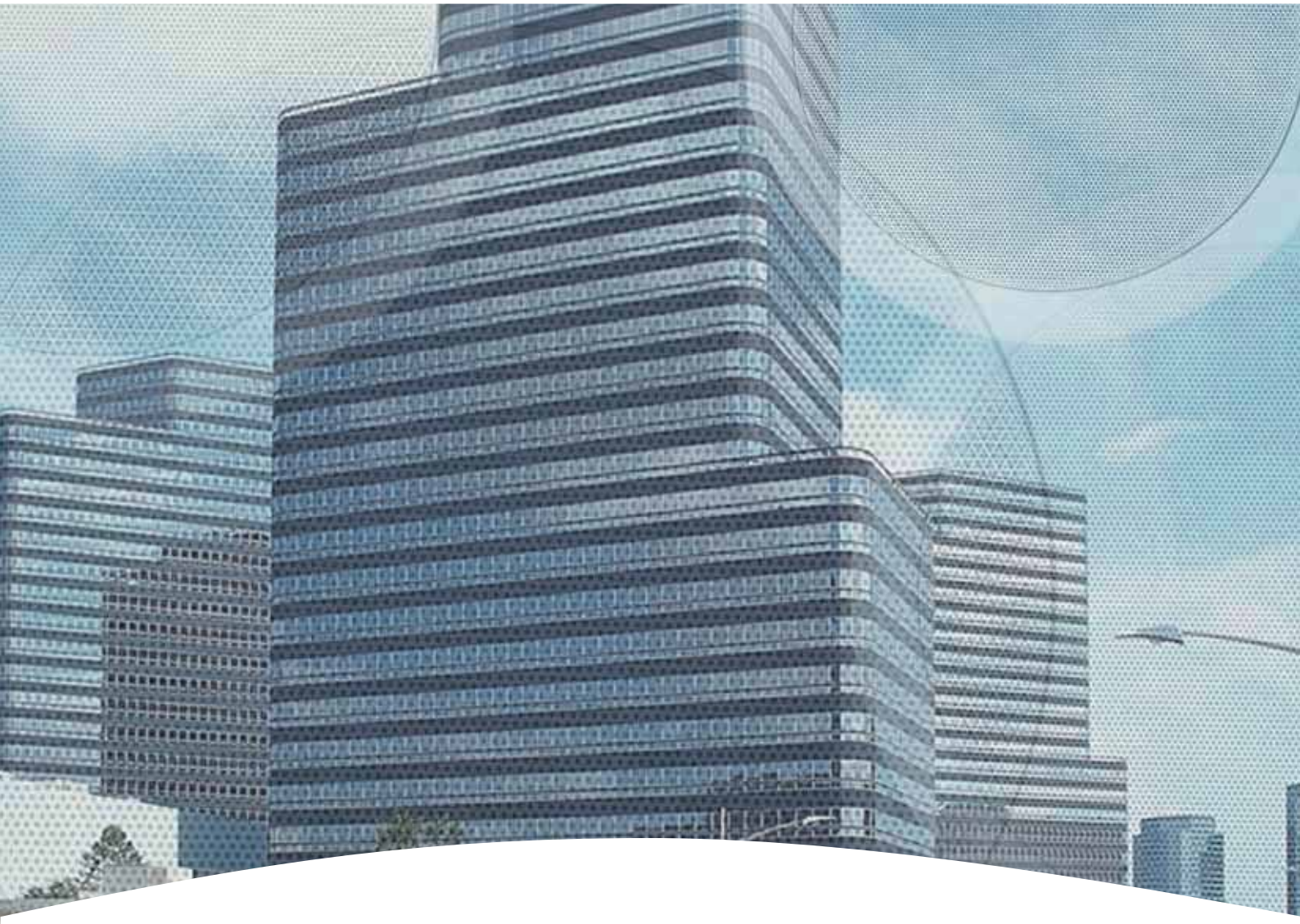
ESSER
by Honeywell



Product Catalog 2013

VAPA System VARIODYN D1

Introduction

Dear Business Partners,
As always, this new updated edition of our VARIODYN D1 Comprio product catalog will provide you a clear overview of our voice alarm and public address portfolio.
In comparison to the previous edition, this edition has been expanded and brought up to date. Since the last edition, our VARIODYN D1 product family gain some new members and we are able to provide improved features on the exiting products.

Clearly the highlight is our new VARIODYN D1 Comprio system on page xx, which is a big step further to come more competitive in smaller voice alarm and public address projects. As usual, also the new VARIODYN D1 Comprio system comes with all great benefits like the current components without any compromise in function or quality. Functions like equalizing, delay, compressor and limiter or automatic volume control are as well onboard as features like 1 hour (!) audio memory, 4 port Ethernet switch ,configurable buttons and signaling LED's or a monitored hand held microphone.



The other highlight is the new 4XD125B amplifier with build in battery management for uninterruptible power supply (UPS). This means that in a project where a UPS is needed, this amplifier substitute a separate UPS, for the amp itself, as well for one DOM or VARIODYN D1 Comprio system. A perfect solution for distributed systems such need in high risers, railways, metro or campus applications.

All new components will be EN54-16 certified latest by mid of 2013.
Our management system PAMMI is now also included in the catalog, the current version supports now semi automatic configuration and zone and graphical layout changes by the customers. All other features like digital voice announcement function, audio data base and schedule functions are still remain.

As well we add some useful accessories like our new housing for the DCSF type call stations or a new telephone interface for SIP telephony. The catalog includes now also our portfolio of a wide range of EN54-24 certified loudspeakers.
But please have also a look on the enhancements in our existing product portfolio, the DOMs provide now a build in 4 Channel audio memory with 1 hour total audio storage capacity and a extended audio delay of 9,9 seconds.
Please also refer to the information we have provided online. In the protected customer area, there are a wide range of resources relating to system setup and planning available for download.
Finally, we would like to mention that it is always a good idea to view the areas of fire detection technology and voice alarms as a whole.

We provide a serial interfaces to ESSER FACP with great benefit in security and service.
This is becoming increasingly important, not only due to the new regulations. Market and customer focus as well as competency and a spirit of innovation are our principal objectives. At the same time, they form the guiding principles that we consistently implement in developing our products with you as our partner, while taking your requirements into account. Take the opportunity to communicate with us and share your suggestions and requirements so we can shape the future together in an increasingly difficult market environment. We are looking forward to a continued successful collaboration with you.

Your ESSER team

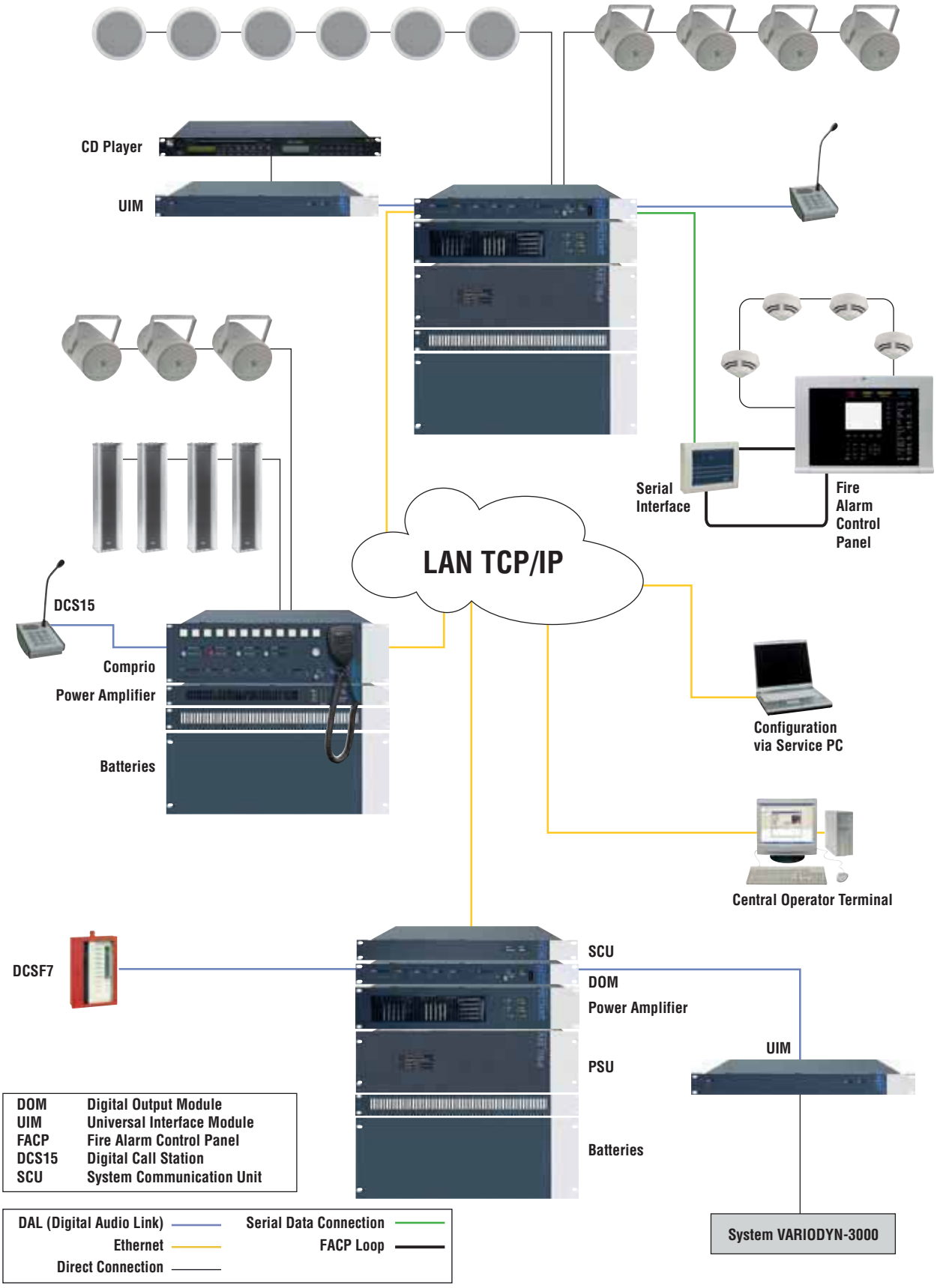
Notes



VARIODYN D1

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VARIODYN D1


CD Player
UIM
Serial
Interface
Fire
Alarm
Control
Panel
LAN TCP/IP
DCS15
Comprio
Power Amplifier
Batteries
Configuration
via Service PC
Central Operator Terminal
DCSF7
SCU
DOM
Power Amplifier
PSU
Batteries
UIM
System VARIODYN-3000
DOM Digital Output Module
UIM Universal Interface Module
FACP Fire Alarm Control Panel
DCS15 Digital Call Station
SCU System Communication Unit
DAL (Digital Audio Link)
Ethernet
Direct Connection
Serial Data Connection
FACP Loop

Public address systems are used in all crowded public places such as subway stations, train stations, airports, shopping centers, stadiums and schools. In everyday operation, the system is used to provide information to the public, for advertising, and also for musical entertainment or for internal purposes such as communication with staff in extensive building complexes (paging and intercom service).
A system of this type is particularly significant during emergencies, when it is important to alert people audibly in a targeted manner.
People can then be evacuated in an orderly fashion.
With VARIODYN D1, voice alarm and public address systems are for the first time connected to Local Area Networks (LAN) and Wide Area Networks (WAN). The systems are installed cost- effectively using standard Ethernet modules and prefabricated cabling. The modern, user- friendly configuration tools in VARIODYN D1 reduce training costs and familiarization times.

