

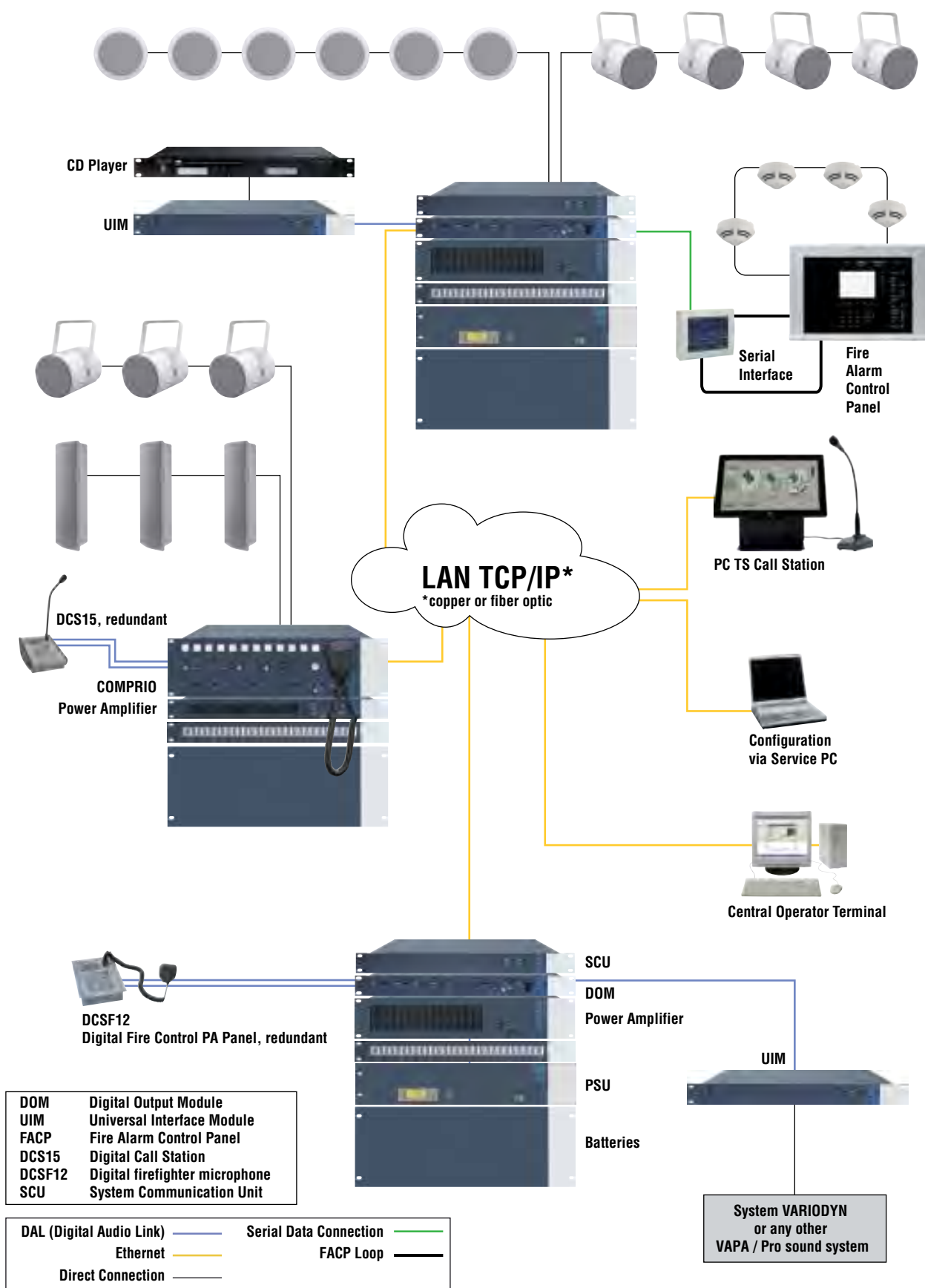
Public Address & Voice Alarm Systems

Product catalog
Valid from May 2016

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VARIODYN D1

General

Public address systems are used in all public spaces with large numbers of people, such as subway stations, train stations, airports, shopping centers, arenas, and schools. In its daily operation, the system provides information to the public, as well as commercials, music, and internal notifications such as communication to employees in largely-spaced buildings.

Such a system becomes specifically important in case of an emergency: It is important, to provide the acoustic alarm in a targeted manner. This allows for organizing an evacuation according to plan.

With VARIODYN D1, public address systems are for the first time ever connected to Local Area Networks (LAN) and Wide Area Networks (WAN). Installation is performed in a cost-effective manner by means of standard Ethernet modules and preassembled cabling.

Our VARIODYN D1 Comprio control unit, which is available in various versions, and which, together with the new four-channel amplifier 4XD125B or 4XD250B, forms a complete voice alarm system for small and medium-sized applications. This solution don't need an extra PSU, which is already integrated in the amplifiers.

It goes beyond saying that all peripheral components and accessories of the VARIODYN D1, such as call stations, enclosures, converters, cables, etc., can also be used with these new components. Programming too is possible as easily and conveniently as before via the Designer software tool. People familiar with the VARIODYN D1 system can therefore install the new components effortlessly and without any problems. This involves a savings of time, costs, and inventory, and minimizes training effort as well.

All relevant VARIODYN D1 components are included in the EN 54-16 certificate, including accessories, network components, and upright cabinets.

VARIODYN D1

Digital Output Module

583361.22



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
- VdS approval: G 210122
- 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
- 24 V DC power supply

ACCESSORIES

583451.21	Cable for cabinet rear panel DOM4-8
583486	Patch cable CAT5, 1 m yellow (Ethernet)
583487	Patch cable CAT5, 2 m yellow (Ethernet)
583488	Patch cable CAT5, 3 m yellow (Ethernet)
583496	End-of-line module (EOL)
581316	Microphone, for AVC
583703	Mounting set 1
583342	Loop Isolator Module



The DOM components are delivered "neutrally without branding." Please use a ventilation panel Part No. 583708.HO for every DOM.

Digital Output Module DOM4-8

VdS approval: G 210122

Part of EN 54-16 approval

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. Any complex system configuration can be implemented through the networking of multiple DOMs via Ethernet. All power amplifiers are permanently monitored. In case a power amplifier is faulty, it can be replaced dynamically by a backup amplifier or a backup amplifier channel. The switchover is done automatically. The loudspeaker lines are permanently monitored for short circuit, ground fault, 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 like 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 DOM4-8 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.

TECHNICAL DATA

AUDIO INPUT

OUTPUT TYPE	symmetrically
NOMINAL LEVEL	0 dBu
MAX. OUTPUT LEVEL	< 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	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

VARIODYN D1

Digital Output Module

583362.22



Features

- Authorized in compliance with EN 54-16
- Compliant with IEC 60849
- All the functions of an alarm and evacuation system in a 19" module (DOM)
- Networkable via Ethernet
- Permanent monitoring of all functionally relevant system components
- Automatic and dynamic switching to redundant emergency amplifiers
- Automatic volume control (AVC), also during announcements
- Remote monitoring and configuration via the network
- 24 V DC emergency power supply
- Spur and loop technologies in "VARIODYN D1 Loop technology"
- Connection to a NTP server via Ethernet is possible
- Speech or audio memory up to 1 h

ACCESSORIES

583451.21	Cable for cabinet rear panel DOM4-8
583486	Patch cable CAT5, 1 m yellow (Ethernet)
583487	Patch cable CAT5, 2 m yellow (Ethernet)
583488	Patch cable CAT5, 3 m yellow (Ethernet)
583496	End-of-line module (EOL)
581316	Microphone, for AVC
583703	Mounting set 1
583342	Loop Isolator Module
583708.HO	Ventilation panel 1 HU with Honeywell logo



The DOM components are delivered "neutrally without branding." Please use a ventilation panel Part No. 583708.HO for every DOM.

Digital Output Module DOM4-24

VdS approval: G 210122

Part of EN 54-16 approval

The DOM is the central control element of the VARIODYN D1. It interfaces with all input and output modules, and it manages and monitors the loudspeaker circuits. For voice alarm systems and for electro-acoustic emergency warning systems according to EN 60849 and EN50849. The connection of multiple DOMs via Ethernet allows the realization of complex system configurations. All output amplifiers are permanently monitored. In the event of a faulty output, an emergency amplifier can dynamically replace it. The switchover is done automatically. The loudspeaker lines are continuously monitored for short circuit, fault to ground, interruptions, as well as impedance deviation. Defective loudspeaker zones are separated in a non-reactive manner. A DOM contains storage capacities for prerecorded audio messages that can be used for alarm texts and signals (evacuation alarm, all-clear signal) and caution signals (gongs). The volume of every source and every amplifier channel can be regulated. Additional filters such as parametric equalizers, high-pass and low-pass filters and delays are also available. Any errors are registered within a timeframe of only very few seconds in conformity with the standard, displayed, and logged. For special applications like e.g. tunnel, a delay in all for channels can be programmed up to 9.9 sec.

The DOM4-24 control unit features 4 independent amplifier channels, through which it can operate a total of 24 loudspeaker zones or 4 loudspeaker rings in VARIODYN D1 loop technology. There is also a possibility to combine spur and loop technologies in a DOM.

TECHNICAL DATA

AUDIO INPUT

OUTPUT TYPE	symmetrically
NOMINAL LEVEL	0 dBu
MAX. OUTPUT LEVEL	< 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 k Ω , < 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

VARIODYN D1

VARIODYN D1 Comprio

VARIODYN D1 Comprio

Our VARIODYN D1 Voice Alarm System has grown, so that in the future it can be even better, even less expensive, 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 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 also a separate backup amplifier is not needed anymore. 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

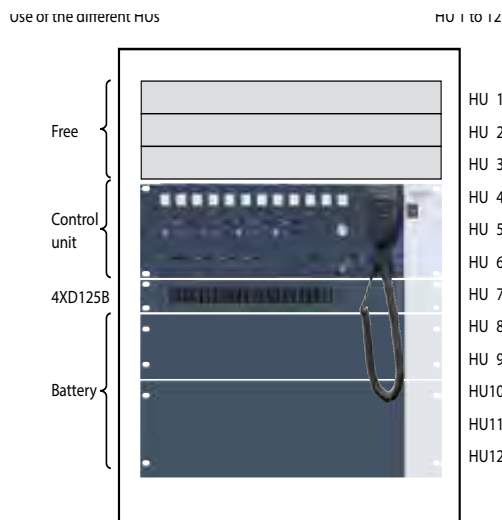
VARIODYN D1 line together with the other DOM and amplifiers. The new components are integrated in the product approval of the VARIODYN D1 Voice Alarm System.

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 also still carried out easily and conveniently using the Designer software tool. An expert can jump into the VARIODYN D1 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.

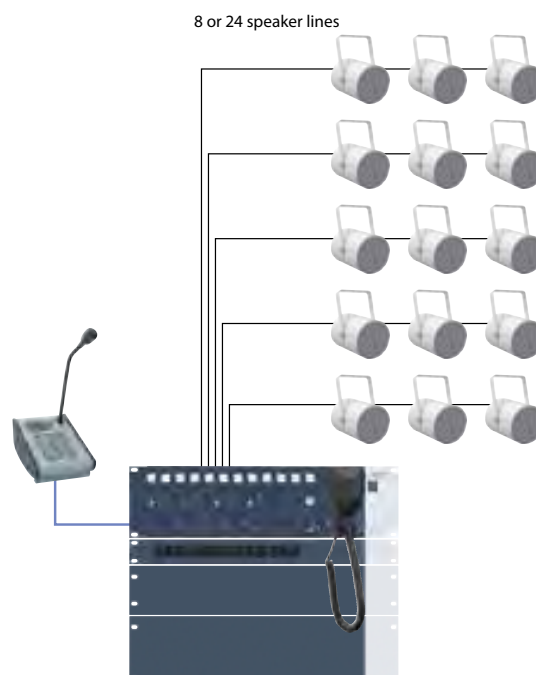
Comprio system (4 variants)

- 583940 VARIODYN D1 Comprio 4-8 (standalone without ethernet)
- 583941 VARIODYN D1 Comprio 4-24 (standalone without ethernet)
- 583944 VARIODYN D1 Comprio 4-8 (network variant)
- 583945 VARIODYN D1 Comprio 4-24 (network variant)

Rack mounted system (12 HUs)



System overview



VARIODYN D1

VARIODYN D1 Comprio

583940



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
- Two monitored 24 V DC power supply inputs
- 12 contact inputs (8 of which can be monitored)
- 8 relay outputs
- 3 audio-line inputs
- 3 DAL port
- 1 TWI port

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
581340	Periphery clamp for top-hat rail
583466	Patch cable CAT5, 0.5 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	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts

VARIODYN D1 Comprio 4-8 (Stand alone without Ethernet) Part of EN 54-16 approval

Comprio is the central controlling unit of VARIODYN D1 system for small and mid-sized objects. The Comprio, together with the 4XD125B and 4XD250B four-channel amplifiers, forms a voice alarm system for projects such as schools, smaller hotels, etc. The emergency power supply is built in to the 4XD125B and 4XD250B four-channel amplifiers. For voice alarm systems and electro-acoustic emergency warning systems compliant with EN 60849 or EN50849. All power amplifiers are continuously monitored. In case a power amplifier is faulty, it can be replaced dynamically by a backup amplifier. If you use 4XD125B or 4XD250B amplifiers one channel could be the backup amplifier. Means you can use three channels to power loudspeaker lines and one channel to back up the other three.

The switching takes place automatically via Comprio. The loudspeaker lines are permanently monitored for short circuit, ground fault, failure as well as impedance deviation. Faulty loudspeaker zones are separated in a non-reacting manner. Comprio contains storage capacity for pre-stored messages, which can be used for alarm texts and signals (evacuation alarm, all-clear signal) and caution signals (gong). The volume of each source and each amplifier channel can be controlled. Additional filters like parametric equalizer, high-and low pass filter as well as a delay is available with up to 9.9 sec. All errors are recognized, displayed and recorded within few seconds meeting the standards. The Comprio can control 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 in a DOM. The Comprio also has 12 contact inputs, 8 of which can be programmed to be monitored, as well as 8 potential-free relay outputs, one audio-line output, up to 3 audio-line inputs and/or up to 3 microphone inputs, 3 DAL connections and one TWI connection.

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

When ordering, we recommend looking at our very attractively priced product packages.

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



The DOM components are delivered "neutrally without branding." Please use a ventilation panel Part No. 583708.HO for every DOM.

VARIODYN D1

VARIODYN D1 Comprio

583941



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
- Two monitored 24 V DC power supply inputs
- 12 contact inputs (8 of which can be monitored)
- 8 relay outputs
- 3 audio-line inputs
- 3 DAL port
- 1 TWI port

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
581340	Periphery clamp for top-hat rail
583466	Patch cable CAT5, 0.5 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)
581316	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts



The DOM components are delivered "neutrally without branding." Please use a ventilation panel Part No. 583708.HO for every DOM.

VARIODYN D1 Comprio 4-24 (Stand alone without Ethernet) Part of EN 54-16 approval

Comprio is the central controlling unit of VARIODYN D1 system for small and mid-sized objects. The Comprio, together with the 4XD125B and 4XD250B four-channel amplifiers, forms a voice alarm system for projects such as schools, smaller hotels, etc. The emergency power supply is built in to the 4XD125B and 4XD250B four-channel amplifiers. For voice alarm systems and electro-acoustic emergency warning systems compliant with EN 60849 or EN50849. All power amplifiers are continuously monitored. In case a power amplifier is faulty, it can be replaced dynamically by a backup amplifier. If you use 4XD125B or 4XD250B amplifiers one channel could be the backup amplifier. Means you can use three channels to power loudspeaker lines and one channel to back up the other three.

The switching takes place automatically via Comprio. The loudspeaker lines are permanently monitored for short circuit, ground fault, failure as well as impedance deviation. Faulty loudspeaker zones are separated in a non-reacting manner. Comprio contains storage capacity for pre-stored messages, which can be used for alarm texts and signals (evacuation alarm, all-clear signal) and caution signals (gong). The volume of each source and each amplifier channel can be controlled. Additional filters like parametric equalizer, high-and low pass filter as well a delay is available with up to 9,9 sec. All errors are recognized, displayed and recorded within few seconds meeting the standards. The Comprio can control 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 in a DOM. The Comprio also has 12 contact inputs, 8 of which can be programmed to be monitored, as well as 8 potential-free relay outputs, one audio-line output, up to 3 audio-line inputs and/or up to 3 microphone inputs, 3 DAL connections and one TWI connection.

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

When ordering, we recommend looking at our very attractively priced product packages.

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

VARIODYN D1

VARIODYN D1 Comprio

583944



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
- Two monitored 24 V DC power supply inputs
- 12 contact inputs (8 of which can be monitored)
- 8 relay outputs
- 3 audio-line inputs
- 3 DAL port
- 1 TWI port

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
581340	Periphery clamp for top-hat rail
583466	Patch cable CAT5, 0.5 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)
581316	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts

VARIODYN D1 Comprio 4-8 net (with Ethernet) Part of EN 54-16 approval

The Comprio is the central control panel of a VARIODYN D1 system for small and medium-sized objects. Together with the 4XD125B four-channel amplifier, the Comprio is a complete voice alarm system for projects such as schools, small hotels, etc. The emergency power supply is integrated into the 4XD125B four-channel amplifier. For voice alarm systems according to DIN VDE 0833-4 and for electro-acoustic emergency warning systems according to EN 60849.

All output amplifiers are permanently monitored. In the event of a faulty output, an emergency amplifier can dynamically replace it. Switching is done automatically via the Comprio.

The loudspeaker lines are continuously monitored for short circuit, fault to ground, interruptions, as well as impedance deviation. Defective loudspeaker zones are separated in a non-reactive manner.

A Comprio contains storage capacities for prerecorded audio messages that can be used for alarm texts and signals (evacuation alarm, all-clear signal) and caution signals (gongs). The volume of every source and every amplifier channel can be regulated. Additional filters such as parametric equalizers, high-pass and low-pass filters and delays are also available. Any errors are registered within a timeframe of only very few seconds in conformity with the standard, displayed, and logged. For special applications such as tunnel, delays of up to 9.9 seconds can be programmed.

The Comprio control unit features four independent amplifier channels, through which it can operate a total of 8 loudspeaker zones. 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 3 audio line in ports, and / or up to 3 microphone inputs, 3 DAL connections, and a TWI port.

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

Additional accessories such as enclosures, cables, call stations, etc. must be ordered separately.



The DOM components are delivered "neutrally without branding." Please use a ventilation panel Part No. 583708.HO for every DOM.

VARIODYN D1

VARIODYN D1 Comprio

583945



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
- 3 audio-line inputs
- 3 DAL port
- 1 TWI port

VARIODYN D1 Comprio 4-24 net (with Ethernet) Part of EN 54-16 approval

Comprio is the central controlling unit of VARIODYN D1 system for small and mid-sized objects. Comprio together with four-channel amplifier 4XD125B forms a complete voice alarm system for projects like schools, small hotels etc. The emergency power supply is integrated in four-channel amplifier 4XD125B. Voice alarm system implemented as per DIN VDE 0833-4 and electro acoustic emergency warning system as per EN 60849.

