage of the new logical functions which makes it much easier and efficient to configure the DOM.

The control unit DOM4-24 is equipped with 4 independent amplifier channels in order to operate 24 loudspeaker areas or 4 loudspeaker circuits in VARIODYN D1 loop technology. There is also the option of mixing loop and spur technology with a DOM

**Technical Data**

**Audio output:**

Output type	symmetrically
Nominal level	0 dBu
max. Outputlevel	< 6 dBu
Transmission range	20 ... 20000 Hz
Harmonic distortion at nominal level	< 0.03 % @ 1 kHz
Signal/Noise ratio	> 70 dB/75 dB (A)
Output impedance	> 5 kΩ, < 500 pF

**Sensor Input (AVC):**

Input type	symmetrically
Nominal level	-51 dBu
Nominal level for emergency telephone station	0 dBu
Transmission range	100 ... 8000 Hz
Harmonic distortion at nominal level	< 0.02 % @ 1 kHz
Signal/Noise ratio	> 60 dB/65 dB (A)
Load impedance	typ. 200 Ω

**Common technical data:**

Rated voltage	90 .. 264 V AC
Rated frequency	47 ... 63 Hz
Emergency power supply	24 V DC
Power consumption	50 / 80 W (@230 V, w/o / with 4 x DAL)
Contact load relay	100 V DC/1 A
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 % (non-condensing)
Weight	approx. 6.8 kg
Dimensions	W: 483 mm H: 44 mm D: 349 mm (1 HU, 19")
Declaration of Performance	DoP-20997130701

**Accessories**

583452.21	Cable for cabinet rear panel DOM4-24
583486A	Patch cable CAT5, 1 m yellow (Ethernet)
583487A	Patch cable CAT5, 2 m yellow (Ethernet)
583488A	Patch cable CAT5, 3 m yellow (Ethernet)
583496	End-of-line module (EOL)
581310	Measuring microphone for D1 AVC in a 5" recessed ceiling housing
581316	Microphone, for AVC
583703	Mounting set 1
583342	Loop Isolator Module
583708.HO	Ventilation panel 1 HU with Honeywell logo



## VARIODYN D1 Comprio

Our VARIODYN D1 Voice Alarm System has grown, so that in the future it can be even better, even more cost effective, and even more efficient in small and medium-sized properties. The compact Comprio control unit is available in different variants, and together with the new 4XD125B and 4XD250B four-channel amplifiers, it represents a complete voice alarm system for small and medium-sized properties.

The 4XD125B and 4XD250B four-channel amplifiers also includes a battery charger for the emergency power supply of this small system. The new amplifiers also provide the option to use one channel as backup amplifier for the other three channels. In this case a separate backup amplifier is no longer required.. The components are designed for installation in a 19" housing or upright cabinet. We have provided special compact housing variants with 12 HU each. If desired, these components can also be housed in the larger housings and upright cabinets of our VARIODYN D1 line together with the other DOM and amplifiers.

The new components are integrated in the product approval of the VARIODYN D1 Voice Alarm System.

Of course, all peripheral components and accessory parts of the VARIODYN D1, such as call stations, housing, converter, cable, etc., can also be used with these new components.

The programming is still carried out easily and conveniently using the Designer software tool. An VARIODYN D1 expert can jump into the Comprio at full speed without any additional effort and use the new components with no problems. That saves time, money, warehouse space, and minimizes additional training costs. If desired, the Part No. 583308 handheld microphone can be plugged directly into the Comprio.

### Comprio system (4 variants)

583940 VARIODYN D1 Comprio 4-8 (standalone without ethernet)

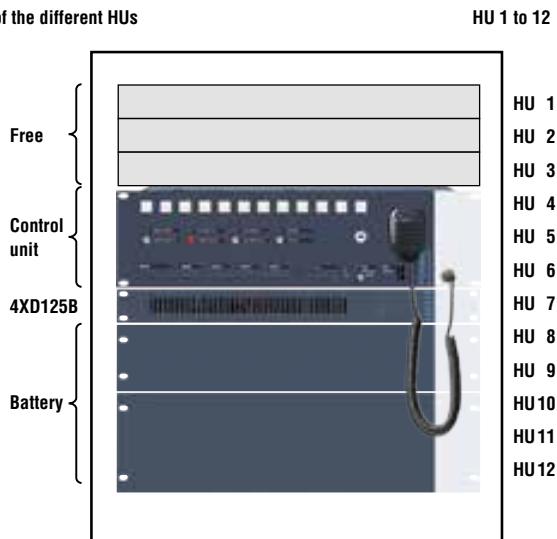
583941 VARIODYN D1 Comprio 4-24 (standalone without ethernet)

583944 VARIODYN D1 Comprio 4-8 net (network variant)

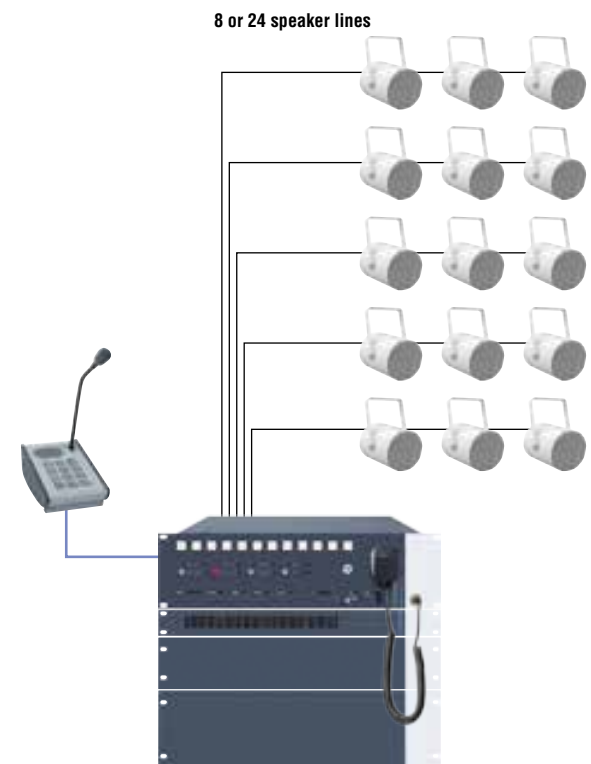
583945 VARIODYN D1 Comprio 4-24 net (network variant)

## Rack mounted system (12 HUs)

Use of the different HUs



## System overview



583940

VARIODYN D1 Comprio 4-8 (Stand alone without Ethernet)



## Features

- One hour audio memory (flash)
- 4 channel parametric equalizer, compressor/limiter and delay (up to 9.9 seconds)
- Loudspeaker LOOP support
- EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- All functions of an alarm and evacuation system
- Permanent monitoring of all functions
- Automatic and dynamic switching of back up amplifier
- Automatic volume control (AVC) even also during announcements
- Two monitored 24 V DC power supply inputs
- 12 contact inputs (8 of which can be monitored)
- 8 relay outputs
- 1 audio output and 2 audio inputs
- 3 DAL port
- 1 TWI port

## Part of EN 54-16 approval

Comprio is the central control panel of a VARIODYN D1 system for small and medium sized projects. When combined with the 4XD125B or 4XD250B four channel amplifiers, they provide a complete voice alarm system for projects such as schools and small hotels. The emergency power supply is integrated into the 4XD125B and 4XD250B four channel amplifiers. The system is compliant with voice alarm standards and elector-acoustic emergency warning systems DIN VDE 0833-4, EN 60849 and EN 50849.

All amplifiers are permanently monitored and in the case of a fault a backup amplifier can automatically replace it. If a 4XD125B or 4XD250B amplifier is used it is possible to use three channels to power the speaker zones and use the fourth channel as a backup amplifier. All loudspeaker zones are permanently monitored for short circuit, ground fault, failures and impedance deviation. Faulty loudspeaker zones are separated in a non-reactive manner. Any errors are recognized, displayed and recorded within seconds, ensuring all relevant standards are met.

The Comprio control panel contains storage capacity pre-recorded audio messages which can be used for alarm texts and signals (evacuation alarm/ all clear signals) and caution signals (gongs). The volume of each source and each amplifier channel can be controlled. Additional filters such as parametric equalizer, high-and low pass filter can be programmed. For special applications such as tunnels a delay is available of to 9.9 seconds can be programmed.

The Comprio control panel can be connected to four independent amplifier channels to operate a total of 8 loudspeaker zones or four loudspeaker rings in VARIODYN D1 loop technology. It is also possible to mix spur and loop technology.

The Comprio further features 12 contact inputs, of which eight can be programmed with supervision, 8 potential-free relay outputs, an audio line out and up to 2 audio line in ports, and / or up to 3 microphone inputs, 3 DAL connections, and one TWI port.

This variant is a "stand-alone" unit. If Ethernet networking is desired to connect with other Comprio control panels or DOM, the network variant Part No. 583944 should be ordered.

Additional accessories like the handheld microphone, housing, cable, call station etc. must be ordered separately.

## Technical Data

Transmission range	20 ... 20000 Hz
Load impedance	typ. 200 Ω
Harmonic distortion at nominal level	< 0.03 %
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 60 °C
Air humidity	15 ... 90 %
Weight	approx. 5.7 kg
Dimensions	W: 483 mm H: 133 mm D: 345 mm (3 HE, 19")
Declaration of Performance	DoP-00376130701

## Accessories

583708.HO	Ventilation panel 1 HU with Honeywell logo
583308	Handheld microphone for VARIODYN D1 Comprio
583441.10	Backup cable RC41 VARIODYN D1
584913	Rack for Comprio
584913.R	Rack for Comprio (mounting included)
583414	Cable set 24 V DC-VARIODYN D1 Comprio / 4XD125B or 4XD250B
581732	Battery 12 V / 65 Ah
581340	Periphery clamp for top-hat rail
583466A	Patch cable CAT5, 0.5 m gray (periphery)
583467A	Patch cable CAT5, 1 m gray (periphery)
583469A	Patch cable CAT5, 3 m gray (periphery)
583483	Patch cable CAT5, 3 m blue (DAL)
583451.21	Cable for cabinet rear panel DOM4-8
583477.21	Output cable 2 amplifier DOM
583491	Input cable DOM amplifier, 0.5 m green
583496	End-of-line module (EOL)
581310	Measuring microphone for D1 AVC in a 5" recessed ceiling housing
581316	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts

583941

VARIODYN D1 Comprio 4-24 (Stand alone without Ethernet)



## Features

- One hour audio memory (flash)
- 4 channel parametric equalizer, compressor/limiter and delay (up to 9.9 seconds)
- Loudspeaker LOOP support
- EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- All functions of an alarm and evacuation system
- Permanent monitoring of all functions
- Automatic and dynamic switching of back up amplifier
- Automatic volume control (AVC) even also during announcements
- Two monitored 24 V DC power supply inputs
- 12 contact inputs (8 of which can be monitored)
- 8 relay outputs
- 1 audio output and 2 audio inputs
- 3 DAL port
- 1 TWI port

## Part of EN 54-16 approval

Comprio is the central control panel of a VARIODYN D1 system for small and medium sized projects. When combined with the 4XD125B or 4XD250B four channel amplifiers, they provide a complete voice alarm system for projects such as schools and small hotels. The emergency power supply is integrated into the 4XD125B and 4XD250B four channel amplifiers. The system is compliant with voice alarm standards and elector-acoustic emergency warning systems DIN VDE 0833-4, EN 60849 and EN 50849.

All amplifiers are permanently monitored and in the case of a fault a backup amplifier can automatically replace it. If a 4XD125B or 4XD250B amplifier is used it is possible to use three channels to power the speaker zones and use the fourth channel as a backup amplifier. All loudspeaker zones are permanently monitored for short circuit, ground fault, failures and impedance deviation. Faulty loudspeaker zones are separated in a non-reactive manner. Any errors are recognized, displayed and recorded within seconds, ensuring all relevant standards are met.

The Comprio control panel contains storage capacity pre-recorded audio messages which can be used for alarm texts and signals (evacuation alarm/ all clear signals) and caution signals (gongs). The volume of each source and each amplifier channel can be controlled. Additional filters such as parametric equalizer, high-and low pass filter can be programmed. For special applications such as tunnels a delay is available of up to 9.9 seconds can be programmed.

The Comprio control panel can be connected to four independent amplifier channels to operate a total of 24 loudspeaker zones or four loudspeaker rings in VARIODYN D1 loop technology. It is also possible to mix spur and loop technology.

The Comprio further features 12 contact inputs, of which eight can be programmed with supervision, 8 potential-free relay outputs, one audio line out and up to 2 audio line in ports, and / or up to 3 microphone inputs, 3 DAL connections, and one TWI port.

This variant is a "stand-alone" unit. If Ethernet networking is desired to connect with other Comprio control panels or DOM, the network variant Part No. 583944 should be ordered.

Additional accessories like the handheld microphone, housing, cable, call station etc. must be ordered separately.

## Technical Data

Transmission range	20 ... 20000 Hz
Load impedance	typ. 200 Ω
Harmonic distortion at nominal level	< 0.03 %
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 60 °C
Air humidity	15 ... 90 %
Weight	approx. 6.8 kg
Dimensions	W: 483 mm H: 133 mm D: 345 mm (3 HE, 19")
Declaration of Performance	DoP-00376130701

## Accessories

583708.HO	Ventilation panel 1 HU with Honeywell logo
583308	Handheld microphone for VARIODYN D1 Comprio
583441.10	Backup cable RC41 VARIODYN D1
584913	Rack for Comprio
584913.R	Rack for Comprio (mounting included)
583414	Cable set 24 V DC-VARIODYN D1 Comprio / 4XD125B or 4XD250B
581732	Battery 12 V / 65 Ah
581340	Periphery clamp for top-hat rail
583466A	Patch cable CAT5, 0.5 m gray (periphery)
583467A	Patch cable CAT5, 1 m gray (periphery)
583469A	Patch cable CAT5, 3 m gray (periphery)
583483	Patch cable CAT5, 3 m blue (DAL)
583452.21	Cable for cabinet rear panel DOM4-24
583477.21	Output cable 2 amplifier DOM
583491	Input cable DOM amplifier, 0.5 m green
583496	End-of-line module (EOL)
581310	Measuring microphone for D1 AVC in a 5" recessed ceiling housing
581316	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts

583944

VARIODYN D1 Comprio 4-8 net (with Ethernet)



## Features

- One hour audio memory (flash)
- 4 channel parametric equalizer, compressor/limiter and delay (up to 9.9 seconds)
- Loudspeaker LOOP support
- EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- All functions of an alarm and evacuation system
- Networkable via Ethernet, build in 4 port switch
- Permanent monitoring of all functions
- Automatic and dynamic switching of back up amplifier
- Automatic volume control (AVC) even also during announcements
- Remote monitoring and configuration via network
- Two monitored 24 V DC power supply inputs
- 12 contact inputs (8 of which can be monitored)
- 8 relay outputs
- 1 audio output and 2 audio inputs
- 3 DAL port
- 1 TWI port

## Part of EN 54-16 approval

Comprio is the central control panel of a VARIODYN D1 system for small and medium sized projects. When combined with the 4XD125B or 4XD250B four channel amplifiers, they provide a complete voice alarm system for projects such as schools and small hotels. The emergency power supply is integrated into the 4XD125B and 4XD250B four channel amplifiers. The system is compliant with voice alarm standards and elector-acoustic emergency warning systems DIN VDE 0833-4, EN 60849 and EN 50849.

All amplifiers are permanently monitored and in the case of a fault a backup amplifier can automatically replace it. If a 4XD125B or 4XD250B amplifier is used it is possible to use three channels to power the speaker zones and use the fourth channel as a backup amplifier. All loudspeaker zones are permanently monitored for short circuit, ground fault, failures and impedance deviation. Faulty loudspeaker zones are separated in a non-reactive manner. Any errors are recognized, displayed and recorded within seconds, ensuring all relevant standards are met.

The Comprio control panel contains storage capacity pre-recorded audio messages which can be used for alarm texts and signals (evacuation alarm/ all clear signals) and caution signals (gongs). The volume of each source and each amplifier channel can be controlled. Additional filters such as parametric equalizer, high-and low pass filter can be programmed. For special applications such as tunnels a delay is available of to 9.9 seconds can be programmed.

The Comprio control panel can be connected to four independent amplifier channels to operate a total of eight loudspeaker zones or four loudspeaker rings in VARIODYN D1 loop technology. It is also possible to mix spur and loop technology.

The Comprio further features 12 contact inputs, of which eight can be programmed with supervision, 8 potential-free relay outputs, one audio line out and up to 2 audio line in ports, and / or up to 3 microphone inputs, 3 DAL connections, and one TWI port.

This version features an Ethernet connection to other Ethernet capable devices of the VARIODYN D1 family.

Additional accessories like the handheld microphone, housing, cable, call station etc. must be ordered separately.

## Technical Data

Transmission range	20 ... 20000 Hz
Load impedance	typ. 200 Ω
Harmonic distortion at nominal level	< 0.03 %
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 60 °C
Air humidity	15 ... 90 %
Weight	approx. 5.7 kg
Dimensions	W: 483 mm H: 133 mm D: 345 mm (3 HE, 19")
Declaration of Performance	DoP-00376130701

## Accessories

583708.HO	Ventilation panel 1 HU with Honeywell logo
583308	Handheld microphone for VARIODYN D1 Comprio
583441.10	Backup cable RC41 VARIODYN D1
584913	Rack for Comprio
584913.R	Rack for Comprio (mounting included)
583414	Cable set 24 V DC-VARIODYN D1 Comprio / 4XD125B or 4XD250B
581732	Battery 12 V / 65 Ah
581340	Periphery clamp for top-hat rail
583466A	Patch cable CAT5, 0.5 m gray (periphery)
583467A	Patch cable CAT5, 1 m gray (periphery)
583469A	Patch cable CAT5, 3 m gray (periphery)
583483	Patch cable CAT5, 3 m blue (DAL)
583451.21	Cable for cabinet rear panel DOM4-8
583477.21	Output cable 2 amplifier DOM
583491	Input cable DOM amplifier, 0.5 m green
583496	End-of-line module (EOL)
581310	Measuring microphone for D1 AVC in a 5" recessed ceiling housing
581316	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts

583945

VARIODYN D1 Comprio 4-24 net (with Ethernet)



## Features

- One hour audio memory (flash)
- 4 channel parametric equalizer, compressor/limiter and delay (up to 9.9 seconds)
- Loudspeaker LOOP support
- EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- All functions of an alarm and evacuation system
- Networkable via Ethernet, build in 4 port switch
- Permanent monitoring of all functions
- Automatic and dynamic switching of back up amplifier
- Automatic volume control (AVC) even also during announcements
- Remote monitoring and configuration via network
- Two monitored 24 V DC power supply inputs
- 12 contact inputs (8 of which can be monitored)
- 8 relay outputs
- 1 audio output and 2 audio inputs
- 3 DAL port
- 1 TWI port

## Part of EN 54-16 approval

Comprio is the central control panel of a VARIODYN D1 system for small and medium sized projects. When combined with the 4XD125B or 4XD250B four channel amplifiers, they provide a complete voice alarm system for projects such as schools and small hotels. The emergency power supply is integrated into the 4XD125B and 4XD250B four channel amplifiers. The system is compliant with voice alarm standards and elector-acoustic emergency warning systems DIN VDE 0833-4, EN 60849 and EN 50849.

All amplifiers are permanently monitored and in the case of a fault a backup amplifier can automatically replace it. If a 4XD125B or 4XD250B amplifier is used it is possible to use three channels to power the speaker zones and use the fourth channel as a backup amplifier. All loudspeaker zones are permanently monitored for short circuit, ground fault, failures and impedance deviation. Faulty loudspeaker zones are separated in a non-reactive manner. Any errors are recognized, displayed and recorded within seconds, ensuring all relevant standards are met.

The Comprio control panel contains storage capacity pre-recorded audio messages which can be used for alarm texts and signals (evacuation alarm/ all clear signals) and caution signals (gongs). The volume of each source and each amplifier channel can be controlled. Additional filters such as parametric equalizer, high-and low pass filter can be programmed. For special applications such as tunnels a delay is available of to 9.9 seconds can be programmed.

The Comprio control panel can be connected to four independent amplifier channels to operate a total of 24 loudspeaker zones or four loudspeaker rings in VARIODYN D1 loop technology. It is also possible to mix spur and loop technology.

The Comprio further features 12 contact inputs, of which eight can be programmed with supervision, 8 potential-free relay outputs, one audio line out and up to 2 audio line in ports, and / or up to 3 microphone inputs, 3 DAL connections, and one TWI port.

This version features an Ethernet connection to other Ethernet capable devices of the VARIODYN D1 family.

Additional accessories like the handheld microphone, housing, cable, call station etc. must be ordered separately.

## Technical Data

Transmission range	20 ... 20000 Hz
Load impedance	typ. 200 Ω
Harmonic distortion at nominal level	< 0.03 %
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 60 °C
Air humidity	15 ... 90 %
Weight	approx. 6.8 kg
Dimensions	W: 483 mm H: 133 mm D: 345 mm (3 HE, 19")
Declaration of Performance	DoP-00376130701

## Accessories

583708.HO	Ventilation panel 1 HU with Honeywell logo
583308	Handheld microphone for VARIODYN D1 Comprio
583441.10	Backup cable RC41 VARIODYN D1
584913	Rack for Comprio
584913.R	Rack for Comprio (mounting included)
583414	Cable set 24 V DC-VARIODYN D1 Comprio / 4XD125B or 4XD250B
581732	Battery 12 V / 65 Ah
581340	Periphery clamp for top-hat rail
583466A	Patch cable CAT5, 0.5 m gray (periphery)
583467A	Patch cable CAT5, 1 m gray (periphery)
583469A	Patch cable CAT5, 3 m gray (periphery)
583483	Patch cable CAT5, 3 m blue (DAL)
583452.21	Cable for cabinet rear panel DOM4-24
583477.21	Output cable 2 amplifier DOM
583491	Input cable DOM amplifier, 0.5 m green
583496	End-of-line module (EOL)
581310	Measuring microphone for D1 AVC in a 5" recessed ceiling housing
581316	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts



580242

Four-channel amplifier 4XD125B



### Features

- EN 54-4 and EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- Class D technology, efficiency > = 80 %
- 4 independent amplifier channels
- One of four amplifier channels can be used as general back up channel
- One height unit
- Ideal for use with the VARIODYN D1 Comprio
- Self-monitoring and self-test by microcontroller
- Protected against overload, short circuit and overheating
- Smooth and fast step-down in 1dB steps in the event of overdrive or over load
- 24 V DC PSU for back up mains power
- Integrated battery charger according to EN 54-4 for charging batteries up to a capacity of 65 Ah (2 x 12 V / 65 Ah) for emergency power supply of the amplifier and one Comprio or DOM
- Temperature controlled variable speed fans

### Part of EN 54-16 approval

Four-channel power amplifier with built in battery charger for emergency power supply of VARIODYN D1 Comprio. 4XD125B has 4 independent amplifier channels each with 125 W in class D direct drive technology. Due to the fact that all amplifier channels are completely independent from each other, it is possible to use one channel for back up. This could be for the other 3 channels or alternatively for other amplifier channels of other amplifiers with the same or lower output power (only 4XDxxxB models). The amplifier may be used with the VARIODYN D1 Comprio, as well as a DOM. It is also possible to use the amplifier with a separate PSU, in this case the internal battery charger must be disabled.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Rated current	2.95 A
Power output	4 x 125W
Emergency power supply	24 V DC
Technology	Class D
Transmission range	20 ... 22000 Hz
Load impedance	> 20 kΩ (balanced)
Channel separation	> 42 dB
Harmonic distortion at nominal level	< 0.3 %
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 55 °C
Air humidity	0 ... 93 %
Color	gray, similar to RAL 7016
Weight	approx. 9 kg
Dimensions	W: 483 mm H: 44 mm D: 402 mm 1 HU, 19"
Declaration of Performance	DoP-00376130701



The amplifier 4XD125B is not suitable for use with VARIODYN D1 loop technology.

### Accessories

583491	Input cable DOM amplifier, 0.5 m, green (two units required)
583477.21	Output cable 2 amplifier DOM
583414	Cable set 24 V DC VARIODYN D1 Comprio / 4XD
583413	Cable set for connecting the batteries to the 4XDxxxB amplifiers

580243

Four-channel amplifier 4XD250B



### Features

- EN 54-4 and EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- Class D technology, efficiency > = 80 %
- 4 independent amplifier channels
- One of four amplifier channels can be used as general back up channel
- Two Height Unit (2 HU)
- Ideal for use with the VARIODYN D1 Comprio
- Self-monitoring and self-test by microcontroller
- Protected against overload, short circuit and overheating
- Smooth and fast step-down in 1dB steps in the event of overdrive or over load
- 24 V DC PSU for back up mains power
- Integrated battery charger according to EN 54-4 for charging batteries up to a capacity of 65 Ah (2 x 12 V / 105 Ah) for emergency power supply of the amplifier and one Comprio or DOM
- Temperature controlled variable speed fans

### Part of the EN 54-16 approval

Four-channel amplifier with integrated battery recharging system for the emergency power supply to the VARIODYN D1 Comprio. The 4XD250B features 4 independent amplifier channels, each with 250 W, in class D direct drive technology. Due to the fact that all amplifier channels are completely independent from each other, it is possible to use one channel for back up. This could be for the other 3 channels or alternatively for other amplifier channels of other amplifiers with the same or lower output power (only 4XDxxxB and 4XDxxxW models). The amplifier can be used in combination with the VARIODYN D1 Comprio as well as with a DOM. It is also possible to use the amplifier also with a separate PSU, the internal PSU must be switched of then. In this case the internal battery charger must be disabled.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Power output	4 x 250W
Emergency power supply	24 V DC
Technology	Class D
Transmission range	20 ... 22000 Hz
Channel separation	> 75 dB
Harmonic distortion at nominal level	< 0.3 % @ 1 kHz
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 55 °C
Air humidity	0 ... 93 %
Color	gray, similar to RAL 7016
Weight	approx. 12 kg
Dimensions	W: 483 mm H: 90 mm D: 408 mm
Declaration of Performance	DoP-00376130701

### Accessories

583491	Input cable DOM amplifier, 0.5 m, green (two times needed)
583477.21	Output cable 2 amplifier DOM
583414	Cable set 24 V DC VARIODYN D1 Comprio / 4XD
583413	Cable set for connecting the batteries to the 4XDxxxB amplifiers



583308

## Hand-held microphone for VARIODYN D1 Comprio



### Part of EN 54-16 approval

Hand-held microphone with announcement key in order to talk directly into the Comprio control unit. The microphone is inserted into the socket directly on the front of the Comprio, and can also be mounted there.

### Technical Data

Declaration of Performance	DoP-00376130701
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581732

## Battery 12 V / 65 Ah



Emergency battery for usage in emergency power supply of Voice Alarm applications. Required per 2 pieces.

### Technical Data

Weight	approx. 21.3 kg
Dimensions	W: 348 mm H: 178 mm D: 163 mm

581730

## Battery for emergency power supply 12 V / 105 Ah



Emergency battery for usage in emergency power supply of Voice Alarm applications.

### Technical Data

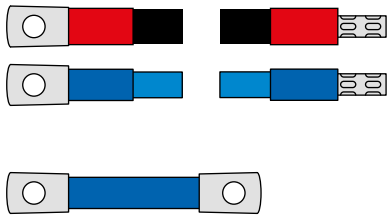
Weight	approx. 32.5 kg
Dimensions	L: 502 mm W: 111 mm H: 236 mm

### Features

- Optimized for using in 19"-cabinets
- Front terminal

583413

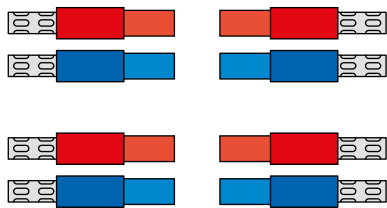
### Cable set for connecting batteries to VARIODYN D1 4DxxxB amplifier



Standard cable set for internal housing connection of the batteries to the amplifier 4XD125B or 4XD250B.