Additional requirements for voice alarm systems in accordance with EN54-16

Thanks to EN54-16 approval of our voice alarm system VARIODYN D1, which is required from 01.04.2011 in Europe onwards. These components are described below and are listed in this catalog. The description also points out some special features, which are important for an EN54-16 system. First of all, before setting up the voice alarm system, we recommend that you talk to the expert responsible for approving the system, in order to clarify and get written agreement on the general and system-specific requirements for the voice alarm system.
Our VARIODYN D1 Voice Alarm System has relatively few expansions because the system has complied with the highest technical standards for a considerable period of time.
The first additional component, which must be part of an EN54-16-certified system is the VCM. The VCM offers collective displays and operating functions, which were implemented via a digital call station prior to EN54-16 approval. There must be at least one VCM per system, which is installed directly in the upright cabinet. For more information, please refer to the pages describing the VCM.
Another component is the overvoltage protection module for the contact inputs and outputs of the UIM. This module provides additional EMC protection if the connected external contacts are more than 3 m away from the system. For more information, please refer to the pages describing the UIM and the overvoltage protection module for the UIM.
EN54-16 approval requires that the transmission paths of emergency digital call stations for systems with more than one alarm area must be designed redundantly when the digital call station is separated and not contained directly in the upright cabinet. For this reason, our range now includes the dummy plate Part No. 583709, which can be used for installing a digital call station DCSF12 or DCSF1 directly in the upright cabinet. If the emergency digital call stations need to be used at a remote site, these can be duplicated and thereby set up fully redundantly.
All the relevant VARIODYN D1 components are contained in the EN54-16 and VdS approval, including accessories, network components and upright cabinets.

583361.22 **Digital Output Module DOM4-8**



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

DOM 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 as per DIN VDE 0833-4. Any complex system configuration can be implemented through the networking of multiple DOMs via the Ethernet. In this case, all DOMs are on the same level. There is no Master/Slave configuration. All power amplifiers are permanently monitored. In case a power amplifier is faulty, it can be replaced dynamically by a spare amplifier. The switchover is done automatically via the DOM. Loudspeaker cables are continually monitored for short-circuit, short-to-ground, interruption and impedance variation. Faulty loudspeaker areas are separated without reaction. 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 amplifier channel can be regulated. Other filters, e.g., parametric equalizers, high and low pass filters and delays, are also available. All disturbances are recognized within a few seconds in compliance with standards, displayed and logged. For special applications, e.g., tunnels, delays of up to 9.9 seconds can be programmed. 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.

Features

- One hour audio memory (flash)
- 4 channel parametric equalizer
- 4 channel compressor/limiter
- 4 channel delay (9.9 seconds max.)
- Loudspeaker LOOP support
- Permitted as per EN54-16
- Compliant with IEC 60849
- All functions of an alarm and evacuation system in a 19"-module (DOM)
- Networkable via Ethernet, build in 4 port switch
- Permanent monitoring of all functionally-relevant system parts
- Automatic and dynamic switching onto redundant spare amplifier
- Automatic Loudspeaker Regulation (ALR) also during announcements
- Remote monitoring and configuration via network 24 V DC power supply
- Spur technology and/or loop technology in "VARIODYN D1 loop technology"
- Connection to a NTP server via Ethernet is possible

Technical Data

Audio output:	
Output type	symmetrically
Nominal level	0 dBu
max. Outputlevel	< 6 dBu
Transmission range	20 ... 20000 Hz
Harmonic distortion at nominal level	< 0.03 %
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
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 ... 440 Hz
Emergency power supply	24 V DC
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: 345 mm (1 HU, 19")

The DOM components are provided "neutrally". Please use one ventilation field Part No. 583708. ES for each DOM.

Accessories

583451.21	Cable for rear panel of DOM4-8 cabinet
583486	CAT5 patch cable, 1 m yellow (Ethernet)
583487	CAT5 patch cable, 2 m yellow (Ethernet)
583488	CAT5 patch cable, 3 m yellow (Ethernet)
583496	End of Line Module (EOL)
581316	P4 microphone for AVR
583703	Mounting kit 1
583342	Loop Isolator Module (LIM)
583708.ES	Ventilation field 1 HU with ESSER logo

583362.22 Digital Output Module DOM4-24



Features

- Permitted as per EN54-16
- Compliant with IEC 60849
- All functions of an alarm and evacuation system in a 19"-module (DOM)
- Networkable via Ethernet
- Permanent monitoring of all functionally-relevant system parts
- Automatic and dynamic switching onto redundant spare amplifier
- Automatic Loudspeaker Regulation (ALR) also during announcements
- Remote monitoring and configuration via network 24 V DC power supply
- Spur technology and/or loop technology in "VARIODYN D1 loop technology"
- Connection to a NTP server via Ethernet is possible

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

DOM is the central control element of VARIODYN D1. It has interfaces to all input/output assemblies, and it administers and monitors the loudspeaker circuits. For voice alarm systems as per DIN VDE 0833-4.
Any complex system configuration can be implemented through the networking of multiple DOMs via the Ethernet.
All power amplifiers are permanently monitored. In case a power amplifier is faulty, it can be replaced dynamically by a spare amplifier. The switchover is done automatically via the DOM.
Loudspeaker cables are continually monitored for short-circuit, short-to-ground, interruption and impedance variation. Faulty loudspeaker areas are separated without reaction.
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 amplifier channel can be regulated. Other filters, e.g., parametric equalizers, high and low pass filters and delays, are also available. All disturbances are recognized within a few seconds in compliance with standards, displayed and logged. For special applications, e.g., tunnels, delays of up to 9.9 seconds can be programmed.
The control unit DOM4-24 is equipped with 4 independent amplifier channels in order to operate 24 loudspeaker areas or 4 loudspeaker circuits in VARIODYN D1 loop technology. There is also the option of mixing loop and spur technology with a DOM.

Technical Data

Audio output:	
Output type	symmetrically
Nominal level	0 dBu
max. Outputlevel	< 6 dBu
Transmission range	20 ... 20000 Hz
Harmonic distortion at nominal level	< 0.03 %
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
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 ... 440 Hz
Emergency power supply	24 V DC
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: 345 mm (1 HU, 19")

The DOM components are provided "neutrally". Please use one ventilation field Part No. 583708.ES for each DOM.

Accessories

583452.21	Cable for rear panel of DOM4-24 cabinet
583486	CAT5 patch cable, 1 m yellow (Ethernet)
583487	CAT5 patch cable, 2 m yellow (Ethernet)
583488	CAT5 patch cable, 3 m yellow (Ethernet)
583496	End of Line Module (EOL)
581316	P4 microphone for AVR
583703	Mounting kit 1
583342	Loop Isolator Module (LIM)
583708.ES	Ventilation field 1 HU with ESSER logo

VARIODYN D1 Comprio

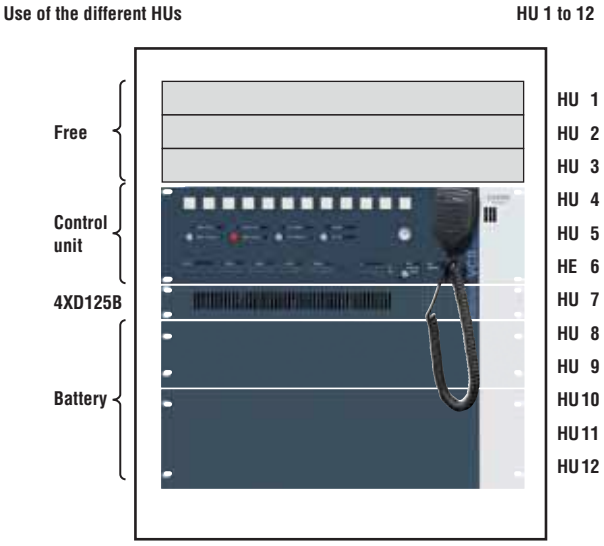
Our VARIODYN D1 Voice Alarm System has grown, so that in the future it can be even better, even less expensive, and even more efficient in small and medium-sized properties. The compact Comprio control unit is available in different variants, and together with the new 4XD125B four-channel amplifier, it represents a complete voice alarm system for small and medium-sized properties.
The 4XD125B four-channel amplifier also includes a battery charger for the emergency power supply of this small system. 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 cabinet components of our VARIODYN D1 line.
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.

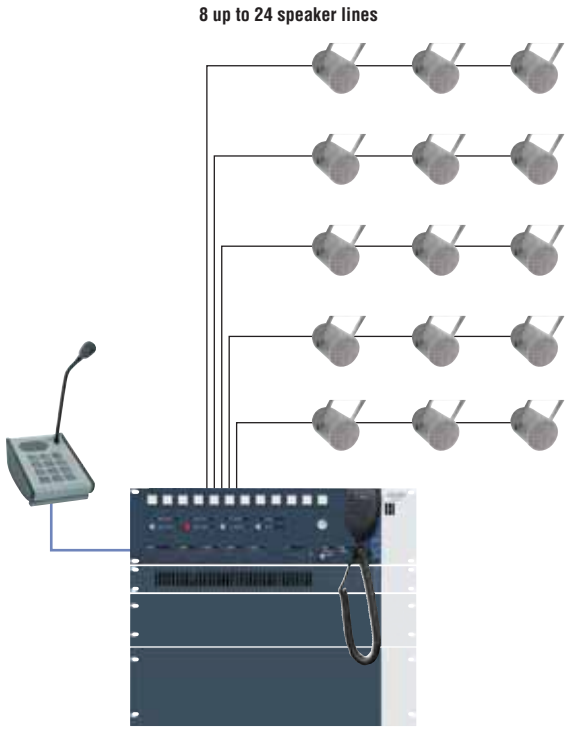
Comprio system (4 variants)

583940 VARIODYN D1 Comprio 4-8 (standalone)
583941 VARIODYN D1 Comprio 4-24 (standalone)
583944 VARIODYN D1 Comprio 4-8 net (network variant)
583945 VARIODYN D1 Comprio 4-24 net (network variant)

Rack mounted system (12 HUs)