All power amplifiers are permanently monitored. In case of faulty power amplifier, a backup amplifier can replace this dynamically. The switching takes place automatically via Comprio.

The loudspeaker lines are permanently monitored for short circuit, ground fault, failure as well as impedance deviation. Faulty loudspeaker zones are separated in a non-reacting manner.

Comprio contains storage capacity for pre-stored messages, which can be used for alarm texts and signals (evacuation alarm, all-clear signal) and caution signals (gong). The volume of each source and each amplifier channel can be controlled. Additional filters like parametric equalizer, high-and low pass filter as well as delays are available as well. All errors are recognized, displayed and recorded within few seconds meeting the standards. For special applications like e.g. tunnel, delays can be programmed up to 9.9 sec.

The controlling unit Comprio is equipped with 4 independent amplifier channels, in order to operate 24 loudspeaker zones all together. Furthermore, Comprio has 12 contact inputs out of which 8 can be monitored and programmed, 8 potential free relay outputs, a audio line output, up to 3 audio line inputs and-/ or up to 3 microphone inputs, 3 DAL connections and a TWI connection.

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

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

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
581340	Periphery clamp for top-hat rail
583466	Patch cable CAT5, 0.5 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)
581316	Microphone, for AVC
583703	Mounting set 1
583332	Overvoltage protection for UIM contacts



The DOM components are delivered "neutrally without branding." Please use a ventilation panel Part No. 583708.HO for every DOM.

VARIODYN D1

VARIODYN D1 Comprio

580242



Features

- 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 average 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 step-down in 3 dB steps in the event of overload temperature controlled fan
- 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



The amplifier 4XD125B is currently not yet released for use with the VARIODYN D1 Loop Technology.

Four-channel amplifier 4XD125B 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 with each 125 W in class D technology. Due to the fact that all amplifier channels are complete independent from each others, it is possible to use one channel for back up. This could be for the other 3 channels or also for other amplifier channels of others 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 possible to use the amplifier also with a separate PSU, the internal PSU must be switched of then.

TECHNICAL DATA	
RATED VOLTAGE	230 V AC
RATED FREQUENCY	50 ... 60 Hz (+10 % / -5 %)
EMERGENCY POWER SUPPLY	24 V DC
TECHNOLOGY	Class D
CHANNEL SEPARATION	> 42 dB
HARMONIC DISTORTION AT NOMINAL LEVEL	< 0.3 %
AMBIENT TEMPERATURE	-5 °C ... 55 °C
AIR HUMIDITY	0 .. 93 % (non condensing)
COLOR	gray, similar to RAL 7016
DIMENSIONS	W: 483 mm H: 44 mm D: 402 mm (1 HU, 19")
DECLARATION OF PERFORMANCE	DoP-00376130701

VARIODYN D1

VARIODYN D1 Comprio

580243



Features

- EN 54-16 certified
- Compliant with EN 60849 and EN 50849
- Class D technology, efficiency $\geq 80\%$
- 4 independent amplifier channels
- One of four amplifier channels can be used as general average 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 step-down in 3 dB steps in the event of overload temperature controlled fan
- 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

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

Four-channel amplifier 4XD250B

Part of 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 technology. Due to the fact that all amplifier channels are complete independent from each others, it is possible to use one channel for back up. This could be for the other 3 channels or also for other amplifier channels of others 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 possible to use the amplifier also with a separate PSU, the internal PSU must be switched of then.

TECHNICAL DATA

RATED VOLTAGE	230 VAC
RATED FREQUENCY	50 ... 60 Hz (+10 % / -5 %)
EMERGENCY POWER SUPPLY	24 VDC
TECHNOLOGY	Class D
CHANNEL SEPARATION	> 75 dB
HARMONIC DISTORTION AT NOMINAL LEVEL	< 0.3 % @ 1kHz
AMBIENT TEMPERATURE	-5 °C ... 55 °C
STORAGE TEMPERATURE	-10 °C ... 55 °C
WEIGHT	approx. 12 kg
DIMENSIONS	W: 483 mm H: 90 mm D: 408 mm
DECLARATION OF PERFORMANCE	DoP-00376130701

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.

VARIODYN D1

VARIODYN D1 Comprio

584913



19" – housing for VARIODYN D1 Comprio

Part of EN 54-16 approval

Housing for VAPA small system Comprio without swivel frame. Housing can be used as free standing housing or for wall mounting. It is 12 HU high and an area of 600 mm x 600 mm and serves for acceptance of Comprio control unit; a four-channel amplifier 4XD125B or 4XD250B with built in emergency power supply, corresponding batteries (up to 105 Ah) and a ventilation field. Furthermore there are 2 or 3 height units (corresponding which amplifier is used), e.g. for the installation of additional components such as recording units. If more space is needed, another 19" Rack from our upright cabinet line can be used.

581730



Battery for emergency power supply 12 V/105 Ah

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

Features

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

581732



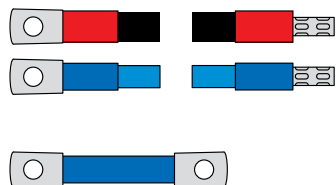
Battery 12 V / 65 Ah

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

VARIODYN D1

VARIODYN D1 Comprio

583413

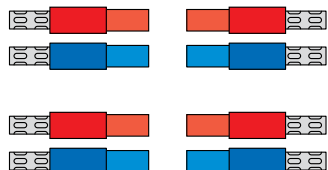


Cable set for connecting batteries to VARIODYN D1 4XDxxxB amplifier

Part of EN 54-16 approval

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

Part of EN 54-16 approval

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

583491

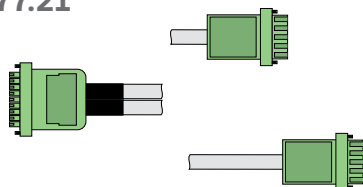


Input cable DOM amplifier, 0.5 m green

Part of EN 54-16 approval

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

583477.21



Output cable 2 amplifier DOM

Part of EN 54-16 approval

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.

VARIODYN D1

Loudspeaker Loop Technology

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 loudspeakers lines. This means that in the case of 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.

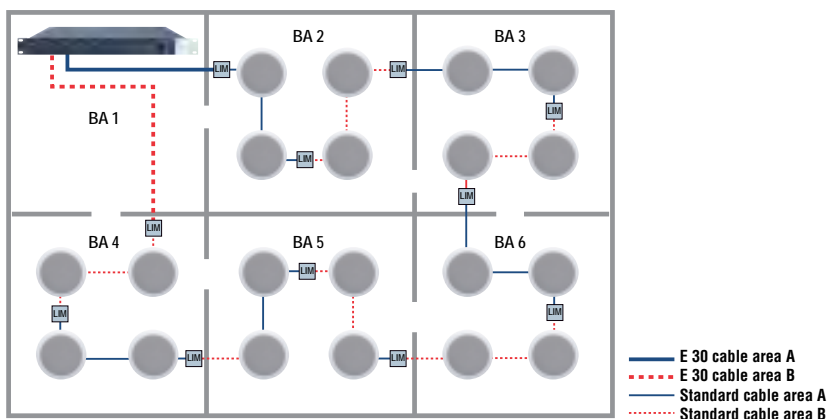
VARIODYN D1 loop technology is a new technology for optimizing the reliability of the loudspeaker connection. With this new type of technology, a wire-break and short-circuit-resistant loop is constructed, similar to the case of fire detection technology.

One of the first systems on the market

VARIODYN D1 is one of the first voice alarm systems on the market to have 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 and 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



VARIODYN D1

Loudspeaker Loop Technology

583342



Features

- Much higher safety than spur cabling
- Fully redundant 100 V loop wiring system technology
- Extensive topologies are possible
- Short-circuit and wire break tolerant
- EN54-17 certified
- Large saving in wiring and installation

Loop Isolator Modul LIM

VdS approval: G 212061

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 mm² 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.

The 4XD300 and 4XD500 will be available in a new version by QII/2016 and supports then also VARIODYN D1 Loop Technology.

POWER AMPLIFIER	MAX. LIM NUMBER	MAX. LOOP LENGTH INCL. SPURS
2XD250	40	1000
2XD400	64	1000
4XD125B	---	---
4XD300	---	---
4XD500	---	---
4XD250B	25	500

VARIODYN D1

Power Amplifier

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
RATED CURRENT	2.8 A
POWER OUTPUT	2 x 250 W (sin, @ 40 Ω)
EMERGENCY POWER SUPPLY	24 V DC
TECHNOLOGY	Klasse 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 % (non condensing)
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

VARIODYN D1

Power Amplifier

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

VdS approval: G 210122

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 Ω)
EMERGENCY POWER SUPPLY	24 V DC
TECHNOLOGY	Klasse 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 % (non condensing)
WEIGHT	approx. 19 kg
DIMENSIONS	W: 482 mm H: 89 mm D: 402 mm (2 HU, 19")
DECLARATION OF PERFORMANCE	DoP-20997130701

ACCESSORIES

583491	Input cable DOM amplifier, 0.5 m, green (two times needed)
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

VARIODYN D1

Power Amplifier

580248



Features

- Built-in electronic protective circuit against thermal overload, DC signals, sub frequent signals, short circuit, open outputs and HF interference
- 4 Potentiometer on the back adjustable for input amplification for each channel
- Separate front-panel LED status display for each channel for CLIP, PROTECT, SIGNAL, POWER, NETWORK 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

ACCESSORIES

583491	Input cable DOM amplifier, 0.5 m, green (two times needed)
583477.21	Output cable 2 amplifier DOM

Four-channel amplifier 4XD300

Part of 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	< 0.2 %
AMBIENT TEMPERATURE	-5 °C ... 55 °C
AIR HUMIDITY	40 .. 93 % (non condensing)
COLOR	gray, similar to RAL 7016
WEIGHT	approx. 13.8 kg
DIMENSIONS	W: 483 mm H: 44 mm D: 402 mm (1 HU, 19")

580249



Features

- Built-in electronic protective circuit against thermal overload, DC signals, sub frequent signals, short circuit, open outputs and HF interference
- 4 Potentiometer on the back adjustable for input amplification for each channel
- Separate front side LED status display per channel for 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

ACCESSORIES

583491	Input cable DOM amplifier, 0.5 m, green (two times needed)
583477.21	Output cable 2 amplifier DOM

Four-channel amplifier 4XD500

Part of 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
POWER OUTPUT	4 x 5000 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")

VARIODYN D1

Power Amplifier

580261



Features

- 4-channels, each with 300 W, Class D, 100 V outputs
- Efficiency > 80 %
- Control and monitoring by DOM or Comprio
- Protection against thermal overload and output short-circuit

ACCESSORIES

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

Power amplifier 4XV300, 4x 300W, no secondary power supply

Part of EN 54-16 approval

The power amplifier has four independent amplifier channels (100 V) and is compatible with the VARIODYN® D1 system. The power amplifier is controlled and monitored by DOM or Comprio.

TECHNICAL DATA

RATED VOLTAGE	230 V AC
RATED FREQUENCY	50 ... 60 Hz (+10 % / -5 %)
POWER OUTPUT	4 x 300 W
TECHNOLOGY	Class D
CHANNEL SEPARATION	> 92 dB
HARMONIC DISTORTION AT NOMINAL LEVEL	< 0.02 %
AMBIENT TEMPERATURE	-5 °C ... 55 °C
AIR HUMIDITY	40 .. 93 % (non condensing)
COLOR	gray, similar to RAL 7016
WEIGHT	approx. 13.8 kg
DIMENSIONS	W: 484 mm H: 88 mm D: 400 mm (2HU 19")

580262



Power amplifier 4XV500, 4x 500W, no secondary power supply

Part of EN 54-16 approval

As 580261, but with 500 Watt power.

VARIODYN D1

Digital Call Station - Redundant Call Station

583501.RE



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

ACCESSORIES

583506	Digital push-button module DKM 18 for redundant call stations
583311	Keyboard protection for call station DCS VARIODYN D1
583312	Table installation kit for DCS call station VARIODYN D1
583507	Installation kit for redundant DCS
583300.HO	Adhesive sticker for DCS "Honeywell"
583318	Substitute key caps (PU 12 pieces)



The digital communication may be embedded in the surface of a table, for which a table mounting kit per unit 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. One of these caps three horizontally arranged keys can be protected.



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

Digital Call Station DCS15 redundant Part of 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 VAPA 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 potential or actually in high danger. Our paging station supports also redundant cable connection to two separate Comprio (not standalone version of Comprio) or DOM. Means it's possible to connect two cables to one paging station. 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 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 further 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. For redundant operation, two CAT5 cables are needed. 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

AUDIO OUTPUT

NOMINAL LEVEL 0 dBu

TRANSMISSION RANGE 20 ... 22000 Hz

AUDIO INPUT

NOMINAL LEVEL 0 dBu

COMMON TECHNICAL DATA

MICROPHONE Elektret, cardoid 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 % (non condensing)

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

Redundant Connection to Two DOMs*



Single Connection



VARIODYN D1

Digital Call Station – Redundant Call Station

583502.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

ACCESSORIES

583507	Installation kit for redundant DCS
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A 3 m long CAT5 cable for connecting the digital communication unit to a wall jack, is included in delivery.

Digital Call Station DCS2 redundant Part of 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 % (non condensing)
WEIGHT	approx. 1.6 kg
DECLARATION OF PERFORMANCE	DoP-20997130701

583506



ACCESSORIES

583507	Installation kit for redundant DCS
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Digital Key Module DKM18 for redundant call stations

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.

TECHNICAL DATA

DIMENSIONS	W: 123 mm H: 71 mm D: 180 mm
DECLARATION OF PERFORMANCE	DoP-20997130701

VARIODYN D1

Digital Call Station - Redundant Fire Brigade Stations

583503.RE



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

ACCESSORIES

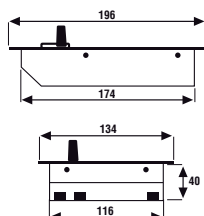
583506	Digital push-button module DKM 18 for redundant call stations
583311	Keyboard protection for call station DCS VARIODYN D1
583316.21	FO conversion for OIM control panel VARIODYN D1
583317.21	FO conversion for digital call stations DCS VARIODYN D1
583315.02	PSU for FO converter DCS O VARIODYN D1
583307	Wall junction box for call station DCS VARIODYN D1
583300.HO	Adhesive sticker for DCS "Honeywell"
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 an FB call station DCSF
584962	Enclosure for two FB call stations DCSF



In order to protect from unintentional key strokes, a transparent key cap is available. In this way pressing of keys is only possible with open caps. With one of these caps, three horizontally arranged keys of a digital telephone station or a digital key module can be protected.



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



Digital firefighter microphone DCSF12 redundant Part of 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 VAPA 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 supports also redundant cable connection to two separate Comprio (not standalone Version of Comprio) or DOM. Means it's possible to connect two cables to one paging station. For redundant operation, two cables (CAT5) connected to one paging microphone are needed. 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 microphone 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. For redundant operation, two CAT5 cables are needed. 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.

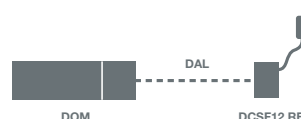
TECHNICAL DATA

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 % (non condensing)
COLOR	black, similar to RAL 9005 (side frames) gray, similar to RAL 7037 (middle body)
WEIGHT	approx. 1.6 kg
DIMENSIONS	W: 134 mm H: 40 mm D: 196 mm
DECLARATION OF PERFORMANCE	DoP-20997130701

Redundant Connection to Two DOMs*



Single Connection



VARIODYN D1

Digital Call Station - Redundant Fire Brigade Stations

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

ACCESSORIES

583709	Dummy plate
584961	Housing for a FW-Communication DCSF
584962	Housing for two FW-Communication DCSF



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

Digital firefighter microphone DCSF1 redundant Part of 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 % (non condensing)
WEIGHT	approx. 1.6 kg
DECLARATION OF PERFORMANCE	DoP-20997130701

Redundant Connection to Two DOMs*



Single Connection

VARIODYN D1

Digital Call Station - Redundant Fire Brigade Stations

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

ACCESSORIES

583316.21	LWL-Converter-Central
583317.21	LWL-Converter-communication unit
583300.ES	Label for DCS "ESSER by Honeywell"
583318	Replacement-Key caps (VPE 12 pieces)

Fire Brigade Call Station DCSF7

VdS approval: G 210122

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, but they could easily paste over on your own convenience.

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 the same like the other DCS and DSCF call stations.

TECHNICAL DATA	
OPERATING VOLTAGE	24 VDC
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 % (non condensing)
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

Redundant Connection to Two DOMs*

Single Connection



VARIODYN D1

Digital Call Station - Accessories for Call Stations

584960



FIBS mounting kit for DCS1/12

Mounting frame for the Digital Call Stations DCSF1 and DCSF12 into FIBS.

TECHNICAL DATA

COLOR	black
DIMENSIONS	W: 240 mm H: 170 mm D: 47 mm

584961



Housing for one Fire Department Digital Call Station DCSF

Wall housing made of sheet steel for installation of one DCSF12 or DCSF1 in the original housing.

TECHNICAL DATA

TYPE OF PROTECTION	IP30
COLOR	red, similar to RAL 3000
WEIGHT	approx. 4.8 kg
DIMENSIONS	W: 350 mm H: 265 mm D: 100 mm

Features

- Powder-coated in red, similar to RAL 3000
- Door with 180 x 120 mm viewing window with acrylic glass cover
- Prepared for installation of the fire department lock
- Internal mounting plate for installation of the digital call station
- 2 cable entries on the housing rear wall
- 2 cable entries each on the top and bottom of the housing
- One mounting bracket for fiber-optic cable converter Part No. 583317.21 in the housing



Housing including additions with 4 screws for installation of the Digital Call Stations.

VARIODYN D1

Digital Call Station - Accessories for Call Stations

584962



Housing for two Fire Department Digital Call Station DCSF

Wall housing made of sheet steel for installation of two DCSF12 or DCSF1 in the original housing.

TECHNICAL DATA	
TYPE OF PROTECTION	IP30
COLOR	red, similar to RAL 3000
WEIGHT	approx. 8.4 kg
DIMENSIONS	W: 350 mm H: 500 mm D: 100 mm

Features

- Powder-coated in red, similar to RAL 3000
- Door with 180 x 120 mm viewing window with acrylic glass cover
- Prepared for installation of the fire department lock
- 2 internal mounting plates for installation of the digital call stations
- 4 cable entries on the housing rear wall
- 2 cable entries each on the top and bottom of the housing
- Two mounting brackets for fiber-optic cable converter Part No. 583317.21 in the housing
- Option for installing one DCSF and one DKM18 digital call station using mounting kit Part No. 583312



Housing including additions with 4 screws for installation of the Digital Call Stations.