583414

### Cable set 24 V DC VARIODYN D1 Comprio 4XD



Standard cable set for connecting Comprios to the amplifier 4XD125B or 4XD250B.

583491A

### CAT5 patch cable, 0,5 m green (DOM to amplifier)



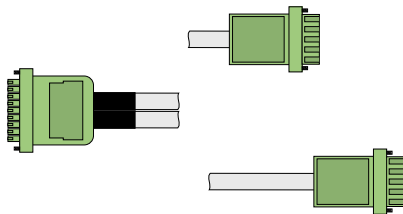
Prefabricated cable from the DOM to the 2-channel power amplifier. If a 4 channel amplifier is used, this cable is needed two times.

#### Technical Data

Color	green
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583477.21

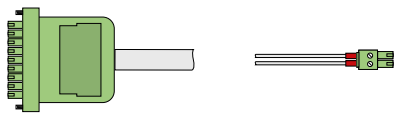
### Output cable 2 amplifier DOM



Prefabricated cabling of power amplifiers, 4 channels (max. 100 V) to the DOM.

583441.10

### Backup cable RC 41 VARIODYN D1, 0.5 m



Prefabricated cabling of a general average channel on 3 user channels, for the 3:1 average in conjunction with a four-channel amplifier 4XD125B (Part No. 580242) or 4XD250B (Part No. 580243). Length 2 m. Short version for Comprio applications.

## Loop Technology LIM

Technology has developed rapidly in the area of electronics in recent years. This has opened up a host of new possibilities for optimizing existing technical solutions and developing new, innovative products. This trend can also be noted in the area of voice alarms.

### Spur circuit versus loop wiring system

In the past, 100 V loudspeaker lines were designed exclusively using spur technology. This led to a high risk of failure, because if one spur circuit was interrupted, all the loudspeakers after the wire break would fail. The entire spur circuit would go down in the case of a short circuit.

### Minimizing the risk of failure

To minimize this risk of failure in the case of a wire break or short circuit, A/B wiring was used for a long time for based systems on DIN VDE 0833-4 (safety level 2 and 3).

In the case of A/B wiring, half of the loudspeakers in a room are operated on different loudspeaker lines.

This means that in the case of a basic line fault, such as a wire break or short circuit, half of the loudspeakers in the relevant area will still be in operation.

If half of the loudspeakers fail and the alarms are therefore operating at half power, the sound level is reduced by about 3 dB if the loudspeakers are arranged correctly.

VARIODYN D1 loop technology is a new technology for optimizing the reliability of the loudspeaker connection.

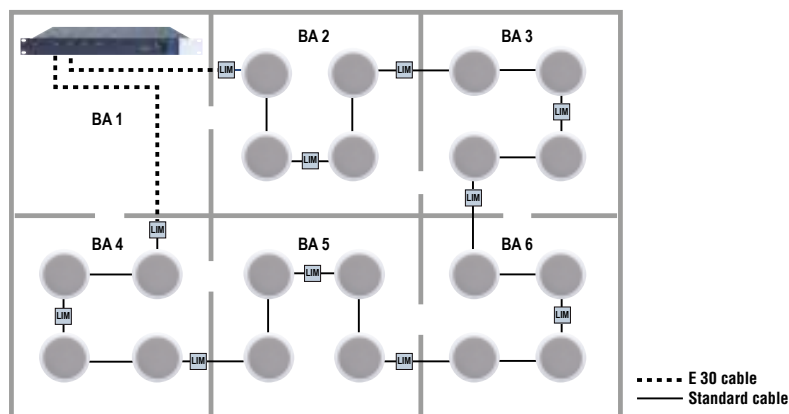
With this new type of technology, a wire-break and short-circuit-resistant loop is constructed, similar to the case of fire detection technology.

### One of the first systems on the market

VARIODYN D1 is one of the first voice alarm systems on the market with this loop wiring system technology. This new technology is based on the proven DOM4-8 which is used for creating up to 4 wire-break and short-circuit-resistant loops. On each of these 4 loops, up to 64 loop isolator modules can be used. Impedance monitoring is used in terms of monitoring technology, which, unlike other solutions, does not require coupling capacitors in the loudspeakers. The loop isolator modules monitor the loudspeaker loop in connection with the DOM isolate the faulty piece of wire from the loop in the case of a short circuit. This means that if each loudspeaker is equipped with a loop isolator module, 100 % system reliability is ensured in the case of a basic line fault.

### The main advantages of this loop technology are as follows:

- 100 % system reliability when each loudspeaker is provided with a loop isolator module
- A/B wiring can be replaced easily
- Only minimum E30 cables needed
- Considerable cost savings for wiring and installation
- Second loudspeaker not necessary in small rooms



583342

Loop Isolator Module LIM




Approval: EN 54-17

Loop Isolator Module to install a short-circuit and open-circuit tolerant 100 V loudspeaker loop wiring system in VARIODYN D1 loop technology. The modules monitor the current on the loudspeaker ring and disconnect in case of over-current, e.g. in the case of short-circuit, the defective part of the ring from the rest. Loop failures are displayed on DOM and VCM. Each module has a total of three two-pole terminals to connect the loop wiring system and the speakers. Wires can be connected with a section of up to 2.5 mm<sup>2</sup> to the terminals. Furthermore, a LED of its operating condition is on each module. The Loop Isolator module is housed in a stable, compact IP 66 housing with more of wiring space and is can be use in projects with difficult environmental condition, e.g. industrial use.

Features

- Much higher safety compared to spur cabling
- Fully redundant 100 V loop wiring system technology
- Extensive topologies are possible
- Short-circuit and wire break tolerant
- EN 54-17 certified
- Large saving in wiring and installation

Power amplifier	Max. LIM number	Max. loop length incl. spurs
2XD250	40	1000
2XD400	64	1000
4XD250B	25	500
4XD300	40	1000
4XD500	50	1000

 Please consider that the 4XD125B is not compatible with the loop technology!

## 580231



### Features

- Compliant with EN 60849 and EN 50849
- EN 54-16 certified
- Class D two channel amplifier
- Protected against overload and short- circuits
- Protected against overheating
- Monitoring by VARIODYN D1 DOM
- 24 V DC emergency power supply input

### General display element

- System voltage (green LED)
- CPU status (green LED)
- Combined fault (yellow LED)
- 24 V emergency power supply (yellow LED)

### Display element per amplifier channel

- Operation (green LED)
- Amplifier channel status (green LED)
- Amplifier channel error (yellow LED)
- Clip display (yellow LED)

## Power amplifier 2XD250

### Part of EN 54-16 approval

The power amplifier has two independent amplifier channels, each with 250 Watt and is compatible to VARIODYN D1 system. The power amplifiers are controlled and monitored by VARIODYN D1 Comprio DOM4-8 or DOM4-24.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Rated current	2.8 A
Power output	2 x 250 W (sin, @ 40 W)
Emergency power supply	24 V DC
Technology	Class D
Transmission range	50 ... 22000 Hz
Input level	0 dBu
Load impedance	> 20 kΩ (symmetrically)
Harmonic distortion at nominal level	< 0.3 % @ 1 kHz
Efficiency	> 80 % (at max. level)
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 55 °C
Air humidity	0 ... 93 %
Color	gray, similar to RAL 7016
Weight	approx. 16.5 kg
Dimensions	W: 482 mm H: 89 mm D: 402 mm (2 HU, 19")
Declaration of Performance	DoP-20997130701

### Accessories

583491	Cable DOM-XV for amplifier audio input and remote control
583476.21	Cable XV-DOM for amplifier audio output (for 1 amplifier @ one DOM or Comprio)
583477.21	Cable XV-DOM for amplifier audio output (for 2 amplifier @ one DOM or Comprio)
583703	Mounting set 1

## 580232



### Features

- Compliant with EN 60849 and EN 50849
- EN 54-16 certified
- Class D two channel amplifier
- Protected against overload and short- circuits
- Protected against overheating
- Cooling by way of controlled ventilation
- Monitoring by VARIODYN D1 DOM
- 24 V DC emergency power supply input

### General display element

- System voltage (green LED)
- CPU status (green LED)
- Combined fault (yellow LED)
- 24 V emergency power supply (yellow LED)

### Display element per amplifier channel

- Operation (green LED)
- Amplifier channel status (green LED)
- Amplifier channel error (yellow LED)
- Clip display (yellow LED)

## Power amplifier 2XD400

### Part of EN 54-16 approval

The power amplifier has two independent amplifier channels, each with 400 Watt and is compatible to VARIODYN D1 system. The power amplifiers are controlled and monitored by VARIODYN D1 Comprio DOM4-8 or DOM4-24.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz
Rated current	4.5 A
Power output	2 x 400 W (sin, @ 25 W)
Emergency power supply	24 V DC
Technology	Class D
Transmission range	50 ... 22000 Hz
Input level	0 dBu
Load impedance	> 20 kΩ (symmetrically)
Harmonic distortion at nominal level	< 0.3 % @ 1 kHz
Efficiency	> 80 % (at max. level)
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 55 °C
Air humidity	< 93 %
Weight	approx. 19 kg
Dimensions	W: 482 mm H: 89 mm D: 402 mm (2 HU, 19")
Declaration of Performance	DoP-20997130701

### Accessories

583491	Cable DOM-XV for amplifier audio input and remote control
583476.21	Cable XV-DOM for amplifier audio output (for 1 amplifier @ one DOM or Comprio)
583477.21	Cable XV-DOM for amplifier audio output (for 2 amplifier @ one DOM or Comprio)
583703	Mounting set 1

580242

Four-channel amplifier 4XD125B



### Features


- EN 54-4 and EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- Class D technology, efficiency > = 80 %
- 4 independent amplifier channels
- One of four amplifier channels can be used as general back up channel
- One height unit
- Ideal for use with the VARIODYN D1 Comprio
- Self-monitoring and self-test by microcontroller
- Protected against overload, short circuit and overheating
- Smooth and fast step-down in 1dB steps in the event of overdrive or over load
- 24 V DC PSU for back up mains power
- Integrated battery charger according to EN 54-4 for charging batteries up to a capacity of 65 Ah (2 x 12 V / 65 Ah) for emergency power supply of the amplifier and one Comprio or DOM
- Temperature controlled variable speed fans

### Part of EN 54-16 approval

Four-channel power amplifier with built in battery charger for emergency power supply of VARIODYN D1 Comprio. 4XD125B has 4 independent amplifier channels each with 125 W in class D direct drive technology. Due to the fact that all amplifier channels are completely independent from each other, it is possible to use one channel for back up. This could be for the other 3 channels or alternatively for other amplifier channels of other amplifiers with the same or lower output power (only 4XDxxxB models). The amplifier may be used with the VARIODYN D1 Comprio, as well as a DOM. It is also possible to use the amplifier with a separate PSU, in this case the internal battery charger must be disabled.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Rated current	2.95 A
Power output	4 x 125W
Emergency power supply	24 V DC
Technology	Class D
Transmission range	20 ... 22000 Hz
Load impedance	> 20 kΩ (balanced)
Channel separation	> 42 dB
Harmonic distortion at nominal level	< 0.3 %
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 55 °C
Air humidity	0 ... 93 %
Color	gray, similar to RAL 7016
Weight	approx. 9 kg
Dimensions	W: 483 mm H: 44 mm D: 402 mm 1 HU, 19"
Declaration of Performance	DoP-00376130701

 The amplifier 4XD125B is not suitable for use with VARIODYN D1 loop technology.

### Accessories

583491	Input cable DOM amplifier, 0.5 m, green (two units required)
583477.21	Output cable 2 amplifier DOM
583414	Cable set 24 V DC VARIODYN D1 Comprio / 4XD
583413	Cable set for connecting the batteries to the 4XDxxxB amplifiers

580243

Four-channel amplifier 4XD250B



### Features

- EN 54-4 and EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- Class D technology, efficiency > = 80 %
- 4 independent amplifier channels
- One of four amplifier channels can be used as general back up channel
- Two Height Unit (2 HU)
- Ideal for use with the VARIODYN D1 Comprio
- Self-monitoring and self-test by microcontroller
- Protected against overload, short circuit and overheating
- Smooth and fast step-down in 1dB steps in the event of overdrive or over load
- 24 V DC PSU for back up mains power
- Integrated battery charger according to EN 54-4 for charging batteries up to a capacity of 65 Ah (2 x 12 V / 105 Ah) for emergency power supply of the amplifier and one Comprio or DOM
- Temperature controlled variable speed fans

### Part of the EN 54-16 approval

Four-channel amplifier with integrated battery recharging system for the emergency power supply to the VARIODYN D1 Comprio. The 4XD250B features 4 independent amplifier channels, each with 250 W, in class D direct drive technology. Due to the fact that all amplifier channels are completely independent from each other, it is possible to use one channel for back up. This could be for the other 3 channels or alternatively for other amplifier channels of other amplifiers with the same or lower output power (only 4XDxxxB and 4XDxxxW models). The amplifier can be used in combination with the VARIODYN D1 Comprio as well as with a DOM. It is also possible to use the amplifier also with a separate PSU, the internal PSU must be switched of then. In this case the internal battery charger must be disabled.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Power output	4 x 250W
Emergency power supply	24 V DC
Technology	Class D
Transmission range	20 ... 22000 Hz
Channel separation	> 75 dB
Harmonic distortion at nominal level	< 0.3 % @ 1 kHz
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 55 °C
Air humidity	0 ... 93 %
Color	gray, similar to RAL 7016
Weight	approx. 12 kg
Dimensions	W: 483 mm H: 90 mm D: 408 mm
Declaration of Performance	DoP-00376130701

### Accessories

583491	Input cable DOM amplifier, 0.5 m, green (two times needed)
583477.21	Output cable 2 amplifier DOM
583414	Cable set 24 V DC VARIODYN D1 Comprio / 4XD
583413	Cable set for connecting the batteries to the 4XDxxxB amplifiers



## 580248.11



### Features

- Built- in electronic protective circuit against thermal overload, DC signals, sub frequent signals, short circuit, open outputs and HF interference
- Individual status LEDs indicate channel CLIP, PROTECT, SIGNAL, POWER, LINE and 24 V DC power Back switch contact for sequential remote power
- 2 back fault message contacts
- Back fault message contact for missing 24 V emergency power supply
- 24 V emergency power supply input
- Suitable for use with loop technology

## Four-channel amplifier 4XD300

### Part of the EN 54-16 approval

Power amplifier for the voice alarm system VARIODYN D1 in class D technologies with four independent power channels and galvanic isolated 100 V direct outputs, symmetric inputs, inrush current limitation and soft start. In comparison to our 4XDxxxB series amplifiers, one amplifier can back up another amplifier.

Four built-in fans with smooth temperature controlled speed control.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Power output	4 x 300 W
Emergency power supply	24 V DC
Technology	Class D
Channel separation	> 92 dB
Harmonic distortion at nominal level	< 0.02 %
Ambient temperature	-5 °C ... 55 °C
Air humidity	40 ... 93 %
Color	gray, similar to RAL 7016
Weight	approx. 13.8 kg
Dimensions	W: 484 mm H: 88 mm D: 400 mm (2HU 19")

### Accessories

583491	Input cable DOM-amplifier, 0.5 m green (two units required)
583477.21	Output cable 2 amplifier -DOM

## 580249.11



### Features

- Built- in electronic protective circuit against thermal overload, DC signals, sub frequent signals, short circuit, open outputs and HF interference
- Individual status LEDs indicate channel CLIP, PROTECT, SIGNAL, POWER, LINE and 24 V DC power Back switch contact for sequential remote power
- 2 back fault message contacts
- Back fault message contact for missing 24 V emergency power supply
- 24 V emergency power supply input
- Suitable for use with loop technology

## Four-channel amplifier 4XD500

### Part of the EN 54-16 approval

Power amplifier for the voice alarm system VARIODYN D1 in class D technologies with four independent power channels and galvanic isolated 100 V direct outputs, symmetric inputs, inrush current limitation and soft start. In comparison to our 4XDxxxB series amplifiers, one amplifier can back up another amplifier.

Four built-in fans with smooth temperature controlled speed control.

### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Power output	4 x 500 W
Emergency power supply	24 V DC
Technology	Class D
Channel separation	> 92 dB
Harmonic distortion at nominal level	< 0.02 %
Ambient temperature	-5 °C ... 55 °C
Color	gray, similar to RAL 7016
Weight	approx. 14 kg
Dimensions	W: 484 mm H: 88 mm D: 400 mm (2 HU 19")

### Accessories

583491	Input cable DOM amplifier, 0.5 m, green (two units required)
583477.21	Output cable 2 amplifier DOM

## 580261

### Four-channel amplifier 4XV300



Power amplifier for the voice alarm system VARIODYN D1 in class D technology with four independent power channels and galvanic isolated 100 V direct outputs, symmetric inputs, inrush current limitation and soft start.

Four built-in fans with smooth temperature controlled speed control.

#### Features

- Power amplifier 4-channel, 100 V outputs
- Efficiency higher than 80 %
- Control and monitoring by DOM
- Integrated electronic protection against thermal overload and short-circuit on the output

#### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz (+10 % / -5 %)
Power output	4x 300 W
Technology	Class D
Transmission range	20 ... 20000 Hz
Load impedance	> 20 kΩ (symmetrically)
Harmonic distortion at nominal level	< 0.03 % @ 1 kHz
Ambient temperature	-5 °C ... 55 °C
Storage temperature	-10 °C ... 55 °C
Air humidity	0 ... 93 %
Color	gray, similar to RAL 7016
Weight	approx. 12 kg
Dimensions	W: 484 mm H: 88 mm D: 400 mm (2 HU 19")

#### Accessories

583444	Backup cable RC 44
583491	Input cable DOM amplifier (2 x required)
583477.21	Output cable 4XV amplifier DOM 583477.21

## 580262

### Four-channel amplifier 4XV500



As 580261, but with 500 Watt power.

Redundant Call Station

583520

**NEW**



**Features**

- High failure safety due to redundant transmission route
- Cost-effective CAT5 cabling
- Electret gooseneck microphone with cardioid pattern
- Exchangeable gooseneck microphone with protection by using a specific tool to lock/unlock
- Permanent monitoring of the microphone and cable
- Mechanical protection against cable disconnection
- Build-in loudspeaker for monitoring and for intercom operation between other paging stations
- Independent additional audio input/output e.g. for audio player
- 12 freely configurable keys with independent programmable LEDs

Digital Call Station DCS plus

**Part of the EN 54-16 approval**

The digital call station DCS plus allow the selection of loudspeaker circuits, the transmission of voice announcements as well as various gongs and alarms. The digital call station is connectable via a standard CAT5 cable to the VARIODYN D1 control devices DOM and Comprio. All control signals, up to four simultaneous audio signals and the power supply are transmitted. This connection can be done by single or redundant cabling up to 300 m away. It can be increased to 20 Kilometers by using fiber-optic cabling.

The digital call station DCS plus can be expanded with up to six digital keyboard modules DKM plus, whereby the total number of available keys and LEDs increases to 120 per communication station.

The function of the microphone and the cable connection is permanently monitored. The DCS plus provides an additional external audio input and output, which can be used to connect audio devices such as CD players. A 3 m long CAT5 cable to connect the digital call station to a wall jack is included.

**Technical Data**

Nominal level	0 dBu
Transmission range	60 ... 22000 Hz
Nominal level	0 dBu
Microphone	Electret, uni-directional
Swan-neck	400 mm
Loudspeaker	2W
Sample rate	48 kHz
AD/DA converter	24 Bit
Current consumption	< 70 mA
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 95 %
Color	Black, similar to RAL 9005
Weight	approx. 1.42 kg
Dimensions	W: 200 mm H: 49.4 mm D: 200 mm

The Digital Call Station DCS plus may be embedded in the surface of a table.

A 3 m long CAT5 cable to connect the digital call station to a wall jack is included in delivery.

**Accessories**

583526 Digital Key Module DKM plus

**Redundant Connection to Two DOMs\***

**Single Connection**



583526

**NEW**



**Features**

- Daisy chain cabling from DCS plus to one or more DKM plus
- Mechanical connection to DCS plus and further DKM plus

Digital Key Module DKM plus

**Part of the EN 54-16 approval**

The Digital Key Module DKM plus offer 18 freely configurable keys and 18 LEDs. Up to six Digital Key Module DKM plus can be connected to a Digital Call Station DCS plus. This allows communication stations with up to 120 keys and 120 LEDs.

**Technical Data**

Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 95 %
Color	Black, similar to RAL 9005
Weight	approx. 1.22 kg
Dimensions	W: 200 mm H: 49.4 mm D: 200 mm

The Digital Key Module DKM plus may be embedded in the surface of a table.



**Features**


- High failure safety due to redundant transmission route
- Cost-effective CAT5 cabling
- Elektret gooseneck microphone with cardioid pattern
- Permanent monitoring of the microphone and cable
- Loudspeaker for monitoring and for intercom operation between other paging stations (DCS series)
- 24-bit AD/DA converter
- Independent additional audio input/output e.g. for audioplayer
- 12 freely configurable keys with independent programmable LED
- A separate LED, programmable in yellow or red
- Can be used redundantly as well as non-redundantly


**Part of the EN 54-16 approval**

In many installation codes it is necessary to have redundancy in critical signal routes like speaker cables (Loop or AB cabling), between fire panel and the PAVA system. In some installation codes this includes also the connection to the fire men paging microphone. If the connection is lost, there is no way for any live announcement to people which are potentially or actually in high danger. Our paging station supports redundant cable connections to two separate Comprio with Ethernet (not standalone version of Comprio) or DOM. This means it is possible to connect two (CAT5) cables to one paging station providing redundant operation. For redundant operation, two cables (CAT5) connected to one paging microphone are needed. The digital paging microphone DCS15 RE serves for the selection of loudspeaker circuits and for setting off speech announcements as well as various gong or alarm sounds. It features 12 freely configurable keys, 13 LED's and a gooseneck microphone. The paging microphone is connected with our DAL (Digital Audio Link) bus to a Comprio or DOM by a standard CAT5 cable. All audio signals and all control signals are transmitted digitally. The function of the microphone of the digital paging microphone is permanently acoustically monitored. The DCS15 RE also provides an external audio input and output which can be used for connecting audio devices such as CD players. Up to four DAL bus links can be connected to a DOM. Every DCS in the system can simultaneously generate and receive different voice transmissions and control signals. A digital paging microphone can be offset up to 300 m by means of a CAT5 cable. Extension to a greater distance is possible with fiber optic (FO) cables - see respective FO converters which are needed additionally. A redundant connection with FO cables can be achieved. If more keys and/or LEDs are needed, it is possible to add up to six digital key modules (DKM18), which allows the increase of the total number of available keys and LEDs to 120 per call station.

**Technical Data**

<b>Audio output:</b>	
Nominal level	0 dBu
Transmission range	20 ... 22000 Hz
<b>Audioinput:</b>	
Nominal level	0 dBu
<b>Common technical data:</b>	
Microphone	Elektret, cardioid characteristic
Swan-neck	250 mm
Loudspeaker	1 W
Sample rate	48 kHz
AD/DA converter	24 Bit
Current consumption	< 70 mA
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Color	black, similar to RAL 9005 (side frames) gray, similar to RAL 7037 (middle body)
Weight	approx. 1.6 kg
Dimensions	W: 123 mm H: 71 mm D: 180 mm
Declaration of Performance	DoP-20997130701

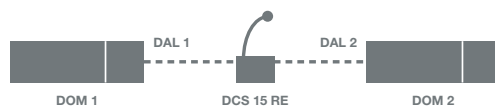
 The digital call station may be embedded in the surface of a table, for which a table mounting kit is required. In order to protect from unintentional key press, a transparent key cap is available. Pressing of keys is only possible with open caps. Each cap will protect three horizontal keys.

 A 3 m long CAT5 cable for connecting the digital communication unit to a wall jack, is included in delivery.

**Accessories**

- |        |   |
|--------|---|
| 583506 | Digital push-button module DKM 18 for redundant call stations |
| 583311 | Keyboard protection for call station DCS VARIODYN D1          |
| 583507 | Installation kit for redundant DCS                            |
| 583318 | Substitute key caps (PU 12 pieces)                            |

**Redundant Connection to Two DOMs\***



**Single Connection**



583502.RE

Digital Call Station DCS2 redundant



Part of the EN 54-16 approval

As Part No. 583501.RE, however, with only one free configurable key, two LEDs, one microphone and one speaker. An additional audio input/output is not available with this device.

Technical Data

Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Color	gray, similar to RAL 7037
Weight	approx. 1.6 kg
Dimensions	W: 123 mm H: 71 mm D: 180 mm
Declaration of Performance	DoP-20997130701

Features

- High failure safety due to redundant transmission route
- A light emitting diode, programmable in yellow or red
- Can be used redundantly as well as non-redundantly



A 3 m long CAT5 cable for connecting the digital communication unit to a wall jack, is included in delivery.

Accessories

583507 Installation kit for redundant DCS

583506

Digital Key Module DKM18 for redundant call stations



Part of the EN 54-16 approval

Digital key module DKM18 with 18 freely configurable keys and 18 LEDs. Up to 6 of these DKM18 key modules can be connected to a redundant DCS15 or DCS2. This allows for redundant call stations with up to 120 keys and 120 LEDs. Only suitable for call stations with the .RE suffix. Please note this unit is not suitable for use with the older 58330X.21 call stations. If you need to replace or add a DKM to a 58330x.21 station please contact sales support.

Technical Data

Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Color	gray, similar to RAL 7037
Weight	approx. 1.6 kg
Dimensions	W: 123 mm H: 71 mm D: 180 mm
Declaration of Performance	DoP-20997130701

Accessories

583507 Installation kit for redundant DCS

583529

Keyboard cover for DCS plus und DKM plus

Transparent key cap to protect from accidental key presses. So, pressing the keys is only possible with an open cap. With one of these caps, three horizontally arranged keys of a digital call station DCS plus or a digital key module DKM plus can be protected.

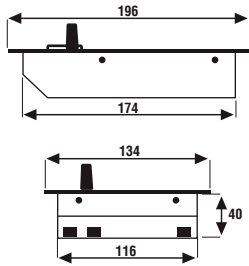


This product will be available with Q3/2018.

Redundant fire brigade stations

583503.RE

Digital firefighter microphone DCSF12 redundant



Features

- High failure safety due to redundant transmission route
- Hand-held microphone with built-in loudspeaker and acoustic microphone monitoring
- Permanent monitoring of the line to the next interface module
- 24-bit AD/DA converter
- 12 freely configurable keys
- Additional LED programmable in yellow or red
- Can be used redundantly as well as non- redundantly

Part of the EN 54-16 approval

In many installation codes it is necessary to have redundancy in critical signal routes like speaker cables (Loop or AB cabling), between fire panel and the PAVA system. In some installation codes this includes also the connection to the fire men paging microphone. For very good reason, because if the connection to the call station is lost, there is no way for any live announcement to people which are potential or actually in high danger.

Our paging station also supports redundant cable connection to two separate Comprio (not standalone Version of Comprio) or DOM's which means it's possible to connect two cables (CAT5) to one paging station. The digital paging microphone DCSF12 serves for the selection of loudspeaker circuits and for setting off speech announcements as well as various gong or alarm sounds. It features 12 freely configurable keys, 13 LED and a handheld microphone. The paging microphone is connected with our DAL (Digital Audio Link) bus to a Comprio or DOM by means of a standard CAT5 cable. All audio signals and all control signals are transmitted digitally. The function of the digital paging microphone is permanently acoustically monitored.

Up to four DAL bus links can be connected to a DOM. Every digital call station in the system can simultaneously generate and receive different voice transmissions and control signals. A digital paging microphone can be offset up to 300 m by means of a CAT5 cable. Extension to a greater distance is possible with fiber optic (FO) cables - see respective FO converters which are needed additionally. Also a connection with FO cables can be done redundant. If more keys and/or LEDs are needed, it is possible to add up to six digital key modules (DKM18), which allows the increase of the total number of available keys and LEDs to 120 per call station.