System overview



583944 **VARIODYN D1 Comprio 4-8 net**

NEW



Features

- EN54-16 approval pending
- Compliant with DIN VDE 0833-4
- Compliant with IEC 60849
- All functions of an alarm and evacuation system in a 19" module
- Continuous monitoring of all functionally relevant system parts
- Automatic and dynamic switchover to redundant backup amplifier
- Automatic Volume Control (AVC) even during announcements
- 24 V DC emergency power supply
- Strand or loop technology in "VARIODYN D1 loop technology"
- 12 contact inputs (8 of which programmable for monitoring)
- 8 potential-free relay outputs, up to 3 audio line inputs and/or up to 3 microphone inputs
- 3 DAL connections
- 1 TWI connection
- Can be networked over Ethernet

The Comprio is the central control unit of a VARIODYN D1 system for small and medium-sized facilities. The Comprio, together with the 4XD125B four-channel amplifier, forms a complete voice alarm system for projects such as schools, smaller hotels etc. The emergency power supply is built in to the 4XD125B four-channel amplifier. For voice alarm systems compliant with DIN VDE 0833-4 and electro-acoustic emergency warning systems compliant with EN 60849.
All power amplifiers are continuously monitored. In the event that a power amplifier fails, it can be replaced dynamically by a backup amplifier. The switchover is carried out automatically by the Comprio.
The loudspeaker cables are continually monitored for short circuits, earth faults, interruption and impedance variations. Incorrect loudspeaker zones are isolated without feedback.
A Comprio has storage capacity for preset announcements that 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, such as parametric equalizers, high and low pass filters, and delays, are also available. In compliance with standards, all disturbances are detected within a matter of seconds, displayed and logged. For special applications, such as tunnel, delays of up to 9.9 seconds can be programmed.
The Comprio control unit is equipped with four independent amplifier channels to operate a total of 8 loudspeaker zones or four loudspeaker rings in VARIODYN D1 loop technology. It is also possible to mix spur and loop technology 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 offers Ethernet networking with other Ethernet-capable equipment in the VARIODYN D1 family.
Additional accessories, such as housings, cables, call stations etc., must be ordered separately.

The DOM components are provided "neutrally".
Please use one ventilation field Part No. 583708.ES for each DOM.
Handheld microphone for VARIODYN D1 Comprio (Part No. 583308) is not included in Part No. 583945.

Available from Q3/2013

Accessories

583708.ES	Ventilation field 1 HU with ESSER logo
583308	Handheld microphone for VARIODYN D1 Comprio
583444	Backup cable RC44 VARIODYN D1
584913	Housing for Comprio
584913.R	Housing for Comprio (including mounting)
583413	Cable set for connecting batteries to the VARIODYN D1 Comprio
581732	Battery 12 V/65 Ah
583414	Cable set, 24 V DC-VARIODYN D1 Comprio/4XD125B
583440	Peripheral clip for top hat rail
583466	CAT5 patch cable, 0.5 m gray (peripheral)
583467	CAT5 patch cable, 1.0 m gray (peripheral)
583469	CAT5 patch cable, 3.0 m gray (peripheral)
583496	End of Line Module (EOL)
581316	Microphone, for AVC
583703	Mounting set 1
583342	Loop Isolator Module (LIM)
583332	Surge protection module for UIM contacts

583945 VARIODYN D1 Comprio 4-24 net

NEW



Features

- EN54-16 approval pending
- Compliant with DIN VDE 0833-4
- Compliant with IEC 60849
- All functions of an alarm and evacuation system in a 19" module
- Continuous monitoring of all functionally relevant system parts
- Automatic and dynamic switchover to redundant backup amplifier
- Automatic Volume Control (AVC) even during announcements
- 24 V DC emergency power supply
- Strand or loop technology in "VARIODYN D1 loop technology"
- 12 contact inputs (8 of which programmable for monitoring)
- 8 potential-free relay outputs, up to 3 audio line inputs and/or up to 3 microphone inputs
- 3 DAL connections
- 1 TWI connection
- Can be networked over Ethernet

The Comprio is the central control unit of a VARIODYN D1 system for small and medium-sized facilities. The Comprio, together with the 4XD125B four-channel amplifier, forms a complete voice alarm system for projects such as schools, smaller hotels etc. The emergency power supply is built in to the 4XD125B four-channel amplifier. For voice alarm systems compliant with DIN VDE 0833-4 and electro-acoustic emergency warning systems compliant with EN 60849.

All power amplifiers are continuously monitored. In the event that a power amplifier fails, it can be replaced dynamically by a backup amplifier. The switchover is carried out automatically by the Comprio.

The loudspeaker cables are continually monitored for short circuits, earth faults, interruption and impedance variations. Incorrect loudspeaker zones are isolated without feedback.

A Comprio has storage capacity for preset announcements that 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, such as parametric equalizers, high and low pass filters, and delays, are also available. In compliance with standards, all disturbances are detected within a matter of seconds, displayed and logged. For special applications, such as tunnel, delays of up to 9.9 seconds can be programmed.

The Comprio control unit is equipped with 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 offers Ethernet networking with other Ethernet-capable equipment in the VARIODYN D1 family.

Additional accessories, the handheld Microphone, such as housings, cables, call stations etc., must be ordered separately.

The DOM components are provided "neutrally".
Please use one ventilation field Part No. 583708.ES for each DOM.

Available from Q3/2013

Accessories

583708.ES	Ventilation field 1 HU with ESSER logo
583308	Handheld microphone for VARIODYN D1 Comprio
583444	Backup cable RC44 VARIODYN D1
584913	Housing for Comprio
584913.R	Housing for Comprio (including mounting)
583413	Cable set for connecting batteries to the VARIODYN D1 Comprio
581732	Battery 12 V/65 Ah
583414	Cable set, 24 V DC-VARIODYN D1 Comprio/4XD125B
583440	Peripheral clip for top hat rail
583466	CAT5 patch cable, 0.5 m gray (peripheral)
583467	CAT5 patch cable, 1.0 m gray (peripheral)
583469	CAT5 patch cable, 3.0 m gray (peripheral)
583496	End of Line Module (EOL)
581316	Microphone, for AVC
583703	Mounting set 1
583342	Loop Isolator Module (LIM)
583332	Surge protection module for UIM contacts

580242 Four-Channel Amplifier 4XD125B

NEW



Four-channel power amplifier with built-in battery charger for emergency power supply of one VARIODYN D1 Comprio or one DOM. The 4XD125B has four independent amplifier channels with 125 W each in class D technology. The amplifier can be used together either with the VARIODYN D1 Comprio or with a DOM.

Available from Q2/2013

Features

- Compliant with the EN54–16 standard
- Suitable for VDE 0833-4 or EN 60849 or VDE 0828 systems
- Class D technology, efficiency >= 80%
- Four independent amplifier channels
- Configurable for 4 x 125 W or 2 x 250 W operation
- 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
- Built-in fan with temperature-controlled speed regulation, with air flow from the front of the unit to the back
- Power supply 230 V AC or 24 V DC (emergency power)
- Built-in battery charger for EN54-4 charging of batteries up to a capacity of 65 Ah (2 x 12 V/65 Ah), for emergency power to the amplifier and external components
- One of the four amplifier channels can be used as a backup channel
- CAN bus interface for service functionality

Accessories

583491	Input cable DOM-amplifier, 0.5 m green
583477.21	Output cable 2 amplifier-DOM
583414	Cable set, 24 V DC VARIODYN D1 Comprio/4XD125
583413	Cable set for connection of batteries to the VARIODYN D1 Comprio

583308 Handheld Microphone for VARIODYN D1 Comprio

NEW



Handheld microphone with talk button for speaking directly into the Comprio control unit. The microphone is plugged into the socket directly on the front of the Comprio and can be hung up there as well.

Available from Q2/2013

584913 19“ Rack for VARIODYN D1 Comprio

NEW



Housing for the VAPA small system Comprio without hinged frame. The housing can be used as a standing housing or for wall mounting. It is 12 HU high with a footprint of 600 mm x 600 mm and can hold a Comprio control unit, a 4XD125 four-channel amplifier with built-in emergency power supply, the corresponding batteries (up to 65 Ah) and a ventilation field. There are also 3 height units left open, for example for the installation of additional components, such as recording units. If more space is needed, another solution from our upright cabinet line can be used as well.

Available from Q2/2013

584913.R 19“ Rack for VARIODYN D1 Comprio incl. Assembling

NEW

Housing Part No. 584913 for the system Comprio.

Available from Q2/2013

581732 **Battery 12 V/65 Ah**

NEW

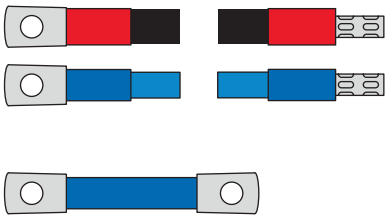
Battery for emergency power supply of VAPA applications and the Comprio. Two pieces are required.

Available from Q2/2013

583413 **Cable Set 24 V DC/4XD125**

NEW

Standard cable set for housing-internal connection of the batteries to the 4XD125B four-channel amplifier.

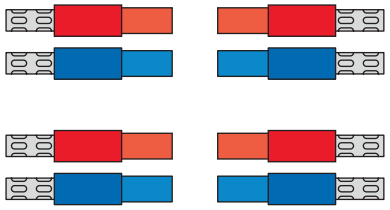


Available from Q2/2013

583414 **Cable Set for Connecting Batteries to Comprio**

NEW

Standard cable set for connection of the Comprio to the 4XD125B amplifier.



Available from Q2/2013

Loop Technology LIM

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

Spur circuit versus loop wiring system

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

Minimizing the risk of failure

To minimize this risk of failure in the case of a wire break or short circuit, A/B wiring was used for a long time .
In the case of A/B wiring, half of the loudspeakers in a room are operated on different loudspeaker lines.
This means that in the case of a basic line fault, such as a wire break or short circuit, half of the loudspeakers in the relevant area will still be in operation.
If half of the loudspeakers fail and the alarms are therefore operating at half power, the sound level is reduced by 3 dB if the loudspeakers are arranged correctly.
This level decrease is permitted in accordance with DIN VDE 0833-4 standards.

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

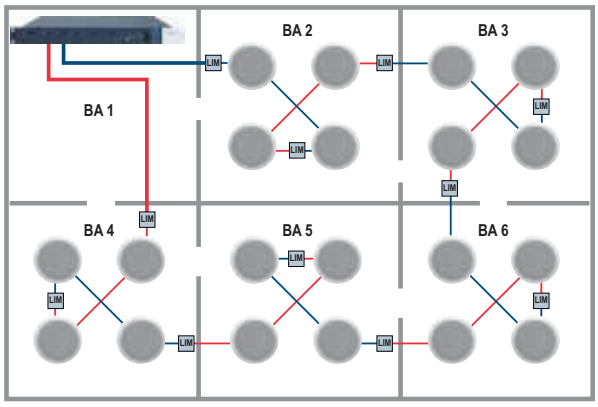
VARIODYN D1 is one of the first voice alarm systems on the market to have this loop wiring system technology. This new technology is based on the proven DOM4-8 and DOM4-24 which are used for creating up to 4 wire-break and short-circuit-resistant loops. On each of these 4 loops, up to 64 loop isolator 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.