584963



Profile half-cylinder with standard closure

Profile half-cylinder with standard closure for installation in firefighter intercom housing Part No. 584961 or 584962.



The screw fasteners and 2 keys are included in the scope of delivery.

VARIODYN D1

Digital Call Station - Accessories for Call Stations

583316.21



Features

- EN 54-16 certified

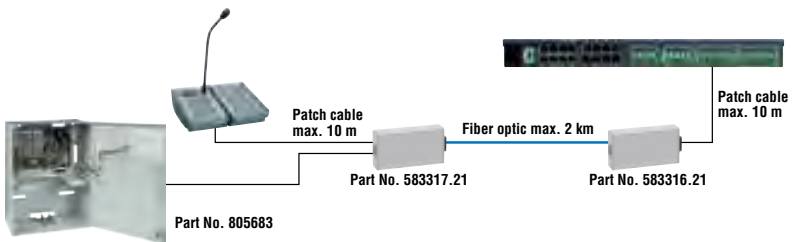
ACCESSORIES	
583315.02	Power supply for LWL converter
805683	External power supply DCU 2403

LWL converter multi mode

VdS approval: G 210122
Part of EN 54-16 approval

Assembly for connection of digital communication units DCS or UIM to VARIODYN D1 via multimode optical fiber.

TECHNICAL DATA	
WAVELENGTH	1308 nm
RANGE	< 2 km
FO-CONNECTOR	Duplex SC
DIMENSIONS	W: 115 mm H: 55 mm D: 25 mm
DECLARATION OF PERFORMANCE	DoP-20997130701



583316.SM



Features

- EN 54-16 certified

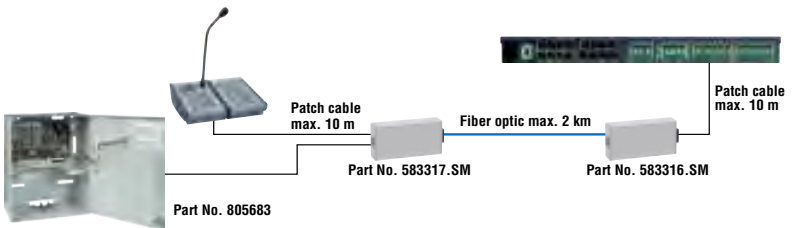
ACCESSORIES	
583315.02	Power supply for LWL converter
805683	External power supply DCU 2403

LWL converter single mode

Part of EN 54-16 approval

Assembly for connecting digital communication DCS and/or UIM to VARIODYN D1 from single mode – fiber optic cable.

TECHNICAL DATA	
RANGE	< 20 km
DECLARATION OF PERFORMANCE	DoP-00376130701



VARIODYN D1

Digital Call Station - Accessories for Call Stations

583317.21



Features

- Authorized in compliance with EN 54-16

ACCESSORIES

583315.02 PSU for FO converter

805683 External PSU DCU 2403

LWL converter for DCS multi mode

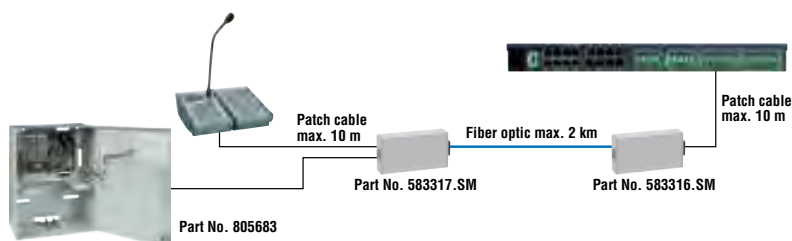
VdS approval: G 210122

Part of EN 54-16 approval

Assembly for connection of digital communication units DCS or UIM to VARIODYN D1 via multimode optical fiber. The voltage supply in the case safety relevant should be performed from the 24 V DC power supply of the voice alarm system or through a power supply supplied by 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
DECLARATION OF PERFORMANCE	DoP-20997130701



583317.SM



Features

- Authorized in compliance with EN 54-16

ACCESSORIES

583315.02 PSU for FO converter

805683 External PSU DCU 2403

LWL converter for DCS single mode

Part of EN 54-16 approval

Assembly for connecting digital communication DCS and/or UIM to VARIODYN D1 from single mode – fiber optic cable. The voltage supply in the case safety relevant should be performed from the 24 V DC power supply of the voice alarm system or through a power supply supplied by a battery (Part No. 805683).

TECHNICAL DATA

RANGE	< 20 km
DECLARATION OF PERFORMANCE	DoP-00376130701

583315.02



Power supply for LWL converter

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

VARIODYN D1

Digital Call Station - Accessories for Call Stations

583307



Wall surface mount terminal box for DCS

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

583300.ES



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

583300.HO



Adhesive label for DCS "Honeywell"

Label for the call stations of the DCS series and DCSF with the "Honeywell" branding.



10 pieces

583300.VD

Adhesive label for DCS "VARIODYN D1"

Label for the call stations of the DCS series and DCSF with the "VARIODYN D1" branding.

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 telephone station or a digital key module can be protected.

VARIODYN D1

Digital Call Station - Accessories for Call Stations

583507



Installation kit for redundant DCS

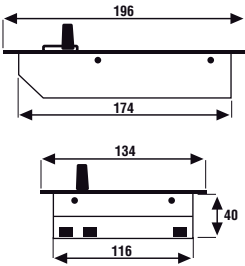
Installation kit for DCS15RE, DCS2RE, or DKM18. This installation kit is needed to install a paging microphone in a table surface or the 19" panel (Part No. 583709)

TECHNICAL DATA	
DIMENSIONS	W: 134 mm H: 40 mm D: 196 mm

ACCESSORIES	
583709	Blind cover 4 HU



Can be used for RE versions!



583318



Key cap

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



12 pieces

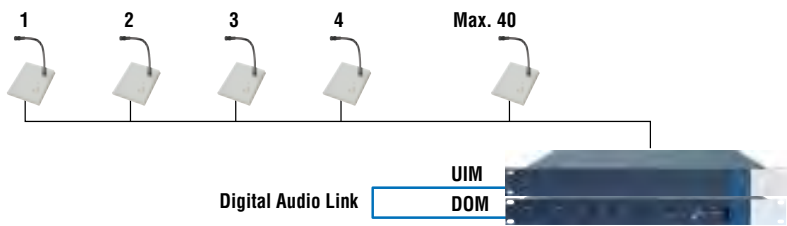
VARIODYN D1

Digital Call Station - Call Stations for Public Announcements

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.



586100



Dynamic hand-held microphone

Hand-held microphone in a stable metal version, with one key for paging microphone station DIGIM1WH (Part No. 586101).

TECHNICAL DATA	
AMBIENT TEMPERATURE	-30 °C ... 70 °C
STORAGE TEMPERATURE	-40 °C ... 80 °C
AIR HUMIDITY	< 93 % (non condensing)
TYPE OF PROTECTION	IP 40
WEIGHT	approx. 210 g (incl. cable)

586101



ACCESSORIES	
586100	Dynamic hand-held microphone

Paging microphone station for external microphone DIGIM1WH

In an elegant enclosure for space-saving use at cash registers. Type: DIGIM1WH with 9 pole D-sub-plug for connecting hand-held microphones with key and busy indicator.

Furthermore: 1 labellable key with LED-indicator for key control and busy, power, status, or gong indicators. Diode-programmable processor control Integrated Limiter and special purpose circuit for eliminating switch-on noises. Built-in +6 dB NF amplifier with volume control. Succinct brief pre-gong signal with volume and pitch regulation.

Parallel circuit of up to 40 call stations via line JY(ST)Y4(6)x2x0,8(0,6).

TECHNICAL DATA	
OPERATING VOLTAGE	24 VDC
CURRENT CONSUMPTION @ 24 V DC	approx. 24 mA
HOUSING	ABS light gray
DIMENSIONS	W: 122 mm H: 41 mm D: 185 mm

VARIODYN D1

Digital Call Station - Call Stations for Public Announcements

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
WEIGHT	approx. 210 g (incl. cable)

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).

VARIODYN D1

Additional System Devices

583371.21



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

ACCESSORIES	
583703	Mounting set 1



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.

Mains Switching Unit MSU

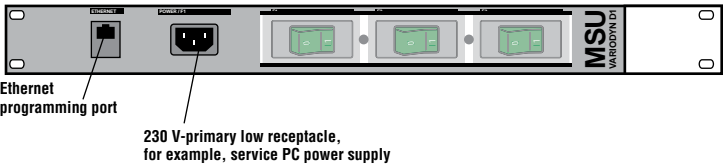
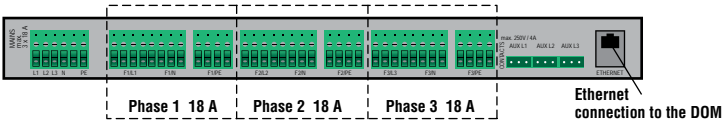
VdS approval: G 210122
Part of EN 54-16 approval

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 % (non condensing)
WEIGHT	approx. 4.2 kg
DIMENSIONS	W: 483 mm H: 44 mm D: 345 mm (1 HU, 19")
DECLARATION OF PERFORMANCE	DoP-20997130701



MSU rear view and front view

VARIODYN D1

Additional System Devices

583381.31



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

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

System Communication Unit SCU

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

VARIODYN D1

Additional System Devices

583331.21



Features

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

ACCESSORIES	
583401.21	Signal cable12 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

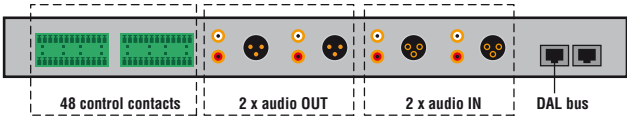
Universal Interface Module UIM

VdS approval: G 210122
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 inputs. 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)
AUDIO INPUT	
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 % (non condensing)
WEIGHT	approx. 3.6 kg
DIMENSIONS	W: 483 mm H: 44 mm D: 345 mm (1 HE, 19")
DECLARATION OF PERFORMANCE	DoP-20997130701



UIM rear view and front view

VARIODYN D1

Additional System Devices

583332



Overvoltage protection for UIM contacts

VdS approval: G 210122

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

583351



View Control Module VCM

VdS approval: G 210122

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

approx. 10 mA

DECLARATION OF PERFORMANCE

DoP-20997130701

583341.21



Contact Interface Module CIM

VdS approval: G 210122

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 %

WEIGHT

approx. 310 g

DIMENSIONS

W: 105 mm H: 40 mm D: 105 mm

DECLARATION OF PERFORMANCE

DoP-20997130701

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



Control contacts are listed as open-collector.

VARIODYN D1

Multimedia Audio Devices

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	
DVD\CD\AUDIO:	
OUTPUT VOLTAGE	2 VDC \pm 0,2 V
HARMONIC DISTORTION AT NOMINAL LEVEL	< 0.05 %
SIGNAL-TO-NOISE RATIO	> 80 dB
CHANNEL SEPARATION	> 75 dB
TUNER:	
FREQUENCY BAND AM	531 ... 1710 kHz
FREQUENCY BAND FM	87,5 ... 108 MHz
COMMON TECHNICAL DATA:	
RATED VOLTAGE	230 VAC
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)

VARIODYN D1

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 are required to operate 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!

581721



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

ACCESSORIES

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



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

Emergency power supply 24 V / 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 % (non-condensing)
WEIGHT	approx. 6 kg
DIMENSIONS	W: 483 mm H: 88 mm D: 395 mm (2 HU, 19")

VARIODYN D1

Power Supply

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.
- 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 186 A

ACCESSORIES

581730 Battery for emergency power supply 12 V / 105 Ah

581731 Battery for emergency power supply 12 V / 150 Ah



Delivery time on request.

Emergency power supply PSU 24 V-2

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 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

VARIODYN D1

Power Supply

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)
- 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

ACCESSORIES

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



Delivery time on request.

Emergency power supply PSU 24 V-4 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 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

VARIODYN D1

Power Supply

581724



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

ACCESSORIES

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



Delivery time on request.

Emergency power supply PSU 24 V-2 net Part of EN 54-16 approval

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

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

VARIODYN D1

Power Supply

581725



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

ACCESSORIES

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



Delivery time on request.

Emergency power supply PSU 24 V-4 net Part of EN 54-16 approval

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

VARIODYN D1

Power Supply

581730



Features

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

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

581731



Features

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

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

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	L: 348 mm W: 178 mm H: 163 mm

VARIODYN D1

Accessories

583535



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

ACCESSORIES

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

Alarm transponder VARIODYN D1

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 optionally available:

-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 latest fire detection technology 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

788603.10



1 x UM-profile and 2x side panels

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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Application example with transponder Part No. 583535

VARIODYN D1

Accessories

581310



Features

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

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

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 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.

581320



Flushmounted XLR panel jack

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

TECHNICAL DATA	
COLOR	pure white / silk-mat

ACCESSORIES

581329	Surface mount
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VARIODYN D1

Accessories

581329



Surface mount box

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

TECHNICAL DATA

COLOR	pure white / silk-mat
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Delivery time on request.

583496



End-of-Line module EOL

VdS approval: G 210122

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

VdS approval: G 210122

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.

TECHNICAL DATA

COLOR	black
WEIGHT	approx. 45 g
DIMENSIONS	L: 65 mm W: 33 mm H: 16 mm
DECLARATION OF PERFORMANCE	DoP-20997130701

Features

- Approved as per EN 54-16

VARIODYN D1

Accessories

583387.21



Features

- EN 54-16 certified
- Module for time synchronization of entire VARIODYN D1 system
- Can be connected to any DOM in the system
- via GPS signal synchronization
- Activation on the system via pre-installed cable (included)



Incl. pre-installed cable

Time Control Module TCM GPS Part of EN 54-16 approval

This module is used for the time synchronization of a VARIODYN D1 alarm/evacuation system via GPS (Global Positioning System). The exact time is then transmitted to all other networked DOMs via one DOM which is time-synchronized with the TCM-GPS (Time Control Module TCM GPS). This facilitates precisely timed, automated announcements (e.g. the recess bell in schools) timed volume adjustment (e.g. night-mode in railway stations) or simply just precisely-timed documentation of announcements or fault alarms.

Connection

The module is either connected directly to the I2C interface via a standard CAT5 cable (max. 10m) or connected to the 9 pin Sub-D jack of a DOM with the included adapter cable.

Monitoring

Both disconnections of the module as well as of the satellite reception is recorded.

TECHNICAL DATA

DIMENSIONS	W: 55 mm H: 25 mm D: 115 mm
DECLARATION OF PERFORMANCE	DoP-00376130701

583392



Features

- EN 54-16 certified
- 6 Ethernet-connections
- Relay for redirecting a faulty message contact load 24 V DC / 1 A
- 2 Duplex-SC-LWL-connections

Standards

- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX/FX
- IEEE 802.1p Priority Support
- IEEE 802.1d Spanning Tree Protocol
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.1q VLAN Tagging

FO switch for Ethernet ring, multimode

VdS approval: G 210122
Part of EN 54-16 approval

The LWL 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 an LWL fiber rupture, it is possible to still communicate through the other side of the loop. In addition, every 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	6 W
DATA TRANSMISSION SPEED	14880 / 148800 bps (Ethernet / Fast Ethernet)
TRANSMISSION DISTANCE	max. 2 km
FIBER	Multimode 50/125 µm, 62,5/125 µm
AMBIENT TEMPERATURE	0 °C ... 60 °C
TYPE OF PROTECTION	IP30
DIMENSIONS	W: 54 mm H: 135 mm D: 105 mm
DECLARATION OF PERFORMANCE	DoP-20997130701

VARIODYN D1

Accessories

583393



Features

- EN 54-16 certified
- 6 Ethernet-connections
- Relay for redirecting a faulty message contact load 24 V DC / 1 A
- 2 Duplex-SC-LWL-connections

FO switch for Ethernet ring, single mode Part of EN 54-16 approval

Same as Part No. 583392 but for single mode fiber 9/125 μm and 10/125 μm .

TECHNICAL DATA	
OPERATING VOLTAGE	12 ... 48 V DC
POWER CONSUMPTION	6 W
TRANSMISSION DISTANCE	max. 30 km
FIBER	Monomode 9/125 μm , 10/125 μm
AMBIENT TEMPERATURE	0 °C ... 60 °C
TYPE OF PROTECTION	IP 30
DIMENSIONS	W: 54 mm H: 135 mm D: 105 mm
DECLARATION OF PERFORMANCE	DoP-00376130701

586115



ACCESSORIES

586116	Power supply for telephone interface
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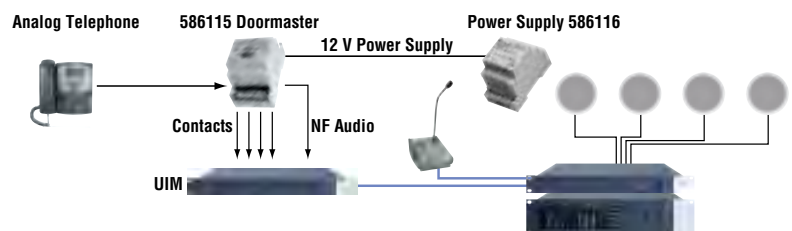
Doormaster-Smart-PAL-Telephone interface

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



VARIODYN D1

Accessories

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

583531



Features

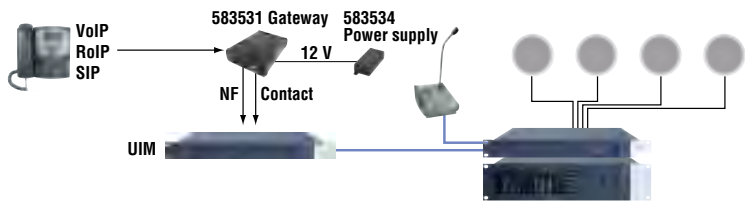
- Automatic answering service
- Automatic selection
- Sent and received contacts
- Power supply via PoE or ISDN
- Aluminum housing for table-/ wall mounting

ACCESSORIES	
583534	PSE (PoE-Injector 802.3af) for ULE-614

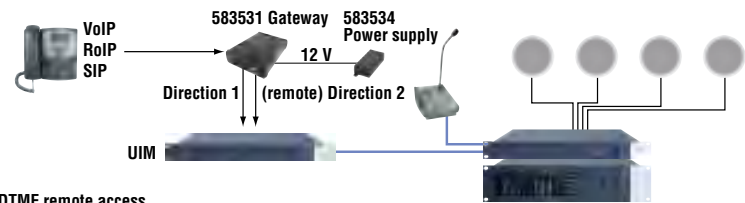
VoIP- or ISDN transmission device

VoIP- or ISDN- transmission unit for devices with analog listening-and speech channels (e.g. radio base stations, loudspeakers, headsets etc.).

TECHNICAL DATA	
OPERATING VOLTAGE	18 ... 42 V DC
DIMENSIONS	W: 109 mm H: 35 mm D: 185 mm



Speech input and contact activation



DTMF remote access

583534



PSE (PoE Injector 802.3af) for 583531

Power supply via the Ethernet cable when no appropriate IP switch is present. Also suitable for power supply to the 583531 in cases of an unpowered ISDN cable 230 V AC, 16 W, incl. network cable with plug and RJ45 patch cable.