Technical Data

Microphone	Elektret, cardoid characteristic
Loudspeaker	1 W
Sample rate	48 kHz
AD/DA converter	24 Bit
Current consumption	< 150 mA
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Color	gray, similar to RAL 7037
Weight	approx. 1.6 kg
Dimensions	W: 134 mm H: 40 mm D: 196 mm
Declaration of Performance	DoP-20997130701

In order to protect from unintentional key press, a transparent key cap is available. Pressing of keys is only possible with open caps. Each cap will protect three horizontal keys.

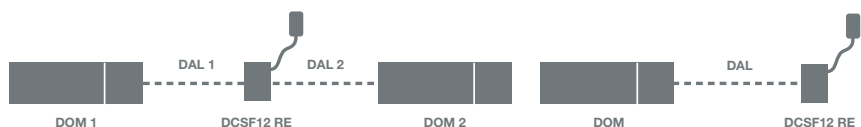
A 3 m long CAT5 cable for connecting the digital communication unit to a wall jack, is included in delivery.

Accessories

- 583506 Digital push-button module DKM 18 for redundant call stations
- 583311 Keyboard protection for call station DCS VARIODYN D1
- 583316.21 FO conversion for OIM control panel VARIODYN D1
- 583317.21 FO conversion for digital call stations DCS VARIODYN D1
- 583315.02 PSU for FO converter DCS O VARIODYN D1
- 583307 Wall junction box for call station DCS VARIODYN D1
- 583318 Substitute key caps (PU 12 pieces)
- 583709 Blind cover for the installation of a DCSF12 or a DCSF1 in the upright cabinet
- 584961 Enclosure for one FB call station DCSF
- 584962 Enclosure for two FB call stations DCSF

Redundant Connection to Two DOMs\*

Single Connection





## 583504.RE



### Features

- High failure safety due to redundant transmission route
- A light emitting diode, programmable in yellow or red
- Can be used redundantly as well as non-redundantly
- Hand-held microphone with built-in loud speaker and acoustic microphone monitoring
- Permanent monitoring of the line to the next interface module
- 24-bit AD/DA converter

## Digital firefighter microphone DCSF1 redundant

### Part of the EN 54-16 approval

Same as Part No. 583503.RE but with one freely configurable key, two LEDs and a manual microphone with a built-in loudspeaker.

### Technical Data

Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Color	gray, similar to RAL 7037
Weight	approx. 1.6 kg
Dimensions	W: 134 mm H: 196 mm D: 40 mm
Declaration of Performance	DoP-20997130701

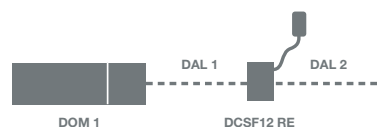


A 3 m long CAT5 cable for connecting the digital communication unit to a wall jack, is included in delivery.

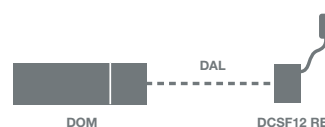
### Accessories

583709	Dummy plate
584961	Enclosure for one FB call station DCSF
584962	Enclosure for two FB call station DCSF

### Redundant Connection to Two DOMs\*



### Single Connection



## 583505.RE



### Features

- Five freely-programmable buttons for alarms
- One freely configurable button for the all-clear signal
- One button for resetting/acoustics
- Three integrated LED (Operation, Fault, Occupied)
- Hand-held microphone with cardioid characteristics and PTT talk button
- Optional fiber optic connection for distances of up to 2000 m
- EN 54-16 certified

## Fire Brigade Call Station DCSF7

### Part of EN 54-16 approval

The Digital Fire Brigade Call Station DCSF7 serves to dial and start pre-configured alarm text messages and to broadcast voice announcements by the fire brigade.

This call station is designed for the use in Austria. The buttons are labeled in German language, but can easily be replaced in local language

The Digital Fire Brigade Call Station DCSF7 is used along with ENS VARIODYN D1 and contains a hand-held microphone with talk button, operation/display elements and an inbuilt loudspeaker for acoustic microphone monitoring and the acoustic error message to be broadcast.

All other features, including the redundant cabling are as per the DCS and DSCF call stations.

### Technical Data

Operating voltage	24 V DC
Microphone	Manual microphone, cardioid characteristic, Push-To-Talk (PTT) button
Loudspeaker	1 W
Sample rate	48 kHz
AD/DA converter	24 Bit
Current consumption	< 150 mA
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Color	red, similar to RAL 3000 (housing) white, similar to RAL 9002 (key pad)
Weight	approx. 2 kg
Dimensions	W: 200 mm H: 300 mm D: 55 mm
Declaration of Performance	DoP-20997130701

### Accessories

583316.21	LWL-Converter-Central
583317.21	LWL-Converter-communication unit
583318	Replacement-Key caps (VPE 12 pieces)

### Redundant Connection to Two DOMs\*



### Single Connection



Accessories for paging microphones

584961


Enclosure for a firefighter paging microphone DCSF



Wall enclosure manufactured out of sheet steel for the inclusion a firefighter paging microphone DCSF12 (Part No. 583503.RE) or DCSF (Part No. 583504.RE) in the original enclosure. Additionally you should to order an installation kit (Part No. 583507 for each DCS/DKM).

Technical Data

Type of protection	IP 30
Color	red, similar to RAL 3000
Weight	approx. 4.8 kg
Dimensions	W: 350 mm H: 265 mm D: 100 mm

 Housing including a pack with 4 screws for the installation of the call station. This call station is not included in the scope of the delivered package.

Features

- Powder coated in red, similar RAL 3000
- Door with a viewing window 180 x 120 mm with acrylic glass cover
- Internal mounting plate for installation of the DCS
- 3 cable entries on rear wall of housing
- 2 cable entries on the upper and lower housing - and -bottom side respectively
- A cable entry on the right and left of the housing
- A mounting bracket for fiber optic converter Part No. 583317.21 in the housing

Accessories

584963 Profile half-cylinder with standard closure

584962


Enclosure for one firefighter paging microphone and one DKM



Wall enclosures made of sheet steel for holding one firefighter paging microphone DCSF12 (Part No. 583503.RE) or DCSF (Part No. 583504.RE) and one DKM18 (Part No. 583306.21) in the original enclosure. Additionally you should order an installation kit (Part No. 583507) for each DCS/DKM.

Technical Data

Type of protection	IP 30
Color	red, similar to RAL 3000
Weight	approx. 8.4 kg
Dimensions	W: 350 mm H: 500 mm D: 100 mm

 Housing including accessory kit with 8 screws for assembly of the callstations. This call station is not included in the scope of the delivered package.

Features

- Powder coated in red, similar RAL 3000
- Door with 2 viewing windows 180 x 120 mm with acrylic glass cover
- Prepared to include fire closure
- Internal mounting plate for installation of the DCS/DKM
- 6 Cable entries on rear wall of housing
- 2 Cable entries on the upper and lower housing - and -bottom side respectively
- 2 Cable entries right and left of housing respectively
- 2 Mounting brackets for LWL-Converter type. Part No. 583317.21 in housing

Accessories


584963 Profile half-cylinder with standard closure

584963

Profile half-cylinder with standard closure



Profile half-cylinder with standard locking for mounting in fire brigade call station housing Part No. 584961 or 584962.

 Fastening screw and 2 keys are included in the delivery.

Accessories for Call Stations

583316.21

LWL converter multi mode



Part of EN 54-16 approval

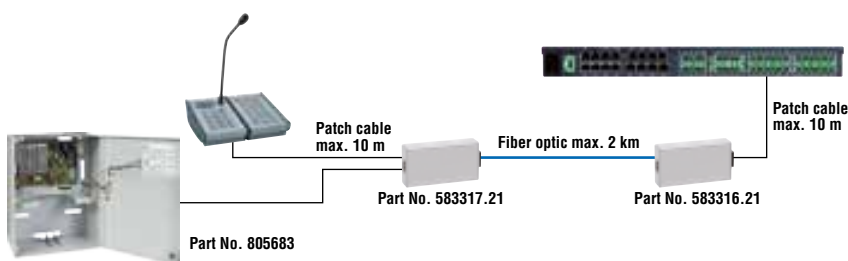
Module required for connection of digital communication units DCS or universal interface module UIM to VARIODYN D1 via multimode optical fiber. If the system is in use for VA purposes, it is necessary to provide power either from 24 V DC source or from a battery (Part No. 805683).

Technical Data

Wavelength	1308 nm
Range	< 2 km
FO-Connector	Duplex SC
Dimensions	W: 115 mm H: 55 mm D: 25 mm

Accessories

- 583315.02 Power supply for LWL converter
- 805683 External power supply DCU 2403



583316.SM

LWL converter single mode



Part of EN 54-16 approval

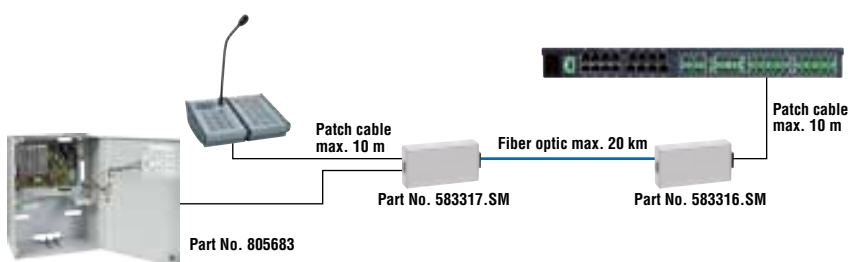
Module required for connection of digital communication units DCS or universal interface module UIM to VARIODYN D1 via multimode optical fiber. If the system is in use for VA purposes, it is necessary to provide power either from 24 V DC source or from a battery (Part No. 805683).

Technical Data

Range	< 20 km
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Accessories

- 583315.02 Power supply for LWL converter
- 805683 External power supply DCU 2403



583317.21

**LWL converter for DCS multi mode**



**Part of EN 54-16 approval**

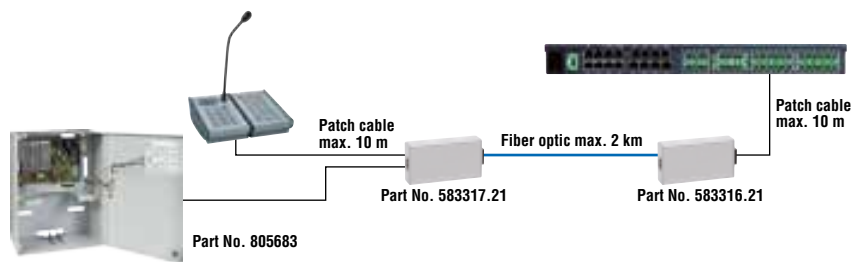
Module required for connection of digital communication units DCS or universal interface module UIM to VARIODYN D1 via multimode optical fiber. If the system is in use for VA purposes, it is necessary to provide power either from 24V DC source or from a battery (Part No. 805683).

**Technical Data**

Operating voltage	24 V DC
Current consumption @ 24 V DC	approx. 500 mA
Wavelength	1308 nm
Range	< 2 km
FO-Connector	Duplex SC
Dimensions	W: 115 mm H: 55 mm D: 25 mm

**Accessories**

- 583315.02 PSU for FO converter
- 805683 External PSU DCU 2403



583317.SM

**LWL converter for DCS single mode**



**Part of the EN 54-16 certification**

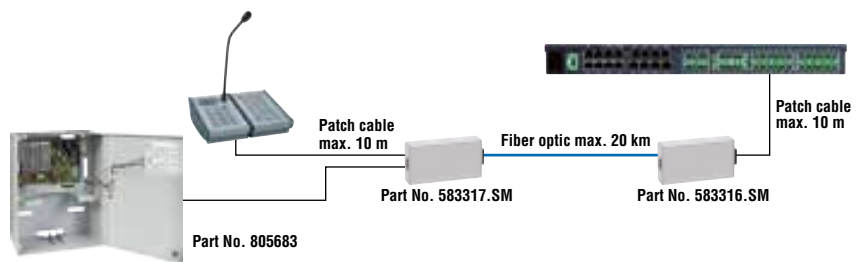
Module required for connection of digital communication units DCS or universal interface module UIM to VARIODYN D1 via multimode optical fiber. If the system is in use for VA purposes, it is necessary to provide power either from 24V DC source or from a battery (Part No. 805683).

**Technical Data**

Range	< 20 km
-------	---------

**Accessories**

- 583315.02 PSU for FO converter
- 805683 External PSU DCU 2403



583315.02

**Power supply for LWL converter**

Power supply for fiber optic converter Part No. 583317.21. For non-security applications.



583307

**Wall-surface mount terminal box for DCS**




Wall jack to connection of a communication unit of the series DCS or DCSF.

583300.HO

**Adhesive label for DCS "Esser by Honeywell"**



Label for the stations of the DCS series and DCSF with the inscription "ESSER by Honeywell."

 10 pieces

583311

**Keyboard cover for DCS VARIODYN D1 call station**



Transparent key cap to protect from accidental key presses. So, pressing the keys is only made possible with an open cap. With one of these caps, three horizontally arranged keys of a digital call station or a digital key module can be protected.

583507


**Installation kit for redundant DCS**



Installation kit for DCS15RE, DCS2RE, or DKM18. This installation kit is needed to install a paging microphone in a table surface or the 19" panel (Part No. 583709).

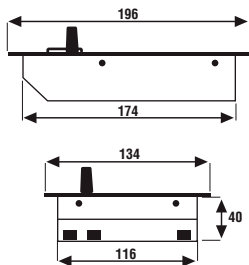
**Technical Data**

Dimensions W: 134 mm H: 40 mm D: 196 mm

 Can be used for RE versions!

**Accessories**

583709 Blind cover 4 HU



583318

**Key cap**



Replacement key caps for telephone stations of the DCS, DCFS and DKM series.

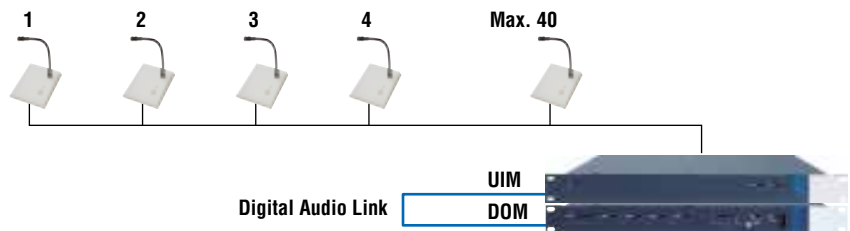
 12 pieces

Call stations for non-safety related applications

The DIGISystem M is a universal call station system for loudspeakers. Up to 40 call stations can be connected parallel, though only one NF-input and up to 5 digital inputs are used on a UIM. Processor-controlled different functions for the keys are possible. No special receiver is required in the VARIODYN system, only one UIM. The NF-output should be connected on a UIM-line input and the switching outputs to UIM-contact inputs. The control line 9 (PPT contact) is equipped to trigger this function with a minimum lag of time to prevent mechanical noise while pressing the keys.

The telephone stations are suitable for the use in departmental stores, courts, furniture stores, home improvement store etc.

The call stations are NOT for safety-related announcements, for e.g. for alerts and evacuation messages.



586102

Desktop microphone with pre chime DIGIM1



Desktop call station built-in pre chime DIGI M1. 1 writable button with LED indicator for keyboard control and busy /operating-/chime display. Processor control with programming via diodes. Integrated limiter and special circuit to eliminate thumps. Built-in +6 dB NF-amplifier with volume control. Concise short chime with controls for volume and pitch. Parallel connection of up to 40 call stations on line JY(ST)Y6 (4) x 2 x 0.8 (0.6). 3 m connecting cable with D-Sub-plug 9-pin. Cardioid swan-neck in electret condenser technology.

Technical Data	
Operating voltage	24 V DC
Current consumption @ 24 V DC	approx. 24 mA
Housing	ABS light gray
Dimensions	L: 250 mm W: 125 mm H: 30 mm D: 150 mm

586103

Desktop call station with pre chime DIGIM4



Desktop call station with chime-system DIGI M4 placed in housing. 4 writable buttons with LED indicator for keyboard control and busy /operating-/chime display. Processor control with programming via diodes. Integrated limiter and special circuit to eliminate thumps. Built-in +6 dB NF-amplifier with volume control. Concise short chime with controls for volume and pitch. Parallel connection of up to 40 call stations on line JY(ST)Y6(4)x2x0.8(0.6). 3 m connecting cable with D-Sub-plug 9-pin. Cardioid swan-neck in electret condenser technology.

Technical Data	
Operating voltage	24 V DC
Current consumption @ 24 V DC	approx. 30 mA
Housing	ABS light gray
Dimensions	L: 250 mm W: 125 mm H: 30 mm D: 150 mm

586104

UP-box for DIGISystem desktop paging microphone DIGIST09



Flush mount box for DIGISystem desktop call stations with a lockable 9-pin Sub-D socket connector including an EMI/RFI filter. Quick coupling with spring clips. The outlet may be configured either vertically or at a 30° tilt. Pure white and complete with GIRA system 55-fitting uniframe. Intended for use with surface mount housing (Part No. 581329).



583560

**PC Touch Screen Call Station**

**NEW**



**Features**

- Zero-bezel model provides a seamless, edge-to-edge design for a sleek appearance that is easy to clean and provides maximum display space
- Pure glass touchscreen for optimal picture quality is factory sealed to resist spills, dust and grease
- Durable to withstand the rigors of use in a public environment
- Dynamic gooseneck microphone with on/off switch
- Sennheiser CL2- line cable between Call Station and Microphone

An elegant touch screen solution, designed for use in front of house environments or complex buildings. Combined with the PAMMI plus software the user has an intuitive tool for creating announcements with graphical display of the site and zones. The sleek yet durable call station delivers a 15-inch touchscreen, Intel Celeron dual-core processor, 2 GB RAM and 320 GB storage.


Designed to fit on top of an office desk, reception desk, information desk or gate desk.

With no moving parts to wear out, touch response is fast, accurate, and drift free using a finger or soft stylus. Pure glass construction allows high light transmission, ensuring good visibility in bright light environments, without compromising durability or functionality.

The first class gooseneck microphone with cardioid characteristics is perfect for noisy environments. With the high grade cable it is possible to place the microphone remotely from the call station hardware, allowing for the user to create a comfortable working environment.

**Technical Data**

Ambient temperature	0 °C ... 35 °C
Air humidity	20 ... 80 %
Weight	approx. 7.3 kg

 Intel Celeron Processor, Intel HD Graphics, 2 GB RAM, Windows POS Ready OS, 1 x line out, 2 x line in, 1 x Gigabit LAN

583565

**Dynamic Microphone with Gooseneck**

**NEW**



Suitable for control desks, table- or wallmounting. Microphone capsule protected against structure-born sound.

**Technical Data**

Ambient temperature	-30 °C ... 60 °C
Air humidity	< 93 %
Housing	Metal / Plastic
Weight	approx. 400 g
Dimensions	W: 150 mm H: 300 mm D: 150 mm

583371.21

## Mains Switching Unit MSU



### Features

- Approved as per EN 54-16
- Three 18 A overload switch with control contacts and indicator light
- For maintenance purposes IEC and Ethernet port for connecting a service PC
- The three terminals for auxiliary change-over per overload switch
- Up to four devices can be connected per overload switch
- Plastic cover of the keys

### Part of EN 54-16 approval

The power panel MSU is used to secure the power supply of all VARIODYN D1 components that are installed in a cabinet. In addition, it offers a connector for connecting a service PC for local / network-wide maintenance purposes.

Each of up to three phases that will be charged max. 18 A. The overload switch automatically releases the current, but can also be used for manual switching of the power supply.

The operating state is indicated by green indicator lights. The switch position can be evaluated via auxiliary contacts. A front-mounted 230 V mains connector and an RJ45 jack are provided for connecting a service PC.

### Technical Data

#### Thermal Protection:

Rated current	18 A
Operating life	10.000 cycles
Shutdown	1-pole

#### Auxiliary Contacts:

Type	Changeover contact
Contact load AC	250 V, max. 4 A
Contact load DC	24 V, max 4 A

#### Common technical data:

Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Weight	approx. 4.2 kg
Dimensions	W: 483 mm H: 44 mm D: 345 mm (1 HU, 19")
Declaration of Performance	DoP-20997130701

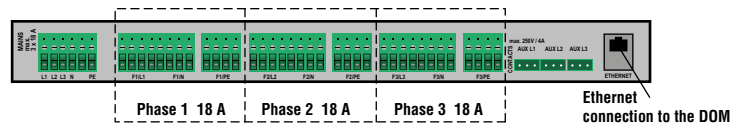


This unit does not protect against neutral conductor interruption. If this is not done on customer side, you need to include accessory Part No. 584970 and 584971. An electrical professional is needed to connect this item to mains power.

### Accessories

583703

Mounting set 1



Ethernet programming port

230 V-primary low receptacle, for example, service PC power supply

MSU rear view and front view

583381.31

## System Communication Unit SCU



### Features

- EN 54-16 certified
- Digital audio memory for VARIODYN D1
- Networkable via Ethernet
- Can be used for the logging and recording of announcements
- Automatic buffer and repetition of interrupted announcements
- 24 V DC emergency power supply

### Part of EN 54-16 approval

The System Communications Unit serves as a digital audio memory for the VARIODYN D1 system. It is possible to record and playback multiple audio data streams simultaneously.

The connection to the other VARIODYN D1 modules is made via the Ethernet, and is permanently monitored.

The audio storage for critical evacuation alerts and notifications is done in accordance with IEC EN 60849 in a non-volatile flash memory. Depending on the format, storage capacity is approx. two hours.

Additional prerecorded audio messages such as announcements, signals, or commercial texts are stored on a hard disk. Depending on the format, storage capacity here is approx. 1000 hours.

The SCU can also be used for the logging and recording of announcements. These are also stored in the memory, and logged with date, time, and activation details. The automatic buffer makes it possible to transmit announcements that cannot be played to all targets as soon as these targets become available.

### Connections

- Ethernet connection 100 Mbit/s
- Network connection
- 24 V DC emergency input

### Displays

- POWER-LED, HARDDISK-LED
- ERROR-LED, STAND-ALONE-LED

### Note:

Not for safety-related voice messages, these must be stored in the DOM.

### Technical Data

#### Emergency power supply:

Rated voltage 24 V DC  
Power consumption 24 W

#### Common technical data:

Rated voltage 90 ... 265 V AC  
Rated frequency 47 ... 63 Hz  
Flash memory approx. 2 h  
Hard drive capacity approx. 1000 h  
Ambient temperature -5 °C ... 45 °C  
Air humidity 15 ... 90 %  
Color gray, similar to RAL 7016  
Weight approx. 3 kg  
Dimensions W: 483 mm H: 44 mm D: 360 mm (1 HU, 19")  
Declaration of Performance DoP-20997130701

### Accessories

583486	Patch cable CAT5, 1 m yellow (ETH)
583487	Patch cable CAT5, 2 m yellow (ETH)
583488	Patch cable CAT5, 3 m yellow (ETH)
583703	Mounting set 1

583331.21

## Universal Interface Module UIM



### Features

- EN 54-16 certified
- Two analog audio inputs/outputs
- 48 contacts freely programmable as inputs and outputs
- Digital Audio link (DAL) to DOM

### Part of EN 54-16 approval

The universal interface module serves as the interface module of the VARIODYN D1 public address system for connecting two analog audio inputs, two analog audio outputs, as well as 48 control contacts. For eight control contacts, short-circuit and interruption monitoring can be activated.

The UIM is connected to the VARIODYN D1 module DOM via the DAL bus.

It digitizes two analog audio inputs, i.e. from a CD player or a hazard detection system, and transmits the digitized audio data to the VARIODYN D1 module DOM via the DAL bus. In order to transmit all played messages to an external device, for instance, two outputs are available as analog audio sources. The 48 contacts can serve as contact inputs or as contact outputs. This allows for an external control of the VARIODYN D1 system, and information about the status of the system is made available.

### Technical Data

#### Audio output:

Nominal level	0 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.05 %
Output impedance	200 Ω / 200 Ω (XLR / Cinch, potential free)

#### Audioinput:

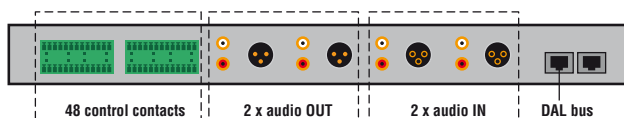
Nominal level	0 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.05 %
Load impedance	100 kΩ / 1 kΩ (XLR / Cinch, potentialfrei)

#### Common technical data:

Current consumption @ 24 V DC	< 150 mA
Inputs	max. 36 V DC
Outputs	36 V DC/50 mA
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 %
Weight	approx. 3.6 kg
Dimensions	W: 483 mm H: 44 mm D: 345 mm (1 HE, 19")
Declaration of Performance	DoP-20997130701

### Accessories

583401.21	Signal cable 12 for UIM
583481	Patch cable CAT5, 1 m blue (DAL)
583482	Patch cable CAT5, 2 m blue (DAL)
583483	Patch cable CAT5, 3 m blue (DAL)
583703	Mounting set 1
583332	Overvoltage protection module for UIM-contacts



UIM rear view and front view

583332

## Overvoltage protection for UIM contacts

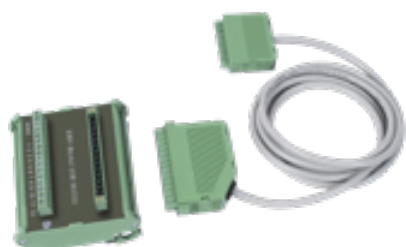
### Part of EN 54-16 approval

The UIM has 48 contact inputs or outputs. These inputs and outputs are divided into 4 blocks, each with 12 pieces.

In EN 54-16 compliant systems, to connect cables, which head to the external contacts and are longer than 3 m, the crowbar circuit protection module should be used. With Crowbar circuit module, in each case, 12 inputs and outputs (1 Block) are fused. It is then used instead of the signal cable 12 (Part No. 583401.21) A connection cable is included in shipping.

### Technical Data

Declaration of Performance	DoP-20997130701
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583351

**View Control Module VCM****Part of EN 54-16 approval**

The VCM was added to the VARIODYN D1 system in accordance with the requirements for EN 54-16 approval. It enables the standardized display of collective messages and has a 5-button operator control panel. At least one VCM is required for EN 54-16 systems. If several upright cabinets are set up directly side-by-side in a room and form a single system, one VCM per room is sufficient. Remotely positioned cabinets require a separate VCM each. The VCM is connected directly to a UIM and 24 V DC. The max. 3 DOMs in the cabinet in which the VCM is located are also connected to three separate VCM inputs. All other DOMs are linked via Ethernet. The VCM can be programmed easily and conveniently using a macro in the "Designer" programming software.

**Technical Data**

Current consumption @ 24 V DC  
Declaration of Performance

approx. 10 mA  
DoP-20997130701

583341.21

## Contact Interface Module CIM



### Features

- EN 54-16 certified
- Contacts as inputs or outputs freely programmable /4 of which can be monitored
- CAT5 cabling to DOM
- Mounting by mounting to the DIN-track possible
- Connection of different trades possible via CIM

### Part of EN 54-16 approval

The CIM is used as an interface of VARIODYN D1 system for the connection of 8 control contacts. The 8 control contacts can be configured as either an input or an output. Four of the eight contacts can be programmed in the input function with monitoring of connection line. A 3 m long Cat 5 cable is included to connect from CIM to the TWI input of DOM.

### Technical Data

Inputs	max. 36 V
Outputs	36 V DC / 50 mA
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 ... 90 % (non condensing)
Weight	approx. 310 g
Dimensions	W: 105 mm H: 40 mm D: 105 mm
Declaration of Performance	DoP-20997130701



Control contacts are listed as open-collector.