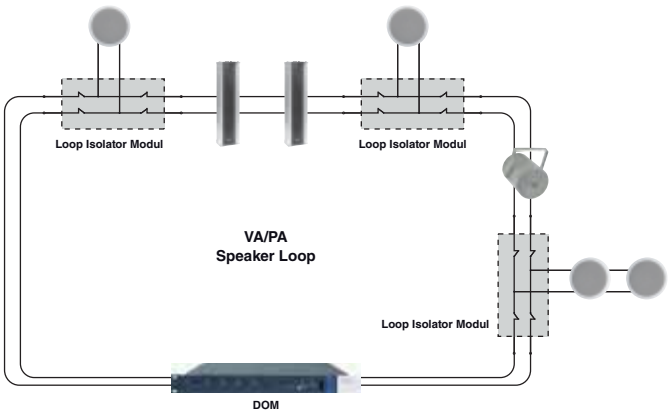
The main advantages of this loop technology are as follows:

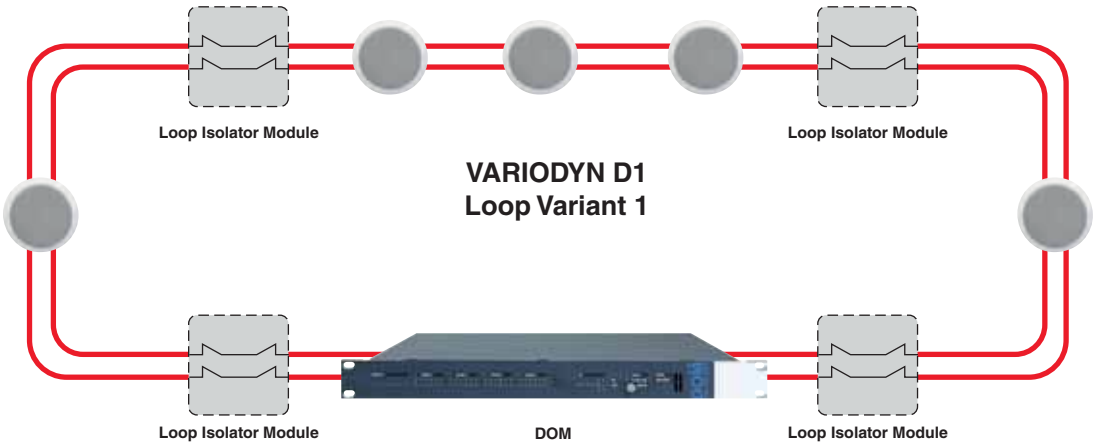
•100% system reliability when each loudspeaker is provided with a loop isolator module
- A/B wiring can be replaced easily
- E30 wiring not necessary in all cases
- Considerable cost savings for wiring and installation
- Second loudspeaker not necessary in small rooms

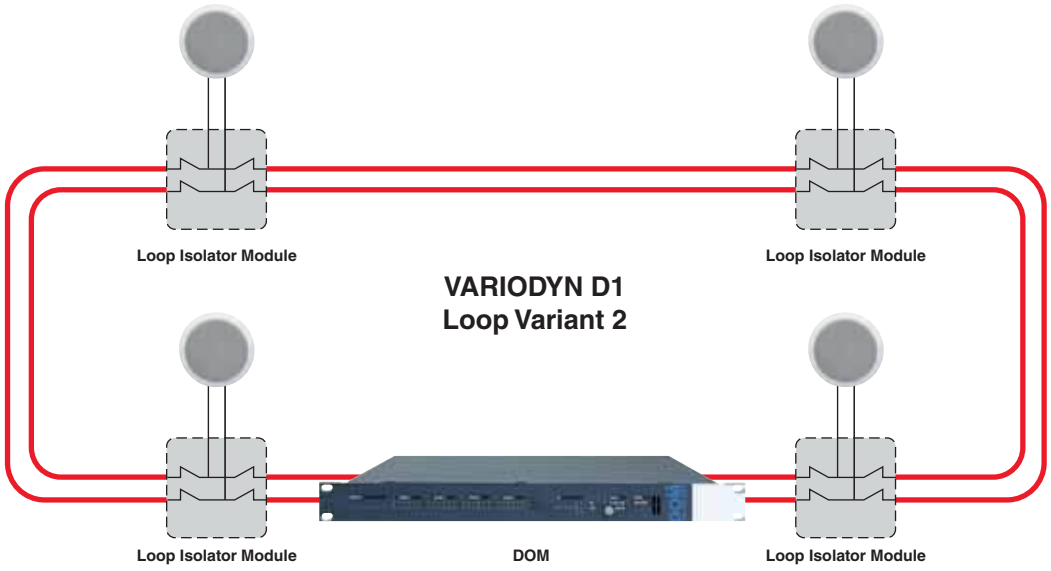
Due to the many advantages and high system reliability, it seems that VARIODYN D1 loop technology will establish itself as the industry leader in the medium and long term in the area of voice alarms just like in fire detection technology.

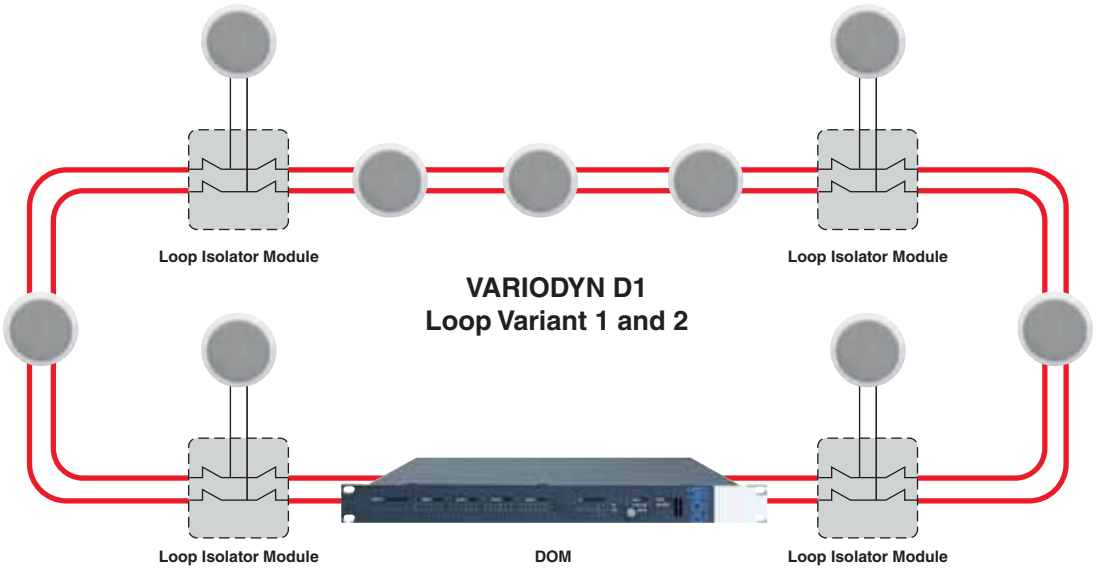







Loop Isolator Module
Loop Isolator Module
VARIODYN D1
Loop Variant 1
Loop Isolator Module
DOM
Loop Isolator Module


Loop Isolator Module
Loop Isolator Module
VARIODYN D1
Loop Variant 2
Loop Isolator Module
DOM
Loop Isolator Module


Loop Isolator Module
Loop Isolator Module
VARIODYN D1
Loop Variant 1 and 2
Loop Isolator Module
DOM
Loop Isolator Module

583342 Loop Isolator Module LIM



Approval: VdS

Loop Isolator Module for designing a short-circuit and open-circuit tolerant 100-V loud speaker loop in VARIODYN D1 loop technology. The modules monitor current on the loud-speaker circuits and cut off the defective conductive parts from the loudspeaker circuit in case of overcurrent due to a short-circuit, for example. Line disturbances are displayed on the DOM and VCM. Each module has a total of three bipolar clamps for connecting the loop and the loudspeaker. Wires with a diameter up to 2.5 mm² in diameter can be connected to the clamps. There is an optical display of the operating status on the module. The Loop Isolator Module is in a stable, compact IP-66 body with lots of wiring space and can thus also be installed in projects with difficult environmental conditions, e.g. industry.

Features

- Fully-redundant 100-V loop technology
- Extensive topologies are possible
- Tolerant to short and open circuits
- As per EN 54-17
- Large savings potential with cabling and installation

580231 Power Amplifier 2XD250



Features

- Complies with IEC BS EN 60268-3, 55013 and 55020 standards
- Class D double amplifier with high efficiency
- Self-monitoring and self-test via microcontrollers
- Protected against overload and short-circuits
- Protected against overheating
- Cooling via regulated fan
- Monitoring via VARIODYN D1 DOM
- 24 V DC emergency power supply

General Indicators
- Mains voltage (green LED)
- CPU status (green LED)
- Collective fault (yellow LED)
- 24 V emergency power supply (yellow LED)

Indicators per Amplifier Channel
- Operation (green LED)
- Amplifier channel status (green LED)
- Amplifier channel fault (yellow LED)
- Clip indicator (yellow LED)

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

Usage

The power amplifiers have two independent amplifier channels and are compatible with the VARIODYN D1 system. The power amplifiers are controlled and monitored by VARIODYN D1 DOM4-8/DOM4-24 control units.

LF / Control Input

The two low frequency inputs and the control input are connected by cable (Part No. 583491) to the VARIODYN D1 DOM.

100 V Outputs

Symmetrical ungrounded 100 V outputs are available on the “OUTPUT 100V” terminal strip. The 100 V outputs of the two double amplifiers are connected via cable (Part No. 583477.21) to the VARIODYN D1 DOM. Once a cooling element reaches a critical temperature, the load for this channel is disconnected by relays and is once again connected by relays upon reaching a secure temperature.

Power Connection, Battery Connection

An IEC connector for power connection as well as a power fuse can be found on the back of the amplifier. The power cable is supplied. The power amplifier may only be operated via a three-wire AC power cable with a non-fused ground conductor.
The 24 V emergency power supply is connected to a designated 2-pin terminal.