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 as DOM, UIM, CIM, Comprio	584101	
Ethernet	584102	
DAL bus	584102	CAT5 line length up to 250 m

VARIODYN D1

Surge Protection Module

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

FX808338



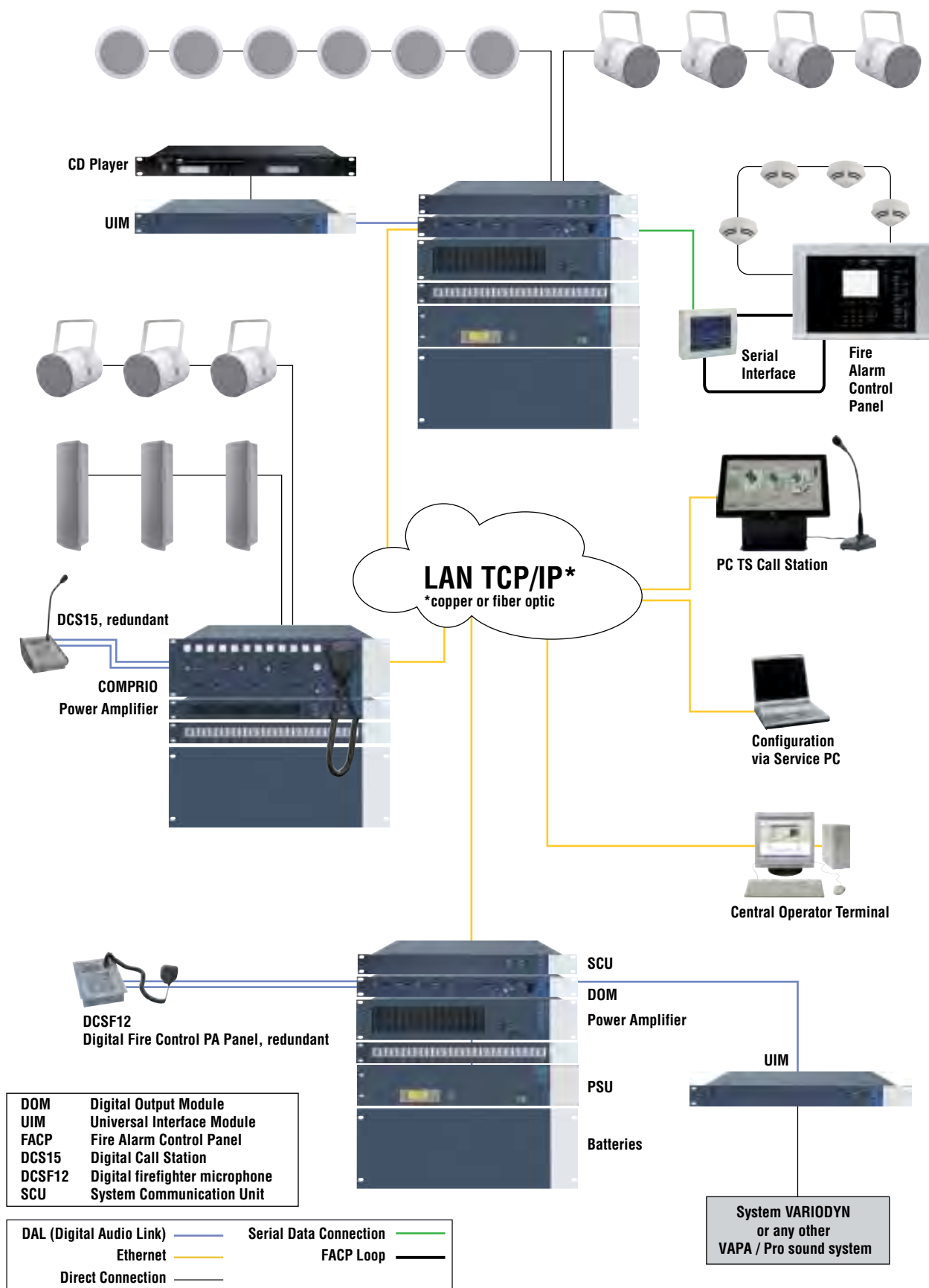
Expansion housing with 2 DIN rails

Control panel expansion housing with 2 DIN rails for inserting ethernet switches, fiber optic converters, couplers in cap rail enclosures etc. For application-oriented completion and expansion of voice alarm system or fire alarm systems.

VARIODYN D1

Interface to Fire Control Panels

ESSER FACP Interface



VARIODYN D1

Interface to Fire Control Panels

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. Protocol: similar to DIN 19245-1 (Profibus) topology: Ring structure, 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.

781336



DC/DC converter output voltage 12 V DC VdS 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.

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 mm²
- Short-circuit proof



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

VARIODYN D1

Interface to Fire Control Panels

784856



The essernet micromodule and the interface module are not included and must be ordered separately, depending on the type of essernet and the serial transmission mode.

SEI serial essernet interface EDP, bidirectional

Same as 784855, but bidirectional with remote control options e.g. for the connection to a Building Management System (BMS)

ACCESSORIES	
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



1 x UM-profile and 2x side panels

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.



Application example with transponder Part No. 583535

VARIODYN D1

Interface to Fire Control Panels

805683



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

ACCESSORIES

805684.10	Adapter card for DCU 2402
808623	esserbus alarm transponder



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

External power supply DCU 2403

VdS 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.

583386.21



Features

- Approved as per EN 54-16

Adapter TWI-RS232

VdS approval: G 210122
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.

VARIODYN D1

VARIODYN D1 PAMMI Plus

Features

- Supports also to stream Audio into VARIODYN D1
- 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.

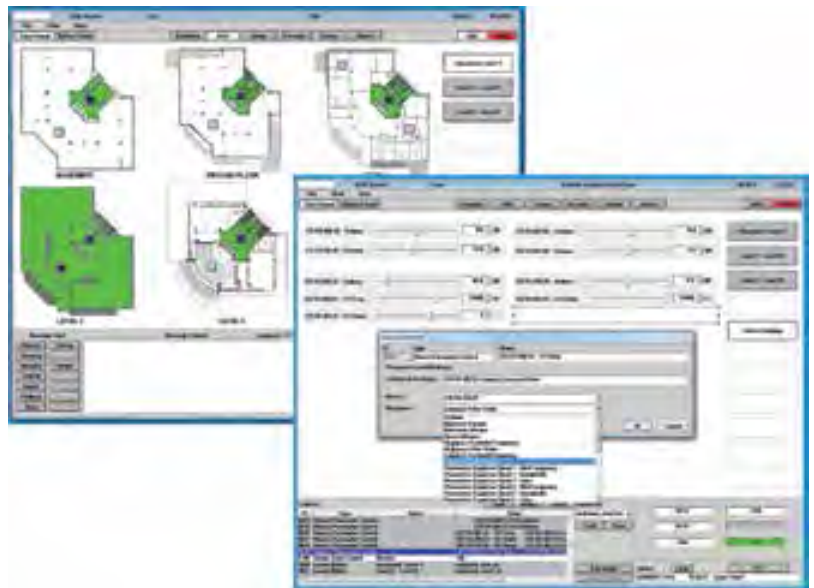
The graphical user interface can be customized for a particular property, thus being very useful. Whether the customer requires list displays, building plans, or other graphical representations, with PAMMI Plus everything is straightforward and quickly possible.

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.



VARIODYN D1

VARIODYN D1 PAMMI Plus

583651



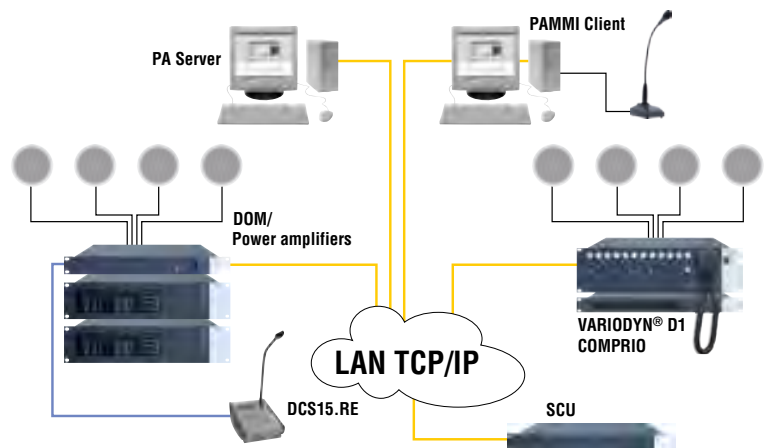
Features

- 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

PAMMI Plus PA server

The PAMMI Plus server applications is the core of the VARIODYN D1 PAMMI Plus Management System. It realizes system control and communication with the components of the VARIODYN D1 voice alarm system and den 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 downward 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



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

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.

VARIODYN D1

VARIODYN D1 PAMMI Plus

583653



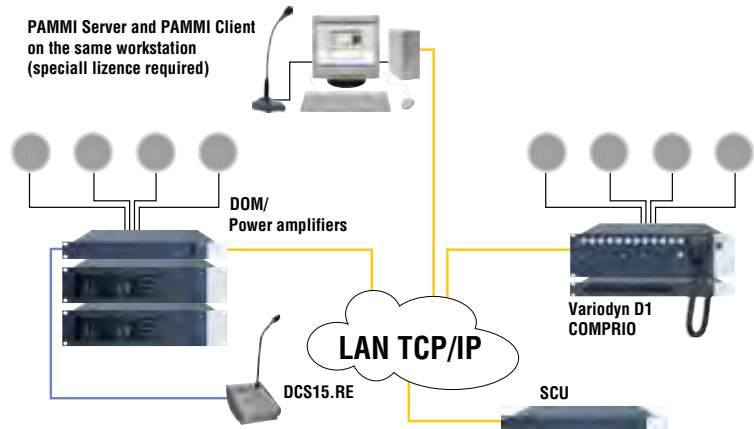
Features

- 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 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.



583532



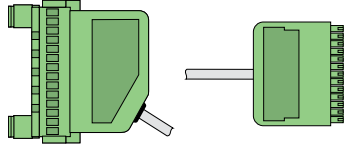
PAMMI Plus switchbox WRS D1

Switchover box for redundant operation of a PAMMI Plus management system. Two PAMMI Plus management systems are connected to the switchover box. In the event that one of the two systems fails, the other system is automatically activated.

VARIODYN D1

Cable Overview

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 D1,2m

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 Comprio 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).

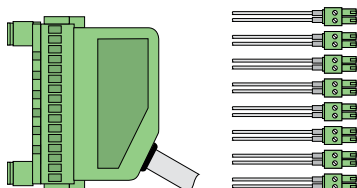
583441.10



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 Comprio applications.

583451.21



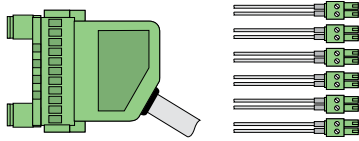
Cable for cabinet rear panel DOM4-8

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.

VARIODYN D1

Cable Overview

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.

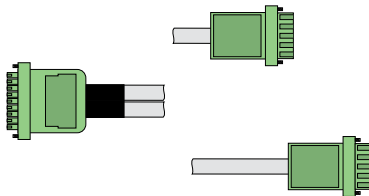
583476.21



Output cable amplifier DOM

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

583477.21

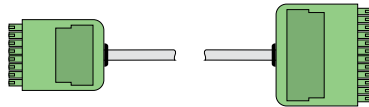


Output cable 2 amplifier DOM

Part of EN 54-16 approval

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).

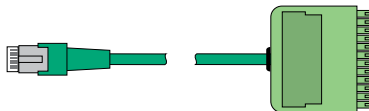
583472.21



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

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

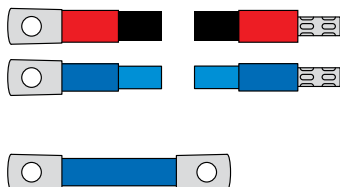
583473.21



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.

VARIODYN D1

Cable Overview

583481



CAT5 patch cable, 1 m blue (DAL)

583482



CAT5 patch cable, 2 m blue (DAL)

583483



CAT5 patch cable, 3 m blue (DAL)

583486



CAT5 patch cable, 1 m yellow (Ethernet)

583487



CAT5 patch cable, 2 m yellow (Ethernet)

583488



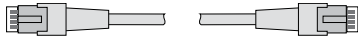
CAT5 patch cable, 3 m yellow (Ethernet)

583466



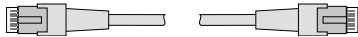
Patch cable CAT5, 0.5 m gray (Periphery)

583467



Patch cable CAT5, 1 m gray (Periphery)

583469



Patch cable CAT5, 3 m gray (Periphery)

583489



XLR cable 1 m, plug jack length 1 m

Audio-connection cable with a XLR plug and XLR jack, e.g. for connecting an external audio device to the UIM.

VARIODYN D1

Cable Overview

583490



XLR cable 10 m, plug jack length 10 m

Audio-connection cable with a XLR plug and XLR jack, e.g. for connecting an external audio device to the UIM.

583491



Input cable DOM amplifier, 0.5 m green
Part of EN 54-16 approval

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

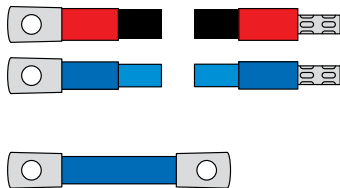
583492



Audio-connection cable length 1.8 m

Audiocable, stereo-Cinch.

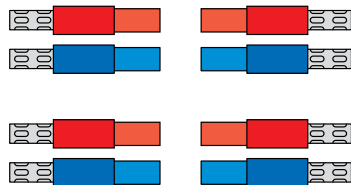
583413



Cable set for connecting batteries to VARIODYN D1 4XDxxxB amplifier
Part of EN 54-16 approval

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
Part of EN 54-16 approval

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

581340



Periphery clamp, 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. 583466, 583467 or 583469) 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 the cable Part No. 583466 or cable Part No. 583468
For Comprio 12HU
For cabinet 24 HU, 26 HU, 40 HU, 42 HU

NOTES



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 VAC
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 VDC
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



Zum Anschluss an den MMA 240 Mischverstärker (581352) muss entweder ein XLR-Kabel, 1 m (583489) oder ein XLR-Kabel, 10 m (583490) bestellt werden!

SOUND SYSTEM

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

NOTES



X-618 PUBLIC ADDRESS SYSTEM

X-DCS2000/EN



Features

- Easy-access preset buttons
- Built-in fault diagnosis
- Automatic volume control
- Extendable zones connections via software configuration

ACCESSORIES

HN-PTT	Push-to-talk Microphone
--------	-------------------------

Digital system manager

The Digital System Manager DSM is the basic unit of X-618 Public Address System. DSM integrates plentiful functions such as zone expansion, multiple audio sources support, audio file storage, net audio, broadcasting, zone control, monitoring, fault diagnosis etc. The supplied X-SMART management software allows users to easily and efficiently manage and control the system.

TECHNICAL DATA	
AUDIO INPUT	
AUXILIARY INPUT	1V (0 dBV)
INPUT IMPEDANCE	20 k Ω
FREQUENCY RESPONSE	60 Hz ... 16 kHz
SNR	> 85 dB
AUDIO OUTPUT	
AUDIO OUTPUT CHANNELS	4
OUTPUT SIGNAL	1.2 V (1.6 dBV)
RECORD OUTPUT	1 V (0 dBV)
AVC INPUT	
CHANNELS	4
INPUT SIGNAL	14 mV (-37 dBV) or 330 mV (-9.6 dBV)
INPUT IMPEDANCE	20 k Ω
PHANTOM POWER	DC 24 V, configured by switch
FREQUENCY RESPONSE	60 Hz ... 16 kHz
SNR	> 65 dB
LOUDSPEAKER CIRCUIT	
OUTPUT CHANNELS	8, with circuit fault detection function
MAX. OUTPUT LOAD	500 W, if supervised max. 250 W)
GENERAL	
MAIN POWER SUPPLY	100 ... 240 V DC, 50/60 Hz
BACKUP POWER SUPPLY	21.5 ... 28.5 V DC
MAX. INPUT POWER	120 W
RATED VOLTAGE	50 W
AIR HUMIDITY	< 95 %, non condensing
OPERATING TEMPERATURE	-10 °C ... +55 °C
STORAGE TEMPERATURE	-40 °C ... +70 °C
DIMENSIONS	W: 580 mm H: 235 mm D: 552 mm
WEIGHT	approx. 9.3 kg

X-618 PUBLIC ADDRESS SYSTEM

HN-PTT



Push-to-talk microphone

Push-to-talk microphone with announcement key in order to talk directly into the Digital System Manager (Part No. X-DCS2000/EN) or digital call station (Part No. X-NPMI).

Features

- Superior voice reproduction
- User-friendly operation
- Durable construction
- Remote switching contact
- Optional component of X-DCS2000/EN and X-NPMR

X-DA2250EN



Power amplifier 2x250W, EN

The high efficient digital Class D power amplifier offers flexible choices for different applications. The 24 V DC backup power supply input offers an redundant power supply operation.

INPUT/OUTPUT

X-DA2250EN supports both balanced and unbalanced audio inputs. It can receive audio signal from XDCS2000/EN via a CAT5 cable (RJ45 plug).

FAULT PROTECTION

X-DA2250EN is self-protect against overheat, overcurrent, overvoltage and under voltage.

INDICATORS

- Power
- AC fault
- Signal (for each channel)
- Clip (for each channel)
- Protection (for each channel)

- Two channel 250 W efficiency Class-D amplifier
- Effective ventilation using forced air cooling fan
- Automatic protection
- Fault detection
- CE compliant
- 24 V DC backup power supply

TECHNICAL DATA	
RATED VOLTAGE	2 × 250 W
MAIN POWER SUPPLY	100 ... 240 V DC, 50/60 Hz
BACKUP POWER SUPPLY	21.5 ... 28.5 V DC
POWER CONSUMPTION	< 700 W
MAIN POWER SUPPLY PROTECTION	T10 AL 250 V
SPEAKER OUTPUT VOLTAGE	100 V / 70 V
FREQUENCY RESPONSE	70 Hz ... 18 kHz (+1 dB ... -3 dB)
INPUT SENSITIVITY	1.414 V _{RMS}
INPUT IMPEDANCE	20 KΩ
SNR	> 100 dB (with A-Weight)
HARMONIC DISTORTION AT NOMINAL LEVEL	<0.05 % (at 1/3 rated power, 1 kHz)
CHANNELS	2
AIR HUMIDITY	95 %
OPERATING TEMPERATURE	0 °C ... +40 °C (non condensing)
STORAGE TEMPERATURE	-10 °C ... +55 °C
DIMENSIONS	W: 416 mm H: 88 mm D: 483 mm
WEIGHT	approx. 11.7 kg

X-618 PUBLIC ADDRESS SYSTEM

X-DA1500EN



Power amplifier 1x500W, EN

As X-DA2250EN, but 1 channel and 500 Watt power.