## X-MAP04



### Features

- Two independent audio outputs for DVD / USB / SD and FM / AM Tuner
- Two independent volumes can be set
- A combined audio output

## DVD/CD/MP3/FM/AM audio player

The X-MAP04 audio device features an integrated DVD/CD player, an MP3 player and an FM/AM tuner, as well as an USB/SD interface. The device supports two modes of operation. Mode of operation 1: DVD/USB/SD and FM/AM tuner can be operated simultaneously via two separate ports. Mode of operation 2: DVD/USB/SD and FM/AM tuner can be switched. The selected signal is transmitted via a joint port. DVD videos and JPEG are supported. The connection to the VARIODYN D1 system is done via a cinch audio link. Suitable for 24-hour operation.

### Technical Data

<b>DVD\CD\Audio:</b>	
Output voltage	2 V DC ± 0,2 V
Harmonic distortion at nominal level	< 0.05 %
Signal-to-noise ratio	> 80 dB
Channel separation	> 75 dB
<b>Tuner:</b>	
Frequency band AM	531 ... 1710 kHz
Frequency band FM	87,5 ... 108 MHz
<b>Common technical data:</b>	
Rated voltage	230 V AC
Power consumption	13 W
Inputs	FM 75 Ω, USB-Port, SD-Port
Outputs	1 x Cinch for FM/AM-Tuner, 1 x Cinch for DVD/USB/SD, 1 x Cinch for mixed signals
Weight	approx. 3.8 kg
Dimensions	W: 482 mm H: 44 mm D: 252 mm (1 HU)

## Emergency power supply

The emergency power supply is certified according to the standard EN 54-4 (A2), which is mandatory since August 2009 for emergency power supply of voice alarm systems. Which battery capacity and the number of devices required to operate the voice alarm system, depends on the required buffer time, power, the alarm time etc. To ensure the optimum designing of emergency power supply, simply and efficiently, a calculation tool for VARIODYN D1 emergency power supply is available for you in our service area of our website as a file to download.



All batteries must be ordered in pairs!

### 581722



#### Features

- Emergency power supply in the 1 HU enclosure
- Outputs for control devices such as DOM or Comprio net
- 8 individually fused high power outputs for output amplifiers, each with 30A max.
- Authorisation pursuant to EN 54-4(A2)
- LED displays and display for status reports
- Potential-free contacts for the transmission of alarm messages
- Battery capacity up to a total of 320 Ah
- Maximum output 186 A

### Emergency power supply PSU 24 V-2

#### Part of the EN 54-16 approval

Emergency manager for use as emergency power supply of an Voice Alarm – application.

#### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz
Output current	max. 186 A (battery)
Battery capacity	max. 320 Ah
Emergency power supply	24 V DC
Ambient temperature	-5 °C ... 40 °C
Storage temperature	-40 °C ... 85 °C
Weight	approx. 5.2 kg
Dimensions	W: 483 mm H: 45 mm D: 328 mm



2 batteries of the same kind are required for each emergency power supply.

#### Accessories

581730	Battery for emergency power supply 12 V / 105 Ah
581731	Battery for emergency power supply 12 V / 150 Ah

### 581723



#### Features

- Emergency power supply in the 2 HU enclosure
- Outputs for control devices such as DOM or Comprio net
- 1 individually fused high power outputs for output amplifiers (12 outputs in total but one output cannot be used)
- Authorisation pursuant to EN 54-4(A2)
- LED displays and display for status reports
- Potential-free contacts for the transmission of alarm messages
- Battery capacity up to a total of 640 Ah
- Maximum output current in case of emergency power situation 372 A

### Emergency power supply PSU 24 V-4

#### Part of the EN 54-16 approval

Emergency manager for use as emergency power supply of an Voice Alarm – application.

#### Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz
Output current	max. 372 A (battery)
Battery capacity	max. 640 Ah
Emergency power supply	24 V DC
Ambient temperature	-5 °C ... 40 °C
Storage temperature	-40 °C ... 85 °C
Weight	approx. 8.8 kg
Dimensions	W: 483 mm H: 89 mm D: 328 mm



Up to 2 x 2 batteries of the same kind are required for each emergency power supply.

#### Accessories

581730	Battery for emergency power supply 12 V / 105 Ah
581731	Battery for emergency power supply 12 V / 150 Ah



581724

Emergency power supply PSU 24 V-2 net



Features

- Emergency power supply in the 1 HU enclosure
- Outputs for control devices such as DOM or Comprio net
- 6 individually fused high power outputs for output amplifiers
- Authorization pursuant to EN 54-4(A2)
- LED displays and display for status reports
- Potential-free contacts for the transmission of alarm messages
- Battery capacity up to a total of 320 Ah
- Maximum output current in case of emergency power situation 186 A
- Ethernet interface for reading service information

Part of the EN 54-16 approval

Emergency manager for use as emergency power supply of an Voice Alarm – application. This version offers in addition to the features of Part No. 581722 an Ethernet interface for reading service information over USB via Ethernet.

Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz
Output current	max. 186 A (battery)
Battery capacity	max. 320 Ah
Emergency power supply	24 V DC
Ambient temperature	-5 °C ... 40 °C
Storage temperature	-40 °C ... 85 °C
Weight	approx. 5.2 kg
Dimensions	W: 483 mm H: 45 mm D: 328 mm

2 batteries of the same kind are required for each emergency power supply.

Delivery time on request.

Accessories

581730	Battery for emergency power supply 12 V / 105 Ah
581731	Battery for emergency power supply 12 V / 150 Ah

581725

Emergency power supply PSU 24 V-4 net



Features

- Emergency power supply in the 2 HU enclosure
- Outputs for control devices such as DOM or Comprio net
- 1 individually fused high power outputs for output amplifiers (12 outputs in total but one output cannot be used)
- Authorization pursuant to EN 54-4(A2)
- LED displays and display for status reports
- Potential-free contacts for the transmission of alarm messages
- Battery capacity up to a total of 640 Ah
- Maximum output current in case of emergency power situation 372 A
- Ethernet interface for reading service information

Part of the EN 54-16 approval

Emergency manager for use as emergency power supply of an Voice Alarm – application. This version offers in addition to the features of Part No. 581722 an Ethernet interface for reading service information over USB via Ethernet.

Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz
Output current	max. 372 A (aus Akku)
Battery capacity	max. 640 Ah
Emergency power supply	24 V DC
Ambient temperature	-5 °C ... 40 °C
Storage temperature	-40 °C ... 85 °C
Weight	approx. 8.8 kg
Dimensions	W: 483 mm H: 89 mm D: 328 mm

Up to 2 x 2 batteries of the same kind are required for each emergency power supply.

Delivery time on request.

Accessories

581730	Battery for emergency power supply 12 V / 105 Ah
581731	Battery for emergency power supply 12 V / 150 Ah

581721

Emergency power supply 24 V / 150 A



Features

- Emergency power supply in 1 HU housing
- 3 individually fused outputs for control devices (DOM)
- 6 individually fused high power outputs for power amplifiers
- Approval according to EN 54-4 (A2)
- LED indicators for power, battery, consumer
- Potential free contacts for forwarding of error messages
- Battery capacity up to 225 Ah
- Maximum output 150 A

Part of EN 54-16 approval

Emergency manager for use as emergency power supply of an Voice Alarm – application.

Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz
Output voltage	24 V DC
Output current	max. 150 A
Ambient temperature	-5 °C ... 45 °C (at 100 % load)
Storage temperature	-25 °C ... 85 °C
Air humidity	0 ... 95 %
Weight	approx. 6 kg
Dimensions	W: 483 mm H: 88 mm D: 395 mm (2 HU, 19")

2 batteries of the same kind are required for each emergency power supply.

Delivery time on request.

Accessories

581730	Battery for emergency power supply 12 V / 105 Ah
581731	Battery for emergency power supply 12 V / 150 Ah

## 581730

### Battery for emergency power supply 12 V / 105 Ah



Emergency battery for usage in emergency power supply of Voice Alarm applications.

#### Technical Data

Weight	approx. 32.5 kg
Dimensions	L: 502 mm W: 111 mm H: 236 mm

#### Features

- Optimized for using in 19"-cabinets
- Front terminal

## 581731

### Battery for emergency power supply 12 V/150 Ah



Emergency battery for usage in emergency power supply of Voice Alarm applications.

#### Technical Data

Weight	approx. 49.5 kg
Dimensions	L: 552 mm W: 110 mm H: 288 mm

#### Features

- Optimized for using in 19"-cabinets
- Front terminal

## 581732

### Battery 12 V / 65 Ah



Emergency battery for usage in emergency power supply of Voice Alarm applications. Required per 2 pieces.

#### Technical Data

Weight	approx. 21.3 kg
Dimensions	W: 348 mm H: 178 mm D: 163 mm

583535

## Alarm transponder VARIODYN D1



### Features

- Two supervised relay outputs for the system VARIODYN D1, for connection of optical alarms
- Per relay output can be connected up to 10 visual alarm (Applicable types see accessories)
- Per DOM / UIM or Comprio can be connected up to 4 alarm transponder

The alarm transponder for VARIODYN D1 provides each 2 supervised relay outputs for optical alarm signaling devices to provide alarms to people in very noisy areas or to deaf people. It works independently, is driven by the VARIODYN D1 and this message to the VARIODYN D1 is reported in case of failure of the relay line.

The transponder is installed with in the cabinet of VARIODYN D1.

For the installation of the alarm transponder for VARIODYN D1, the following case is available as an option:

-788603.10 (For DIN rail mounting in the enclosure cabinet or stand)

The power supply of the alarm transponder via the system's 24 V DC.

The alarm transponder is attached to the DOM and UIM or VARIODYN D1 Comprio.

Per relay line can be connected up to 10 visual alarm of the series Part No. 766410 ... 766 414 or the series Part No. 766420.

The visual alarm, refer to the fire alarm systems catalog.

### Technical Data

Operating voltage	10 ... 28 V DC
Contact load relay	30 V DC / 1 A
Ambient temperature	-10 °C ... 50 °C
Storage temperature	-25 °C ... 75 °C
Weight	approx. 28 g
Dimensions	W: 82 mm H: 72 mm D: 20 mm

### Accessories

788603.10	Top-hat rail mounting
766411...766414	Optical alarm signaling device
766420...766424	Optical alarm signaling device

788603.10

## Module housing for top-hat mounting rail



For snap-on mounting rail of several electronic modules with 82 x 72 mm PCB size. Angled cable entry.

### Technical Data

Color	Green
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1 x UM-profile and 2x side panels



Application example with transponder Part No. 583535

581310

## Measuring microphone for D1 AVC in a 5" recessed ceiling housing



### Features

- Decoupled mounting in a ceiling loudspeaker housing
- Easy and quick installation

System-tested sensing microphone for automatic volume control (AVC) of the VARIODYN D1 system. This decoupled sensing microphone is mounted in a 5" ceiling loudspeaker (DL 130 construction, incl. fire dome) flush and invisibly inside the ceiling. Connection is accomplished by means of an enclosed 3-pole XLR plug.

### Technical Data

Transmission range	20 ... 16000 Hz
Sensitivity	2.5 mV
Sound level	max. 157 dB
Impedance	2000 Ω
Ambient temperature	-10 °C ... 55 °C
Weight	approx. 1 kg
Dimensions	Ø: 180 mm D: 135 mm



581316

## Microphone P4, for AVC



Microphone for using the AVC functionality (Automatic volume control) of the DOM. The microphone is installed in the affected area and connected via the XLR socket (Part No. 581320) to the appropriate DOM input.

### Technical Data

Transmission range	20 ... 16000 Hz
Sensitivity	2.5 mV
Sound level	max. 157 dB
Impedance	2000 Ω
Weight	approx. 400 g

581317

## Mounting kit for microphone P4

Mounting kit for ALR microphone Part No. 581316.

HN-D32N

## Noise Detector

### Features

- Collect ambient noise from built-in microphone
- Elegant appearance
- Easy field installation with spring loaded clips
- 2-core shielded cable
- Transmission distance ≈ 200 meters

HN-D32N Noise Detector is designed to collect ambient noise samples and transmit them to the control system. The system can then automatically adjust the volume to deliver intelligible sound. It is intended for use in areas such as metro station, airport, shopping mall, where noise level varies constantly and sound clarity is of utmost importance.

### Technical Data

Transmission range	60 ... 18000 Hz
Sensitivity	2.4 mV
Sound level	max. 152 dB
Impedance	2000 Ω
Color	white, similar to RAL 9010
Dimensions	Ø: 200 x 118 mm

581320

## Flush-mounted XLR panel jack



Flush-mounted box with a XLR socket 3-pole / GIRA System 55.

### Technical Data

Color	pure white / silk-mat
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### Accessories

581329	Surface mount
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581329

## Surface mount box



Surface mount frame for the Part No. 581320 to 581323 / GIRA System 55.

### Technical Data

Color pure white / silk-mat



Delivery time on request

583496

## End-of-Line module EOL



### Part of EN 54-16 approval

End-of-line module for the end of the VARIODYN D1 voice alarm system loudspeaker line for standard-compliant monitoring, when more than 20 loudspeakers are connected to a line. The module is connected to the final loudspeaker at the end of the line.

Independent of the number and the output of the connected loudspeakers.

### Technical Data

Weight	approx. 20 g
Dimensions	L: 40 mm W: 29 mm D: 11 mm
Declaration of Performance	DoP-20997130701

### Features

- Approved as per EN 54-16
- Standard monitoring
- Final element for 100 V of loudspeaker line in 2-wire technology
- Different connection possibilities for optimum line adaptation (3 connections)
- The module is sealed and has therefore an optimum humidity protection

583386.21

## Adapter TWI-RS232



### Part of EN 54-16 approval

The TWI-RS232 adaptor serves for implementing of the TWI bus on RS232. Use for special servicing and connecting an external system (e.g., a FACP IQ8Control or FlexES Control).

The TWI-RS232 adapter is connected directly to the DOM. The VARIODYN D1 system can be controlled by the fire alarm control panel via this connection. Faults in the VARIODYN D1 system are reported to the fire alarm control panel and can also be reset via the external operating panels. The connection between the two systems is constantly monitored for short-circuit and interruption. The system time and the date of both systems are synchronized automatically (received from FAS -> DOM or DOM -> FAS - depending on selection).

### Technical Data

Color	black
Weight	approx. 45 g
Dimensions	L: 65 mm W: 33 mm H: 16 mm
Declaration of Performance	DoP-20997130701

583394.11

**NEW**



### Features

- 6-port 10/100/1000Tx Gigabit Ethernet
- 2-port 100/1000 SFP Slot
- Configuration: Web GUI, Serial Console, CLI Command
- Network Redundancy support: G.8032 ERPS,RSTP, MSTP
- Supports IGMP v1/v2, up to 256 groups
- Supports IEEE802.1p QoS and CoS/ToS
- Supports IEEE802.1Q VLAN, SNMP v1/v2c/v3
- System Warning setting for automatic warning through e-mail
- Redundant Power Input Design, 12 - 48 V
- Rugged Metal Case Design
- DIN-Rail Mounting, Wall Mounting (optional)

583392.11



### Features

- RoHS compliant
- Compliant with Fast Ethernet standard
- Compatible with SONET/SDH application
- Industry standard small form pluggable (SFP) package
- Duplex LV connector
- Differential LVPECL inputs and outputs
- Single power supply 3.3V
- TTL signal detect indicator
- Hot Pluggable
- Class 1 laser product complies with EN 60825-1


## Fibre Optic Switch for Ethernet ring

### Part of EN 54-16 approval

The Fiber Optic switch is used for designing an Ethernet network in loop topology. On account of the loop structure, the network is fully redundant since, in the case of a fiber rupture, it is possible to still communicate through the other side of the loop. In addition, every Fiber Optic switch has two operating voltage inputs (24 V DC) and one relay for the forwarding of fault signals.

### Technical Data

Operating voltage	12 ... 48 V DC
Power consumption	15 W
Ambient temperature	-5 °C ... 45 °C
Storage temperature	-40 °C ... 85 °C
Air humidity	15 ... 95 %
Type of protection	IP 30
Housing	Metal
Weight	approx. 870 g
Dimensions	W: 46 mm H: 142 mm D: 99 mm

 The Fiber Optic switch can be equipped with one (for point-to-point connection) or two (for redundant loop connection) fiber optic module(s):  
 583392.11 Fiber Optic module for FO Switch monomode for up to 2 km distances  
 583393.11 Fiber Optic module for FO Switch single mode for up to 20 km distances

## Fiber Optic module for FO Switch, multimode

### Part of EN 54-16 approval

Pluggable Fiber Optic module for the fiber optic switch 583394.11 in 1310 nm multimode. This provides a Fiber Optic cable length up to 2 km.

### Technical Data

Transmission distance	max. 2 km
Fiber	Multimode 50/125 µm, 62,5/125 µm
Ambient temperature	-5 °C ... 45 °C
Air humidity	15 ... 95 %
Housing	Metal
Weight	approx. 100 g



583393.11

## Fiber Optic module for FO Switch, single mode



### Features

- RoHS compliant
- Compliant with Fast Ethernet standard
- Compatible with SONET/SDH application
- Industry standard small form pluggable (SFP) package
- Duplex LV connector
- Differential LVPECL inputs and outputs
- Single power supply 3.3V
- TTL signal detect indicator
- Hot Pluggable
- Class 1 laser product complies with EN 60825-1

### Part of EN 54-16 approval

Pluggable Fiber Optic module for the fiber optic switch 583394.11 in 1310 nm single mode. This provide a Fiber Optic cable length up to 20 km.

### Technical Data

Transmission distance	max. 20 km
Fiber	Singlemode 9/125 μm, 10/125 μm
Ambient temperature	-5 °C ... 45 °C
Air humidity	15 ... 95 %
Housing	Metal
Weight	approx. 100 g

586115

## Doormaster-Smart-PAL-Telephone interface



DOORMASTER-SMART-PAL-Telephone interface is used for recording the announcements via similar telephone system in VARIODYN D1 voice alarm system. Up to 4 different call circuits or areas can be addressed using the telephone system. For this purpose 1+ 4 control contacts are available for switching on and/or zone selection.

The connection of telephone interface to VARIODYN D1 takes place via control inputs and audio input of UIM Part. No. 583331.21. 12 V operating voltage can be generated from 24 V emergency power supply with voltage converter Part No. 781336 that is available in the voice alarm system. The voltage converter can be mounted in housing Part No. 788603 on the C-rail in rack. The programming takes place with MFV post dial, so that the device can also be used from distance.

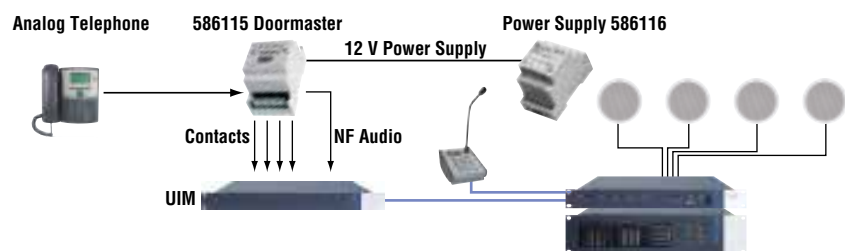
### Technical Data

Operating voltage	12 V DC
Current consumption @ 12 V DC	approx. 100 mA
Contact load relay	24 V DC/0,5 A (relay 1/2) 24 V DC/1 A (relay 3/4)
Ambient temperature	-5 °C ... 45 °C
Mounting	mounting rail
Dimensions	W: 52 mm H: 89 mm D: 57 mm

### Accessories

586116

Power supply for telephone interface



586116

## Power supply for telephone interface

Power supply for telephone interface Part No. 586115.




### Technical Data

Rated voltage	127 / 230 V AC
Output voltage	13 V AC
Output current	max. 0.6 A

**583703**

### Mounting kit 1



 Each contains 24 cage nuts, screws and washers.

**583704**

### Dummy plate 1 HU



Dummy plate in VARIODYN D1 design with 1 HU to cover open slots in upright cabinets.

**583705**

### Dummy plate 2 HU



Dummy plate in VARIODYN D1 design with 2 HU to cover open slots in upright cabinets.

**583706**

### Dummy plate 3 HU



Blind cover in VARIODYN D1 design with 3 HU to cover free installation space in upright cabinets.

**583707**

### Dummy plate 4 HU



Dummy plate in VARIODYN D1 design with 4 HU to cover open slots in upright cabinets.

**583708**

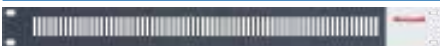
### Ventilation panel 1 HU (without branding)



Ventilation panel in VARIODYN D1 Design with 1 height unit and without branding.

**583708.HO**

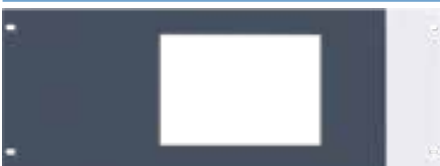
### Ventilation panel 1 HU (Honeywell branding)



Ventilation panel in VARIODYN D1 Design with 1 HU and with Honeywell branding.

**583709**

### Dummy plate 4 HU (DCSF)



Dummy plate to install a fire stations DCSF12 or DCSF1 in the upright cabinets. The dummy plate has a height of 4 HU and is available on a cutout for telephone station and the holes for the fixing screws. The mounting screws are included in shipping.

**583710**

### Dummy plate 4 HU (DCSF/DKM)



Dummy plate to install 2 fire stations DCSF12 or DCSF1 in the upright cabinets. The dummy plate has a height of 4 HU and is available on 2 cutouts for microphone units or DKM18. To install a digital key module DKM18, the installation kit Part No. 583507 and a standard RJ11 cable is required.

# Surge Protection for VARIODYN D1

The following table shows the surge protection modules for voice alarm system VARIODYN D1, according to the line to be protected and the application:

Line to be protected	Protection module	Notes
Mains connection	584100	Adapted for 230 V AC or 380 V AC applications
100 V speaker lines	584101	
Contacts, digital inputs and outputs of the control components such as DOM, UIM, CIM, Comprio	584101	
Ethernet	584102	
DAL bus	584102	CAT5 line length up to 250 m



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584100

**Surge voltage protection module for connection to the mains**



**Approvals KEMA, VDE, UL**

Overvoltage protection module to protect the mains connection of a VARIODYN D1 voice alarm system. The overvoltage protection module can be used for 230 V AC or 380 V AC mains connections and can be accommodated with its housing for DIN rail installation quickly and easily in the 19" cabinet.

**Features**

- Protect single-phase 230 V AC mains connections
- Protect three-phase 380 V AC mains connections

584101

**Surge voltage protection module for loudspeaker cables**



**Approvals KEMA, VDE, UL, VdS, CSA**

Overvoltage protection module to protect the 100 V loudspeaker lines of a VARIODYN D1 voice alarm system or of the dry contact or digital inputs and outputs of the control components, such as DOM, UIM, CIM, Comprio. The overvoltage protection module can be housed with its housing for DIN rail installation quickly and easily in the 19" cabinet.

**Features**

- Protect 100 V loudspeaker lines
- Protect contact or digital inputs and outputs of the control components, such as DOM, UIM, CIM, Comprio

584102

**Surge voltage protection for Ethernet or DAL bus**



**Approvals CSA, UL, GOST**

Overvoltage protection module to protect the Ethernet or DAL bus lines of a VARIODYN D1 voice alarm system. The overvoltage protection module can be housed with its housing for DIN rail installation quickly and easily in the 19" cabinet.

**Features**

- Protect Ethernet
- Protect DAL bus

772386

## Interface module RS232 / 24 V



For the serial essernet interface for a length up to 15 m.

788606

## Housing for SEI



Housing for the serial essernet interface (SEI).

784840.10

## essernet module, 62.5 kBd for IQ8Control



Network interface module for max. 16 network participants. Transmission via Token-Passing protocol, similar to DIN 19245-1 (Profibus) loop technology, interruption and short-circuit tolerance.

784841.10

## essernet module, 500 kBd for IQ8Control



Network interface module such as essernet module Item no. 784840.10, however for max. 31 network participants.

784856

## SEI serial essernet interface EDP, bidirectional



The serial essernet interface can be used as a gateway to link remote computers that support the ESSER by Honeywell data protocol (EDP). The EDP version (bidirectional) with remote control options e.g. for the connection to a Building Management System (BMS). The unit includes a slot for an essernet module and is therefore a fully functional unit within the short circuit and open circuit resistant essernet.

### Features

- Serial data rate 19.2 kBd
- RS 485 interface on-board for a max. length of 1,000 m

### Technical Data

Operating voltage	10.5 ... 28 V DC
Current consumption @ 12 V DC	approx. 60 mA
Current consumption @ 24 V DC	approx. 30 mA
Storage temperature	-10 °C ... 50 °C
Air humidity	< 95 % (non-condensing)
Ambient temperature	-5 °C ... 50 °C



The essernet micromodule and the interface module either RS 232 (Part No. 772386) or TTY (Part No. 772387) are not included and must be ordered separately in accordance with the required essernet type and the serial transmission standard. The optional interface module must be ordered separately and is a supplement to the serial essernet interface. It is plugged into the connectors provided on the main PCB. Depending on the required application, a TTY /CL 20 mA (Part No. 772387) or a RS232 / V.24 (Part No. 772386) interface module may be installed on the serial essernet interface.

When using virtual control groups (PA/VA), a hardware output shall be provided on the FACP side per virtual control group, e.g. through the output of an esserbus coupler. To avoid any kind of problem, please contact the International Sales Support for advice before quoting or installing the serial essernet interface!

### Accessories

788606	Housing kit
772386	Interface module RS 232/24 V
772387	Interface module TTY/CL 20 mA
784840.10	essernet micromodule (62.5 kBd)
784841.10	essernet micromodule (500 kBd)

## 788603.10

### Module housing for top-hat mounting rail



For snap-on mounting rail of several electronic modules with 82 x 72 mm PCB size. Angled cable entry.



1 x UM-profile and 2x side panels



Application example with transponder Part No. 583535

## 805683

### External power supply DCU 2403



#### Features

- Reversible output voltage 12 V DC or 24 V DC
- Simple integration into esserbus/esserbus-Plus
- Internal service LED displays
- Four floating relay outputs
- Monitoring of mains voltage with selectable delay time
- Individual battery monitoring for emergency power operation
- Switchable ground fault monitoring
- Front door with cover contact
- in compliance with EN 54-4/A2
- for use in voice alarms to supply recessed components, such as at fiber optic recessed callstations

#### Approval: G 210052

External power supply in a compact metal housing for up to two 12 V / 24 Ah batteries. This power supply facilitates an uninterruptable supply of power. Integration into the esserbus/esserbus-Plus optional via optional adapter card (Part No. 805684.10) and esserbus Transponder (Part No. 808623). Four floating relay outputs are available for the transmission of disturbances (power failure, ground fault, battery failure and collective fault). External LED display for operation and collective fault on the lockable front door, internal LEDs for detailed recognition of emergency power operation, individual monitoring of battery failure and ground fault.



Batteries used in the power supply must be tested and VdS approved. Batteries of the same age from the same manufacturer coming from the same production batch must be used when connecting batteries in parallel.



Pre-installed connector cable for 12 V / 24 Ah SB-type battery (Part No. 018006)

Housing lock with key

Device accessory kit contains: dummy cover, jumper bar for standby terminal, device fuses, jumper for setup of output voltage

#### Accessories

805684.10

Adapter card for DCU 2402

808623

esserbus alarm transponder

## 781336

### DC/DC converter output voltage 12 V DC



#### Features

- Galvanic isolation of DC voltage potentials
- Voltage interface, for instance for 12 V DC operation of couplers in an 8010 Series 3 extinguishing system.
- Connecting terminals up to 1.5 mm<sup>2</sup>
- short-circuit proof

#### Approval: VdS

The converter provides a galvanically isolated 12 V power supply for a detector for special applications. The input voltage is 12 V, and it is supplied from the fire alarm control panel or from an external PSU. The module can be integrated into the 120240, 788600, 788601, 788603, 788650.10, or 788651.10 enclosures.

When planning the project, please pay attention to primary (12 V) current drain in case of a mains failure.



The module can also be used in explosion endangered zones for the galvanic separation of the esserbus voltage supply.



583386.21

## Adapter TWI-RS232



### Part of EN 54-16 approval

The TWI-RS232 adaptor serves for implementing of the TWI bus on RS232. Use for special servicing and connecting an external system (e.g., a FACP IQ8Control or FlexES Control).