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 %
Weight	approx. 16.5 kg
Dimensions	W: 482 mm H: 89 mm D: 402 mm (2 HE, 19")

Accessories

583491	DOM-XV cable for amplifier audio inputs and remote connection
583476.21	DOM-XV cable for amplifier audio outputs (for 1 amplifier)
583477.21	DOM-XV cable for amplifier audio outputs (for 2 amplifiers)
583703	Mounting kit 1

580232 Power Amplifier 2XD400



Features

- Complies with IEC BS EN 60268-3, 55013 and 55020 standards
- Class D double amplifier with high efficiency
- Self-monitoring and self-test via microcontrollers
- Protected against overload and short-circuits
- Protected against overheating
- Cooling via regulated fan
- Monitoring via VARIODYN D1 DOM
- 24 V DC emergency power supply

General Indicators
- Mains voltage (green LED)
- CPU status (green LED)
- Collective fault (yellow LED)
- 24 V emergency power supply (yellow LED)

Indicators per Amplifier Channel
- Operation (green LED)
- Amplifier channel status (green LED)
- Amplifier channel fault (yellow LED)
- Clip indicator (yellow LED)

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

Usage

The power amplifiers have two independent amplifier channels and are compatible with the VARIODYN D1 system. The power amplifiers are controlled and monitored by VARIODYN D1 DOM4-8/DOM4-24 control units.

LF/Control Input

The two low frequency inputs and the control input are connected by cable (Part No. 583491) to the VARIODYN D1 DOM.

100 V Outputs

Symmetrical ungrounded 100 V outputs are available on the “OUTPUT 100 V” terminal strip. The 100 V outputs of the two double amplifiers are connected via cable (Part No. 583477.21) to the VARIODYN D1 DOM. Once a cooling element reaches a critical temperature, the load for this channel is disconnected by relays and is once again connected by relays upon reaching a secure temperature.

Power Connection, Battery Connection

An IEC connector for power connection as well as a power fuse can be found on the back of the amplifier. The power cable is supplied. The power amplifier may only be operated via a three-wire AC power cable with a non-fused ground conductor.
The 24 V emergency power supply is connected to a designated 2-pin terminal.

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 %
Weight	approx. 19 kg
Dimensions	W: 482 mm H: 89 mm D: 402 mm (2 HE, 19")

Accessories

583491	DOM-XV cable for amplifier audio inputs and remote connection
583476.21	DOM-XV cable for amplifier audio outputs (for 1 amplifier)
583477.21	DOM-XV cable for amplifier audio outputs (for 2 amplifiers)
583703	Mounting kit 1

580242 Four-Channel Amplifier 4XD125B

NEW



Four-channel power amplifier with built-in battery charger for emergency power supply of one VARIODYN D1 Comprio or one DOM. The 4XD125B has four independent amplifier channels with 125 W each in class D technology. The amplifier can be used together either with the VARIODYN D1 Comprio or with a DOM.

Features

- Compliant with the EN54–16 standard
- Suitable for VDE 0833-4 or EN 60849 or VDE 0828 systems
- Class D technology, efficiency >= 80%
- Four independent amplifier channels
- Configurable for 4 x 125 W or 2 x 250 W operation
- 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
- Built-in fan with temperature-controlled speed regulation, with air flow from the front of the unit to the back
- Power supply 230 V AC or 24 V DC (emergency power)
- Built-in battery charger for EN54-4 charging of batteries up to a capacity of 65 Ah (2 x 12 V/65 Ah), for emergency power to the amplifier and external components
- One of the four amplifier channels can be used as a backup channel
- CAN bus interface for service functionality

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	< 0.03 %
Ambient temperature	-5 °C ... 55 °C
Air humidity	up to 93% (no condensation)
Color	gray, similar to RAL 7016
Dimensions	W: 483 mm H: 44 mm D: 402 mm 1 HU, 19"

Available from Q2/2013

Accessories

583491	Input cable DOM-amplifier, 0.5 m green
583477.21	Output cable 2 amplifier-DOM
583414	Cable set, 24 V DC VARIODYN D1 Comprio/4XD125
583413	Cable set for connection of batteries to the VARIODYN D1 Comprio

580249 Four-Channel Amplifier 4XD500

NEW



Power amplifier for the VARIODYN D1 Voice Alarm System in class D technology with four independent amplifier channels and galvanically isolated 100 V direct outputs, symmetric inputs, inrush current limitation and soft start.
Four built-in fans with continuously temperature-regulated speed control.

Features

- Simple connection to the DOM or Comprio using prefab standard cable from the VARIODYN D1 line
- Built-in electronic protective circuit against thermal overload, DC signals, subfrequency signals, short circuit, open outputs and HF interference
- 4 potentiometers on the back for adjusting the input amplification per 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 on
- 2 back fault message contacts
- Back fault message contact for missing 24 V emergency power supply
- 24 V emergency power supply via emergency power manager

Technical Data

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

Available from Q3/2013

Accessories

583491	Input cable DOM-amplifier, 0.5 m green
583477.21	Output cable 2 amplifier-DOM

Digital Call Stations

583301.21 Digital Call Station DCS15



Features

- Cost-saving CAT5 cabling
- Elektret swan-neck microphone with cardioid characteristic
- Permanent monitoring of microphone and the line to the connected interface module
- Broadband loudspeaker for microphone monitoring, monitoring of announcements and for intercom operation
- 24-bit AD/DA transformer
- Additional audio input/output (DCS15) e.g. for audio devices such as CD players
- Intercom function with other communication units possible via built-in loudspeaker
- 12 freely configurable keys

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The Digital Call Station DCS15 is used to select loudspeaker circuits as well as for the issuing of voice announcements and of various tones and/or alarms. It is equipped with 12 freely configurable keys, 13 LEDs and a swan neck microphone. The communication unit can be connected to a free DOM (Digital Output Module) DAL bus (Digital Audio Link) via a standard CAT5 cable. All audio signals as well as all control signals are transferred digitally.

Up to four Digital Call Stations can be connected to one DOM. Every Digital Call Station can simultaneously produce and receive different voice signal through-connections and control signals within the system. One digital call station can be relocated by up to 300 m via a CAT5 cable (expansion up to 2,000 m possible using fiber optic cabling) and can be expanded with up to six DKM18 digital key modules; this increases the total number of available keys and LEDs to 120 per communication unit. The function of the microphone in the digital call station is permanently monitored acoustically. The DCS15 furthermore provides an external audio input and output which can be used to connect audio devices such as CD players or tape decks.

Technical Data

Audio output:	
Nominal level	0 dBu
max. Outputlevel	< 6 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.1 % @ 1 kHz
Signal/Noise ratio	> 85 dB
Output impedance	180 Ω
Audioinput:	
Nominal level	0 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.1 %
Signal/Noise ratio	> 95 dB
Common technical data:	
Microphone	Elektret, cardoid characteristic
Swan-neck	300 mm
Transmission range	100 ... 15000 Hz
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

The Digital Call Stations can be flush mounted onto the surface of a table. A table mounting kit is required for this.
A transparent keyboard cover is available in order to provide protection against unintentional keystrokes. This way, pressing keys is only possible with the cover open. Each cover can protect three horizontally arranged keys.

A 3 m CAT5 cable for connection of the Digital Communication Unit to a wall jack is included with delivery.

Accessories

583306.21	Digital key module DKM18
583311	Keyboard cover for VARIODYN D1 DCS
583316.21	Fiber optic converter switchboard
583317.21	Fiber optic converter communication unit
583315.02	Power supply for fiber optic converter
583307	Wall jack AB
583300.ES	Adhesive label for DCS "ESSER by Honeywell"
583318	Replacement keycaps (packages of 12 pieces)

583302.21 Digital Call Station DCS2



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

Same as 583301.21, but with one freely configurable key, two LEDs, one microphone and a loudspeaker.

Technical Data

Ambient temperature	-5 °C ... 55 °C
Air humidity	15 % ... 90 % (non-condensing)
Weight	approx. 1.6 kg

Features

- EN54-16 certified

A 3 m CAT5 cable for connection of the Digital Communication Unit to a wall jack is included with delivery.

583306.21 Digital Key Module DKM18



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

Digital Key Module DKM18 with 18 freely configurable keys and 18 LEDs.
Up to 6 of these DKM18 can be connected to one DCS15 and/or DCS2. Thus communication units with up to 120 keys and 120 LEDs are possible.

Technical Data

Dimensions	W: 123 mm H: 71 mm D: 180 mm

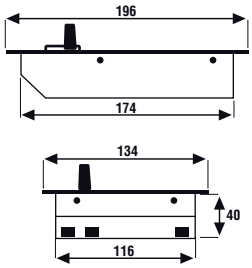
Features

- EN54-16 certified

Fire Control PA Panel

583303.21 **Digital Fire Control PA Panel DCSF12**





Features

- Manual microphone with built-in loudspeaker and acoustic microphone monitoring
- Permanent monitoring of the line to the following interface module
- 24-bit AD/DA converter
- 12 freely configurable keys
- EN54-16 certified

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The Digital Fire Control PA Panel DCSF12 allows for the selection of loudspeaker circuits, transmission of voice announcements as well as of various tones and alarms. The communication unit is connected to a free DAL-bus (Digital Audio Link) on the DOMs (Digital Output Modules) via a standard CAT5 cable. All control signals as well as all audio signals are transmitted digitally. The communication unit has 12 freely configurable keys, 13 LEDs and a manual microphone with a built-in loudspeaker. Up to four digital communication units can be connected to one DOM. Every digital communication unit can simultaneously produce and receive different voice signal through-connections and control signals within the system. A digital communication unit can be relocated by up to 300 m via a CAT5 cable (expansion up to 2,000 m possible using fiber optic cabling) and can be expanded with up to six DKM18 digital key modules; this increases the total number of available keys and LEDs to 120 per communication unit.

The inaudible monitoring frequencies sent by the loudspeaker are continuously picked up by the microphone. Any interruption will lead to an error message.

Technical Data

Microphone	Elektret, cardoid characteristic
Transmission range	200 ... 12500 Hz
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

A transparent keyboard cover is available in order to provide protection against unintentional keystrokes. This way, pressing keys is only possible with the cover open. Each cover can protect three horizontally arranged keys.

A 3 m CAT5 cable for connection of the Digital Communication Unit to a wall jack is included with delivery.

Accessories

583306.21	Digital key module DKM18
583311	Keyboard cover for VARIODYN D1 DCS
583312	Installation kit for DCS onto table VARIODYN D1, 19"
583316.21	FO conversion for OIM VARIODYN D1
583317.21	FO conversion for DCS VARIODYN D1
583315.02	Power supply for FO converter DCS O VARIODYN D1
583307	Wall jack for VARIODYN D1 DCS
583300.ES	Adhesive label for DCS "ESSER by Honeywell"
583318	Replacement keycaps (package of 12 pieces)
584961	Housing for one FW – call station DCSF
584962	Housing for two FW – call stations DCSF

583304.21 Digital Fire Control PA Panel DCSF1



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

Same as 583303.21 but with one freely configurable key, two LEDs and a manual microphone with built-in loudspeaker.

Technical Data

Ambient temperature	-5 °C ... 55 °C
Air humidity	15 % ... 90 % (non-condensing)
Weight	approx. 1.6 kg

A 3 m CAT5 cable for connection of the Digital Call Station unit to a wall jack is included with delivery.