- One channel 500W efficiency Class-D amplifier
- Effective ventilation using forced air cooling fan
- Automatic protection
- Fault detection
- CE complied
- With 24 VDC backup power supply

X-DA4125EN



Power amplifier 4x125W, EN

As X-DA2250EN, but 4 channel and 125 Watt power.

- Four channel 125W efficiency Class-D amplifier
- Effective ventilation using forced air cooling fan
- Automatic protection
- Fault detection
- CE complied
- With 24 VDC backup power supply

X-618 PUBLIC ADDRESS SYSTEM

X-DA2250



Features

- Two channel 250W efficiency Class-D amplifier
- Effective ventilation using forced air cooling fan
- Automatic protection
- Fault detection
- CE complied

Power amplifier 2x250W

The high efficient digital Class D power amplifier offers flexible choices for different applications.

INPUT/OUTPUT

X-DA2250EN supports both balanced and unbalanced audio inputs. It can receive audio signal from XDCS2000/EN via a CAT5 cable (RJ45 plug).

FAULT PROTECTION

X-DA2250EN is self-protect against overheat, overcurrent, overvoltage and under voltage.

INDICATORS

- Power
- AC fault
- Signal (for each channel)
- Clip (for each channel)
- Protection (for each channel)

TECHNICAL DATA	
RATED VOLTAGE	2 × 250 W
MAIN POWER SUPPLY	220 ... 240 V DC, 50/60 Hz
BACKUP POWER SUPPLY	220 ... 240 V DC
POWER CONSUMPTION	< 720 W
MAIN POWER SUPPLY PROTECTION	T10 AL 250 V
SPEAKER OUTPUT VOLTAGE	100 V / 70 V
FREQUENCY RESPONSE	70 Hz ... 18 kHz (+1 dB ... -3 dB)
INPUT SENSITIVITY	1.414 V _{RMS}
INPUT IMPEDANCE	20 KΩ
SNR	> 100 dB (with A-Weight)
HARMONIC DISTORTION AT NOMINAL LEVEL	<0.05 % (at 1/3 rated power, 1 kHz)
CHANNELS	2
AIR HUMIDITY	95 %
OPERATING TEMPERATURE	0 °C ... +40 °C (non condensing)
STORAGE TEMPERATURE	-10 °C ... +55 °C
DIMENSIONS	W: 416 mm H: 88 mm D: 483 mm
WEIGHT	approx. 12.2 kg

X-618 PUBLIC ADDRESS SYSTEM

X-DA1500



Power amplifier 1x500W

As X-DA2250, but 1 channel and 500 Watt power.

Features

- One channel 500W efficiency Class-D amplifier
- Effective ventilation using forced air cooling fan
- Automatic protection
- Fault detection
- CE complied

X-DA4125



Power amplifier 4x125W

As X-DA2250, but 4 channel and 125 Watt power.

Features

- Four channel 125W efficiency Class-D amplifier
- Effective ventilation using forced air cooling fan
- Automatic protection
- Fault detection
- CE complied

X-DA4060



Power amplifier 4x60W

As X-DA2250, but 4 channel and 60 Watt power.

Features

- Four channel 60W efficiency Class-D amplifier
- Effective ventilation using forced air cooling fan
- Automatic protection
- Fault detection
- CE complied

X-618 PUBLIC ADDRESS SYSTEM

X-NPMI



Features

- 4.3-inch color LCD touch screen
- Intuitive and simple user interface
- Detachable gooseneck microphone
- Built-in monitor loudspeaker
- Digital audio processing
- Flush mount desktop installation available
- Microphone monitoring

ACCESSORIES

HN-PTT	Push-to-talk Microphone
X-NPMI-R	Rack mounted accessory

Digital call station

The configurable Digital Call Station is the key module in X-618 Digital Public Address System. It provides comfortable user experience using touch screen color display and simple and intuitive user interface design.

CONNECTIONS

X-618 system can connect with up to 20 X-NPMI via Ethernet. X-NPMI can be used as a node anywhere in the network.

AUDIO TRANSMISSION

The device comes with a detachable gooseneck microphone. The received audio signal will be digitalized to eliminate sound distortion during transmission.

SHORT-CUT OPERATION

X-NPMI has three short-cut buttons on the operation panel: TALK, SELECT ALL and EMERGENCY. The emergency broadcast button can switch the system to emergency broadcast mode, where the recorded evacuation message will be played without delay.

INDICATORS

- Fault
- Run
- Emergency

TECHNICAL DATA

POWER SUPPLY	2 V / 24 V DC
RATED VOLTAGE	5W
FREQUENCY RESPONSE	80Hz~16KHz
SNR	>85dB
THD	<0.05%
MICROPHONE INPUT	-44dB±2dB
MONITORING LOUDSPEAKER	2 W / 8Ω
SAMPLING RATE	44.1 KHz, 16 Bit
OPERATING TEMPERATURE	-10 °C~+ 55 °C
STORAGE TEMPERATURE	-40 °C~+ 70 °C
AIR HUMIDITY	< 95% (non condensing)
DIMENSIONS	W: 210 mm H: 55 mm D: 110 mm
WEIGHT	approx. 0.78 kg

X-NPMI-R



Rack mount panel for X-NPMI

Rack Mount Panel for Digital Call Station X-NPMI.

TECHNICAL DATA

DIMENSIONS	W: 484 mm H: 132 mm (3HU 19")
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X-618 PUBLIC ADDRESS SYSTEM

X-SPT900

Features

- Flexible management of operation permissions
- Supports displaying the network as a visual map
- Displays the device ID, Type, and IP address
- Monitors the status of all devices in the system
- Supports multiple broadcast modes of operation
- Records event logs and fault logs
- Supports backing up the system data

X-SMART system management software

The X-SMART System Management Software X-SPT900 includes one System Resource Platform (Server) X-SP2000 and one Client-Interface X-ST2000. The software is used to monitor the system status, make announcements, play audio, and manage logs.

X-SP2000

ACCESSORIES	
X-ST2000	X-SMART Client Interface

X-SMART system resource platform (server)

The X-SP2000 System Resource Platform (Server) acts as a server for the X-SMART System Management. One or more X-ST2000 Client-Interfaces are needed to provide the Client-Interface tasks.

X-ST2000

X-SMART client interface

The X-ST2000 software provides the Client-Interface. The software needs the X-SP2000 System Resource Platform to work.

X-618 PUBLIC ADDRESS SYSTEM

X-NRI/EN

Features

- Four auxiliary inputs for external audio sources
- Four balance inputs with phantom power and gain control
- Built-in 4GB SD card for network audio storage
- Four ports 10M/100MB Ethernet switch
- 32 monitored dry contact inputs
- Eight dry contact outputs
- Main and backup power supply

Network resource interface

The Network Resource Interface is a universal interface of X-618 for external control access and audio extension. It is suitable to the needs of central interfaces management required by middle-to-large applications. The device provides 4 external audio source interfaces and 1 built-in audio source. These

TECHNICAL DATA	
AUDIO INPUT	
INPUT CHANNELS	4
AUXILIARY INPUT	1V (0 dBV)
INPUT IMPEDANCE	20 k Ω
FREQUENCY RESPONSE	60 Hz ... 16 kHz
SNR	> 85 dB
AVC INPUT	
INPUT CHANNELS	4
INPUT SIGNAL	14 mV (-37 dBV) or 1 V(odBV)
INPUT IMPEDANCE	20 k Ω
PHANTOM POWER	24 VDC
INPUT SIGNAL	60 Hz ... 16 kHz
INPUT IMPEDANCE	20 k Ω
PHANTOM POWER	DC 24 V, configured by switch
FREQUENCY RESPONSE	60 Hz ... 16 kHz
SNR	> 65 dB
GENERAL	
MAIN POWER SUPPLY	100 ... 240 V DC, 50/60 Hz
BACKUP POWER SUPPLY	21.5 ... 28.5 V DC
MAIN POWER SUPPLY PROTECTION	T2 AL 250 V
RATED POWER	15 W
AIR HUMIDITY	95 % (no condensation)
OPERATING TEMPERATURE	-10 °C ... +55 °C
STORAGE TEMPERATURE	-40 °C ... +70 °C
DIMENSIONS	W: 482 mm H: 88 mm D: 420 mm
WEIGHT	approx. 7.3 kg

HN-D32N

Features

- Easy field installation with spring loaded clips

Noise detector

The 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.

NOTES

Ceiling Loudspeaker	84
Cabinet Loudspeaker	96
Horn Loudspeaker	101
Sound Projector	104
Spherical loudspeaker	106
Column Loudspeaker	107



EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

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



Delivery time on request.

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 % (non condensing)
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

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

LSC-606



Delivery time on request.

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.

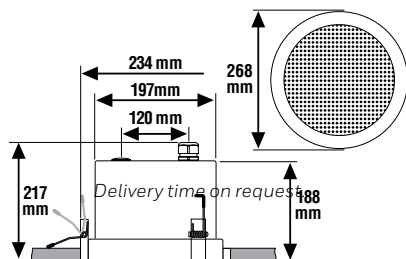
The appearance and neutral white RAL 9003 color have been selected to be unobtrusive in virtually all interiors. The fire dome increases protection of the cable termination. The driver unit is impregnated against moisture. For additional safety, this EN 54-24 ceiling loudspeaker features a ceramic terminal 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 k Ω
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 % (non condensing)
MATERIAL	Metal
COLOR	white, similar to RAL 9003 / red similar to RAL 3000
WEIGHT	approx. 1.57 kg
CUT-OUT SIZE	(\varnothing min.) 195 mm
DIMENSIONS	\varnothing : 222 mm D: 129 mm
DECLARATION OF PERFORMANCE	CPR-DoP-2013002

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582402



Delivery time on request.

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.

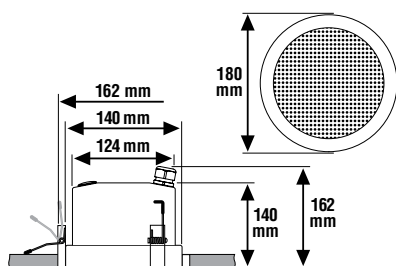
TECHNICAL DATA

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

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582403



Delivery time on request.

20 W 5" 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 20-130/T-EN 54 (130 mm Chassis) has maximum power of 20 W and can be adjusted to 15 W, 10 W or 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 fuse, this EN 54-24 ceiling mount loudspeaker is assembled with ceramic clamp and thermal protection 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.

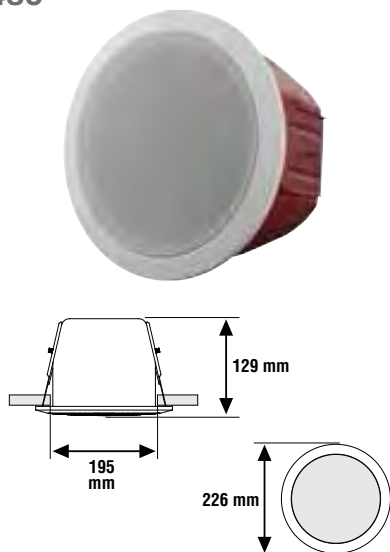
TECHNICAL DATA

RATED POWER	20 W
TRANSFORMER POWER TAPS	20 / 15 / 10 / 5 W
SENSITIVITY EN 54-24, 1 W / 1 M	88.8 dB
SENSITIVITY EN 54-24, MAX 1 M	101.3 dB
TRANSMISSION RANGE	370 ... 16800 Hz (-10 dB)
DISPERSION ANGLE	178° @ 1kHz
AMBIENT TEMPERATURE	-20 °C ... 80 °C
COLOR	white, similar to RAL 9010
WEIGHT	approx. 1.8 kg
CUT-OUT SIZE	(Ø min.) 166 mm
DIMENSIONS	Ø: 180 mm D: 162 mm
DECLARATION OF PERFORMANCE	001-13

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582480



Available Q3/2015

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 k Ω
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 % (non condensing)
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

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582404



Delivery time on request.

Recessed ceiling loudspeaker DL 10-165/T plus-EN54

Approval: EN 54-24

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.

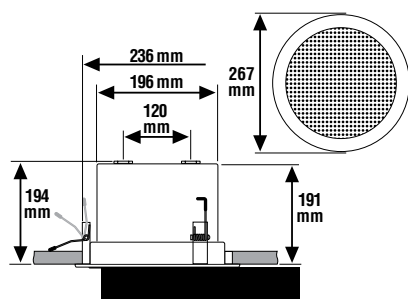
TECHNICAL DATA

LOADING CAPACITY	10 W
TRANSFORMER POWER TAPS	10 / 6 / 3 / 1,5 W
SPL P _{MAX} / 1 M	97.7 dB
SPL 1 W / 1 M	87.7 dB
TRANSMISSION RANGE	249 ... 23500 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: 160 mm
CE CERTIFICATE	1438-CPD-0233

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582405



Delivery time on request.



20 W 8" 2-way ceiling loudspeaker EN 54, metal

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

High quality 2-way ceiling loud speaker in plastic-coated metal with excellent sound quality. This EN 54-24 certified loudspeaker is protected by a moisture-impregnated chassis optimal against moisture.

DL 0610/T-EN 54 (200 mm Chassis) has maximum power of 15 W and can be adjusted to 3 W or 5 W if required. It is ideally suited for demanding sound reinforcement applications such as bistros, restaurants, hotels and many other institutions of public life. Spring clamp with cropped leg spring, with high clamping force, and short tension distance enables a quick and easy mounting. For additional safety, the loudspeaker is also equipped with ceramic fastener and thermal fuse. A fire dome completes the safety features of this loudspeaker. It has two cable lead-throughs. 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.

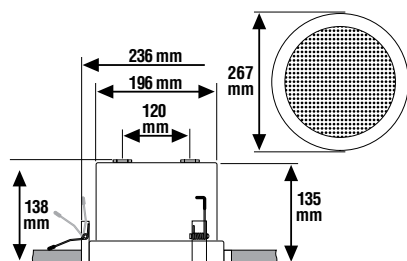
TECHNICAL DATA

RATED POWER	20 W
TRANSFORMER POWER TAPS	20 / 15 / 10 / 5 W
SENSITIVITY EN 54-24, 1 W / 1 M	87.4 dB
SENSITIVITY EN 54-24, MAX 1 M	103.2 dB
TRANSMISSION RANGE	223 ... 21100 Hz (-10 dB)
DISPERSION ANGLE	180° @ 1kHz
AMBIENT TEMPERATURE	-20 °C ... 80 °C
COLOR	white, similar to RAL 9010
WEIGHT	approx. 2.6 kg
CUT-OUT SIZE	(Ø min.) 236 mm
DIMENSIONS	Ø: 268 mm D: 194 mm
DECLARATION OF PERFORMANCE	001-13

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582406



Delivery time on request.

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: 268 mm D: 138 mm
DECLARATION OF PERFORMANCE	001-13

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582407



ACCESSORIES

Optional

582407.FD	Fire dome (FE 130.1) for ceiling loudspeaker Part No. 582407, 582407.SAFE
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6 W 5" ceiling loudspeaker EN 54, metal

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

With its flat form, the type DL-E 06-130/T-EN 54-24 recessed ceiling loudspeaker is optically a good fit for the ceilings for which they were designed. The 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 adjustment is done to the loudspeaker.

The spring latch (2 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 54-24 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 include the optional thermal fuse and a ceramic connecting terminal with the order, and to mount them.

TECHNICAL DATA

RATED POWER	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	96.4 dB
TRANSMISSION RANGE	104 ... 17200 Hz (-10 dB)
DISPERSION ANGLE	180° @ 1kHz
AMBIENT TEMPERATURE	-10 °C ... 55 °C
COLOR	white, similar to RAL 9010
WEIGHT	approx. 0.75 kg
CUT-OUT SIZE	(Ø min.) 150 mm
DIMENSIONS	Ø: 181.5 mm D: 59 mm
DECLARATION OF PERFORMANCE	012-13

582407.FD



The fire dome is EN 54-24 certified, compliant with Part No. 582407, 582407.SAFE.

Fire dome for ceiling loudspeaker Part No. 582407

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

Fire dome (FE 130.1) for the 5" ceiling loudspeaker (Part No. 582407) 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

AMBIENT TEMPERATURE	-20 °C ... 80 °C
COLOR	black
WEIGHT	approx. 0.29 kg
DIMENSIONS	Ø: 138.5 mm D: 70 mm
DECLARATION OF PERFORMANCE	012-13

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582407.SAFE



ACCESSORIES

Optional

582407.FD	Fire dome (FE 130.1)
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6 W 5" ceiling loudspeaker EN 54.SAFE, metal

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

With its flat form, the type DL-E 06-130/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 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 (2 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.

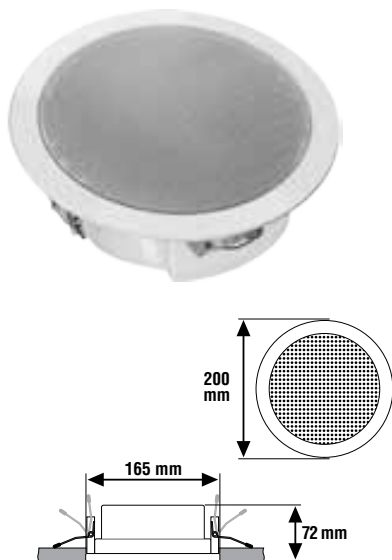
TECHNICAL DATA

RATED POWER	6 W
TRANSFORMER POWER TAPS	6/3/1.5 W
SENSITIVITY EN 54-24, 1 W / 1 M	88.9 dB
SENSITIVITY EN 54-24, MAX 1 M	96.4 dB
TRANSMISSION RANGE	104 ... 17200 Hz (-10 dB)
DISPERSION ANGLE	180° @ 1kHz
AMBIENT TEMPERATURE	-10 °C ... 55 °C
COLOR	white, similar to RAL 9010
WEIGHT	approx. 0.75 kg
CUT-OUT SIZE	(Ø min.) 150 mm
DIMENSIONS	Ø: 181.5 mm D: 59 mm
DECLARATION OF PERFORMANCE	012-13

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582408



ACCESSORIES

Optional

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

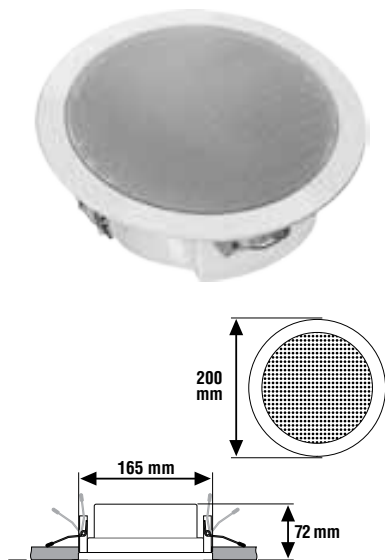
TECHNICAL DATA

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° @ 1 kHz
AMBIENT TEMPERATURE	-10 °C ... 55 °C
COLOR	white, similar to RAL 9010
WEIGHT	approx. 0.76 kg
CUT-OUT SIZE	(Ø min.) 165 mm
DIMENSIONS	Ø: 200 mm D: 72 mm
DECLARATION OF PERFORMANCE	012-13

EN 54-24 LOUDSPEAKER

Ceiling Loudspeaker

582408.SAFE



ACCESSORIES

Optional

582408.FD	Fire dome (FE 165.1)
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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 9010
WEIGHT	approx. 0.76 kg
CUT-OUT SIZE	(Ø min.) 165 mm
DIMENSIONS	Ø: 200 mm D: 72 mm
DECLARATION OF PERFORMANCE	012-13

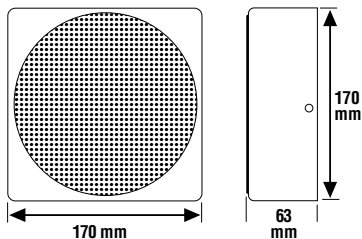
EN 54-24 LOUDSPEAKER

Cabinet Loudspeaker

The cabinet loudspeakers are equipped with a broad number of features to match the different applications. Please select your matching loudspeakers from the table.