The TWI-RS232 adapter is connected directly to the DOM. The VARIODYN D1 system can be controlled by the fire alarm control panel via this connection. Faults in the VARIODYN D1 system are reported to the fire alarm control panel and can also be reset via the external operating panels. The connection between the two systems is constantly monitored for short-circuit and interruption. The system time and the date of both systems are synchronized automatically (received from FAS -> DOM or DOM -> FAS - depending on selection).

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## Features

- Multiple PAMMI Plus clients on a server
- Audio Streaming in VARIODYN D1
- Server computer in a redundant layout, optionally with automatic switching
- Control of VARIODYN D1 and its VARIODYN D1 3000 predecessor system from a control panel
- Interface with various display systems (manufacturer-specific)
- Interface with Automatic Train Control (manufacturer-specific)
- Interface with SCADA (manufacturer-specific)
- Interface with radio and phone via DTMF
- Indicate system status (such as error signals)
- Graphical overview of zones + zone prefixes
- Display of occupied zones
- Setting off standard texts / alarms (in connection with SCU)
- Audio database for announcements
- Assembly of automatic announcements ("Flight LH3434 to Vienna is ready for boarding")
- Multiple languages with variables in different orders
- Scheduler for timed release of announcements (once, multiple times)
- Live announcements (in combination with call station of the VARIODYN D1 with PAMMI Plus)
- Start playing music
- Logging of announcements, error signals, alarms, etc.
- Safe user administration against unauthorized access
- Priority control
- Instant messaging (inclusion of announcement and repeated release)
- Previewing of recordings before release
- Simple and convenient programming, commissioning and use via a Windows user interface

The VARIODYN D1 PAMMI Plus management system: easy and convenient display of VARIODYN D1 system information and for operation and use of the voice alarm and public address system as well. It's installed on a PC running the Windows operating system as a software application and offers optimum flexibility and freedom of control and use.

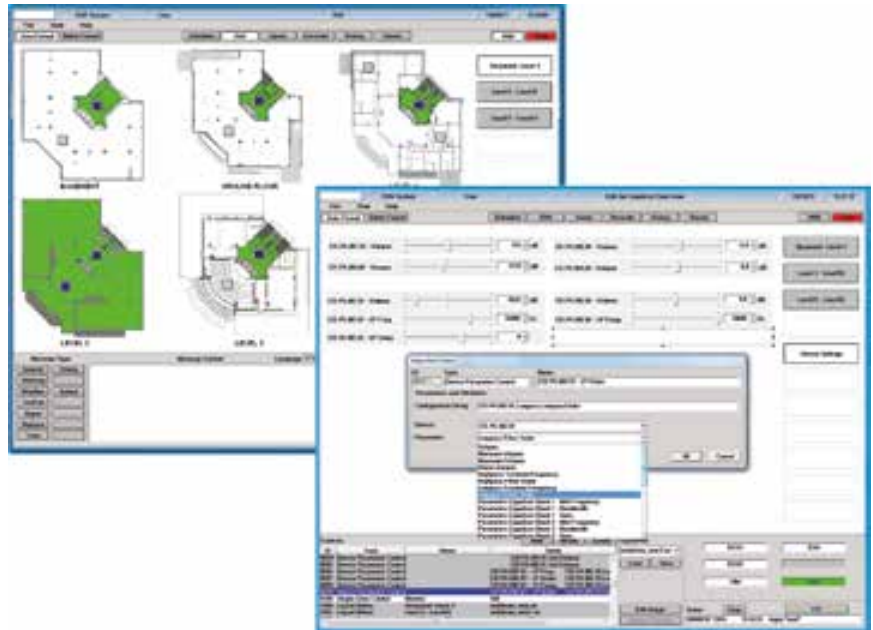
The graphical user interface can be customized for a particular property, thus being very useful. Whether the customer requires list displays, building plans, or other graphical representations, with PAMMI Plus everything is straightforward and quickly possible.

The entire voice alarm and public address system can therefore be serviced and controlled from one or many locations, thanks to the reliable server/client structure of PAMMI Plus,

This represents a great benefit and cost-savings potential to facilities such as airports, train stations, multi-branch industrial plants, hotels, shopping centers, and more.

PAMMI Plus = Public Address Man Machine Interface Plus

This product offers such a wide range of functionalities, that this description can only focus on a fraction of its abilities. Therefore a detailed conversation with one of our specialists in any case is worthwhile.



583651

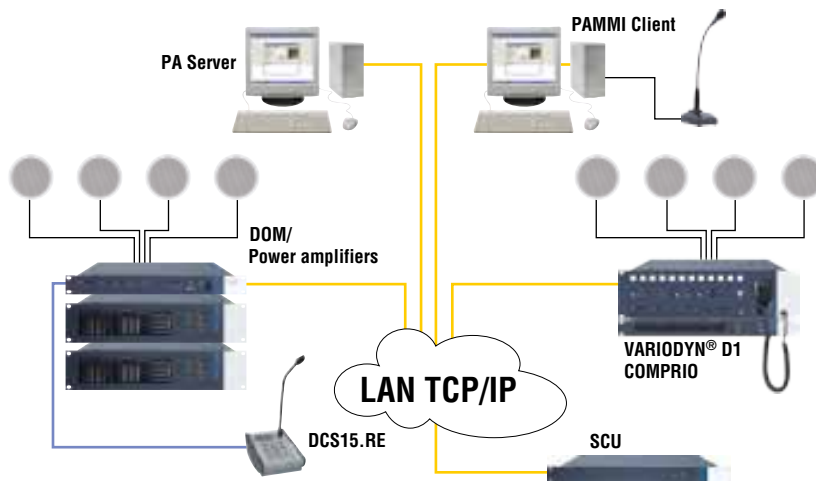
## PAMMI Plus PA server



### Features

- Supports to stream audio into VARIODYN D1
- Checking and monitoring of alarms and evacuation
- Checking and monitoring of announcements and other audio notifications, scheduling of announcements
- Interface to further functions in the facility
- Display and checking of system status of the VARIODYN D1 system
- Software license including USB-Dongle

The PAMMI Plus server applications is the core of the VARIODYN D1 PAMMI Plus Management System. It realises system control and communication with the components of the VARIODYN D1 voice alarm system and the PAMMI Plus client via Ethernet. The PAMMI Plus server manages and controls, for instance, the announcements and audio information of various PAMMI clients, the timed information. Furthermore, it is often possible to incorporate other systems in the object, such as flight control systems, person information systems, train traffic control systems, or text-to-speech systems into the PAMMI Plus Management System. Apart from our current VARIODYN D1 voice alarm and public address system, existing VARIODYN D1 3000 systems can obviously be incorporated as well. Here too, we are fully backward compatible. Parallel to the PAMMI Plus server, an additional PC can be operated in hot standby mode, to which one can switch, if necessary. This means that we have a fully redundant solution with optimal failure safety.



583652

## PAMMI Plus client



### Features

- Supports to stream audio into VARIODYN D1
- Graphical User Interface
- Checking and monitoring of alarms and evacuation
- Management and control of announcements and other audio information, timing of announcements
- Volume and sound control
- Zone selection
- Logbook for documentation of the listed functions
- Display and checking of system status of the VARIODYN D1 system
- Software license including USB-Dongle

PAMMI Plus client Application is a PC workstation with which the input can be made in PAMMI Plus and the information can be retrieved. PAMMI Plus client is the graphical user interface or the operating station. PAMMI Plus client is connected with PAMMI Plus Server via Ethernet and can be set up in a customer specific way. Many PAMMI Plus clients can be operated with one PAMMI Plus server.

In connection with the call station of VARIODYN D1 system, live announcements and buffered messages with the PAMMI Plus clients can be released or controlled. Thus, the user can e.g. narrate, save and control the message. After controlling, the message can be then be released. This prevents the danger of false announcements or live announcements of bad quality.

583653

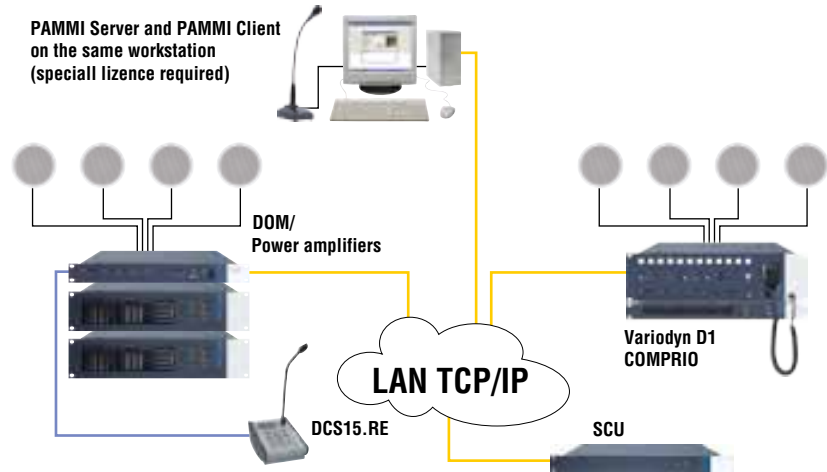
## PAMMI Plus server/client



Combination of PAMMI Plus server (Part No. 583651) and client software (Part No. 583652), so that the entire PAMMI Plus Management System can be operated with full functionality on a PC. This software includes the complete functionality of PAMMI Plus server (Part No. 583651) and client (Part No. 583652). Software license including USB-Dongle.

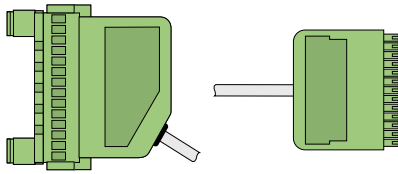
### Features

- Supports to stream audio into VARIODYN D1
- Graphical User Interface
- Checking and monitoring of alarms and evacuation
- Management and control of announcements and other audio information, timing of announcements
- Volume and sound control
- Zone selection
- Logbook for documentation of the listed functions
- Display and checking of system status of the VARIODYN D1 system
- Software license including USB-Dongle



583401.21

### Control cable 12 for UIM



Prefabricated cabling from 12 control contacts of the UIM to the cabinet rear panel; up to 4 pieces connectable per UIM.

583422.21

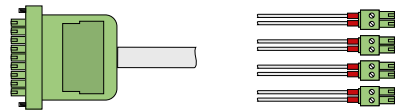
### Backup cable RC 22 VARIODYN D1



Prefabricated cabling of 2 accident channels to 4 user channels

583444

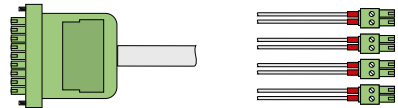
### Backup cable RC 44 VARIODYN D1, 2 m



Prefabricated cabling of 4 auxiliary channels on 4 bearer channels.

583444.10

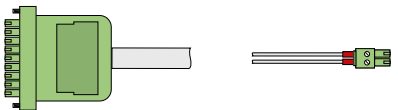
### Backup cable RC 44 VARIODYN D1, 0.5 m



Prefabricated cabling of 4 accident channels on 4 user channels. Short version for Compro applications.

583441

### Backup cable RC 41 VARIODYN D1, 2 m



Prefabricated cabling of a general average channel on 3 user channels, for the 3:1 average in conjunction with a four-channel amplifier 4XD125B (Part No. 580242) or 4XD250B (Part No. 580243).

583441.10

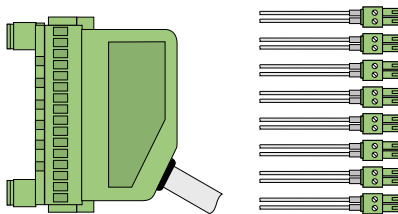
### Backup cable RC 41 VARIODYN D1, 0.5 m



Prefabricated cabling of a general average channel on 3 user channels, for the 3:1 average in conjunction with a four-channel amplifier 4XD125B (Part No. 580242) or 4XD250B (Part No. 580243). Length 2 m. Short version for Compro applications.

583451.21

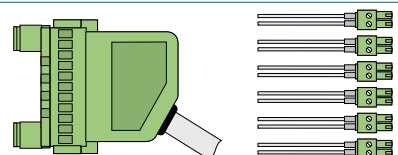
### Cable for cabinet rear panel DOM4-8



Prefabricated cabling of the 100 V outputs of DOM4-8 to the cabinet back wall; per DOM4-8, 1 piece can be connected. Also suitable for the wiring of the switching contacts of the DOM4-X to the cabinet back wall.

583452.21

### Cable for cabinet rear panel DOM4-24



Prefabricated cabling of the 100 V outputs of DOM4-24 to the cabinet back wall; per DOM4-24, up to 4 pieces can be connected.

583476.21

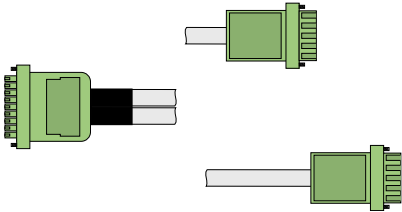
**Output cable amplifier DOM**



Prefabricated cabling of power amplifiers, 2 channels (max. 100 V) to the DOM.

583477.21

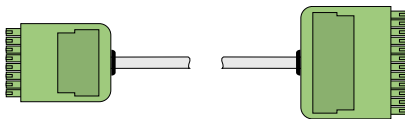
**Output cable 2 amplifier DOM**



Prefabricated cabling of power amplifiers, 4 channels (max. 100 V) to the DOM.

583471.21

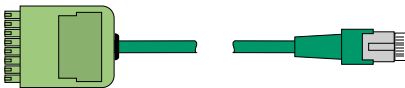
**Input cable DOM (G1) - XV amplifier (G1)**



Prefabricated cabling from DOM to power output amplifier, 2 channels (LF, control).

583472.21

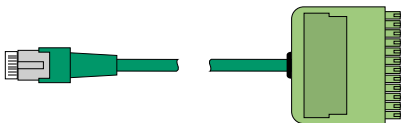
**Input cable DOM (G1) – amplifier (as of G2)**



Cable for connecting older 1st generation devices with the current 2nd generation models.

583473.21

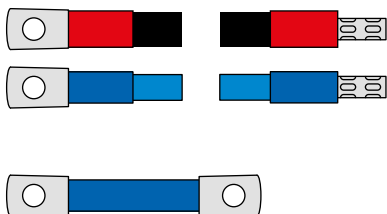
**Input cable DOM (G1) – amplifier (as of G2)**



Cable for connecting older 1st generation devices with the current 2nd generation models.

583410

**Connection cable battery -PSU**



Cable set for connecting batteries to the emergency power supply (Part No. 581721) onto the VARIODYN D1.

583481A

**CAT5 patch cable, 1 m blue (DAL)**



583482A

**CAT5 patch cable, 2 m blue (DAL)**









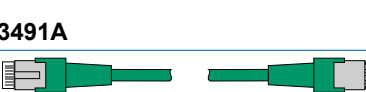

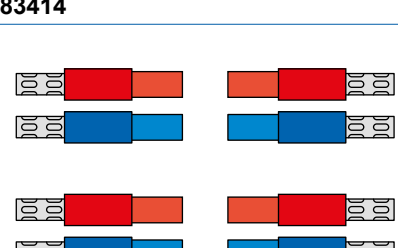


583483A

**CAT5 patch cable, 3 m blue (DAL)**



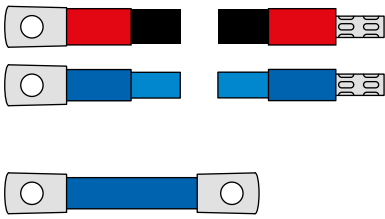


<p>583486A</p> 	<p><b>CAT5 patch cable, 1 m yellow (Ethernet)</b></p>
<p>583487A</p> 	<p><b>CAT5 patch cable, 2 m yellow (Ethernet)</b></p>
<p>583488A</p> 	<p><b>CAT5 patch cable, 3 m yellow (Ethernet)</b></p>
<p>583466A</p> 	<p><b>CAT5 patch cable, 0.5 m gray (Periphery)</b></p>
<p>583467A</p> 	<p><b>CAT5 patch cable, 1 m gray (Periphery)</b></p>
<p>583469A</p> 	<p><b>CAT5 patch cable, 3 m gray (Periphery)</b></p>
<p>583489</p> 	<p><b>XLR cable 1 m, plug jack length 1 m</b></p> <p>Audio-connection cable with a XLR plug and XLR jack, e.g. for connecting an external audio device to the UIM.</p>
<p>583490</p> 	<p><b>XLR cable 10 m, plug jack length 10 m</b></p> <p>Audio-connection cable with a XLR plug and XLR jack, e.g. for connecting an external audio device to the UIM.</p>
<p>583491A</p> 	<p><b>CAT5 patch cable, 0,5 m green (DOM to amplifier)</b></p> <p>Prefabricated cable from the DOM to the 2-channel power amplifier. If a 4 channel amplifier is used, this cable is needed two times.</p>
<p>583492</p> 	<p><b>Audio-connection cable length 1.8 m</b></p> <p>Audiocable, stereo-cinch.</p>
<p>583414</p> 	<p><b>Cable set 24 V DC VARIODYN D1 Comprio 4XD</b></p> <p>Standard cable set for connecting Comprios to the amplifier 4XD125B or 4XD250B.</p>

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## 583413

### Cable set for connecting batteries to VARIODYN D1 4XDxxxB amplifier



Standard cable set for internal housing connection of the batteries to the amplifier 4XD125B or 4XD250B.

## 581340

### Peripheral clip for top hat rail



Adapter box to connect peripheral components, such as for example analog microphones, to the VARIODYN D1. The incoming installation cable is connected directly to the installation box.

Also, the cable shield of the installation cable can be connected in the adapter box.

The output of the adapter box is connected directly via a pluggable power cable (Part No. 583466A, 583467A or 583469A) with the corresponding input of the VARIODYN D1. The pin assignments for the individual applications are listed in the VARIODYN D1 installation instructions (Part No. 798663).



Please order a suitable CAT5 cable from our product portfolio (e.g. Part No. 583466A)





Sound System

Sound System

# Sound System

581352

## MMA 240 mixing amplifier



Five zone mixing amplifier with 240W rated output power. The device is designed for background music and public address broadcast for up to five different zones. One slot for interchangeable music source modules, 6 Mic/Line inputs, gain control, paging microphone input, chime function, phantom power, priority inputs, graphic equalizer, five zone selector.

### Technical Data

Harmonic distortion at the nominal level	< 0.5 %
Channel separation	> 90 dB
Transmission range	50 ... 15000 Hz
Rated voltage	230 V AC
Power consumption	280 W
Weight	approx. 9.7 kg
Dimensions	W: 420 mm H: 88 mm D: 320 mm

581353

## FM/AM/USB/SD player



FM/AM/USB/SD radio tuner and player, designed to play compressed audio files. Volume control, equalizer, mute function, input source selection, repeat, random functions. For MMA 240 Mixing amplifier (581352) only!

### Technical Data

Operating voltage	12 V DC
Current consumption	0.5 A
Harmonic distortion at the nominal level	< 0.1 %
Channel separation	> 70 dB
Transmission range	87.5 ... 108 Hz
Weight	approx. 9.7 kg
Dimensions	W: 420 mm H: 88 mm D: 320 mm

581355

## TALK ST table stand



Microphone stands for XLR gooseneck microphones (TALK C1 or TALK D) with on/off switch.

**Connector:** Microphone input: 3-pin female XLR

**Cable:** 3-pin male XLR

### Characteristics:

Plug-in metal desk stand with on/off switch for microphones with XLRM connectors

### Technical Data

Color	black
Weight	approx. 0.9 kg
Dimensions	W: 45 mm H: 110 mm D: 140 mm



Not included is the connection to MMA 240 mixing amplifier (581352) via 1 m (583489) or 10 m (583490) XLR cable.

581357

## TALK D dynamic microphone



Dynamic gooseneck microphone with robust body and steel grill capsule basket. Designed for paging purposes. It can be used with TALK ST stands for fixed installation as desktop microphone. XLR connector is integrated into the metal body. Supplied with windscreen.

### Technical Data

Transmission range	150 ... 12000 Hz
Color	black
Weight	approx. 176 g
Dimensions	L: 425 mm



**Loudspeaker EN 54-24**

Ceiling Loudspeaker	60-63
Cabinet Loudspeaker	64-67
Horn Loudspeaker	68-69
Sound Projector	70-71
Spherical Loudspeaker	72
Column Loudspeaker	73

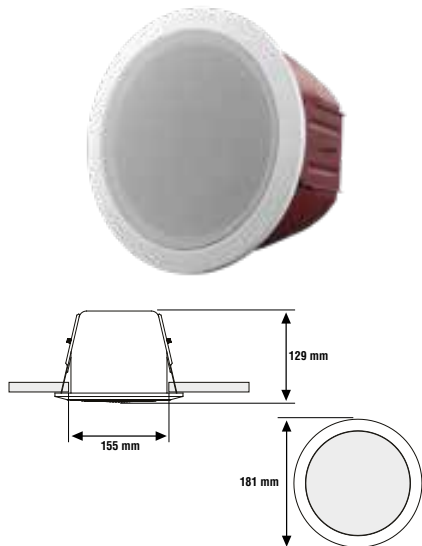
### Important information on sound pressure level specifications:

In the EN 54 Part 24 product standard, the specification of the sound pressure level is defined in the form of an average bandwidth (frequency range from 88.6 Hz to 11.3 kHz).

This parameter so called Sensitivity which is referred to in EN standards and thus crucial for project planning for loudspeakers. In our catalog you will only find sound pressure level measured according to the EN standards for EN 54-24 loudspeakers.

## LSC-506

### 6 W 5" ceiling loudspeaker EN 54 with fire dome, metal



#### Approval as per EN 54-24, 0359/CPD/00138

This voice alarm ceiling loudspeaker is specifically designed for use in buildings where performance of systems for voice evacuation announcements is governed by regulations. It is designed for flush mounting in suspended ceiling and ideal for even sound distribution. The appearance and neutral white RAL 9003 color have been selected to be unobtrusive in virtually all interiors. The fire dome increases protection of the cable termination. The driver unit is impregnated against moisture. For additional safety, this EN 54-24 ceiling loudspeaker features a ceramic terminal block and a thermal fuse.

#### Technical Data

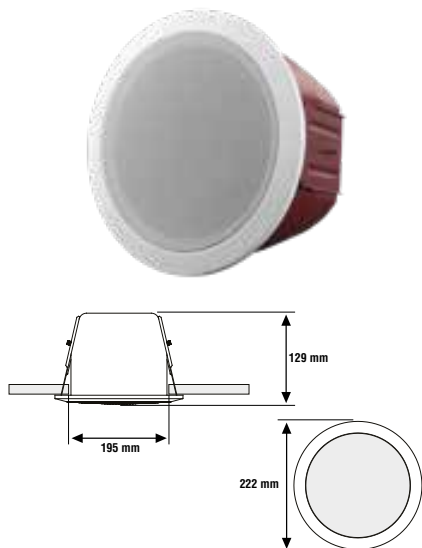
Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 / 0,75 W
Rated impedance	1,7 / 3,3 / 6,7 / 13 kΩ
Sensitivity EN 54-24, 1 W / 1 m	91 dB
Sensitivity EN 54-24, max 1 m	99 dB
Transmission range	180 ... 20000 Hz (-10 dB)
Dispersion angle	173° (H), 174° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Material	Metal
Color	white, similar to RAL 9003 / red similar to RAL 3000
Weight	approx. 1.29 kg
Cut-out size	(Ø min.) 155 mm
Dimensions	Ø: 181 mm D: 129 mm
Declaration of Performance	CPR-DoP-2013002



Delivery time on request.

## LSC-606

### 6 W 6.5" ceiling loudspeaker EN 54 with fire dome, metal



#### Approval as per EN 54-24, 0359/CPD/00138

This voice alarm ceiling loudspeaker is specifically designed for use in buildings where performance of systems for voice evacuation announcements is governed by regulations. It is designed for flush mounting in suspended ceiling and ideal for even sound distribution. The appearance and neutral white RAL 9003 color have been selected to be unobtrusive in virtually all interiors. The fire dome increases protection of the cable termination. The driver unit is impregnated against moisture. For additional safety, this EN 54-24 ceiling loudspeaker features a ceramic terminal block and a thermal fuse.

#### Technical Data

Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 / 0,75 W
Rated impedance	1,7 / 3,3 / 6,7 / 13 kΩ
Sensitivity EN 54-24, 1 W / 1 m	91 dB
Sensitivity EN 54-24, max 1 m	99 dB
Transmission range	170 ... 20000 Hz (-10 dB)
Dispersion angle	170° (H), 171° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Material	Metal
Color	white, similar to RAL 9003 / red similar to RAL 3000
Weight	approx. 1.57 kg
Cut-out size	(Ø min.) 195 mm
Dimensions	Ø: 222 mm D: 129 mm
Declaration of Performance	CPR-DoP-2013002

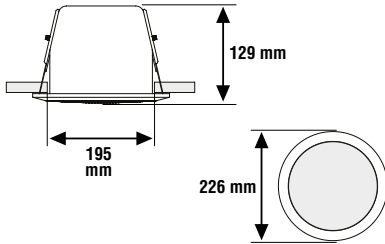


Delivery time on request.



582480

24 W 6.5" 2-way ceiling loudspeaker EN 54, metal



### Approval as per EN 54-24, 0359/CPD/00455

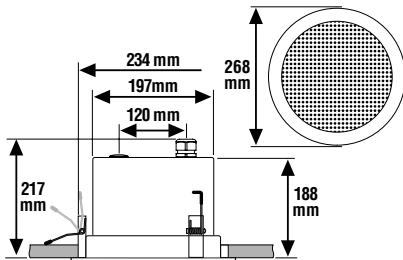
The 6.5" ceiling loudspeaker with its 2-way system features an excellent sound quality. It offers a broad frequency range and a high sound pressure level, thereby guaranteeing excellent music and speech reproduction. It is eminently suitable for demanding sound applications such as bistros, restaurants, hotels, and many other public locations. The ceramic terminal block and the thermal fuse increase the protection for the loudspeaker lines. The driver unit is impregnated against moisture. The loudspeaker complies with standard BS 5859 Part 8, and is certified in accordance with EN 54 Part 24.

#### Technical Data

Rated Power	24 W
Transformer power taps	24 / 12 / 6 / 3 W
Rated impedance	0,42 / 0,83 / 1,67 / 3,33 kΩ
Sensitivity EN 54-24, 1 W / 1 m	91 dB
Sensitivity EN 54-24, max 1 m	103 dB
Transmission range	120 ... 20000 Hz (-10 dB)
Dispersion angle	165° (H) / 167° (V) @ 1 kHz
Ambient temperature	-20 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	0 ... 95 %
Material	Metal
Color	white, similar to RAL 9003
Weight	approx. 2.25 kg
Cut-out size	(Ø min.) 195 mm
Dimensions	Ø: 226 mm D: 129 mm
Declaration of Performance	CPR-DoP-2014004

582402

10 W 8" ceiling loudspeaker EN 54, metal



### Approval as per EN 54-24, 1438/CPD/0233

Ceiling mount loudspeaker in plastic coated metal work with high efficiency and moisture proof broadband loudspeaker chassis, certified as per EN 54-24. DL 10-200/T-EN 54 (200 mm Chassis) has maximum power of 20 W and can be adjusted to 6 W, 10 W or 1.5 W if required. Spring clamps with cropped leg spring, with high clamping force, and short tension distance enables a quick and easy mounting. A smart inner ring prevents the grille from collapsing even under heavy load due to environmental influences. For additional protection, this EN 54-24 ceiling mount loudspeaker is assembled with ceramic clamp and thermal fuse as well as equipped with a fire dome. It has PG16-cable outlet and a blind cover. The fire dome prevents the suction effect of the chimney at the suspended ceiling in case of fire, after possible burning of the loudspeaker membrane.