Features

- EN 54-16 certified

Accessories

583709 Dummy plate

584960 Mounting kit for DCSF1 or DCSF12



For mounting the Digital Call Stations DCSF1 and DCSF12 into the fire information and operating system FIOS.

Technical Data

Color	black
Dimensions	W: 240 mm H: 170 mm D: 47 mm



584961 Housing for one Fire Fighter - 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

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

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

584962 Housing for two Fire Fighter - 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

Housing including additions with 8 screws for installation of the Digital Call Stations.

Features

- Powder-coated in red, similar to RAL 3000
- Door with two 180 x 120 mm viewing windows 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

584963 Profile Half-Cylinder with Standard Closure

NEW



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.

583305.21 Fire Control PA Panel DCSF7



Features

- Five freely-programmable buttons for alarms
- One freely configurable button for the all-clear signal
- One button for resetting/acoustics
- Three integrated LED display elements (Operation, Fault, Occupied)
- Hand-held microphone with cardioid characteristics and PTT talk button
- Optional fiber optic connection for distances of up to 2000 m
- Display window and seal as per EN54-11
- Corresponds to and is tested positively by the test center for fire protection technology PSBT as per ÖNORM F 3033 Test number: FT 14/830/03/08 – sl. No. 442.03
- Optimally tailored to the requirements of the fire brigade
- Lockable metal body
- EN54-16 certified

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The Digital Fire Brigade Call Station DCSF7 serves to dial and start pre-configured alarm text messages and to broadcast freely spoken voice announcements by the fire brigade.
One Fire Brigade Call Station (FWS) needs to be installed mandatorily as per ÖNORM F 3033 with all electro-acoustic emergency systems (ENS) as per TRVB S 158 in Austria.
The Digital Fire Brigade Call Station DCSF7 is used along with ENS VARIODYN D1 and contains the hand-held microphone with talk button, operation/display elements and an in-built loudspeaker for acoustic microphone monitoring and the acoustic error message to be broadcast.
DCSF7 is connected to VARIODYN D1 via a free DAL bus of the Digital Output Module (DOM) using a standard CAT5 cable. Both the transfer of all audio and control signals and the power supply of the call station is ensured via the DAL bus and permanently monitored.

Any number of DCSF7 Digital Fire Brigade Call Stations can be operated with the VARIODYN D1. Thus, in case of evacuation, optimized evacuation of the building is guaranteed, even from different places. These transfers are subject to the necessary priorities and interlocking in ÖNORM F 3033 and TRVB S 158.
The product is authorized with the designation "Fire Brigade Call Station DCSF7 as per ÖNORM F 3033 2005" This approval is certified by a test certificate.
A DCSF7 can be broadcast with a CAT5 cable up to 300 m from an ENZ. The distance to the ENZ can be increased to 2,000 m by using optimum fiber-optic cabling.

Technical Data

Operating voltage	24 V DC
Microphone	Manual microphone, cardoid characteristic, Push-To-Talk (PTT) button
Transmission range	200 ... 12500 Hz
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

Accessories

583316.21	FO converter switchboard
583317.21	FO converter communication unit
583300.ES	Adhesive label for DCS "ESSER by Honeywell"
583318	Replacement keycaps (package of 12 pieces)

Accessories for DCS Call Stations and UIMs

583316.21 Fiber Optic Conversion for Control Unit



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

This FO converter is connect with the DAL bus cable (CAT5 cable; max. 10 m length) to an DOM or the Comprio System and with a multimode fiber optic cable to the Part No. 583317.21.

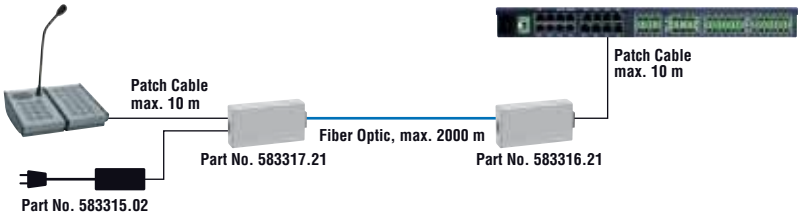
The distance between Part No. 583316.21 and 583317.21 can be up to 2,000 m. The converter is supplied with power via the DAL bus.

Features

- EN54-16 certified

Technical Data

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



583316.SM Fiber Optic Converter OIM Panel SM

NEW



Approval: requested

This FO converter is connect with the DAL bus cable (CAT5 cable; max. 10 m length) to an DOM or the Comprio System and with a singlemode fiber optic cable to the Part No. 583317.21.

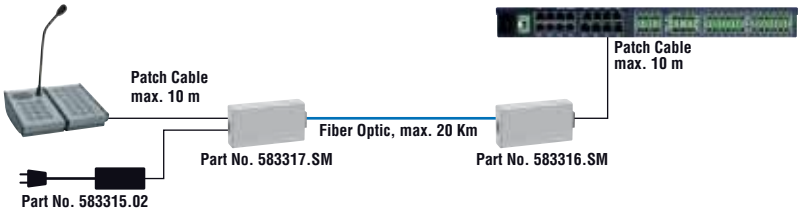
The distance between Part No. 583316.21 and 583317.21 can be up to 20 km. The converter is supplied with power via the DAL bus.

Features

- EN54-16 certified

Technical Data

Range	< 20 km



583317.21 Fiber Optic Conversion for Digital Communication Units DCS



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

This FO converter is connect with the DAL bus cable (CAT5 cable; max. 10 m length) to an DCS series call station or a UIM and with a multimode fiber optic cable to the Part No. 583316.21.

The distance between Part No. 583316.21 and 583317.21 can be up to 2,000 m. The converter is supplied with the power supply Part No. 583315.02.

Features

- EN54-16 certified

Technical Data

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

Accessories

583315.02 Power supply for FO converter

583317.SM Fiber Optic Converter DCS

NEW



Approval: requested

This FO converter is connect with the DAL bus cable (CAT5 cable; max. 10 m length) to an DCS series call station or a UIM and with a singlemode fiber optic cable to the Part No. 583316.21.

The distance between Part No. 583316.21 and 583317.21 can be up to 20 km. The converter is supplied with the power supply Part No. 583315.02.

Features

- EN54-16 certified

Technical Data

Range	< 20 km

For security-relevant installations, the voltage supply has to be provided via the voice alarm system's 24 V DC emergency power supply.

Accessories

583315.02 Power supply for FO converter

583315.02 Power Supply for Fiber Optic Converter



Power supply for FO converters Part No. 583317.21.

583307 Wall Jack for Communication Unit DCS



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

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

583311 Keyboard Cover for VARIODYN D1 DCS Communication Unit



A transparent keyboard cover is available in order to provide protection against unintentional keystrokes. This way, pressing keys is only possible with the cover open. Each cover can protect three horizontally arranged keys of a Digital Communication Unit or a Digital Key Module.

583312 Installation Kit for Communication Unit DCS

NEW



Installation kit for DCS15, DCS2 or DKM18.

Technical Data

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

Accessories

583709 Dummy plate 4 HU



583318 Key Cap



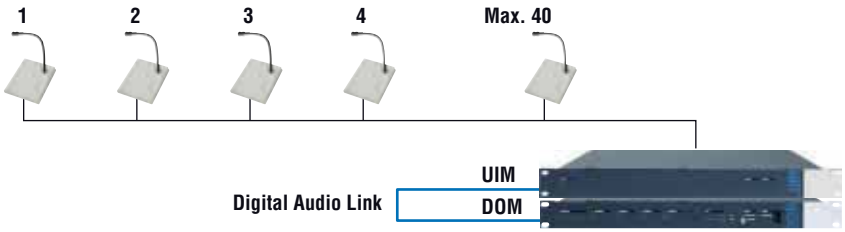
Transparent keyboard covers for DCS, DCSF and DKM call stations.

12 pieces

Call Station for Non-Safety-Relevant Applications

The DIGISystem M is a universal digital call station system for loudspeaker systems. Up to 40 call stations can be connected in parallel, while using just one AF input. Different processor-controlled functions can be assigned to the buttons, depending on the type. The user can easily adapt them to the system in question by removing several diodes or jumpers. The central control unit for the public address system does not need a receiver. The AF output should run to a UIM line input and the switching outputs to UIM contact inputs. Control line 9 is designed to trigger this function with minimum delay in order to prevent mechanical interference noise when the buttons are pressed.
The digital call stations are suitable for use in department stores, courthouses, furniture stores, DIY stores, etc.

These digital call stations are NOT approved for safety-relevant announcements, e.g. fire alarms and evacuation.



586102 Table Call Station with DIGIM1 Pregong System



Table call station with DIGI M1 pregong system in an attractive housing. One labelable button with LED indicator for button monitoring and occupied/operating/gong display. Processor control with programming via diodes. Integrated limiter and special circuit for elimination of switch-on noise. Integral +6 dB AF amplifier with volume control. Distinctive, short pregong with controls for volume and pitch. Parallel connection of up to 40 digital call stations via line JY(ST)Y6(4)x2x0.8(0.6). 3-meter connection cable with 9-pin D-Sub connector. Cardioid gooseneck microphone in electret capacitor technology.

Technical Data

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

586103 Table Call Station with DIGIM4 Pregong System



Table call station with DIGIM4 pregong system in an attractive housing. Four labelable buttons with LED indicator for button monitoring and occupied/operating/gong display. Processor control with programming via diodes. Integrated limiter and special circuit for elimination of switch-on noise. Integral +6 dB AF amplifier with volume control. Distinctive, short pregong with controls for volume and pitch.
Parallel connection of up to 40 digital call stations via line JY(ST)Y6(4)x2x0.8(0.6). 3-meter connection cable with 9-pin D-Sub connector. Cardioid gooseneck microphone in electret capacitor 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 **Flush-Mounted Box for DIGISystem Table Call Station DIGIST09**



Flush-mounted box for DIGI system table call stations with lockable 9-pin D-Sub socket including EMI/RFI filter. Quick connection via screw terminals. The socket outlet is optionally available as vertical or inclined at 30°. Complete with single frame suitable for GIRA System 55 switch range, pure white. On-wall mounting also possible using surface–mounted housing (Part No. 581329).

583371.21 **Mains Switching Unit MSU**



Features

- Three 18 A excess current switches with control contacts and control indicator light
- Low power connection and Ethernet connection to connect a service PC for maintenance purposes
- Three connections for auxiliary changeover contact per excess current switch
- Up to four devices can be connected to each excess current switch

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The Mains Switching Unit MSU serves to protect the power supply of all VARIODYN D1 components which are built into a switchboard. It also provides a plug to connect a service PC for local and network-wide servicing purposes.

Each of the up to three phases can be loaded with max. 18 A. The excess current switch automatically releases the excess current but can also be used to manually switch the voltage supply.