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

582470



Delivery time on request.

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.

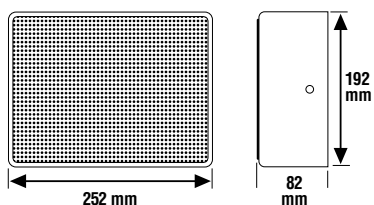
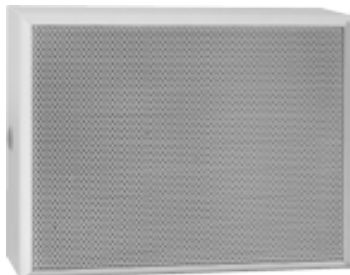
This cabinet loudspeaker complies with the BS 5859-8 standards, and is certified according to the EN 54-24 standard.

TECHNICAL DATA	
RATED POWER	6 W
TRANSFORMER POWER TAPS	6 / 3 / 1,5 / 0,75 W
RATED IMPEDANCE	1,7 / 3,3 / 6,7 k Ω
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 % (non condensing)
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

EN 54-24 LOUDSPEAKER

Cabinet Loudspeaker

582422



Delivery time on request.

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

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

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.

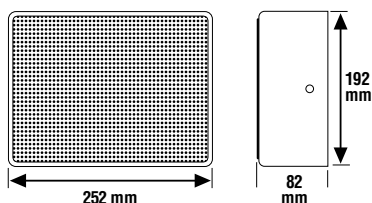
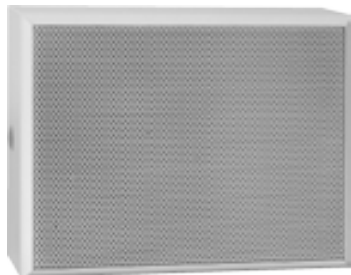
TECHNICAL DATA

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	80° (H), 77° (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: 252 mm H: 192 mm D: 82 mm
DECLARATION OF PERFORMANCE	008-13

EN 54-24 LOUDSPEAKER

Cabinet Loudspeaker

582422.10



Delivery time on request.

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..

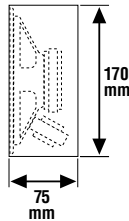
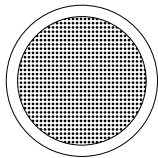
TECHNICAL DATA

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	80° (H), 77° (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: 252 mm H: 192 mm D: 82 mm
DECLARATION OF PERFORMANCE	008-13

EN 54-24 LOUDSPEAKER

Cabinet Loudspeaker

582423



Delivery time on request.

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

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

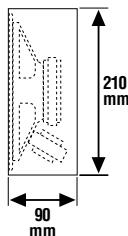
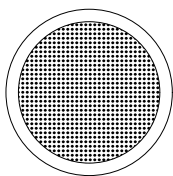
The loudspeaker DL-A 10-200/T-EN 54 for voice alarm made of powder-coated metal in white with high degree of efficiency and a high-quality 200 mm broadband loudspeaker chassis.

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	80° @ 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

582424



Delivery time on request.

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.

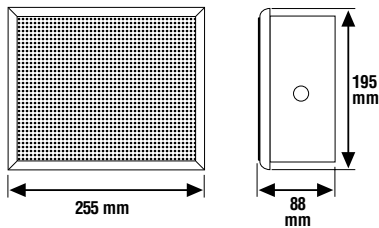
TECHNICAL DATA

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	80° @ 1 kHz
AMBIENT TEMPERATURE	-20 °C ... 80 °C
COLOR	white, similar to RAL 9010
WEIGHT	approx. 2.1 kg
DIMENSIONS	Ø: 210 mm D: 90 mm
DECLARATION OF PERFORMANCE	004-13

EN 54-24 LOUDSPEAKER

Cabinet Loudspeaker

582425



Delivery time on request.

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.

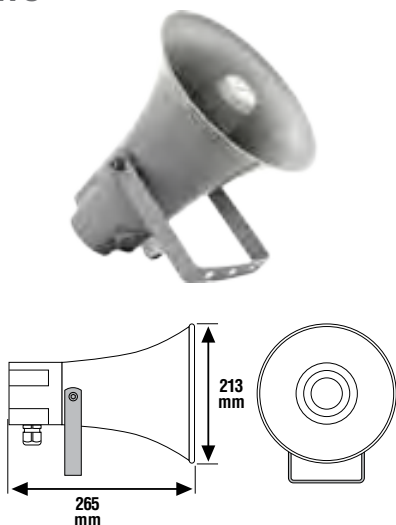
Balanced sound dynamics are provided by a high-grade 165 mm broadband loudspeaker chassis. The loudspeaker is protected against dust and other forms of environmental impact by way of a synthetic shock-resistant ABS-flush mount enclosure in black. The loudspeaker features an integrated ceramic terminal 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), 180° (V) @ 1 kHz
AMBIENT TEMPERATURE	-20 °C ... 80 °C
COLOR	white, similar to RAL 9010
WEIGHT	approx. 1.3 kg
DIMENSIONS	W: 255 mm H: 195 mm D: 88 mm
DECLARATION OF PERFORMANCE	009-13

EN 54-24 LOUDSPEAKER

Horn Loudspeaker

582479



Available Q3/2015

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.

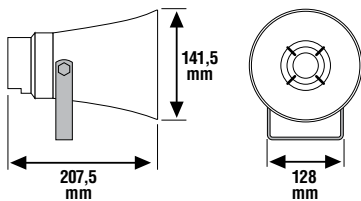
TECHNICAL DATA

RATED POWER	15 W
TRANSFORMER POWER TAPS	15 / 10 / 5 W
RATED IMPEDANCE	0.667 / 1 / 2 k Ω
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

EN 54-24 LOUDSPEAKER

Horn Loudspeaker

582430



Delivery time on request.

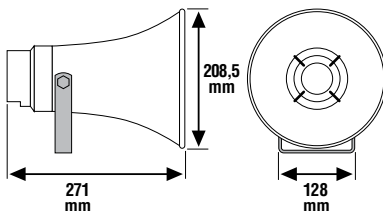
Horn loudspeaker DK 10/T EN54

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 W/5 W/2.5 W/1.25 W (20)
SPL P _{MAX} / 1 M	108 dB
SPL 1 W / 1 M	98 dB
TRANSMISSION RANGE	418 ... 12400 Hz
DISPERSION ANGLE	140° (H), 140° (V)
AMBIENT TEMPERATURE	-40 °C ... 85 °C
TYPE OF PROTECTION	IP66
COLOR	gray, similar to RAL 7035
WEIGHT	approx. 1.4 kg
DIMENSIONS	Ø: 142 mm D: 210 mm
CE CERTIFICATE	1438-CPD-0242

582431



Delivery time on request.

Horn loudspeaker DK 15/T EN54

Approval: EN 54-24

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.

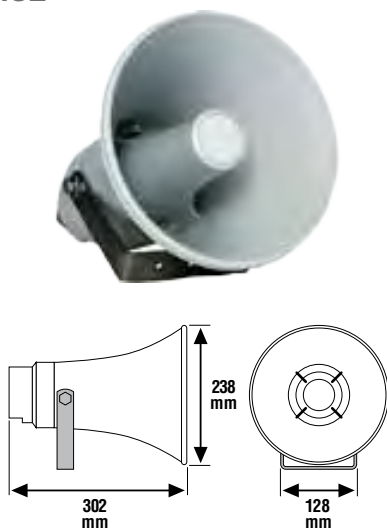
The impact-resistant ABS body as per UL94V0 ensures durable stability. Delivered along with a U-shaped, universal rust-free bracket for flexible assembly. The flexible power modification can easily be done on the back of the loudspeaker, 15 W, 7.5 W, 3.75 W, 1.87 W. The DK 15/T-EN54 is also suitable for use in outdoor areas.

TECHNICAL DATA	
LOADING CAPACITY	15 W
TRANSFORMER POWER TAPS	10 W/7.5 W/3.75 W/1.87 W (20)
SPL P _{MAX} / 1 M	112.3 dB
SPL 1 W / 1 M	100.5 dB
TRANSMISSION RANGE	454 ... 10400 Hz
DISPERSION ANGLE	140° (H), 140° (V)
AMBIENT TEMPERATURE	-40 °C ... 85 °C
TYPE OF PROTECTION	IP66
COLOR	gray, similar to RAL 7035
WEIGHT	approx. 1.9 kg
DIMENSIONS	Ø: 208.5 mm D: 271.5 mm
CE CERTIFICATE	1438-CPD-0242

EN 54-24 LOUDSPEAKER

Horn Loudspeaker

582432



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



Delivery time on request.

30 W horn loudspeaker EN 54, ABS

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

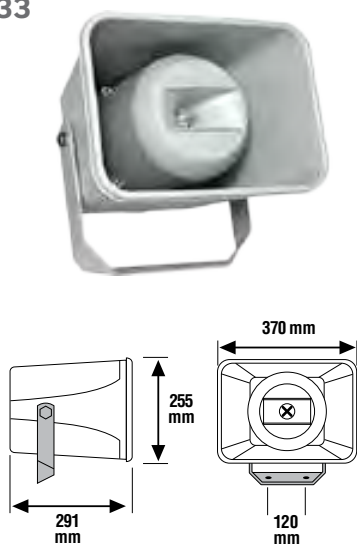
The horn loudspeaker DK 30/T-EN 54 certified in accordance to EN 54-24 offers a high sound pressure and weather resistance, ideal for industrial use.

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	106 dB
TRANSMISSION RANGE	592 ... 6900 Hz (-10 dB)
DISPERSION ANGLE	103° @ 1 kHz
AMBIENT TEMPERATURE	-20 °C ... 90 °C
TYPE OF PROTECTION	IP 66 (zertifiziert)
COLOR	gray, similar to RAL 7035
WEIGHT	approx. 2.6 kg
DIMENSIONS	Ø: 238 mm D: 302 mm
DECLARATION OF PERFORMANCE	003-13

582433



Delivery time on request.

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.

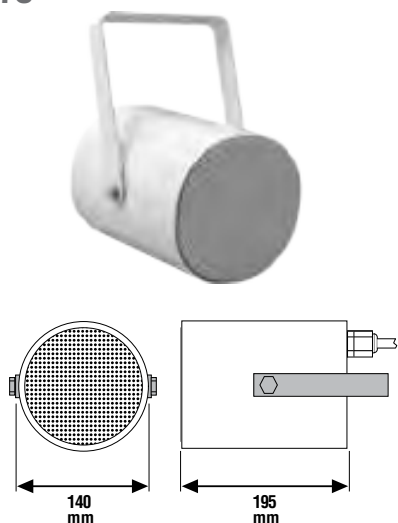
For more safety, it is also equipped with ceramic terminal and thermal fuse. An enormous sound pressure and a convincing music quality, likewise as simple and flexible installation with stainless aluminum universal mount. The flexible power adjustment can be easily done on the back side of the loudspeaker, 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

EN 54-24 LOUDSPEAKER

Sound Projector

582473



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



Delivery time on request.

10 W unidirectional sound projector EN 54, metal

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

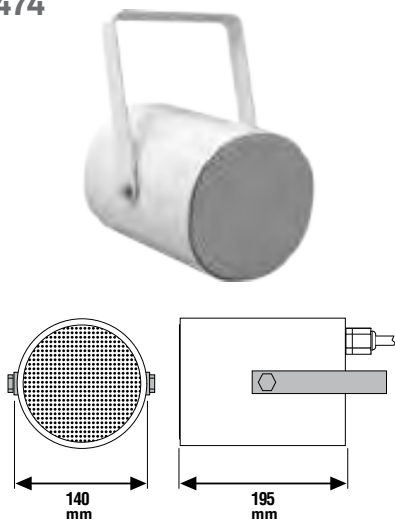
This unidirectional 10 W sound projector features a broad frequency response and a high degree of efficiency. Its IP 65 protection class guarantees universal applicability indoors as well as outdoors.

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

582474



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.

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.

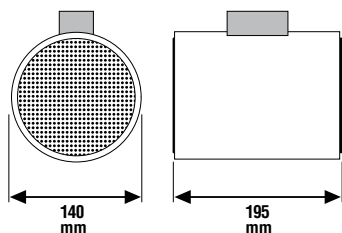
The mounted thermal fuse as well as the ceramic terminal enable application in compliance with BS5839 Part 8.

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

EN 54-24 LOUDSPEAKER

Sound Projector

582475



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.

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

EN 54-24 LOUDSPEAKER

Spherical Loudspeaker

582460



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

Including canopy



Delivery time on request.

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° @ 1 kHz
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

582461



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

Including canopy



Delivery time on request.

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.

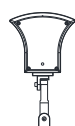
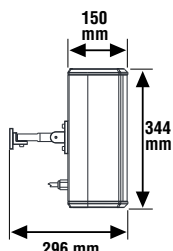
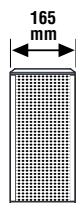
TECHNICAL DATA

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

EN 54-24 LOUDSPEAKER

Column Loudspeaker

582476



Wall mount included



Delivery time on request.

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.

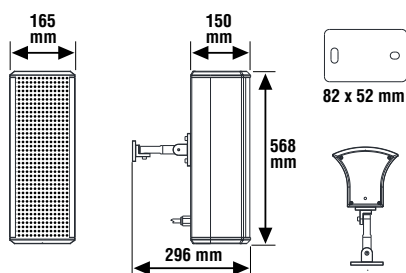
TECHNICAL DATA

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 % (non condensing)
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

EN 54-24 LOUDSPEAKER

Column Loudspeaker

582477



Wall mount included



Delivery time on request.

40 W column loudspeaker EN 54, metal

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

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 % (non condensing)
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

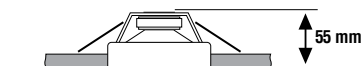
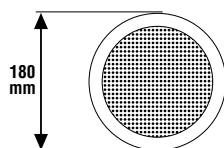
Ceiling Loudspeaker	110
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Horn Loudspeaker	114
Spherical loudspeaker	115



STANDARD LOUDSPEAKER

Ceiling Loudspeaker

581263



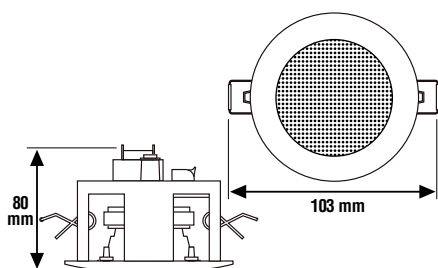
Delivery time on request.

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 k Ω
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 % (non condensing)
MATERIAL	Metal
COLOR	white, similar to RAL 9003
WEIGHT	approx. 0.71 kg
CUT-OUT SIZE	(\emptyset min.) 150 mm
DIMENSIONS	\emptyset : 180 mm D: 55 mm

581274



Delivery time on request.

6 W 3" ceiling loudspeaker, ABS

This versatile loudspeaker is the ideal choice for excellent voice and music reproduction in shopping centers, supermarkets, schools, office buildings, athletic fields, hotels, and restaurants. The loudspeaker features an integrated dual cone and a back-mounted 100 V transformer.

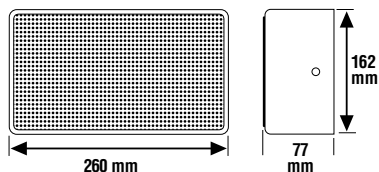
It can be mounted to the ceiling with the enclosed bracket. The loudspeaker is CE and RoHS compliant.

TECHNICAL DATA	
RATED POWER	6 W
TRANSFORMER POWER TAPS	6 / 3 W
RATED IMPEDANCE	1,7 / 3,3 k Ω
SPL 1 W / 1 M	84 dB
TRANSMISSION RANGE	110 ... 20000 Hz (-10 dB)
DISPERSION ANGLE	150°
AMBIENT TEMPERATURE	-25 °C ... 55 °C
STORAGE TEMPERATURE	-40 °C ... 70 °C
AIR HUMIDITY	< 95 % (non condensing)
COLOR	white, similar to RAL 9003
WEIGHT	approx. 0.42 kg
CUT-OUT SIZE	(\emptyset min.) 95 mm
DIMENSIONS	\emptyset : 103 mm D: 80 mm

STANDARD LOUDSPEAKER

Cabinet Loudspeaker

581270



Delivery time on request.

6 W cabinet loudspeaker, ABS

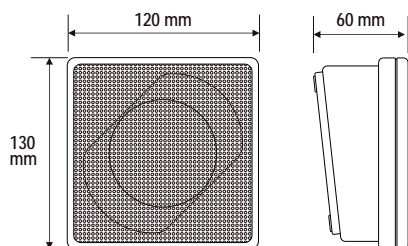
The loudspeaker has a shallow installation height. Its elegant design makes it suited for applications in various environments, such as shopping centers, education institutions, office buildings, hotels, and restaurants.

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 k Ω
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 % (non condensing)
MATERIAL	ABS
COLOR	white, similar to RAL 9003
WEIGHT	approx. 1 kg
DIMENSIONS	W: 260 mm H: 162 mm D: 77 mm

581275



Delivery time on request.

3 W cabinet loudspeaker, ABS

The cost-effective loudspeaker is ideal for smooth sound reproduction. The included mounting enclosure features built-in protection in order to guarantee a longer service life. The moisture-resistant speaker cone offers clear sound. With its compact and discrete design, the loudspeaker can be used in a variety of applications, including shopping centers, educational institutions, public office buildings, hotels, restaurants, etc.

The loudspeaker is CE and RoHS compliant.