#### Technical Data

Rated Power	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	93.9 dB
Sensitivity EN 54-24, max 1 m	103.4 dB
Transmission range	243 ... 19700 Hz (-10 dB)
Dispersion angle	178° @ 1kHz
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 2.1 kg
Cut-out size	(Ø min.) 238 mm
Dimensions	Ø: 268 mm D: 217 mm
Declaration of Performance	001-13

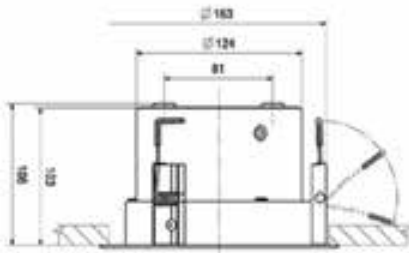


Delivery time on request



582400

Recessed Ceiling Loudspeaker DL 06-130/T-EN54



### Approval as per EN 54-24, 1438/CPD/0233

Modern ceiling installation loudspeaker in plastic-coated metal design (RAL 9010) with high efficiency and moisture-proof broadband loudspeaker chassis, certified as per EN54-24.

DL 06-130/T-EN54 (130 mm chassis) has a maximum power of 6 W and can be modified to 3 W or 1.5 W if required. Spring clamps with cropped leg spring, increased clamp force and shortened tension distance allow you to assemble it quickly and easily. A smart inner ring mounting prevents the grille from collapsing even under high load due to environmental influences. For additional safety, this EN54-24 ceiling installation loudspeaker is equipped with a ceramic clamp and thermal fuse, and fitted with a fire dome. It has a PG16 cable outlet and blind cover. The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through.

### Technical Data

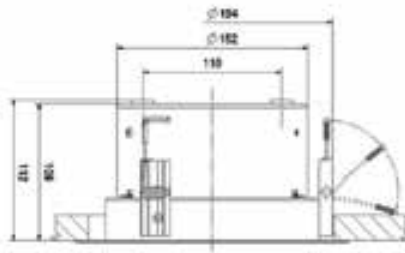
Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	93.5 dB
Sensitivity EN 54-24, 1 m	101.3 dB
Transmission range	350 ... 13.800 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 1.17 kg
Ceiling opening	(Ø min.) 165 mm
Dimensions	Ø: 180 mm D: 106 mm



Delivery time on request

582401

Recessed Ceiling Loudspeaker DL 06-165/T-EN54



### Approval as per EN 54-24, 1438/CPD/0233

Modern ceiling installation loudspeaker in plastic-coated metal design (RAL 9010) with high efficiency and moisture-proof broadband loudspeaker chassis, certified as per EN54-24.

DL 06-165/T-EN54 (165 mm chassis) has a maximum power of 6 W and can be modified to 3 W or 1.5 W if required. Spring clamps with cropped leg spring, increased clamp force and shortened tension distance allow you to assemble it quickly and easily. A smart inner ring mounting prevents the grille from collapsing even under high load due to environmental influences. For additional safety, this EN54-24 ceiling installation loudspeaker is equipped with a ceramic clamp and thermal fuse, and fitted with a fire dome. It has a PG16 cable outlet and blind cover. The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through.

### Technical Data

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	93.5 dB
Sensitivity EN 54-24, 1 m	101.3 dB
Transmission range	404 ... 10.100 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 1.36 kg
Ceiling opening	(Ø min.) 200 mm
Dimensions	Ø: 220 mm D: 112 mm



Delivery time on request

582404

Recessed Ceiling Loudspeaker DL 10-165/T plus-EN54



### Approval as per EN 54-24, 1438/CPD/0233


High-quality 2-way ceiling installation loudspeaker in plastic-coated metal design (RAL 9010) with excellent sound quality. This EN54-24 certified loudspeaker is optimally protected against humidity by a moisture-proof chassis.

DL 10-165/T plus-EN54 (165 mm chassis) has a maximum power of 10 W and can be modified to 6 W, 3 W or 1.5 W if required. It is best suited for demanding audio system projects like bistros, restaurants, hotels and many other facilities of public life. Spring clamps with cropped leg spring, increased clamp force and shortened tension distance allow you to assemble it quickly and easily.

For additional safety, the loudspeaker is equipped with a ceramic clamp and thermal fuse. A fire dome completes the safety equipment of this loudspeaker. It has a PG16 cable outlet and blind cover. The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through.

### Technical Data

Loading capacity	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	87.7 dB
Sensitivity EN 54-24, 1 m	97.7 dB
Transmission range	374 ... 23.400 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 1.66 kg
Ceiling opening	(Ø min.) 200 mm
Dimensions	Ø: 220 mm D: 134 mm

 Delivery time on request

582406

2x6 W 2x4" ceiling loudspeaker EN 54, metal




### Approval as per EN 54-24, 1438/CPD/0233

The A/B-line ceiling loudspeaker for voice alarm systems is certified in accordance with EN 54-24 and offers maximum safety for voice alarm projects.

The DL-AB 06-200/T-EN 54 features two mutually independent chassis and two 100 V output transformers, and allows for a cost-effective supply via two separate (A/B) lines. In the event of a failure of one line, the loudspeaker redundancy allows continued acoustic notification of the respective area. For every installation position, the presence of an A line as well as of a B line provides redundancy. The DL-AB 06-200/T-EN 54 ceiling loudspeaker made out of powder-coated metal features 2 x 6 W output. It can be adjusted to 2 x 3 W or 2 x 1.5 W, and is equipped with a fire dome. It features two cable ducts. The fire dome prevents the chimney suction effect with hanging ceilings in case of a fire, for instance after the blow-out of the loudspeaker membrane. Both A/B-line loudspeakers respectively feature 2 integrated ceramic terminals and 2 thermal fuses.

### Technical Data

Rated Power	12 W
Transformer power taps	2x6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	89.8 dB
Sensitivity EN 54 (double)	92.8 dB
Sensitivity EN 54-24 max (double)	100.3 dB
Sensitivity EN 54-24, max 1 m	97.3 dB
Transmission range	162 ... 18600 Hz (-10 dB)
Dispersion angle	145° @ 1kHz
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 2.02 kg
Cut-out size	(Ø min.) 236 mm
Dimensions	Ø: 267 mm D: 138 mm
Declaration of Performance	001-13

 Delivery time on request

582407

Ceiling Speaker DL-E 06-130/T-EN



### Approval as per EN 54-24, 1438/CPD/0233

This novel EN54-24 certified recessed ceiling loudspeaker for metal ceilings (RAL 9010) visually blends into the ceiling due to its flat design. The moisture-impregnated 5" broadband loudspeaker chassis is characterized by high efficiency. Adaptation to 6 W, 3 W or 1.5 W is implemented in the usual form on the loudspeaker. The spring-loaded connector (two included) guarantees simple, quick mounting in the ceiling. By default, a plastic protective cover is mounted on the back of the loudspeaker, but a fire dome, which is also EN54-24 certified, is available as well. If the loudspeaker will be used as specified by BS 5839-8, it is also possible to order and install an optional thermal fuse as well as a ceramic connector clamp.

#### Technical Data

Loading capacity	6 W
Transformer power taps	6/3/1.5 W
Sensitivity EN 54-24, 1 W / 1 m	88.9 dB
Sensitivity EN 54-24, max 1 m	96.7 dB
Transmission range	104 ... 17200 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-10 °C ... 55 °C
Color	white, similar to RAL 9010
Weight	approx. 0.51 kg
Ceiling opening	(Ø min.) 156 mm
Dimensions	Ø: 181.5 mm D: 66 mm



Ready-to-install recessed ceiling loudspeaker

#### Accessories

582407.FD Fire dome (FE 130.1) for recessed ceiling loudspeaker Part No. 582407  
581286 Ceramic clip and thermal fuse

582407.SAFE

Ceiling Speaker DL-E 06-130/T-EN.SAFE



### EN54-24 approval pending

This novel EN54-24 certified recessed ceiling loudspeaker for metal ceilings (RAL 9010) visually blends into the ceiling due to its flat design. The SAFE variant has a ceramic connector clamp and thermal fuse mounted at the factory. The moisture-impregnated 5" broadband loudspeaker chassis is characterized by high efficiency. Adaptation to 6 W, 3 W or 1.5 W is implemented in the usual form on the loudspeaker. The spring-loaded connector (two included) guarantees simple, quick mounting in the ceiling. By default, a plastic protective cover is mounted on the back of the loudspeaker, but a fire dome, which is also EN54-24 certified, is available as well. This is also required to mount these SAFE in projects that require use in compliance with BS 5839-8.

#### Technical Data

Loading capacity	6 W
Transformer power taps	6/3/1.5 W
Sensitivity EN 54-24, 1 W / 1 m	88.9 dB
Sensitivity EN 54-24, max 1 m	96.7 dB
Transmission range	104 ... 17200 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-10 °C ... 55 °C
Color	white, similar to RAL 9010
Weight	approx. 0.51 kg
Ceiling opening	(Ø min.) 156 mm
Dimensions	Ø: 181.5 mm D: 66 mm

#### Accessories

582407.FD Fire dome (FE 130.1)

582407.FD

Fire dome for Ceiling Speaker Part No. 582407



### Approval as per EN 54-24, 1438/CPD/0233

Fire dome (FE 130.1) for the 5" recessed ceiling loudspeaker (Part No. 582407) for increasing passive safety levels. This fire dome, together with the recessed ceiling loudspeaker above, is EN54-24 certified. The fire dome prevents chimney effect drafts through suspended ceilings in case of fire, should the speaker diaphragm burn through.

#### Technical Data

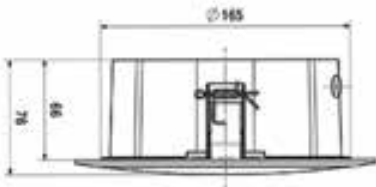
Color	black
Weight	approx. 0.3 kg
Dimensions	D: 70 mm



Hot pot is linked to Part No. 582407, 582407.SAFE, certified according to EN 54-24.

582408

6 W 6.5" ceiling loudspeaker EN 54, metal



### Approval as per EN 54-24, 1438/CPD/0233

With its flat forms, the type DL-E. 06-165/T-EN 54-24 is optically a good fit for the ceilings for which they were designed. The 6.5" broadband loudspeaker chassis, which is impregnated against humidity, distinguishes itself by way of its high degree of effectiveness. Typically, the 6 W, 3 W, or 1.5 W power setting can be selected. The spring latch (3 pieces) guarantees an uncomplicated and quick mounting onto the ceiling. In the standard version, a protective cover made out of a synthetic material is mounted to the back side of the loudspeaker, but a fire dome certified according to the EN 54 Part 24 standard is optionally available as well. If the loudspeaker is also meant to be used in accordance with BS 5839-8, it is possible to order the optional thermal fuse and a ceramic terminal, and to mount them (also certified in accordance with EN 54-24).

#### Technical Data

Rated Power	6 W
Transformer power taps	6/3/1.5 W
Sensitivity EN 54-24, 1 W / 1 m	97.8 dB
Sensitivity EN 54-24, max 1 m	105.3 dB
Transmission range	300 ... 19300 Hz (-10 dB)
Dispersion angle	180° @ 1kHz
Ambient temperature	-10 °C ... 55 °C
Color	white, similar to RAL 9016
Weight	approx. 0.68 kg
Cut-out size	(Ø min.) 165 mm
Dimensions	Ø: 199 mm D: 76 mm
Declaration of Performance	012-13

#### Accessories

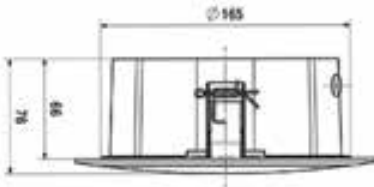
Optional:

582408.FD

Fire dome (FE 165.1) for ceiling loudspeaker Part No. 582408, 582408.SAFE

## 582408.SAFE

## 6 W 6.5" ceiling loudspeaker EN 54.SAFE, metal



### Approval as per EN 54-24, 1438/CPD/0233

With its flat form, these novel type DL-E 06-165/T-EN 54.SAFE is optically a good fit for the ceilings for which they were designed. The SAFE versions are equipped with a premounted ceramic terminal and a thermal fuse. The 6.5" broadband loudspeaker chassis, which is impregnated against humidity, distinguishes itself by way of its high degree of effectiveness. Typically, the 6 W, 3 W, or 1.5 W power setting. The spring latch (3 pieces) guarantees uncomplicated and quick mounting onto the ceiling. In the standard version, a protective cover made out of a synthetic material is mounted to the back side of the loudspeaker, but a fire dome certified according to the EN 54 Part 24 standard is optionally available as well. This is also necessary in order to mount this SAFE-type also in projects which require compliance with BS 5839-8.

### Technical Data

Rated Power	6 W
Transformer power taps	6/3/1.5 W
Sensitivity EN 54-24, 1 W / 1 m	97.8 dB
Sensitivity EN 54-24, max 1 m	105.3 dB
Transmission range	300 ... 19300 Hz (-10 dB)
Dispersion angle	180° @ 1kHz
Ambient temperature	-10 °C ... 55 °C
Color	white, similar to RAL 9016
Weight	approx. 0.68 kg
Cut-out size	(Ø min.) 165 mm
Dimensions	Ø: 199 mm D: 76 mm
Declaration of Performance	012-13

### Accessories

Optional:  
582408.FD Fire dome (FE 165.1)

## 582408.FD

## Fire dome for ceiling speaker Part No. 582408




### Approval as per EN 54-24, 1438/CPD/0233

Fire dome (FE 165.1) for the 6" ceiling loudspeaker (Part No. 582408) for increased passive safety. This fire dome, in combination with the aforementioned ceiling loudspeaker, is certified according to EN 54-24. The fire dome prevents the chimney suction effect with hanging ceilings in case of a fire, for instance after the blow-out of the loudspeaker membrane.

### Technical Data

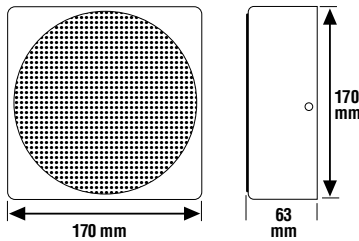
Color	black
Weight	approx. 0.39 kg
Dimensions	Ø: 155 mm D: 87 mm
Declaration of Performance	012-13

 Hot pot is linked to Part No. 582408, 582408.SAFE, certified according to EN 54-24.

Model	Wall-mounted	Ceiling-mounted	Ball-proof
582422	X	X	X
582422.10	X	–	–
582423	X	X	X
582424	X	X	X
582470	X	X	X
582426	X	X	X
582428	X	X	X

582470

## 6 W 4" cabinet loudspeaker EN 54, metal



### Approval as per EN 54-24, 0359/CPD/00174

The cabinet loudspeaker offers a broad frequency range and a high sound pressure level for an accurate and intelligible transmission of the evacuation messages, including an excellent sound reproduction. It is ideal for an even dispersion of sound in public and commercial buildings. Its low-profile, white color design blends easily with most interiors in locations such as hotels, schools, conference rooms, cinemas, amusement parks, factories, and trade fair halls. The driver unit is impregnated against moisture.

This cabinet loudspeaker complies with the BS 5859-8 standards, and is certified according to the EN 54-24 standard.

#### Technical Data

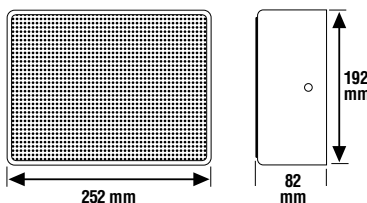
Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 / 0,75 W
Rated impedance	1,7 / 3,3 / 6,7 kΩ
Sensitivity EN 54-24, 1 W / 1 m	91 dB
Sensitivity EN 54-24, max 1 m	99 dB
Transmission range	300 ... 15000 Hz (-10 dB)
Dispersion angle	175° (H), 174° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Material	Metal
Color	white, similar to RAL 9003
Weight	approx. 1.56 kg
Dimensions	L: 170 mm W: 170 mm D: 63 mm
Declaration of Performance	CPR-DoP-2013002



Delivery time on request

582420

## Wall Surface Mount Speaker WA 06-165/T-EN54



### Approval as per EN 54-24, 1438/CPD/0231

Wall surface mount speaker WA 06-165/T with high-quality 165 mm broadband loudspeaker chassis with soffline design.

The wall surface mount speaker with high density, shock-resistant MDF wood housing provides low resonance sound. It is very versatile in use, for example for providing PA services in government buildings, schools or hospitals. The proven spring-loaded snap lock on the back panel guarantees quick wall mounting.

#### Technical Data

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	94.6 dB
Sensitivity EN 54-24, max 1 m	102.4 dB
Transmission range	197 ... 21.900 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-20 °C ... 80 °C
Type of protection	IP54
Color	white, similar to RAL 9010
Weight	approx. 1.95 kg
Dimensions	W: 252 mm H: 192 mm D: 82 mm



Delivery time on request

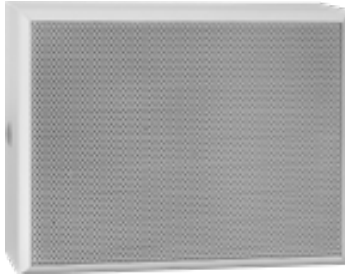
#### Features

- Ball-proof



582420.10

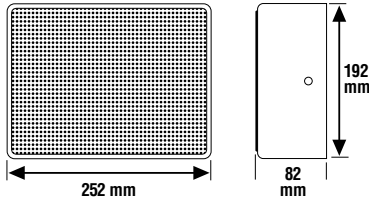
6 W cabinet loudspeaker, wooden, EN 54-24



**Approval as per EN 54-24, 1438/CPD/0231**


Wall surface mount speaker WA 06-165/T with high-quality 165 mm broadband loudspeaker chassis with softline design.

The wall surface mount speaker with high density, shock-resistant MDF wood housing provides low resonance sound. It is very versatile in use, for example for providing PA services in government buildings, schools or hospitals. The proven spring-loaded snap lock on the back panel guarantees quick wall mounting.



**Technical Data**

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	94.6 dB
Sensitivity EN 54-24, max 1 m	102.4 dB
Transmission range	17 ... 21.900 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-20 °C ... 80 °C
Type of protection	IP54
Color	white, similar to RAL 9010
Weight	approx. 1.95 kg
Dimensions	W: 252 mm H: 192 mm D: 82 mm

 Delivery time on request

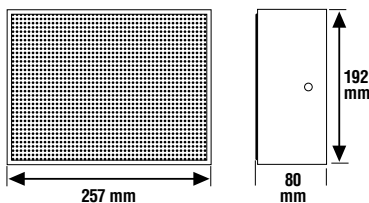
582421

Wall Surface mount Speaker WA 06-165/T Metal-EN54




**Approval as per EN 54-24, 1438/CPD/0231**

WA-06-165/T metal EN 54 is a vandal-proof wall-mounted loudspeaker designed entirely in metal with a maximum power of 6 W. It can be modified to 3 W or 1.5 W if required. Very good speech intelligibility is ensured by the 165 mm broadband chassis. The corrosion-resistant powder-coating (RAL 9010) ensures durable protection against environmental influences. The loudspeaker is equipped with an integrated ceramic clamp and thermal fuse. In addition, the loudspeaker chassis's are protected against the action of moisture.



**Technical Data**

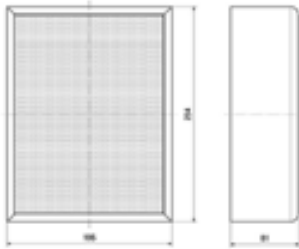
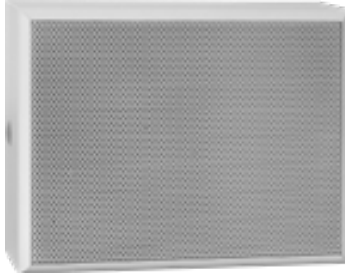
Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	94.6 dB
Sensitivity EN 54-24, max 1 m	102.4 dB
Transmission range	170 ... 18.500 Hz
Dispersion angle	180° (H), 180° (V)
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 2.04 kg
Dimensions	W: 257 mm H: 192 mm D: 80 mm

 Delivery time on request



582422

2 x 6 W, 2 x 4" AB cabinet loudspeaker EN 54, MDF



### Features

- Ball-proof

### Approval as per EN 54-24, 1438/CPD/0230

The A/B line cabinet loudspeaker for voice alarm systems is certified in accordance with EN 54-24 and offers maximum safety for voice alarm projects.

The WA-AB 06-100/T-EN 54 V features two mutually independent chassis and two 100 V output transformers. It allows for cost-effective supply via two separate (A/B) lines. In the event of a failure of one line, the loudspeaker redundancy allows continued alert of the respective area. For every installation position, the presence of an A line as well as of a B line provides redundancy. The high density MDF wood enclosure (in white) ensures low-resonance sound quality. This version is ball impact resistant and suitable for wall or ceiling mounting. The IP 54 rating guarantees operational safety even under harsh environmental conditions. Both A/B-line loudspeakers respectively feature 2 integrated ceramic terminals and 2 thermal fuses. The chassis are impregnated against moisture.

### Technical Data

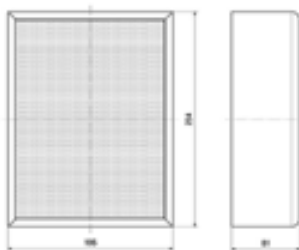
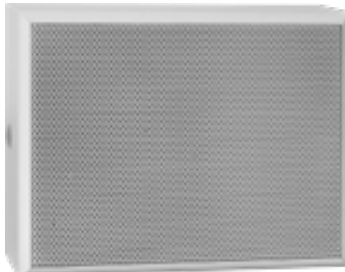
Rated Power	12 W
Transformer power taps	2 x 6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	89.5 dB
Sensitivity EN 54 (double)	92.6 dB
Sensitivity EN 54-24 max (double)	100.1 dB
Sensitivity EN 54-24, max 1 m	97 dB
Transmission range	227 ... 14600 Hz (-10 dB)
Dispersion angle	180° (H), 160° (V) @ 1 kHz
Ambient temperature	-20 °C ... 80 °C
Type of protection	IP 54 (zertifiziert)
Color	white, similar to RAL 9010
Weight	approx. 2.3 kg
Dimensions	W: 254 mm H: 195 mm D: 81 mm
Declaration of Performance	008-13



Delivery time on request

582422.10

2 x 6 W, 2 x 4" AB cabinet loudspeaker EN 54, MDF



### Authorized in compliance with EN 54-24, 1438/CPD/0230

The A/B line cabinet loudspeaker for speech alarm systems is certified in accordance with EN 54-24 and offers maximum safety for speech alarm projects.

The WA-AB 06-100/T-EN 54 V features two mutually independent chassis and two 100 V output transformers. It allows for cost-effective supply via two separate (A/B) lines. In the event of a failure of one line, the loudspeaker redundancy allows continued acoustic irradiation of the respective area. For every installation position, the presence of an A line as well as of a B line provides redundancy. The high density MDF wood enclosure (in white) ensures low-resonance sound quality. This version is exclusively intended for wall mounting. The IP 54 product standard guarantees operational safety even under harsh environmental conditions. Both A/B-line loudspeakers respectively feature 2 integrated ceramic terminals and 2 thermal fuses. The chassis are impregnated against moisture.

### Technical Data

Rated Power	12 W
Transformer power taps	2 x 6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	89.5 dB
Sensitivity EN 54 (double)	92.6 dB
Sensitivity EN 54-24 max (double)	100.1 dB
Sensitivity EN 54-24, max 1 m	97 dB
Transmission range	227 ... 14600 Hz (-10 dB)
Dispersion angle	180° (H), 160° (V) @ 1 kHz
Ambient temperature	-20 °C ... 80 °C
Type of protection	IP 54 (zertifiziert)
Color	white, similar to RAL 9010
Weight	approx. 2.3 kg
Dimensions	W: 254 mm H: 195 mm D: 81 mm
Declaration of Performance	008-13



Delivery time on request

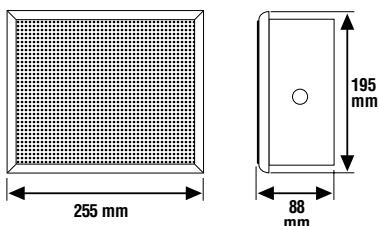
582425

6 W 6.5" flush-mounted wall loudspeaker EN 54




### Approval as per EN 54-24, 1438/CPD/0230

The white WU 06-165/T EN 54-24 was specifically developed for flush mount-installations. The stable rectangular in-wall loudspeaker with its stable sheet steel perforated grid cover also stands out due to its discrete softline appearance. It has a maximum output of 6 W, and can be adjusted to 3 W or 1.5 W, if necessary. Balanced sound dynamics are provided by a high-grade 165 mm broadband loudspeaker chassis. The loudspeaker is protected against dust and other forms of environmental impact by way of a synthetic shock-resistant ABS-flush mount enclosure in black. The loudspeaker features an integrated ceramic terminal block and a thermal fuse. Moreover, the loudspeaker chassis is impregnated against moisture.



### Technical Data

Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	91.6 dB
Sensitivity EN 54-24, max 1 m	99.1 dB
Transmission range	93 ... 23500 Hz (-10 dB)
Dispersion angle	180° (H), 170° (V) @ 1 kHz
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 1.4 kg
Dimensions	W: 255 mm H: 195 mm D: 88 mm
Declaration of Performance	009-13

 Delivery time on request

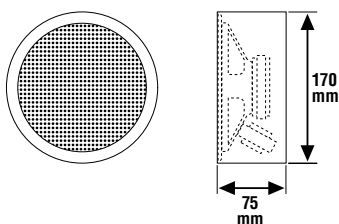
582423

10 W 6.5" round wall or ceiling surface mount loudspeaker, metal




### Approval as per EN 54-24, 1438/CPD/0232

The loudspeaker DL-A 10-165/T-EN 54 for voice alarm made of powder-coated metal in white with high degree of efficiency and a high-quality 200 mm broadband loudspeaker chassis. DL-A 10-165/T-EN 54 can be installed on ceiling and walls, where recessed mounting is not possible. Flat and elegant design for unobtrusive installations provided with a metal back plate. The loudspeaker is equipped for highest security requirements with a ceramic terminal and a thermal fuse. The Chassis is protected against moisture by impregnation. The DL-A 10-165/T EN 54 offers a powerful sound besides the high safety standard.



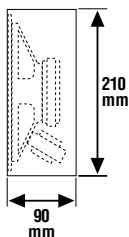
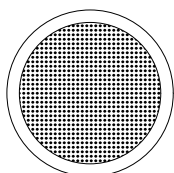
### Technical Data

Rated Power	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	90.7 dB
Sensitivity EN 54-24, max 1 m	100.7 dB
Transmission range	290 ... 23400 Hz (-10 dB)
Dispersion angle	180° @ 1 kHz
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 1.3 kg
Dimensions	Ø: 170 mm D: 75 mm
Declaration of Performance	004-13

 Delivery time on request

582424

10 W 8" round wall or ceiling surface mount loudspeaker, metal



### Approval as per EN 54-24, 1438/CPD/0232

The loudspeaker DL-A 10-200/T-EN 54 for voice alarm made of powder-coated metal in white with high degree of efficiency and a high-quality 200 mm broadband loudspeaker chassis.

The DL-A 10-200/T EN 54 can be mounted onto ceilings and walls when recessed mounting is not possible. Flat and elegant design for unobtrusive installations provided with a metal back plate.

The loudspeaker features a ceramic terminal and a thermal fuse in order to meet the highest safety requirements. The chassis is impregnated against moisture. Apart from a very high safety standard, the DL-A 10-200/T EN 54-24 also features a powerful sound.