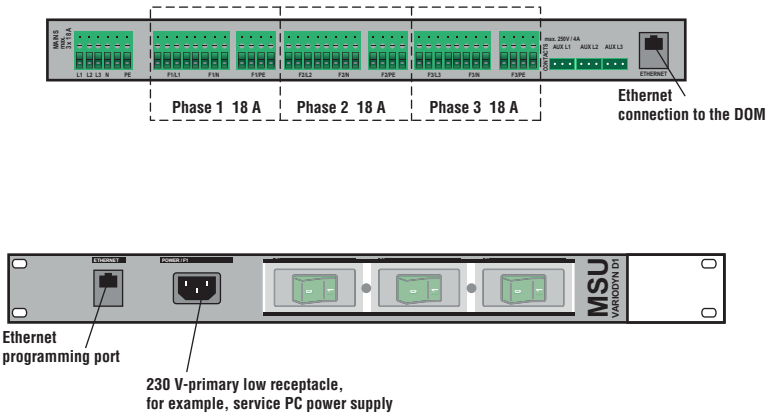
The operating conditions are indicated by green operating lights. The switch setting can be evaluated via auxiliary contacts. A frontal 230 V low power socket and an RJ45 socket are available for service PC connection.

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 HE, 19")

Accessories

583703 Mounting kit 1



MSU rear view and front view

583381.22 System Communication Unit SCU



Features

- Digital audio memory for VARIODYN D1 alarm and evacuation system
- Networkable via Ethernet
- Audio memory in compliance with all alarm and evacuation standards
- Can be used to log and record announcements Automatic temporary storage and playback of interrupted messages
- 24 V DC emergency power supply

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

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

Connected to other VARIODYN D1 modules via Ethernet and is constantly monitored. Audio memory (the availability of which is critical) for alarms and evacuation announcements occurs according to IEC EN 60849 on non-volatile flash-memory. Memory capacity is approx. two hours.

Other audio files such as announcements, signals or advertisements are pre-stored on a hard drive. The memory capacity is approx. 1000 hours.

The SCU can also be used to log and record announcements. These are also saved on the hard drive and are backed up with date, time and activation details. The automatic temporary storage allows previously undeliverable announcements to be played once the desired target is free.

Connections

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

Indicators

- Power LED, Hard Disk LED
- Error LED, Stand-alone LED

Technical Data

Emergency power supply:	
Rated voltage	24 V DC
Power consumption	32 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 ... 55 °C
Air humidity	15 % ... 90 % (non-condensing)
Color	grey, similar to RAL 7016
Weight	approx. 3 kg
Dimensions	W: 483 mm H: 44 mm D: 360 mm (1 HU, 19")

Accessories

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

583331.21 Universal Interface Module UIM



Features

- Conforms to IEC 60849/VDE 0828
- Two analog floating audio inputs/outputs
- 48 contacts as inputs and/or outputs, freely programmable
- Digital Audio Link (DAL) to DOM
- Connection of diverse disciplines possible via UIM

Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The Universal Interface Module UIM serves as an interface module of the VARIODYN D1 public address systems, connecting two analog audio inputs, two analog audio outputs as well as 48 control contacts. Monitoring for short circuiting and interruptions can be activated for eight control contacts.
The UIM can be connected to the VARIODYN D1 DOM module via the DAL databus.

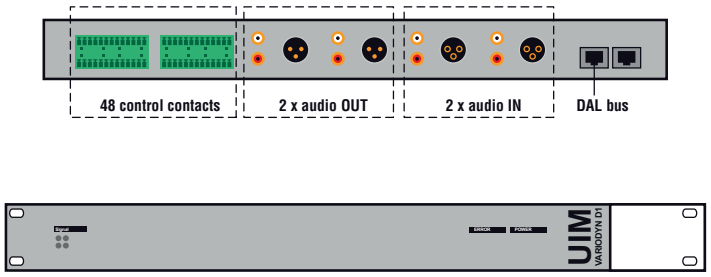
The UIM digitalizes two analog audio inputs, from for example a CD player, security system, etc., and transfers the digitalized audio data to the VARIODYN D1 DOM module via the DAL databus. Two outputs are available as analog audio sources in order for example to forward all played messages to an external device. The 48 contacts can be configured as either contact inputs or outputs. Thus the public address system can be controlled externally and information regarding the status of the public address system can be made available.

Technical Data

Audio output:	
Nominal level	0 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.05 %
Output impedance	200 Ω / 200 Ω (XLR / Cinch, potential free)
Audioinput:	
Nominal level	0 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.05 %
Load impedance	100 kΩ / 1 kΩ (XLR / Cinch, potentialfrei)
Common technical data:	
Current consumption @ 24 V DC	< 150 mA
Inputs	max. 36 V DC
Outputs	36 V DC/50 mA
Ambient temperature	-5 °C ... 55 °C
Air humidity	15 % ... 90 % (non-condensing)
Weight	approx. 3.6 kg
Dimensions	W: 483 mm H: 44 mm D: 345 mm (1 HE, 19")

Accessories

583401.21	Control cable 12 for UIM
583481	CAT5 patch cable, 1 m blue (DAL)
583482	CAT5 patch cable, 2 m blue (DAL)
583483	CAT5 patch cable, 3 m blue (DAL)
583703	Mounting kit 1



UIM rear view and front view

583351 View Control Module VCM



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The VCM was added to the VARIODYN D1 system in accordance with the requirements for EN54-16 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

583332 Overvoltage Protection Module for UIM Contacts



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The UIM has 48 contact inputs and outputs. These inputs and outputs are divided into 4 blocks with 12 inputs/outputs on each block.
On EN 54-16-compliant systems, the Overvoltage Protection Module Part No. 583332 must be used for connecting wires going to external contacts that are longer than 3 m. The Overvoltage Protection Module provides protection for 12 inputs and outputs (i.e. 1 block). It is used instead of signal cable 12 (Part No. 583401.21). It is supplied with its own connection cable.

583341.21 Contact Interface Module CIM



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The Contact Interface Module is used as a VARIODYN D1 system interface for the connection of 8 control contacts. These 8 control contacts can be configured either as inputs or outputs. When used as inputs, four of the eight contacts can be programmed to monitor lines. A 3 m long CAT5 cable for connecting CIM to the TWI-input of the DOM is included with delivery.

Features

- Input and output contacts freely programmable / 4 can be monitored
- CAT5 cabling to DOM
- Mounting via DIN rails possible
- Connection of different disciplines via CIM possible

Technical Data

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

Control contacts are listed as open-collector.

581237 Tuner/CD/MP3 Player MP02



The tuner/CD/MP3 Player combination MP02 also includes a Flashdisk reading device. The player can also be operated using the supplied remote control. The 2 audio outputs facilitate the simultaneous playback of both sources.

Technical Data

Frequency range	87.5 ... 108 MHz
Signal-to-noise ratio	> 60 dB
Harmonic distortion at the nominal level	< 0.8 %
Channel separation	> 30 dB
Transmission range	100 ... 10000 Hz
Output voltage	1.2 V DC ± 2 dB
Transmission range	20 ... 20000 Hz
Harmonic distortion at nominal level	< 0.1 %
Common technical data:	
Rated voltage	230 V AC
Power consumption	50 W
Inputs	FM 75 Ω, USB-Port, SD-Port
Outputs	1 x Cinch
Weight	approx. 3.5 kg
Dimensions	W: 482 mm H: 44 mm D: 250 mm (1 HU)

We have updated our system design and emergency power supplies to the current state of standardization in this new edition of our “Voice Alarm Systems” catalog. The following emergency power supply is certified in compliance with the EN54-4 (A2) standard which is stipulated as of August 2009 for voice alarm system emergency power supplies. Battery capacities and the number devices for the operation of a voice alarm system depend on the required delay time, the required performance, and the alarm time, among other things. To help you both easily and efficiently guarantee optimal distribution of the emergency power supply, our “VARIODYN D1 emergency power supply calculation tool” is ready for you to download in the service area of our website.

581721 Emergency Power Supply 24 V/150 A



Features

- Emergency power supply in the 2 HU body
- 3 individually secured exits for control devices (DOM)
- 6 individually secured high-performance outputs for power amplifiers
- Authorization as per EN 54-4 (A2)
- LED displays for network, battery, users
- Potential-free contacts for transmissions of fault messages
- Battery capacity up to 2 x 12 V/225 Ah
- Maximum output current in case of power failure 150 A

Approval: EN 54-4/A2

Emergency power manager for emergency power supply of ENS (Electro-acoustic Emergency Warning Systems) / VAS (Voice Alarm Systems) / VA (Voice Alarm) applications in compliance with the TRVB 158 S and/or VDE 0833-4 and EN 60849. This emergency power manager is approved according to EN 54-4/A2. (VARIODYN D1 Design)

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
Weight	approx. 6 kg
CE certificate	0333-CPD-075381
Dimensions	W: 483 mm H: 88 mm D: 395 mm (2 HU, 19")

Entry requested in EN 54-16 and VdS authorization of the VARIODYN D1.

Accessories

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

805683 External power supply DCU 2403



Approval: VdS, EN54-4

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.

Features

- Reversible output voltage 12 V DC or 24 V DC
- Output current 6 A at 12 V DC or 3 A 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
- Disengagable ground fault monitoring
- Front door with cover contact

Technical Data

Rated voltage	230 V AC
Rated frequency	50 ... 60 Hz
Output voltage	12 V DC oder 24 V DC; ± 1 % (temperature controlled)
Output current	6 A @ 12 V DC / 3 A @ 24 V DC
Battery capacity	max. 48 Ah @ 12 V DC / max. 24 Ah @ 24 V DC
Contact load relay	max. 125 V / 1,5 A / 60 VA
Ambient temperature	-5 °C ... 40 °C
Storage temperature	-20 °C ... 45 °C
Type of protection	IP30
Housing	sheet steel
Color	gray, similar to RAL 7035
Weight	approx. 23 kg incl. batteries each 12 V DC / 24 Ah
CE certificate	0786-CPD-20935
Dimensions	W: 310 mm H: 410 mm D: 211 mm

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.

Ready-made cables for connecting 12 V/24 Ah SB batteries
Housing lock with key
Accessory pack (contains: dummy cover, insert jumper for device fuses, jumper for adjusting output voltage)

Accessories

808623 esserbus alarm transponder 4 IN 2 OUT
805684.10 Adapter for DCU 2403

581730 Battery for Emergency Power Supply 12 V/105 Ah



Emergency battery (AGM) for usage in emergency power supply of VAPA applications.

Technical Data

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

Features

- Optimized for usage in 19" cabinets
- Front terminal

581731 Battery for Emergency Power Supply 12 V/150 Ah



Emergency battery (AGM) for usage in emergency power supply of VAPA applications.

Technical Data

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

Features

- Optimized for usage in 19" cabinets
- Front terminal

581732 Battery 12 V/65 Ah

NEW

Battery for emergency power supply of VAPA applications and the Comprio. Two pieces are required.

Available from Q2/2013

586116 Power Supply for Telephone Interface

NEW



Power supply for telephone interface Part No. 586115.