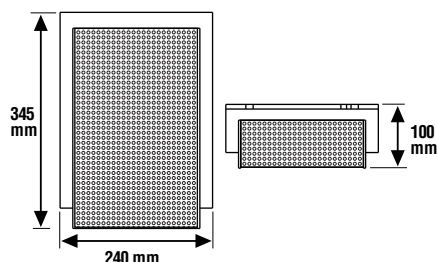
TECHNICAL DATA

RATED POWER	3 W
TRANSFORMER POWER TAPS	3 / 1,5 W
RATED IMPEDANCE	3,3 / 6,7 k Ω
SPL 1 W / 1 M	88 dB
TRANSMISSION RANGE	300 ... 6000 Hz (-10 dB)
DISPERSION ANGLE	180°
AMBIENT TEMPERATURE	-25 °C ... 55 °C
STORAGE TEMPERATURE	-40 °C ... 70 °C
AIR HUMIDITY	< 95 % (non condensing)
MATERIAL	ABS
COLOR	white, similar to RAL 9010
WEIGHT	approx. 0.4 kg
DIMENSIONS	W: 120 mm H: 60 mm D: 30 mm

STANDARD LOUDSPEAKER

Cabinet Loudspeaker

581276



Delivery time on request.

10 W cabinet loudspeaker, ABS

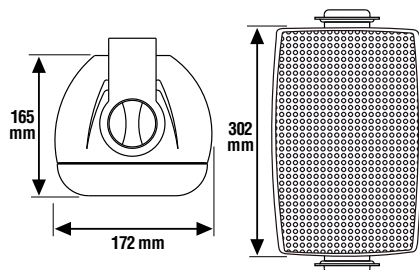
The Cabinet loudspeaker is suitable for various applications, such as shopping centers, supermarkets, educational institutions, office buildings, hotels, and restaurants. It stands out due to its high sound pressure and its wide frequency range, and offers excellent voice and music reproduction. Available 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 % (non condensing)
MATERIAL	ABS
COLOR	white, similar to RAL 9003
WEIGHT	approx. 1.6 kg
DIMENSIONS	W: 345 mm H: 240 mm D: 100 mm

581277



Delivery time on request.

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.

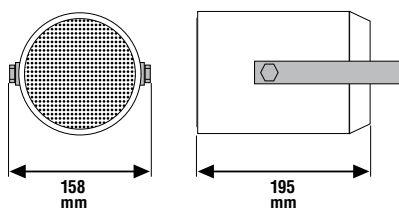
TECHNICAL DATA

RATED POWER	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 % (non condensing)
MATERIAL	ABS
COLOR	white, similar to RAL 9003
WEIGHT	approx. 1.6 kg
DIMENSIONS	W: 345 mm H: 240 mm D: 100 mm

STANDARD LOUDSPEAKER

Sound Projector

581258



Delivery time on request.

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.

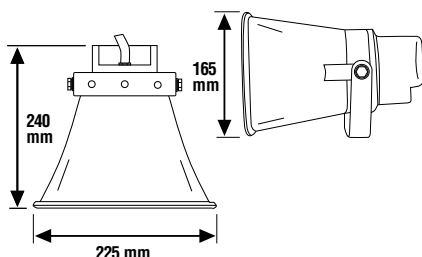
TECHNICAL DATA

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

STANDARD LOUDSPEAKER

Horn Loudspeaker

581271



Delivery time on request.

15 W horn loudspeaker, ABS

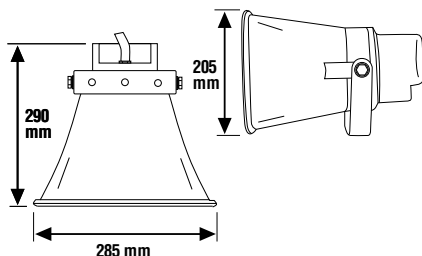
The horn loudspeaker distinguishes itself by its high IP rating and reliability. The enclosure consists of robust and fire-resistant ABS with very low weight. With its esthetic and elegant design, the loudspeaker is suitable for application in a variety of locations, such as in train stations, ports, 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 k Ω
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 % (non condensing)
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

581272



Delivery time on request.

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.

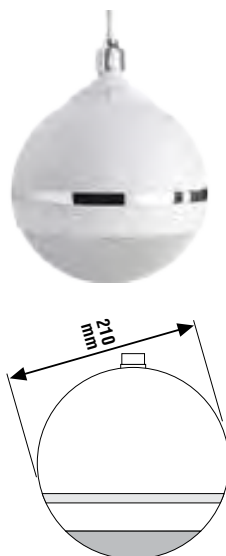
TECHNICAL DATA

RATED POWER	30 W
TRANSFORMER POWER TAPS	30 / 15 W
RATED IMPEDANCE	0,33 / 0,67 k Ω
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 % (non condensing)
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

STANDARD LOUDSPEAKER

Spherical Loudspeaker

581215



Delivery time on request.

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 P _{MAX} / 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

NOTES



VOLUME REGULATORS & ACCESSORIES

581238



Flush mounted volume controller, 5 W

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

581239



Flush mounted volume controller, 30 W

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

581240



Flush mounted volume controller, 60 W

Flushm-ounted Volume Controller 60 watts, with compulsory relay (24 V DC).

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.

581286



Delivery time on request.

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.

LFI-120	123
LFI-220	124
LFI-350	125
LFI-450	126
Accessories	127



ACTIVE BEAM STEERING SYSTEMS

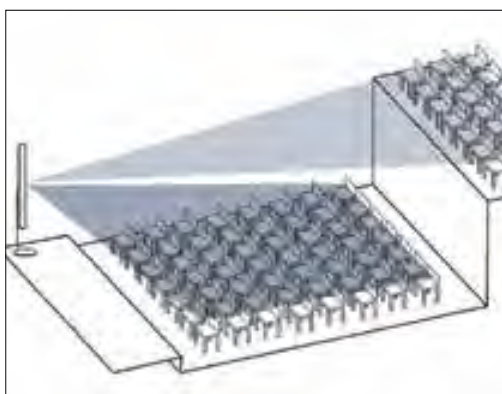
General

Voice Alarms and Announcements – Special Environmental Conditions Require Special Solutions

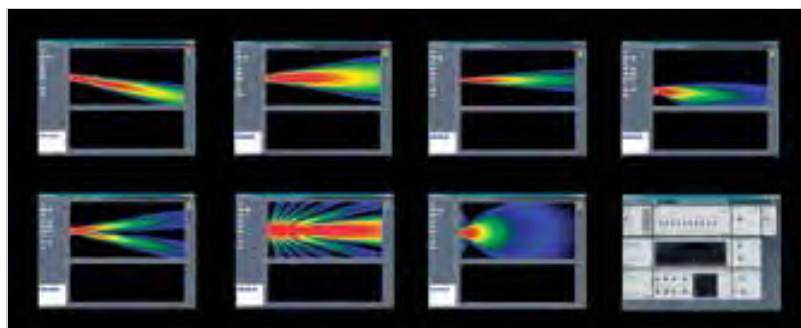
In the field of sophisticated architecture, certain background conditions must be met when implementing a successful safety concept. In relation to the support for possible evacuation measures, modern loudspeaker technology now makes it possible to obtain outstanding results even under difficult conditions in the area of spatial acoustics. This has been demonstrated by numerous corresponding implementations in a variety of projects.

Architecture and Alarms

Imposing spatial structures in functional buildings and extravagant room planning are ever more frequent in refining the visual appearance of buildings. The type and design of construction of these facilities makes it increasingly difficult to ensure the good acoustics needed both for good speech comprehensibility and for pleasant announcements, technology and suitable loudspeakers to achieve very good speech comprehensibility and acoustically clean announcements. Loudspeakers can now be installed so discreetly that sophisticated architecture and effective alarm systems are no longer mutually incompatible.



Our VAPA specialists will be happy to support you in the preparation of a concept and during the planning phase with respect to the implementation of appropriate measures for optimum technical fire protection and a voice alarm system for evacuations. This also includes simulations in the specific structures, taking account of the models of our loudspeaker systems that are being evaluated. Upon request, we can also support you during installation and commissioning, including the successful building approval of your VAPA system.



The functioning of active line arrays:

An active line array is mounted flat on the wall. Using software, the DSP optimally directs the orientations of the beam.

This adjustment takes place in real time.

Any questions?

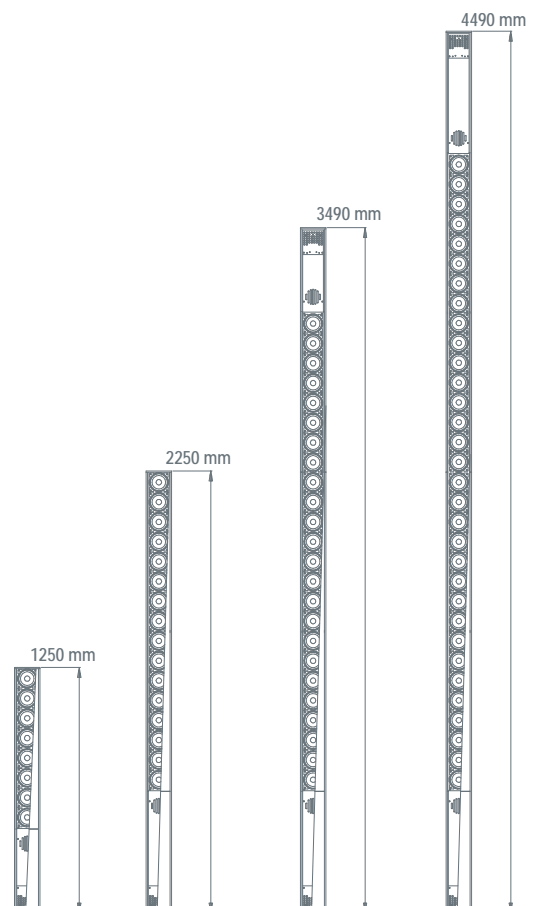
If you have any questions or need support in advance, you can contact our specialists at any time for standards-compliant announcements in your applicable regions. A list of contacts appears on the introductory pages of this catalog.

ACTIVE BEAM STEERING SYSTEMS

General

General Features

- 8, 16, 24 bzw. 32 integral digital amplifiers and digital signal processors (depends on the speakers' length)
- Beam control in realtime
- Side Lobe Free Technology
- Vertical dispersion control function
- Movable acoustic centre
- Two beam technology
- Integral protective circuits for maximum operating safety
- High degree of speech intelligibility in rooms with difficult acoustics
- Suitable for reproduction of music using Fohhn subwoofers in a system
- Aluminium housing with slim, discreet design
- Low weight
- No mechanical steering of speaker necessary
- Discreet integration in the room architecture
- Integral DSP control for:
 - Vertical dispersion monitoring
 - Beam angle
 - Inclination angle
 - Acoustic focus
 - 10-band fully parametric equaliser
 - Volume control
 - Internal Delay up to 350 ms / 120 m
 - Customised preset selection
 - Compressor / limiter
 - Extensive group functions
- Fohhn-Net Remote connection
- Intuitive operating software for configuring all parameters and focus simulation using version 3 of Fohhn Audio Soft or later
- Option of integration in media controls
- Complex remote control and monitoring via Fohhn Net
- Comprehensive range of mounting accessories for fixed installation
- Easy servicing due to superior design
- Green Power Standby Mode
- German Quality - Engineered and made by Fohhn®
- System integration in accordance with EN 60849 and EN 50849 (emergency and fire evacuation)



ACTIVE BEAM STEERING SYSTEMS

General

Integration in Evacuation Systems

Monitoring / Fault Message

- Pilot signal monitoring
- Relay with two changeover switch
- Link jack
- Monitoring of all important device parameters
- Intelligent evaluation

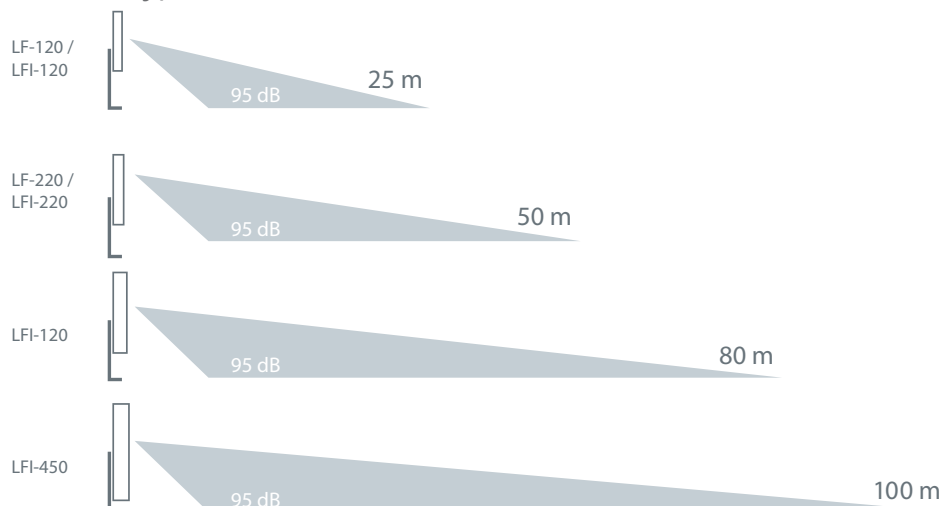
The following faults can be monitored and displayed

- Faults relating to the internal voltage supply
- Overheating
- Short-circuit of the amplifier outputs
- Shutdown of the amplifier outputs due to earth or voltage problems
- Short-circuit of the speaker chassis
- Chassis overload (after measuring the impedance, in preparation)
- Pilot signal monitoring signal missing from Input 2 (configurable)
- Network errors (each message is confirmed)

Fault messages are displayed and transmitted

- Fault contact (relay 2x alternate)
- Red flashing LEDs (built into input circuit board)
- Status messages in Fohhn Audio Soft
- Error messages via RS-485 and Ethernet (accessibility to other systems available)

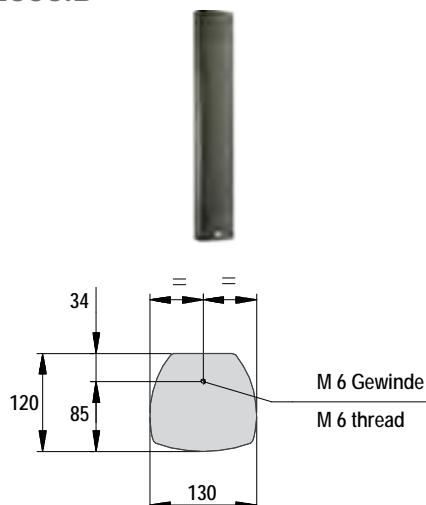
Different types versus different distances



ACTIVE BEAM STEERING SYSTEMS

LFI-120

582600.B



*Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.*



Delivery time on request.

Electronically steerable line array LFI-120HB Applicable in EN 60849 projects

The LFI-HB120 is an active, electronically steerable line array in black.

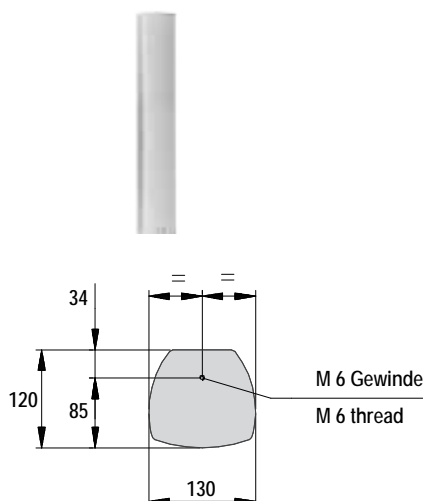
Its integrated digital 8-channel DSP amplifier is perfectly tuned to the system. It is equipped with 8x 4 "neodymium speakers, which are distinguished by their very long stroke.

The LFI series generally are installed there, where conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.

582600.W



*Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.*



Delivery time on request.

Electronically steerable line array LFI-120HW Applicable in EN 60849 projects

The LFI-120HB is an active, electronically steerable line array in white.

Its integrated digital 8-channel DSP amplifier is perfectly tuned to the system. It is equipped with 8x 4 "neodymium speakers, which are distinguished by their very long stroke.

The LFI series generally are installed there, conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

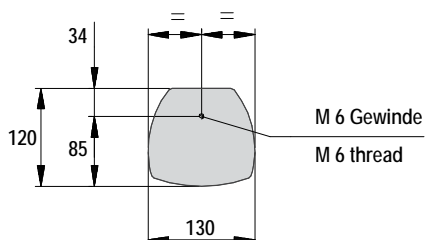
Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.

ACTIVE BEAM STEERING SYSTEMS

LFI-220

582601.B



Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.



Delivery time on request.

Electronically steerable line array LFI-220HB Applicable in EN 60849 projects

The LFI-220HB is an active, electronically steerable line array in black.

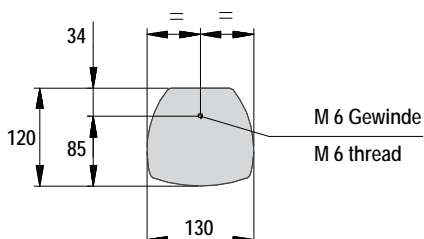
Its integrated digital 16-channel DSP amplifier is perfectly tuned to the system. It is equipped with 16 x 4 "neodymium speakers, which are characterized by their particularly long stroke.

The LFI series generally are installed there, where conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.

582601.W



Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.



Delivery time on request.

Electronically steerable line array LFI-220HW Applicable in EN 60849 projects

The LFI-220HW is an active, electronically steerable line array in white.

Its integrated digital 16-channel DSP amplifier is perfectly tuned to the system. It is equipped with 16x 4 "neodymium speakers, which are distinguished by their very long stroke.

The LFI series generally are installed there, where conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

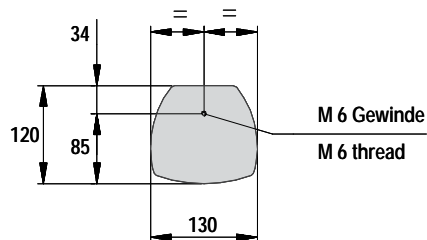
Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.

ACTIVE BEAM STEERING SYSTEMS

LFI-350

582602.B



*Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.*



Delivery time on request.

Electronically steerable line array LFI-350HB Applicable in EN 60849 projects

The LFI-350HB is an active, electronically steerable line array in black.

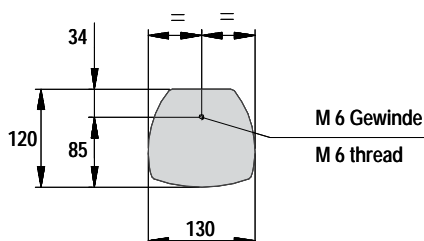
Its integrated digital 24-channel DSP amplifier is perfectly tuned to the system. It is equipped with 24 x 4 "neodymium speakers, which are characterized by their particularly long stroke.

The LFI series generally are installed there, where conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.

582602.W



*Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.*



Delivery time on request.

Electronically steerable line array LFI-350HW Applicable in EN 60849 projects

The LFI-350HW is an active, electronically steerable line array in white.

Its integrated digital 24-channel DSP amplifier is perfectly tuned to the system. It is equipped with 24 x 4 "neodymium speakers, which are characterized by their particularly long stroke.