### Technical Data

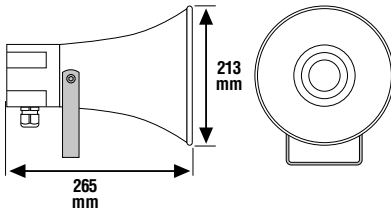
Rated Power	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
Sensitivity EN 54-24, 1 W / 1 m	92.5 dB
Sensitivity EN 54-24, max 1 m	102 dB
Transmission range	275 ... 19100 Hz (-10 dB)
Dispersion angle	180° @ 1 kHz
Ambient temperature	-20 °C ... 80 °C
Color	white, similar to RAL 9010
Weight	approx. 1.69 kg
Dimensions	Ø: 208 mm D: 89.5 mm
Declaration of Performance	004-13



Delivery time on request

582479

15 W horn loudspeaker EN 54, ABS



### Approval as per EN 54-24, 0359/CPD/00456

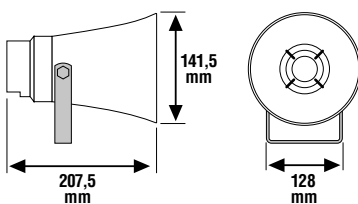
The horn loudspeaker offers a high sound pressure and long-lasting weather resistance, ideal for use in industrial projects. The IP 66 high protection class guarantees operational safety even under the most difficult conditions. The loudspeaker is also equipped with a ceramic terminal block and a thermal fuse for increased safety. The shock-resistant ABS enclosure according to UL94V0 ensures long-lasting stability. A U-shaped non-corrosive universal bracket is enclosed for flexible mounting. The cable connection is done without need for an additional junction box. The flexible power adjustment can be easily done with the rotary switch on the back side of the loudspeaker. The loudspeaker is also suitable for outdoors use. The loudspeaker complies with standard BS 5859 Part 8, and is certified in accordance with EN 54 Part 24.

### Technical Data

Rated Power	15 W
Transformer power taps	15 / 10 / 5 W
Rated impedance	0.667 / 1 / 2 kΩ
Sensitivity EN 54-24, 1 W / 1 m	105 dB
Sensitivity EN 54-24, max 1 m	117 dB
Transmission range	300 ... 16000 Hz (-10 dB)
Dispersion angle	124° (H) / 143° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Type of protection	IP 66
Material	ABS
Color	light grey, similar to RAL 7035
Weight	approx. 2.05 kg
Dimensions	Ø: 213 mm D: 265 mm
Declaration of Performance	CPR-DoP-2014005

582430

Horn Loudspeaker DK 10/T EN54




### Approval as per EN 54-24, 1438/CPD/00242

The horn loudspeaker, DK 10/T-EN54, certified as per EN54-24, offers high acoustic pressure and durable weather resistance, ideal for industrial use. The high protection class IP66 ensures operational safety even under very difficult conditions. For more safety, the loudspeaker is additionally equipped with a ceramic clamp and thermal fuse. The impact-resistant ABS body as per UL94V0 ensures durable stability. Delivered along with a U-shaped, universal rust-free bracket for flexible assembly. The flexible power modification can easily be done on the back of the loudspeaker, 10 W, 5 W, 2.5 W, 1.25 W. The DK 10/ T-EN54 is also suitable for use in outdoor areas.

### Technical Data

Loading capacity	10 W
Transformer power taps	10 5/2.5/1.25 W (20)
Sensitivity EN 54-24, 1 W / 1 m	98 dB
Sensitivity EN 54-24, max 1 m	108 dB
Transmission range	569 ... 7.000 Hz
Dispersion angle	140° (H), 140° (V)
Ambient temperature	-20 °C ... 90 °C
Type of protection	IP66
Color	gray, similar to RAL 7035
Weight	approx. 1.81 kg
Dimensions	Ø: 142 mm D: 210 mm

 Delivery time on request

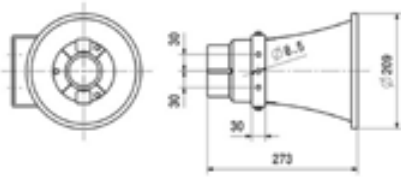
582431

Horn Loudspeaker DK 15/T EN54




### Approval as per EN 54-24, 1438/CPD/0242

The horn loudspeaker, DK 15/T-EN54, certified as per EN54-24, offers high acoustic pressure and durable weather resistance, ideal for industrial use. The high protection class IP66 ensures operational safety even under very difficult conditions. For more safety, the loudspeaker is additionally equipped with a ceramic clamp and thermal fuse. The impact-resistant ABS body as per UL94V0 ensures durable stability. Delivered along with a U-shaped, universal rust-free bracket for flexible assembly. The flexible power modification can easily be done on the back of the loudspeaker, 15 W, 7.5 W, 3.75 W, 1.87 W. The DK 15/T-EN54 is also suitable for use in outdoor areas.



### Technical Data

Loading capacity	15 W
Transformer power taps	15/7.5/3.75/1.87 W (20)
Sensitivity EN 54-24, 1 W / 1 m	100.5 dB
Sensitivity EN 54-24, max 1 m	112.3 dB
Transmission range	677 ... 5.400 Hz
Dispersion angle	110° (H), 110° (V)
Ambient temperature	-20 °C ... 90 °C
Type of protection	IP66
Color	gray, similar to RAL 7035
Weight	approx. 2.1 kg
Dimensions	Ø: 209 mm D: 273 mm

 Delivery time on request

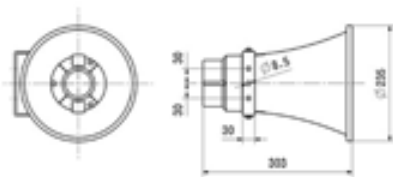
582432

30 W horn loudspeaker EN 54, ABS




### Approval as per EN 54-24, 1438/CPD/0242


The horn loudspeaker DK 30/T-EN 54 certified in accordance to EN 54-24 offers a high sound pressure and weather resistance, ideal for industrial use. The high protection class IP 66 guarantees operating reliability even under difficult environmental conditions. For increased protection, the loudspeaker is equipped with built in ceramic terminal and a thermal fuse. The impact resistant ABS housing following UL94V0 guarantees long lasting stability. A U shaped, stainless universal holder is included for a flexible mounting. The flexible power adjustment can be easily done on the back side of the loudspeaker, 30 W, 20 W, 10 W, 5 W. The DK 30/T-EN 54 is also suitable for using in outdoor areas.



### Technical Data

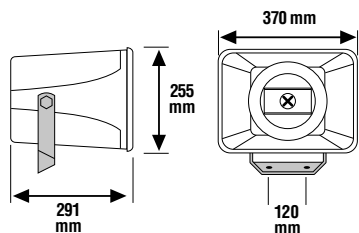
Rated Power	30 W
Transformer power taps	30 / 20 / 10 / 5 W
Sensitivity EN 54-24, 1 W / 1 m	91.9 dB
Sensitivity EN 54-24, max 1 m	124 dB
Transmission range	592 ... 6900 Hz (-10 dB)
Dispersion angle	110° @ 1 kHz
Ambient temperature	-20 °C ... 90 °C
Type of protection	IP 66 (zertifiziert)
Color	gray, similar to RAL 7035
Weight	approx. 2.3 kg
Dimensions	Ø: 235 mm D: 303 mm
Declaration of Performance	003-13

 Incl. premounted 1.0 m cable and an IP 65 distribution box

 Delivery time on request

582433

30 W 2-way horn loudspeaker EN 54, ABS



### Approval as per EN 54-24, 1438/CPD/0242

The 2-way music horn DK-MH 30/T plus-EN 54 with impact-resistant ABS housing in light gray (similar to RAL 7035) and protection class IP 66, complements the series of horn loudspeaker for voice alarm. For more safety, it is also equipped with ceramic terminal and thermal fuse. An enormous sound pressure and a convincing music quality, likewise as simple and flexible installation with stainless aluminum universal mount. The flexible power adjustment can be easily done on the back side of the loudspeaker, 30 W, 15 W, 7,5 W, 3,75 W. The DK MH30/T plus-EN 54 is also suitable for using in outdoor areas.

### Technical Data

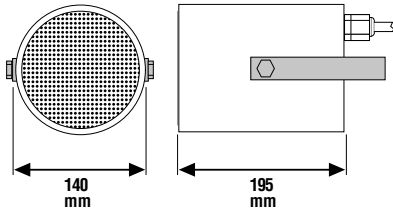
Rated Power	30 W
Transformer power taps	30 / 15 / 7,5 / 3,75 W
Sensitivity EN 54-24, 1 W / 1 m	90.4 dB
Sensitivity EN 54-24, max 1 m	104.8 dB
Transmission range	237 ... 21100 Hz (-10 dB)
Dispersion angle	60° (H), 99° (V) @ 1 kHz
Ambient temperature	-20 °C ... 90 °C
Color	white, similar to RAL 9010
Weight	approx. 4.5 kg
Dimensions	W: 370 mm H: 255 mm D: 291 mm
Declaration of Performance	003-13



Delivery time on request

582473

10 W unidirectional sound projector EN 54, metal



### Approval as per EN 54-24, 0359/CPD/0172


This unidirectional 10 W sound projector features a broad frequency response and a high degree of efficiency. Its IP 65 protection class guarantees universal applicability indoors as well as outdoors.


Its modern design and its excellent sound quality make this sound projector eminently suitable for use in hotels, shopping malls, airports, railway platforms, etc.

The mounted thermal fuse as well as the ceramic terminal enable application in compliance with BS5839 Part 8.

#### Technical Data

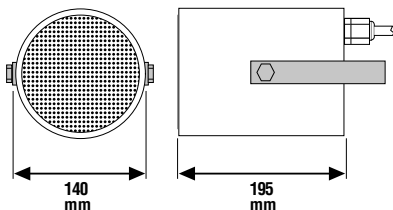
Rated Power	10 W
Transformer power taps	10 / 5 / 2,5 / 1,25 W
Sensitivity EN 54-24, 1 W / 1 m	89 dB
Sensitivity EN 54-24, max 1 m	99 dB
Transmission range	150 ... 20000 Hz (-10 dB)
Dispersion angle	214° (H), 219° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Type of protection	IP 65
Color	white, similar to RAL 9003
Weight	approx. 2.62 kg
Dimensions	Ø: 140 mm D: 195 mm
Declaration of Performance	CPR-DoP-2014002

 Pre-mounted fire-resistant, 6-core connection cable, length 0.90 m  
Including bracket and mounted at housing (please mounted at housing instructions)!

 Delivery time on request

582474

20 W unidirectional sound projector EN 54, metal



### Approval as per EN 54-24, 0359/CPD/0172


This unidirectional 20 W sound projector features a broad frequency response and a high degree of efficiency. Its IP 65 protection class guarantees universal applicability indoors as well as outdoors.


Its modern design and its excellent sound quality make this sound projector eminently suitable for use in hotels, shopping malls, airports, railway platforms, etc.

The mounted thermal fuse as well as the ceramic terminal enable application in compliance with BS5839 Part 8.

#### Technical Data

Rated Power	20 W
Transformer power taps	20 / 10 / 5 / 2,5 W
Sensitivity EN 54-24, 1 W / 1 m	89 dB
Sensitivity EN 54-24, max 1 m	102.5 dB
Transmission range	150 ... 20000 Hz (-10 dB)
Dispersion angle	214° (H), 219° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Type of protection	IP 65
Color	white, similar to RAL 9003
Weight	approx. 2.65 kg
Dimensions	Ø: 140 mm D: 195 mm
Declaration of Performance	CPR-DoP-2014002

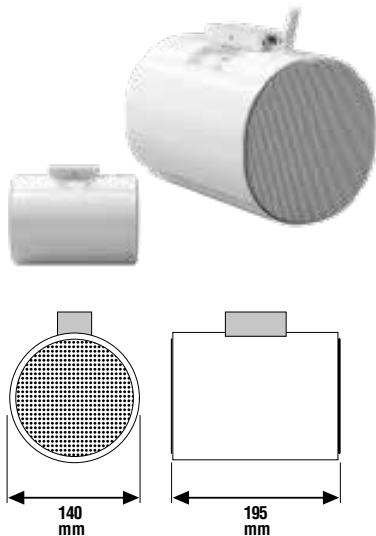
 Pre-mounted fire-resistant, 6-core connection cable, length 0.90 m  
Including bracket mounted at housing (please refer to the installation instructions)!

 Delivery time on request



582475

20 W bidirectional sound projector EN 54, metal


**Approval as per EN 54-24, 0359/CPD/0172**


This bidirectional 20 W sound projector features a broad frequency response and a high degree of efficiency. Its IP 65 protection class guarantees universal applicability indoors as well as outdoors. Its modern design and its excellent sound quality make this sound projector eminently suitable for use in hotels, shopping malls, airports, railway platforms, etc.

The mounted thermal fuse as well as the ceramic terminal enable application in compliance with BS5839 Part 8.

**Technical Data**

Rated Power	20 W
Transformer power taps	20 / 10 / 5 / 2,5 W
Sensitivity EN 54-24, 1 W / 1 m	87 dB
Sensitivity EN 54-24, max 1 m	100 dB
Transmission range	150 ... 20000 Hz (-10 dB)
Dispersion angle	214° (H), 219° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Type of protection	IP 65
Color	white, similar to RAL 9003
Weight	approx. 3.23 kg
Dimensions	Ø: 140 mm D: 195 mm
Declaration of Performance	CPR-DoP-2014002

 Pre-mounted fire-resistant, 6-core connection cable, length 0.90 m  
Including bracket mounted at housing (please refer to installation instructions)!

 Delivery time on request

582441

Sound Projector DA-S 20-130/T EN54

**Approval as per EN 54-24, 1438/CPD/0234**

The DA-S 20-130/T-EN54 sound projector with a 130-mm broadband loudspeaker chassis has high stability, is high-performance and certified as per EN54-24. Due to its good speech intelligibility, this sound projector is especially suitable for applications in corridors and work floors. Equipped with ceramic clamps and thermal fuse, the sound projectors meet the highest safety requirements. The sound projector has a maximum power of 20 W and can also be modified to 15 W, 10 W and 5 W. The chassis's of the sound projectors are best protected against humidity due to their special construction choice of material and production details. The DA-S sound projector with IP65 are completely made of robust aluminum and additionally plastic-coated with RAL 9010. Corrosion can thus not occur. Optionally, you can get a mast bracket (Part No. 581281) for the DA-S 20-130/T-EN54 for a mast diameter of about 200 mm.

**Technical Data**

Loading capacity	20 W
Transformer power taps	20 / 15 / 10 / 5 W
Sensitivity EN 54-24, 1 W / 1 m	92.1 dB
Sensitivity EN 54-24, max 1 m	105.4 dB
Transmission range	800 ... 16.700 Hz
Dispersion angle	360° (H), 360° (V)
Ambient temperature	-20 °C ... 90 °C
Type of protection	IP65
Color	white, similar to RAL 9010
Weight	approx. 2.52 kg
Dimensions	Ø: 150 mm D: 183 mm
CE certificate	1438-CPD-0234

582460

16 W spherical speaker EN 54, ABS



### Approval as per EN 54-24, 1438/CPD/0325

The compact DL-K 16-130/T-EN 54 is equipped with a corrosion-resistant 130 mm full range speaker chassis with ceramic terminal and thermal fuse. The 16 W high ball speaker certified to EN 54-24 with ABS housing (UL94 HB) offers a high sound pressure level and a balanced frequency response.

#### Technical Data

Rated Power	16 W
Transformer power taps	16 / 8 / 4 W
Sensitivity EN 54-24, 1 W / 1 m	85 dB
Sensitivity EN 54-24, max 1 m	97 dB
Transmission range	130 ... 13300 Hz (-10 dB)
Dispersion angle	196° @ 1kHz
Ambient temperature	-20 °C ... 80 °C
Type of protection	IP 35
Color	white, similar to RAL 9010
Weight	approx. 1.5 kg
Dimensions	Ø: 185 mm D: 157 mm
Declaration of Performance	005-13



Pre-mounted, 5-core connection cable, length 4,50 m  
Including canopy



Delivery time on request.

582461

20 W spherical speaker EN 54, ABS



### Approval as per EN 54-24, 1438/CPD/0325

The DL-54 K 20-165/T-EN with an impact-resistant, UV-resistant ABS-housing in white (UL94 V0) features a corrosion-resistant 165-mm broadband loudspeaker chassis with ceramic terminal and thermal fuse. The spherical loudspeaker certified according to EN 54-24 meets the highest safety requirements of IP 35 (IEC 529). The power setting of DL-K 20-165 / T can be easily adjusted by turning the screw at the top of the ball. The low-resistance mode is also possible.

#### Technical Data

Rated Power	20 W
Transformer power taps	20 / 10 / 5 / 2,5 W
Sensitivity EN 54-24, 1 W / 1 m	91.5 dB
Sensitivity EN 54-24, max 1 m	104.5 dB
Transmission range	128 ... 17900 Hz (-10 dB)
Dispersion angle	163° @ 1 kHz
Ambient temperature	-20 °C ... 80 °C
Type of protection	IP 35
Color	white, similar to RAL 9010
Weight	approx. 2.2 kg
Dimensions	Ø: 260 mm D: 245 mm
Declaration of Performance	005-13



Pre-mounted, 5-core connection cable, length 4,50 m  
Including canopy



Delivery time on request

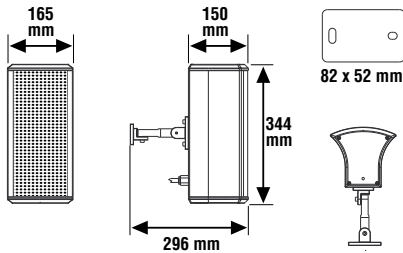
582476

20 W column loudspeaker EN 54, metal

### Approval as per EN 54-24, 0359/CPD/00456



The 20 W column loudspeaker has a broad frequency range and a high sound pressure level. This guarantees an accurate and intelligible transmission of the evacuation message, as well as excellent sound reproduction. It can be used indoors as well as outdoors, in dry as well as in humid surroundings. Due to its flat design and the white coating, the loudspeaker can be easily integrated in hotels, conference rooms, cinemas, factories, trade fair halls and other buildings. The loudspeaker complies with standard BS 5859 Part 8, and is certified in accordance with EN 54 Part 24.



#### Technical Data

Rated Power	20 W
Transformer power taps	20 / 10 / 5 / 2.5 W
Rated impedance	0,5 / 1 / 2 / 4 kΩ
Sensitivity EN 54-24, 1 W / 1 m	91 dB
Sensitivity EN 54-24, max 1 m	104 dB
Transmission range	300 ... 15000 Hz (-10 dB)
Dispersion angle	146° (H) / 87° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Type of protection	IP 66
Material	Aluminum
Color	white, similar to RAL 9003
Weight	approx. 3.75 kg
Dimensions	W: 165 mm H: 344 mm D: 150 mm
Declaration of Performance	CPR-DoP-2014003



Wall mount included



Delivery time on request.

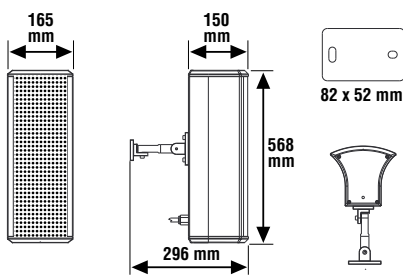
582477

40 W column loudspeaker EN 54, metal

### Approval as per EN 54-24, 0359/CPD/00455



The 40 W column loudspeaker has a broad frequency range and a high acoustic pressure level. This guarantees an accurate and intelligible transmission of the evacuation message, as well as excellent sound reproduction. It can be used indoors as well as outdoors, in dry as well as in humid surroundings. Due to its flat design and the white coating, the loudspeaker can be easily integrated in hotels, conference rooms, cinemas, factories, trade fair halls and other buildings. The loudspeaker complies with standard BS 5859 Part 8, and is certified in accordance with EN 54 Part 24.



#### Technical Data

Rated Power	40 W
Transformer power taps	40 / 20 / 10 / 5 W
Rated impedance	0,25 / 0,5 / 1 / 2 kΩ
Sensitivity EN 54-24, 1 W / 1 m	94 dB
Sensitivity EN 54-24, max 1 m	110 dB
Transmission range	300 ... 15000 Hz (-10 dB)
Dispersion angle	147° (H) / 48° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Type of protection	IP 66
Material	Aluminum
Color	white, similar to RAL 9003
Weight	approx. 5.75 kg
Dimensions	W: 165 mm H: 568 mm D: 150 mm
Declaration of Performance	CPR-DoP-2014003



Wall mount included



Delivery time on request.



**Standard Loudspeaker**

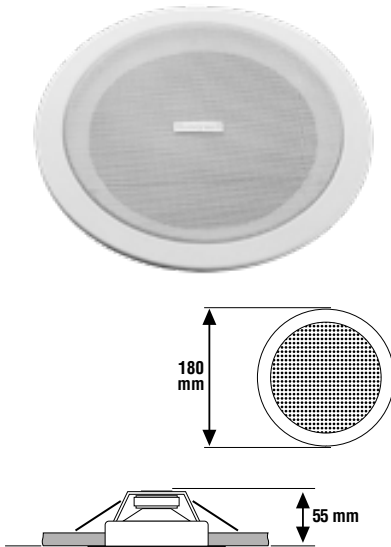
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## Standard Loudspeaker

## Ceiling Loudspeaker

581263

### 6 W 5" ceiling loudspeaker, metal



The cost-effective ceiling loudspeaker features an excellent sound reproduction and an esthetically appealing design. It is versatile and distinguishes itself by its high sound pressure and its broad frequency range. It features 6 W Dual Cone driver unit and a back-mounted 100 V transformer. The loudspeaker is CE and RoHS compliant.

#### Technical Data

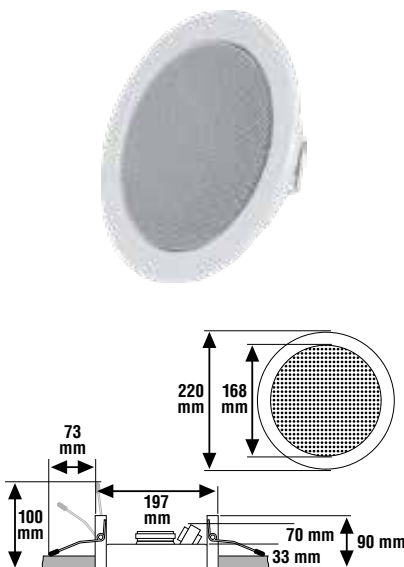
Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 W
Rated impedance	1,7 / 3,3 / 6,7 kΩ
SPL 1 W / 1 m	90 dB
Transmission range	120 ... 20000 Hz (-10 dB)
Dispersion angle	160°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Material	Metal
Color	white, similar to RAL 9003
Weight	approx. 0.71 kg
Cut-out size	(Ø min.) 150 mm
Dimensions	Ø: 180 mm D: 55 mm



Delivery time on request.

581254

### Ceiling Loudspeaker EDL 06-165/T



The metal bayonet recessed ceiling loudspeaker with a 165 mm broadband loudspeaker chassis and high efficacy offers excellent sound for all applications. Spring-loaded snap lock with cranked leg spring, clamping strength and shorter tension interval facilitate fast and simple mounting. Flush installation is thus possible with suspended ceilings.

#### Technical Data

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
SPL Pmax / 1 m	110.8 dB
SPL 1 W / 1 m	103 dB
Transmission range	97 ... 20.000 Hz
Dispersion angle	180°
Color	white, similar to RAL 9010
Weight	approx. 1.3 kg
Dimensions	Ø: 220 mm D: 100 mm

#### Accessories

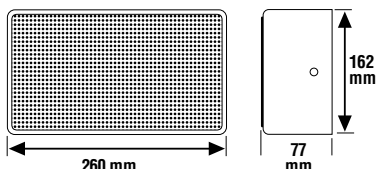
581255 Fire dome (EF 165) for recessed ceiling loudspeakers Part No. 581254

## Standard Loudspeaker

## Wall Surface Mounted Speaker

581270

### 6 W cabinet loudspeaker, ABS



The loudspeaker has a shallow installation height. Its elegant design makes it suited for applications in various environments, such as shopping centers, education institutions, office buildings, hotels, and restaurants.

The loudspeaker features a high-grade loudspeaker chassis, which provides an extraordinary audio output and guarantees long-term durability. The quick and simple installation saves time and costs. The loudspeaker is CE and RoHS compliant.

#### Technical Data

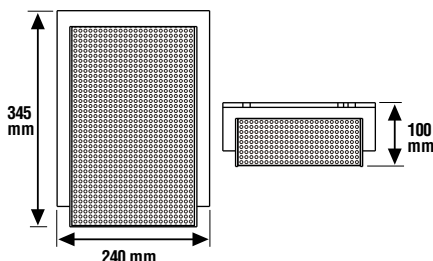
Rated Power	6 W
Transformer power taps	6 / 3 W
Rated impedance	1,7 / 3,3 kΩ
SPL 1 W / 1 m	90 dB
Transmission range	200 ... 20000 Hz (-10 dB)
Dispersion angle	120°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Material	ABS
Color	white, similar to RAL 9010
Weight	approx. 1 kg
Dimensions	W: 260 mm H: 162 mm D: 77 mm



Delivery time on request.

581276

### 10 W cabinet loudspeaker, ABS



The Cabinet loudspeaker is suitable for various applications, such as shopping centers, supermarkets, educational institutions, office buildings, hotels, and restaurants. It stands out due to its high sound pressure and its wide frequency range, and offers excellent voice and music reproduction.

Available output settings are 5 W and 10 W. A spring terminal on the back side makes cable connection easier. The elegant design in shock-resistant ABS material is kept in discrete white.

The loudspeaker features an extraordinary bass response.

The loudspeaker is CE and RoHS compliant.

#### Technical Data

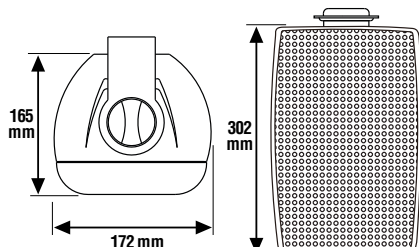
Rated Power	10 W
Transformer power taps	10 / 5 W
Rated impedance	1 / 2 kΩ
SPL 1 W / 1 m	92 dB
Transmission range	150 ... 17000 Hz (-10 dB)
Dispersion angle	170°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Material	ABS
Color	white, similar to RAL 9003
Weight	approx. 1.6 kg
Dimensions	W: 345 mm H: 240 mm D: 100 mm



Delivery time on request.

581277

### 40 W cabinet loudspeaker, ABS



The Cabinet loudspeaker is very well capable of reproducing background music. Spring clips on the back side make a simple installation possible. The loudspeaker is ideal for use in bars, restaurants, shopping centers, video stores, conference rooms, office buildings, trade fair halls, gyms, presentation rooms, etc. The adjustable brackets allow for the flexible positioning of the loudspeaker.

The loudspeaker is CE and RoHS compliant.

#### Technical Data

Rated Power	40 W
Transformer power taps	40 / 20 / 10 W
Rated impedance	0,25 / 0,5 / 1 kΩ
SPL 1 W / 1 m	84 dB
Transmission range	100 ... 20000 Hz (-10 dB)
Dispersion angle	160°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Material	ABS
Color	white, similar to RAL 9003
Weight	approx. 3.2 kg
Dimensions	W: 302 mm H: 172 mm D: 165 mm



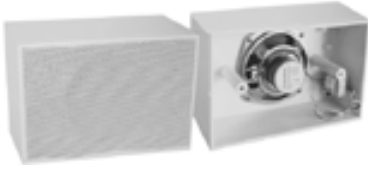
Delivery time on request.

## Standard Loudspeaker

## Wall Surface Mounted Speaker

581228

### Wall surface mount speaker i Speak 6



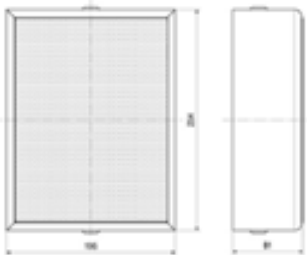
Plastic wall speaker with integrated 100 V transformer. The loudspeaker is designed to be easily mounted on any flat surface.

#### Technical Data

Loading capacity	6 W
Transformer power taps	6 W - 3 W
SPL Pmax / 1 m	99 dB
SPL 1 W / 1 m	92 dB
Transmission range	130 ... 17000 Hz
Dispersion angle	180° (H) x 140° (V)
Material	ABS plastic housing / steel
Color	white, similar to RAL 9018
Weight	approx. 1 kg
Dimensions	W: 166 mm H: 267 mm D: 80 mm

581252

### Wall Surface Mount Speaker EWA06-165/T, white



Wall surface-mount speaker EWA 06-165/T with high-quality 165 mm broadband loudspeaker chassis with softline design.