The LFI series generally are installed there, where conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

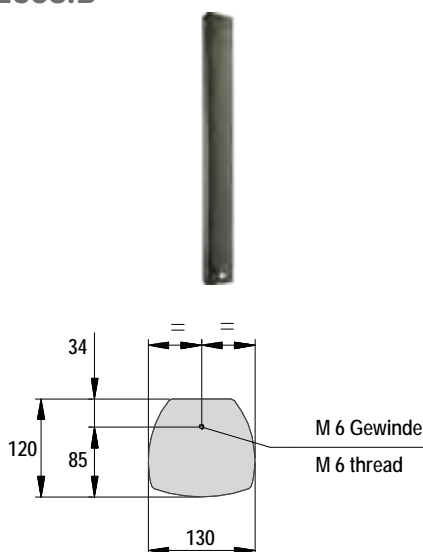
Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.

ACTIVE BEAM STEERING SYSTEMS

LFI-450

582603.B



Electrically steerable line array LFI-450HB

Applicable in EN 60849 projects

The LFI-450HB is an active, electronically steerable line array in black.

Its integrated digital 32-channel DSP amplifier is perfectly tuned to the system. It is equipped with 32 x 4 "neodymium speakers, which are characterized by their particularly long stroke.

The LFI series generally are installed there, where conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.

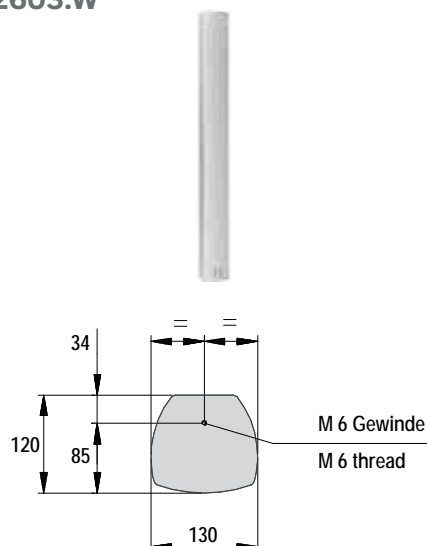


*Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.*



Delivery time on request.

582603.W



Electronically steerable line array LFI-450HW

The LFI-450HW is an active, electronically steerable line array in white.

Its integrated digital 32-channel DSP amplifier is perfectly tuned to the system. It is equipped with 32 x 4 "neodymium speakers, which are characterized by their particularly long stroke.

The LFI series generally are installed there, where conventional methods cannot get anywhere, because of difficult acoustic conditions, and where it is important in these projects on an excellent speech intelligibility, in conjunction with a high sound pressure. The system transmits programming in real time, so it will save a lot of time when setting up.

Two separate dispersion beams are possible and they can be operated with variable acoustic beam center. Furthermore, the important features should be emphasized for system integration as per EN 60849 / DIN VDE 0828. The Linea Focus can only be configured with the Fohhn Audio Soft V3.

Optionally, depending on the application, various mounting brackets are available.



*Fohhn-Net adapter is required to connect to a PC.
Optionally, depending on the application, various mounting brackets.
Optionally, other colors following choice (powder coating).
Optionally, other colors following choice for wall mounts.*

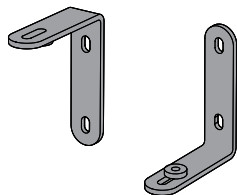


Delivery time on request.

ACTIVE BEAM STEERING SYSTEMS

Accessories

582610.B



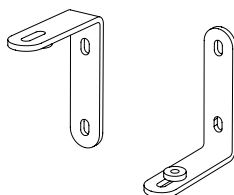
WAL-1B, wall brackets for LFI-120/220HB

The WAL-1B is a black coated specifically for the series LFI 120-220HB. These mounting brackets are suitable for installations in which the above Speakers must be mounted flat and straight to the attachment site.



Delivery time on request.

582610.W



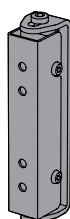
WAL-1W, wall brackets for LFI-120/220HW

The WAL-1W is a white coated (RAL 9016) wall bracket specifically for the series LFI 120-220HW. These mounting brackets are suitable for installations in which the above Speakers must be mounted flat and straight to the attachment site.



Delivery time on request.

582611.B



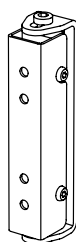
WLF-1B, wall bracket for LFI-120/220/350/450HB

The WLF-1B is a wall bracket painted in black specifically for the series LFI-120/220/350/450HB. This wall mount is suitable for installations in which the above-mentioned Speaker can be mounted flexibly to its orientation at the attachment point. When mounting the LFI-350HB and LFI-450HB, minimum 2 of these mounts are necessary.



Delivery time on request.

582611.W



WLF-1W, wall bracket for LFI-120/220/350/450HW

The WLF-1W is in white (RAL 9016) painted wall bracket specifically for the series LFI-120/220/350/450HW. This wall mount is suitable for installations in which the above-mentioned Speaker can be mounted flexibly to its orientation at the attachment point. When mounting the LFI-350HW LFI-450HW, min. 2 of these brackets are installed.

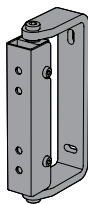


Delivery time on request.

ACTIVE BEAM STEERING SYSTEMS

Accessories

582612.B

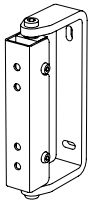


Delivery time on request.

WLF-2B, wall bracket for LFI-120/220/350/450HB

The WLF-2B is a wall bracket painted in black specifically for the series LFI-120HB, LFI-220HB, LFI-350HB and LFI-450HB. This wall mount is suitable for installations in which the above-mentioned Speaker can be mounted flexibly to its orientation at the attachment point. When mounting the LFI-350HB and LFI-450HB, minimum 2 of these mounts are necessary.

582612.W



Delivery time on request.

WLF-2W, wall bracket for LFI-120/220/350/450HW

The WLF-2W is in white (RAL 9016) painted wall bracket specifically for the series LFI-120HW, LFI-220HW, LFI-350HW and LFI-450HW. This wall mount is suitable for installations in which the above Speakers may be mounted at right angles to its fastening point. When mounting the and LFI-350HW and LFI-450HW, min. 2 of these brackets are installed.

LOUDSPEAKER TYPE						ACCESSORIES
LFI-450	LFI-350	LFI-220	LFI-120	LF-220	LF-120	
		X	X			WAL-1
X*	X*	X	X	X	X	WLF-1
X*	X*	X	X	X	X	WLF-2

* Reliable mounting of LFI-350 / 450 requires 2x WLF-1 / 2!

582604.B



Features

- Integrated inconspicuous design
- Simple / quick mounting
- Simple monitored signal transmission
- Integrated VARIODYN D1 loop isolator module
- CE- and RoHS-compliant

Interface module, black

The Interface module is equipped with a 100 V transformer.



ACTIVE BEAM STEERING SYSTEMS

Accessories

582604.W



Interface module, white

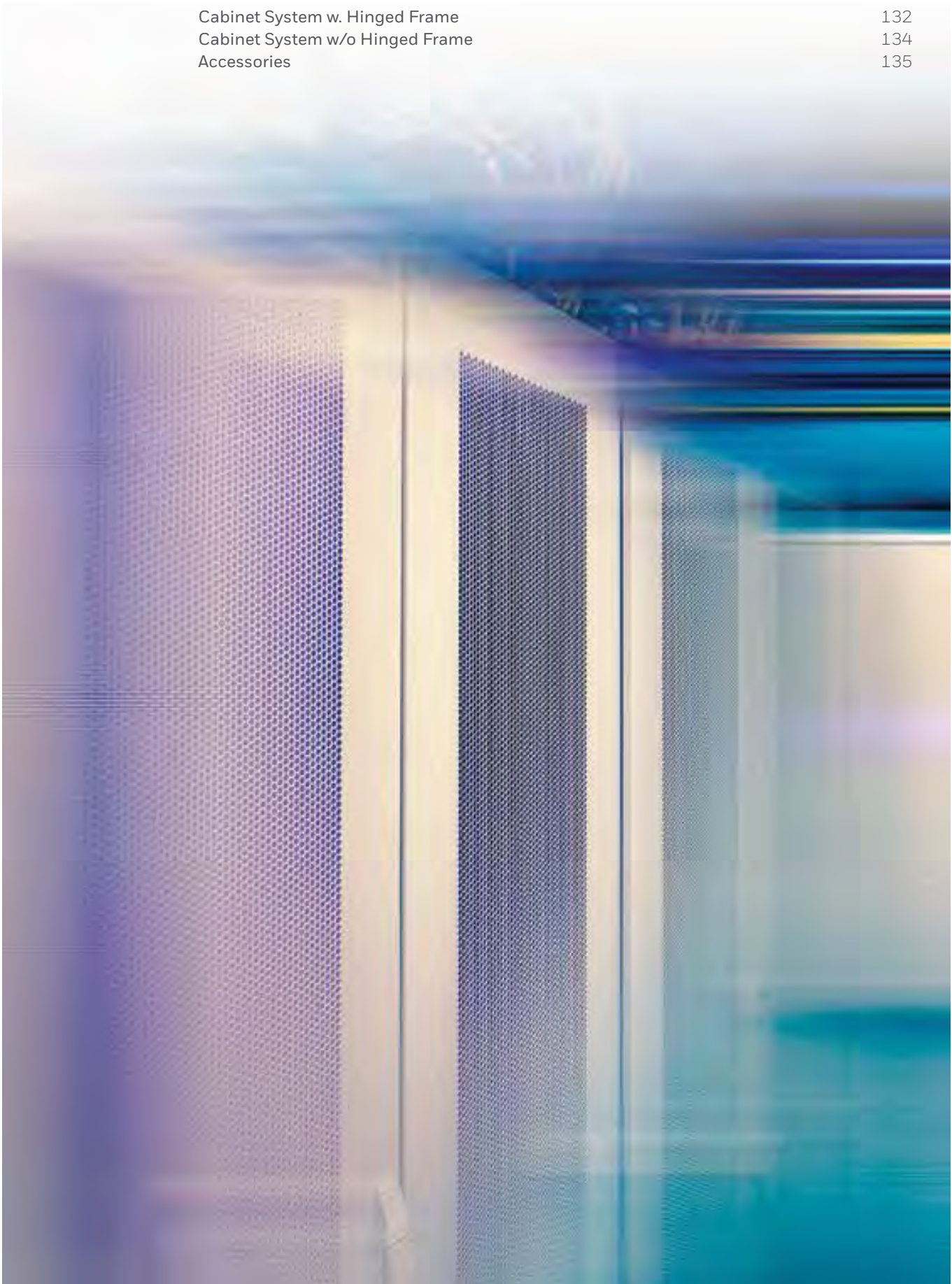
The Interface module is equipped with a 100 V transformer, adapted for 2.5 W. used with the Steerable Line Array speakers it forms the first Steerable Line Array in the world with Loop Technology. The solution is 100 % compliant to EN 60849 and EN50849 and (the module itself) EN 54-17 certified.

Features

- Integrated inconspicuous design
- Simple / quick mounting
- Simple monitored signal transmission
- Integrated VARIODYN D1 loop isolator module
- CE- and RoHS-compliant

NOTES

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19" RACK

Cabinet System with Hinged Frame



VdS approval: G 210122

Stable and practical 19" swivel frame cabinet for easy installation and easy access during servicing. In rooms where the air is dusty it is mandatory to use cabinet air filters such like Part No. 584948 or 584949.

TECHNICAL DATA

MAXIMUM WEIGHT LOAD	250 kg
TYPE OF PROTECTION	IP 40
COLOR	gray, similar to RAL 7035

Features

- Completely detachable
- Pivoting frame and door with little effort in hinge is changeable

ACCESSORIES

584921	Angled Sliding Rail (set) 250 mm deep, for hinged frames
584922	Cable Clamping Rail Set, 2 HU



*Pivot frame
Welded 100 mm plinth, with holes for floor mounting and cable entry
Rear and side walls detachable, on request, and ventilated
Three-part base plate
Roof with a brush strip and cover plate
Front door with a 4 mm ESG pane
Door lock with a swivel lever for 40 mm PHZ and multi point locking
Cabinet completely grounded
Screws set M6 (VE 50 set)*

584900

Upright cabinet with hinged frame 24 HU

TECHNICAL DATA

WEIGHT	approx. 140 kg
INSTALLATION DEPTH	450 mm
DIMENSIONS	W: 800 mm H: 1400 mm D: 800 mm (H: incl. 100 mm base)

584900.R



Cables not included in prices!

Upright cabinet with hinged frame 24 HU (incl. assembly)

Upright cabinet with hinged frame 24 HU, but including assembly of voice alarm components and smaller accessories.

19" RACK

Cabinet System with Hinged Frame

584901

Upright cabinet with hinged frame 40 HU

TECHNICAL DATA	
WEIGHT	approx. 170 kg
INSTALLATION DEPTH	450 mm
DIMENSIONS	W: 800 mm H: 2100 mm D: 800 mm (H: incl. 100 mm base)

584902

Upright cabinet with hinged frame 24 HU - 600 mm deep

TECHNICAL DATA	
WEIGHT	approx. 130 kg
INSTALLATION DEPTH	450 mm
DIMENSIONS	W: 800 mm H: 1400 mm D: 600 mm (H: incl. 100 mm base)

584903

Upright cabinet with hinged frame 40 HU - 600 mm deep

TECHNICAL DATA	
WEIGHT	approx. 160 kg
INSTALLATION DEPTH	450 mm
DIMENSIONS	W: 800 mm H: 2100 mm D: 600 mm (H: incl. 100 mm base)

19" RACK

Cabinet System without Hinged Frame



VdS approval: G 210122

Due to customized preparation and quick installation this cabinet solution meets the demand for fast implementation of a network structure.

TECHNICAL DATA

MAXIMUM WEIGHT LOAD	400 kg
TYPE OF PROTECTION	IP 40
COLOR	gray, similar to RAL 7035

Features

- Reversible door hinge
- Completely detachable

ACCESSORIES

584923	Sliding rail, 800 mm
--------	----------------------



Base frame with depth-adjustable 19" level on the front and rear side, prefabricated with a 105 mm clearance to the doors
Front door with a 4 mm ESG pane (parsol gray)
Rear door steel plate
Door lock with a swivel lever for 40 mm PHZ and multi point locking
Removable side walls, lockable
Three-part base plate, passively ventilated
Roof with a brush strip and cover plate, prefabricated for the fan assembly
Cabinet completely grounded

584910

Upright cabinet with hinged frame 24 HU

TECHNICAL DATA

WEIGHT	approx. 120 kg
DIMENSIONS	W: 800 mm H: 1400 mm D: 800 mm (H: incl. 100 mm base)

584911

Upright cabinet with hinged frame 42 HU

TECHNICAL DATA

WEIGHT	approx. 150 kg
DIMENSIONS	W: 800 mm H: 2100 mm D: 800 mm (H: incl. 100 mm base)

19" RACK

Accessories

584921



Angle sliding rail (Set) 250 mm for swing frame

For additional fastening of maximum two superimposed amplifiers.

584922



Cable clamping rail set, 2 HU

Cable interception set for Main Switching Unit (MSU).

584924



Features

- Cable clamp rail for DOM for installation in the swing frame cabinet.

Cable clamp rail DOM

Cable clamp rail for DOM for mounting in a swing frame cabinet from our delivery program. The cable clamp rail is used for clean cable routing and strain relief of the cables behind a DOM. It is recommended to use such a DOM per cable rail.

584923

Sliding rail set 800 mm

For supporting heavy 19" components in upright cabinets.

584925



Door contact switch with power cable for lamp

With power cable for cabinet light and Wieland connector ST 17/2, completely wired and ready for connection, with mounting materials.

584926



19" cabinet light 230 V / 11 W

- 230 V. / 11 W with network switch and integrated power outlet
- Mounting possible to the cabinet profile or at the 19" level
- Installation height 1 HU
- Incl. connection cable 3.0 m

19" RACK

Accessories

584929



Mounting chassis (Set), with lateral electrical perforation

584930

L-form cable binding strip for cabinets, depth 800 mm

584931



19" power strip 8x with switch

- 16 A / 250 V AC
- With 8 power outlets, at an 35° angle
- Connection cable L= 2 m
- Protection against unintended switching
- Universal mounting possibilities
- Earthing contact system CEE7/III

584932



Fan cartridge, roof installation, 2 fans with thermostat

In technical rooms where the air is dusty it is mandatory to use together with the fan cartridge also a cabinet air filters such like 584947 or 584948.

584933



Wheels for upright cabinet, with brake

TECHNICAL DATA

LOAD CAPACITY

70 kg

DIMENSIONS

H: 70 mm (total)



Only for upright cabinets without hinged frames
(Part No. 584910).



4 pieces

19" RACK

Accessories

584937



Document compartment 2 HU

Document compartment, including front fasteners, cylinder lock and telescopic rail full extension slide.

TECHNICAL DATA

MATERIAL	sheet steel 1.5 m
COLOR	grey, similar to RAL 7035
DIMENSIONS	W: 405 mm H: 88 mm D: 75 mm (2 HU, 19")

584938



Compartment base 2 HU

Compartment floor for front installation.

TECHNICAL DATA

MATERIAL	sheet steel 1.5 m
COLOR	grey, similar to RAL 7035
DIMENSIONS	H: 88 mm D: 250 mm (2 HU)



Incl. mounting materials

584939



Connector set

In order to connect the cabinets.



Set (4 pieces) with mounting material.

584940



Equipotential bonding system

Equipotential bonding rail with sealable cover according to VDE 0609; connectivity options:

1 x round conductor RD 8-10 mm

1 x flat ribbon up to 30 mm width or round conductor RD 8-10 mm

7 x single or multi wire conductors up to 25 mm² or conductors with fine wires up to 16 mm²

19" RACK

Accessories

584942

Document case for 19" cabinets

Document case in upright cabinets for storage of system documentation such as plans, protocols, etc..

584945



Two heavy duty rails with rollers.

Heavy duty caster base for cabinets 80

Heavy duty caster base to receive an upright cabinet without the pivoting frame Part No. 584910. The rolling device is made of two heavy duty rails with rollers, which are screwed on right and left under the upright cabinet. Due to the necessary stability, the depth of the upright cabinet increases to 120 cm.

TECHNICAL DATA

COLOR	gray, similar to RAL 7035
LOAD CAPACITY	450 kg
WEIGHT	approx. 11 kg (per rail)
DIMENSIONS	L: 1200 mm W: 100 mm H: 200 mm (incl. roller, per rail)

584946



Leveling feet for upright cabinets or 19" housing

Leveling feet for upright cabinet or 19" housing with zinc plated screw to compensate for uneven floors. Set of 4 pieces.

583703



Each contains 24 cage nuts, screws and washers.

Mounting kit 1

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.

19" RACK

Accessories

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.ES



Vent 1 HU with ESSER Logo

Lüftungsfeld im VARIODYN® D1 Design mit einer Höheneinheit und aufgedrucktem ESSER Logo.

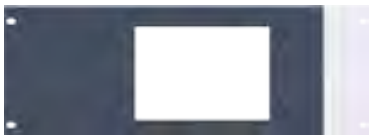
583708.HO



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. 583312 and a standard RJ11 cable is required.

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