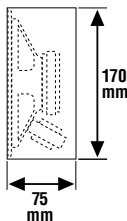
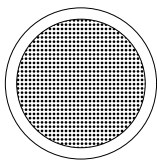
The wall surface-mount speaker with high density MDF wood casing for low resonance sound is very versatile in use, for example for providing PA services in government buildings, schools or hospitals. The proven spring-loaded snap lock on the back panel guarantees quick wall mounting.

#### Technical Data

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
SPL Pmax / 1 m	106.4 dB
SPL 1 W / 1 m	98.6 dB
Transmission range	197 ... 21.900 Hz
Dispersion angle	180°
Color	white, similar to RAL 9010
Weight	approx. 1.7 kg
Dimensions	W: 254 mm H: 195 mm D: 81 mm

581257

### Wall/Ceiling Loudspeaker Round EDL A 10-165/T



Surface mount loudspeaker made of powder-coated metal in white with high efficacy and a high-quality 165 mm broad band loudspeaker chassis.

The EDL-A 10-165/T can be installed on ceilings and walls where flush mounting is not possible. Flat and elegant design for unobtrusive installations which can be realized without bothersome "extruding lips" thanks to the hidden mounting bracket.

#### Technical Data

Loading capacity	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
SPL Pmax / 1 m	112.2 dB
SPL 1 W / 1 m	102.2 dB
Transmission range	290 ... 23.400 Hz
Dispersion angle	180°
Color	white, similar to RAL 9010
Weight	approx. 1.23 kg
Dimensions	Ø: 170 mm D: 75 mm



Delivery time on request

#### Features

- Vandal-proof

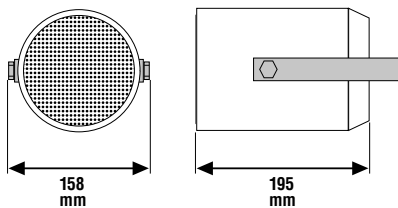


## Standard Loudspeaker

### Sound Projector

581258

#### 20 W unidirectional sound projector, ABS



Due to its high-quality ABS enclosure and its special mechanical design, this sound projector can be used in places where air humidity and temperatures are high. With its broad frequency range and high sound pressure level, this loudspeaker is eminently suitable for use in train stations, shopping centers, warehouses, etc. The sound projector is CE and RoHS compliant.

#### Technical Data

Rated Power	20 W
Transformer power taps	20 / 10 / 5 W
SPL 1 W / 1 m	92 dB
Transmission range	140 ... 20000 Hz (-10 dB)
Dispersion angle	150°
Ambient temperature	-20 °C ... 90 °C
Storage temperature	-40 °C ... 70 °C
Type of protection	IP 55
Color	white, similar to RAL 9003
Weight	approx. 1.56 kg
Dimensions	Ø: 138 mm D: 201 mm

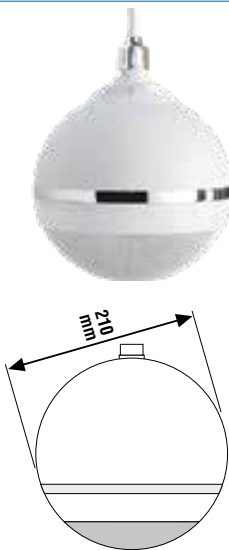


Delivery time on request.

## Spherical Loudspeaker

581215

#### 20 W spherical loudspeaker, metal



Spherical loudspeaker with real surround sound. A 360° horizontal and 160° vertical sound emission results in almost total coverage. Excellent emission, a steady frequency response and good efficiency make this loudspeaker the answer to many acoustics problems.

Ideal for fitting large areas for sound, such as warehouses, entrance halls or factories. Can be used for both voice as well as music.

#### Technical Data

Rated Power	20 W
Transformer power taps	20 / 10 / 5 W
SPL 1 W / 1 m	89.6 dB
SPL Pmax / 1 m	101.6 dB
Transmission range	130 ... 13300 Hz (-10 dB)
Dispersion angle	160°
Color	white
Weight	approx. 1.46 kg
Connection lead	max. 2 m
Dimensions	Ø: 185 mm



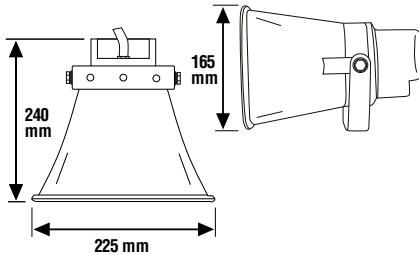
Delivery time on request

## Standard Loudspeaker

## Horn Loudspeaker

581271

### 15 W horn loudspeaker, ABS



The horn loudspeaker distinguishes itself by its high IP rating and reliability. The enclosure consists of robust and fire-resistant ABS with very low weight. With its esthetic and elegant design, the loudspeaker is suitable for application in a variety of locations, such as in train stations, ports, police stations, traffic junctions, etc. The horn loudspeaker features robust adjustable mounting brackets for precise dispersion of sound.

The loudspeaker is CE and RoHS compliant.

#### Technical Data

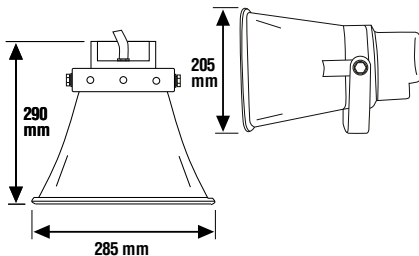
Rated Power	15 W
Transformer power taps	15 / 7,5 W
Rated impedance	0,67 / 1,3 kΩ
SPL 1 W / 1 m	103 dB
Transmission range	350 ... 8000 Hz (-10 dB)
Dispersion angle	140°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Type of protection	IP 66
Material	ABS
Color	white, similar to RAL 9003
Weight	approx. 1.56 kg
Dimensions	W: 240 mm H: 225 mm D: 165 mm



Delivery time on request.

581272

### 30 W horn loudspeaker, ABS



The horn loudspeaker distinguishes itself by its high IP rating and reliability. The enclosure consists of robust and fire-resistant ABS with very low weight. With its esthetic and elegant design, the loudspeaker is suitable for application in a variety of locations, such as in train stations, ports, police stations, traffic junctions, etc. The horn loudspeaker features robust adjustable mounting brackets for precise dispersion of sound.

The loudspeaker is CE and RoHS compliant.

#### Technical Data

Rated Power	30 W
Transformer power taps	30 / 15 W
Rated impedance	0,33 / 0,67 kΩ
SPL 1 W / 1 m	104 dB
Transmission range	300 ... 10000 Hz (-10 dB)
Dispersion angle	150°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 %
Type of protection	IP 66
Material	ABS
Color	white, similar to RAL 9003
Weight	approx. 2.1 kg
Dimensions	W: 290 mm H: 285 mm D: 205 mm



Delivery time on request.

## Standard Loudspeaker

## Music Cabinet Loudspeaker

581216

### Loudspeaker Box VIVA-3 302 WT, 15 W, white



2-way encased loudspeaker with wall-mounting bracket and integrated 100 V transformer. The VIVA-3 series is perfectly suitable for background music. The 80 mm Mica Cone Rubber Edge Woofer, the 13 mm Mylar Dome Tweeter and the U-shaped wall-mounting bracket (included) contribute to the unbelievable popularity of this series among all of our customers. It also is equipped with a rotating logo which self-adjusts according to the mounting position.

#### Technical Data

Loading capacity	15 W
Transformer power taps	15 W – 7.5 W – 3 W – 8 Ohm
SPL Pmax / 1 m	102 dB
SPL 1 W / 1 m	87 dB
Transmission range	150 ... 20000 Hz
Dispersion angle	170° (H), 180° (V)
Material	ABS plastic housing, stainless steel U bracket & hardware
Color	white
Weight	approx. 1.5 kg



Delivery time on request

## Standard Loudspeaker Accessories

581286

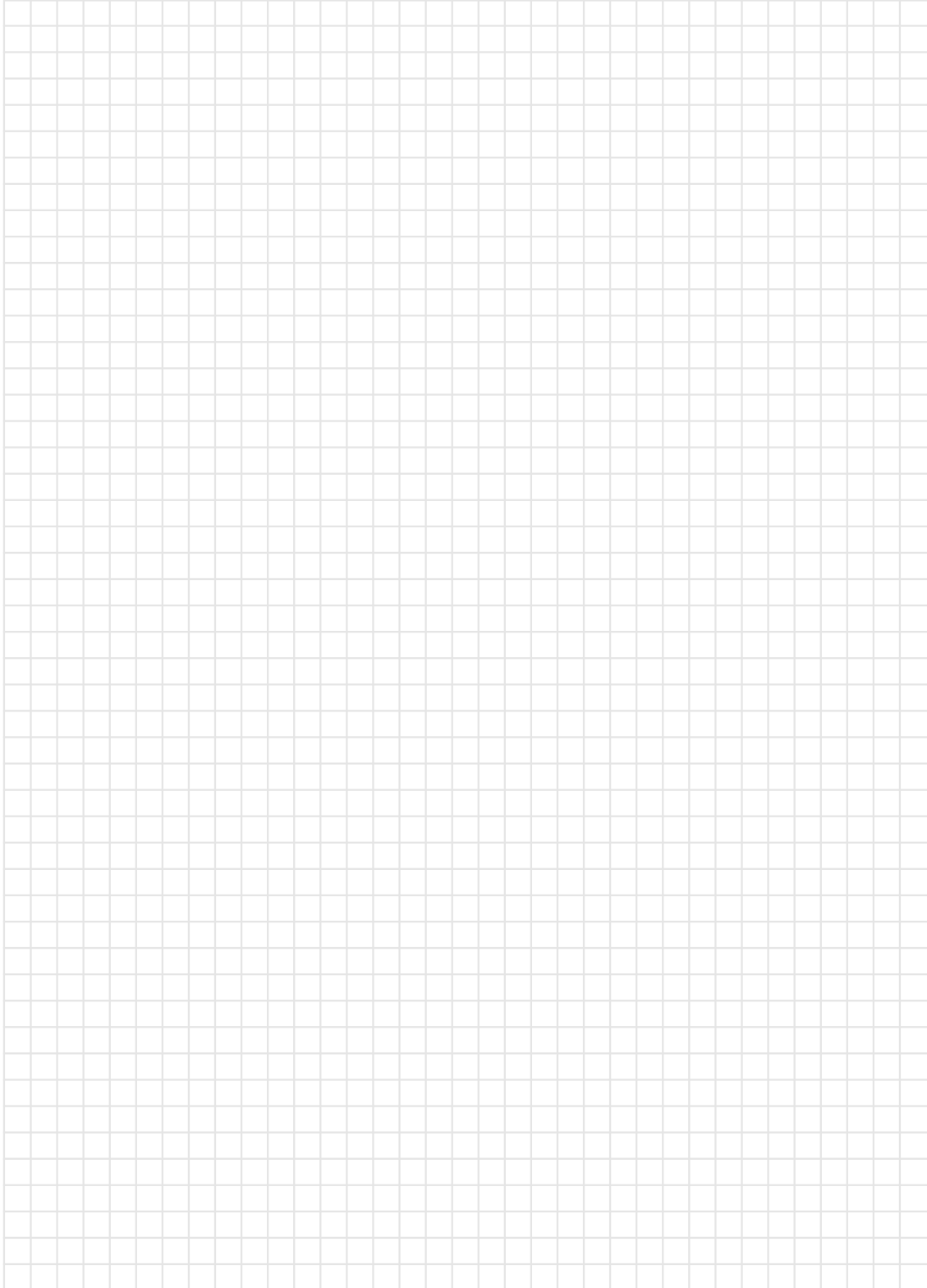
### Ceramic terminal and thermal fuse

A 3-pin ceramic terminal and a thermal fuse (trigger temperature 240 °C) provide the necessary protection to prevent a short circuit of the loudspeaker in case of fire and prevent further damage.



Delivery time on request

# Notes





Volume Regulators

Volume Regulators

# Volume Regulators

581238

## Flush mounted volume controller, 5 W

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Flushmounted Volume Controller 5 watts, with compulsory relay (24 V DC).

581239

## Flush mounted volume controller, 30 W

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Flushmounted Volume Controller 30 watts, with compulsory relay (24 V DC).

581240

## Flush mounted volume controller, 60 W

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Flushmounted Volume Controller 60 watts, with compulsory relay (24 V DC).



**Passive Beam Steering Systems**

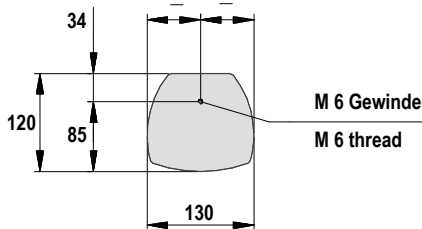
LEN-20	92
LEN-60	93
LEN-100	94
LEN-150	95
LEN-220	96



582650.B

Linea LEN-20 EN 54-24, black

**NEW**



Passive 100 V loudspeaker, with weatherproof aluminium housing, designed for use with voice alarm systems - certified according to EN 54-24, Type B, equipped with two high-quality 4" drivers with treated cones for optimum efficiency in speech and voice alarms.

**Technical Data**

SPL Pmax / 1 m	104 dB
Dispersion angle	130° (H) x 60° (V) nominal; 360° (H) x 360° (V) @ 500 Hz; 190° (H) x 120° (V) @ 1000 Hz; 120° (H) x 60° (V) @ 2000 Hz; 95° (H) x 30° (V) @ 4000 Hz
Housing	weatherproof aluminium housing, powder coated, steel bracings
Color	black, similar to RAL 9005, powder-coated
Weight	approx. 3 kg
Dimensions	W: 130 mm H: 230 mm D: 120 mm

**Accessories**

582613.B

Wall mount WAL-03, black

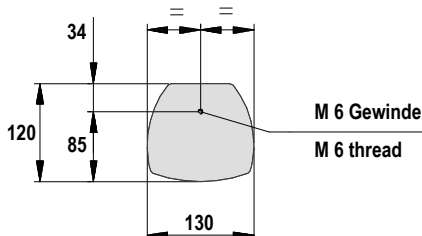
**Features**

- EN 54-24 certified, 100 V loudspeaker for use with voice alarm systems
- suitable for both indoor and outdoor use
- exceptionally even sound dispersion
- SIDE LOBE FREE – passive realization
- equipped with high performance speakers
- excellent speech intelligibility and sound quality
- a long reach
- weatherproof without requiring additional protection (protection class IP54 in accordance with IEC 529 / EN 60529)
- ball impact resistant front grille made from galvanised sheet steel
- ultra-compact, low weight

582650.W

Linea LEN-20 EN 54-24, white

**NEW**



Same as 582650.B, but white.

**Technical Data**

Color	white, similar to RAL 9016, powder-coated
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**Accessories**

582613.W

Wall mount WAL-03, white

582652.B

Linea LEN-60 EN 54-24, black

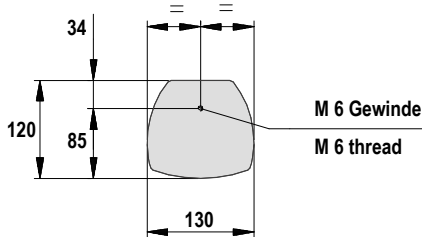
**NEW**



Passive 100 V loudspeaker, with weatherproof aluminium housing, designed for use with voice alarm systems - certified according to EN 54-24, Type B, equipped with two high-quality 4" drivers with treated cones for optimum efficiency in speech and voice alarms.

**Technical Data**

SPL Pmax / 1 m	112 dB
Dispersion angle	130° (H) x 25° (V) nominal; 360° (H) x 90° (V) @500 Hz; 190° (H) x 40° (V) @ 1000 Hz; 120° (H) x 25° (V) @ 2000 Hz; 95° (H) x 13° (V) @ 4000 Hz
Housing	weatherproof aluminium housing, powder coated, steel bracings
Color	black, similar to RAL 9005, powder-coated
Weight	approx. 7.5 kg
Dimensions	W: 130 mm H: 640 mm D: 120 mm



**Accessories**

582614.B Wall mount WLX-100, black

**Features**

- EN 54-24 certified, 100 V loudspeaker for use with voice alarm systems
- suitable for both indoor and outdoor use
- exceptionally even sound dispersion
- SIDE LOBE FREE – passive realization
- equipped with high performance speakers
- excellent speech intelligibility and sound quality
- a long reach
- weatherproof without requiring additional protection (protection class IP54 in accordance with IEC 529 / EN 60529)
- ball impact resistant front grille made from galvanised sheet steel

582652.W

Linea LEN-60 EN 54-24, white

**NEW**



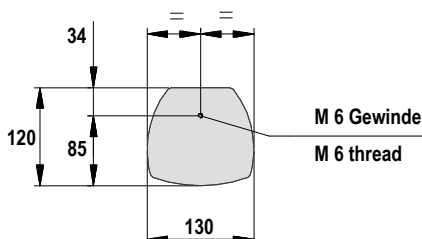
Same as 582652.B, but white.

**Technical Data**

Color	white, similar to RAL 9016, powder-coated
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**Accessories**

582614.W Wall mount WLX-100, white



582654.B

Linea LEN-100 EN 54-24, black

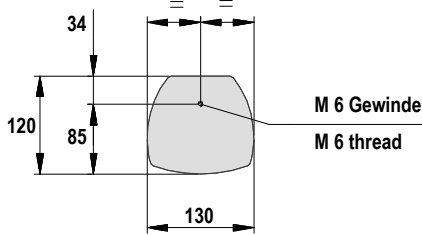
**NEW**



Passive 100 V loudspeaker, with weatherproof aluminium housing, designed for use with voice alarm systems - certified according to EN 54-24, Type B, equipped with two high-quality 4" drivers with treated cones for optimum efficiency in speech and voice alarms.

**Technical Data**

SPL Pmax / 1 m	114 dB
Dispersion angle	130° (H) x 15° (V) nominal; 360° (H) x 55° (V) @500 Hz; 190° (H) x 25° (V) @ 1000 Hz; 120° (H) x 15° (V) @ 2000 Hz; 95° (H) x 8° (V) @ 4000 Hz
Housing	weatherproof aluminium housing, powder coated, steel bracings
Color	black, similar to RAL 9005, powder-coated
Weight	approx. 9.5 kg
Dimensions	W: 130 mm H: 990 mm D: 120 mm



**Accessories**

582614.B

Wall mount WLX-100, black

**Features**

- EN 54-24 certified, 100 V loudspeaker for use with voice alarm systems
- suitable for both indoor and outdoor use
- exceptionally even sound dispersion
- SIDE LOBE FREE – passive realization
- equipped with high performance speakers
- excellent speech intelligibility and sound quality
- a long reach
- weatherproof without requiring additional protection (protection class IP54 in accordance with IEC 529 / EN 60529)
- ball impact resistant front grille made from galvanised sheet steel

582654.W

Linea LEN-100 EN 54-24, white

**NEW**



Same as 582654.B, but white.

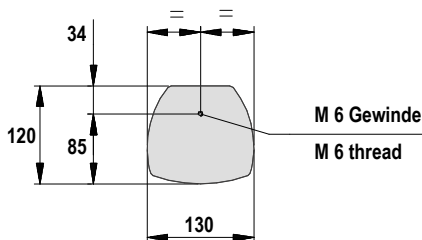
**Technical Data**

Color	white, similar to RAL 9016, powder-coated
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**Accessories**

582614.W

Wall mount WLX-100, white



582657.B

Linea LEN-150 EN 54-24, black

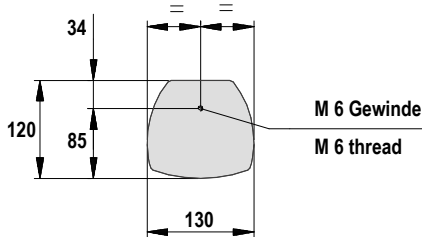
**NEW**



Passive 100 V loudspeaker, with weatherproof aluminium housing, designed for use with voice alarm systems - certified according to EN 54-24, Type B, equipped with two high-quality 4" drivers with treated cones for optimum efficiency in speech and voice alarms.

**Technical Data**

SPL Pmax / 1 m	118 dB
Dispersion angle	130° (H) x 14° (V) nominal; 360° (H) x 35° (V) @500 Hz; 190° (H) x 20° (V) @ 1000 Hz; 120° (H) x 14° (V) @ 2000 Hz; 95° (H) x 8° (V) @ 4000 Hz
Housing	weatherproof aluminium housing, powder coated, steel bracings
Color	black, similar to RAL 9005, powder-coated
Weight	approx. 14.5 kg
Dimensions	W: 130 mm H: 1460 mm D: 120 mm



**Accessories**

582614.B Wall mount WLX-100, black

**Features**

- EN 54-24 certified, 100 V loudspeaker for use with voice alarm systems
- suitable for both indoor and outdoor use
- exceptionally even sound dispersion
- SIDE LOBE FREE – passive realization
- equipped with high performance speakers
- excellent speech intelligibility and sound quality
- a long reach
- weatherproof without requiring additional protection (protection class IP54 in accordance with IEC 529 / EN 60529)
- ball impact resistant front grille made from galvanised sheet steel

582657.W

Linea LEN-150 EN 54-24, white

**NEW**



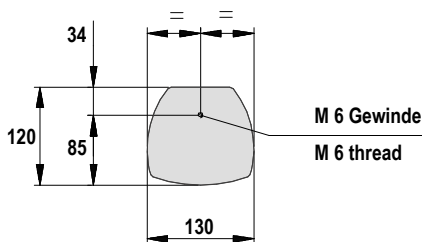
Same as 582657.B, but white.

**Technical Data**

Color	white, similar to RAL 9016, powder-coated
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**Accessories**

582614.W Wall mount WLX-100, white



582660.B

Linea LEN-220 EN 54-24, black

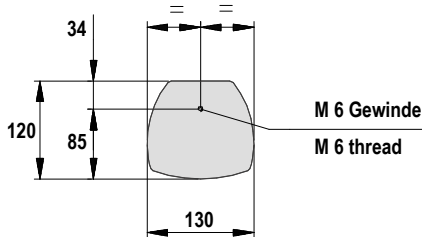
**NEW**



Passive 100 V loudspeaker, with weatherproof aluminium housing, designed for use with voice alarm systems - certified according to EN 54-24, Type B, equipped with two high-quality 4" drivers with treated cones for optimum efficiency in speech and voice alarms.

**Technical Data**

SPL Pmax / 1 m	120 dB
Dispersion angle	130° (H) x 14° (V) nominal; 360° (H) x 55° (V) @500 Hz; 190° (H) x 15° (V) @ 1000 Hz; 120° (H) x 14° (V) @ 2000 Hz; 95° (H) x 8° (V) @ 4000 Hz
Housing	weatherproof aluminium housing, powder coated, steel bracings
Color	black, similar to RAL 9005, powder-coated
Weight	approx. 19.5 kg
Dimensions	W: 130 mm H: 2200 mm D: 120 mm



**Accessories**

582614.B

Wall mount WLX-100, black

**Features**

- EN 54-24 certified, 100 V loudspeaker for use with voice alarm systems
- suitable for both indoor and outdoor use
- exceptionally even sound dispersion
- SIDE LOBE FREE – passive realization
- equipped with high performance speakers
- excellent speech intelligibility and sound quality
- a long reach
- weatherproof without requiring additional protection (protection class IP54 in accordance with IEC 529 / EN 60529)
- ball impact resistant front grille made from galvanised sheet steel

582660.W

Linea LEN-20 EN 54-24, white

**NEW**



Same as 582660.B, but white.

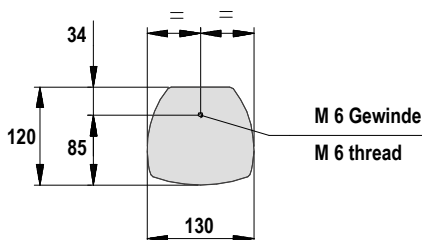
**Technical Data**

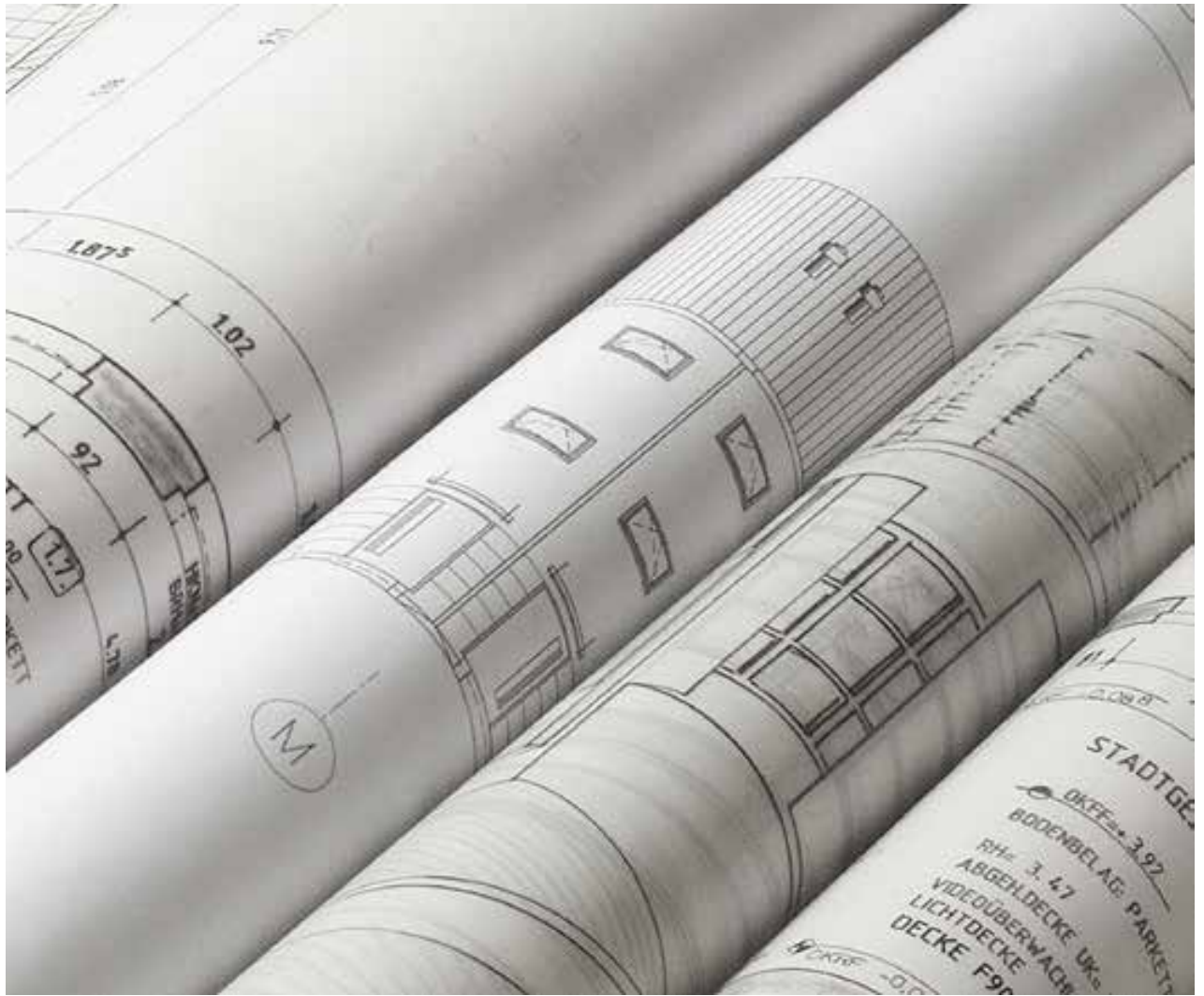
Color	white, similar to RAL 9016, powder-coated
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**Accessories**

582614.W

Wall mount WLX-100, white





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