Technical Data

Output current	max.0.6 A

788603.10 Module housing for top-hat mounting rail



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

Technical Data

Color	green

1 x UM-profile and 2x side panels



Application example with transponder

781336 DC/DC converter output voltage 12 V DC



Features

- Direct current potentials are electrically isolated
- Voltage interface, for instance, for operating transponders connected to an extinguishing control panel 8010 Series 3 configured for 12 V DC operation
- Suitable for max 1.5 mm² connection terminals
- Short circuit resilient

Approval: VdS

This converter generates 12 V as "electrically isolated" power supply for one special detector. The input voltage of 12 V is taken from the FACP or an external power supply. This module can be integrated in cabinets (Part No. 120240, 788600, 788601 and 788603.10). Please pay attention to the primary current consumption (12 V) in case of mains failure.

Technical Data

Operating voltage	10 ... 28 V DC
Output voltage	12 V DC ± 10 %
Output current	max. 800 mA
Ambient temperature	-10 °C ... 50 °C
Storage temperature	-15 °C ... 55 °C
Type of protection	IP 40 (housing)
Weight	approx. 70 g
Dimensions	W: 65 mm H: 72 mm D: 20 mm

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

581310 Sensor Microphone for D1 AVC in 5" Built In Case Ceiling

NEW



System-tested measurement microphone for Automatic Volume Control (AVC) of the VARIODYN D1 system. This measurement microphone is decouple mounted in a 5" recessed ceiling speaker housing (type DL 130, incl. Fire dome), fits flush with the ceiling and is not visible in one of the ceiling panels. It is connected through an included 3-pin XLR plug.

Technical Data

Transmission range	40 ... 18000 Hz
Impedance	350 Ω
Weight	approx. 1 kg
Dimensions	Ø: 180 mm D: 135 mm

Available from Q2/2013

Features

- Decoupled mounting in a recessed ceiling speaker housing
- Simple, fast mounting



581316 Microphone P4, for AVR



Microphone for usage of the AVR (Automatic Volume Regulation) functionality of the DOM. The microphone is installed in the area concerned and connected to the corresponding DOM input via the XLR terminal box (Part No. 581320).

Technical Data

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

581320 Flush-Mounted XLR Panel Jack



Flush-mounted box with 3-pin / GIRA System 55 XLR panel jack.

Technical Data

Color	pure white / silk-mat

Accessories

581329 Surface-mounted box

581329 Surface-Mounted Box



Surface-mounted box for Part Nos. 581320 to 581323 / GIRA System 55

Technical Data

Color	pure white / silk-mat

Delivery time on request

583496 End of Line Module EOL



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

End of Line Module for terminating VARIODYN D1 Voice Alarm System loudspeaker lines for standardized monitoring if more than 20 loudspeakers are connected per line. The module is connected at the line end, following the last loudspeaker.

Independent of number and performance of connected loudspeakers.

Features

- Standardized monitoring
- Terminating device for 100 V loudspeaker line using 2-wire technology
- Different connection options for optimal line adaptation (3 connections)
- The module is sealed and thus has optimal moisture protection

583386.21 TWI - RS 232 Adapter



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

The TWI-RS232 adapter is used for the conversion of the TWI buses to RS232. Used for specific maintenance purposes and connection of an external system (e.g. ESSER IQ8Control).
The TWI-RS232 adapter is connected either directly to the DOM or via the supplied CAT5 cable (depending on the hardware).

Features

- EN54-16 certified

583387.21 Time Control Module TCM GPS VARIODYN D1



Approval: VdS

Part of EN54-16 approval 0786-CPD-20997

This module is meant 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 trouble 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.

Features

- Module for time synchronization of the entire VARIODYN D1 system
- Connection to an arbitrary DOM in the system is possible
- Time synchronization via GPS signal
- Connection to the system via prefabricated cable (included)

Technical Data	
Dimensions	W: 55 mm H: 25 mm D: 115 mm

Prefabricated cable included.

583390 Master Clock SC 98.47 pro



Master clock for timer control in the VARIODYN D1 system. The master clock is connected to the VARIODYN System via a UIM (Part No. 583331.21). A DCF77 time synchronization of the master clock can be carried out using the wireless receiver (Part No. 583391).

Switching Control / Signal Clock

- 4 switching and/or signal circuits
- Day, week and year settings
- 300 units of memory
- Switching functions, ON, OFF, or Pulse
- Shortest switching distance of 1 minute (and/or 1 sec. with pulse)
- Switching capacity of 10 A per channel
- Manual switching override
- Adjustable switching times
- Block formation of weekdays and switching functions
- Programmable without mains connection (via keyboard or with data key)
- PC programmable option

Features

- For approx. 40 slave clocks (24 V DC, 300 mA, pole changing)
- Slave clock line protected against short-circuiting
- Automatic setting of slave clocks
- Slave clock line follow-up device with voltage recovery (automatic setting of slave clock time)
- Fully automatic daylight saving time change with 60 additional pulses and/or pulse suppression
- Monitoring of slave clock line and error indication in display
- PIN encryption security
- Illuminated display
- “Data key” function “DCF” function

583391 Wireless Receiver FU 20.00 pro



DCF77 wireless receiver for connection to the master clock (Part No. 583390). Up to 10 master clocks can be connected in parallel.

The DCF77 signal is sent from Mainflingen (near Frankfurt on the Main). Under normal conditions, the signal range of the FU 20.00 pro receiver is approx. 1500 kilometers.

Features

- Reception of the DCF77 telegram
- Time and date are automatically fed into the timer switches
- Daylight savings time adaptation via the DCF telegram
- Control light flashes when receiving
- Easy mounting, case is rotatable in the mounting bracket
- Feed line: 2-wire, no shielding, selectable cross-section
- Max. line length of 200 m between FU 20.00 pro and SC 98.47 pro

583392 FO Switch for Ethernet Ring, multimode



Approval: VdS

Part of EN 54-16 approval 0786-CPD-20997

The fiber optic switch is used for the creation of an Ethernet network in loop design. Due to the loop structure the network is fully redundant since the other side of the loop can be used for communication in the case of a fiber optic fiber break. Furthermore each switch is equipped with two operating voltage inputs (24 V DC) and a relay for the forwarding of fault messages.

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

Features

- Authorization EN 54-16
- 6 Ethernet connections
- One relay for the forwarding of fault messages contact load 24 V DC / 1 A
- 2 duplex SC FO 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

583393 FO Switch for Ethernet Ring, single mode



Approval: VdS

As 583392 but for single mode fibre 9/125µm and 10/125 µm.
Entry requested in EN 54-16 and VdS authorization of the voice alarm system VARIODYN D1.

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	IP30
Dimensions	W: 54 mm H: 135 mm D: 105 mm

Features

- Authorization EN 54-16
- 6 Ethernet connections
- One relay for the forwarding of fault messages contact load 24 V DC / 1 A
- 2 duplex SC FO connections

586115 Doormaster Smart PAL Telephone



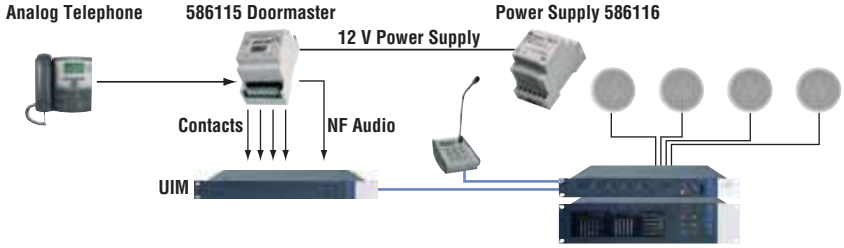
The Doormaster Smart PAL telephone interface is used for recording announcements via an analog telephone system into the VARIODYN D1 Voice Alarm System. Up to 4 different call circuits or areas can be addressed via the telephone system. For this purpose, 1 + 4 control contacts are available for switching on and/or area selection.
The telephone interface is connected to VARIODYN D1 via control inputs and an audio input of UIM Part No. 583331.21. The 12-V operating voltage can be generated from the 24-V emergency power supply with the voltage converter Part No. 781336 available in the voice alarm system. The voltage converter can be assembled in the body Part No. 788603 on the C-track in the standing cabinet.
Programming is done with MFV post-dialing; the device can also be administered remotely in this manner.

Technical Data

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

Accessories

586116 Power supply for Telefone interface



586116 Power Supply for Telephone Interface

NEW



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 VoIP- or ISDN Gateway

NEW



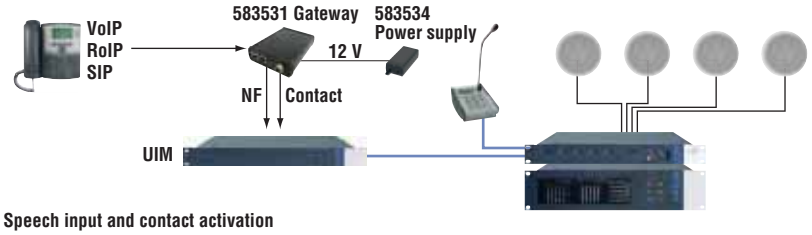
VoIP or ISDN transmission system for units with analog listening and speech channels (e.g. radio base stations, loudspeakers, headsets etc.)

Technical Data

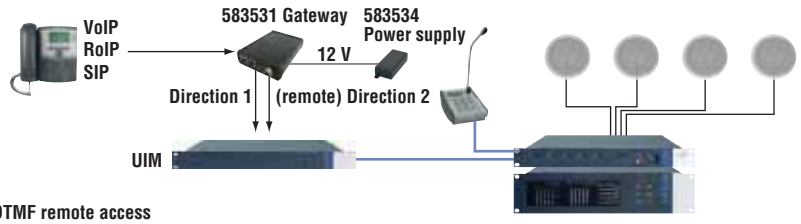
Operating voltage	18 ... 42 V DC
Dimensions	W: 109 mm H: 35 mm D: 185 mm

Accessories

583534 PSE (PoE-Injektor 802.3af) for ULE-614



Speech input and contact activation



DTMF remote access

Features

- Automatic call answering
- Automatic dialing
- Send and receive contact
- Power supply via PoE or ISDN
- Aluminum housing for table/wall mounting

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

NEW



Powered via the Ethernet cable, if no food rich IP-Switch is available. Also suitable for the power supply of the ULE-614 in non-powered ISDN line 230 V AC, 16 W m cable incl. connectors and RJ45 patch cord.

Only a TWI RS 232 adapter (Part No. 583386.21) is required for the VARIODYN D1 when connecting it to an essernet-compatible fire alarm system, such as from the IQ8Control and FlexES Control series.

You can see below the components necessary for the fire alarm system regarding such a connection.

A fully redundant data connection can also be established. For this, at least two DOM and two SEI are necessary.

Connection of a fire detector control unit to a VARIODYN D1 system

784856 **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)

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.

Accessories

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

772386 **Interface module RS 232/V 24**



For the serial essernet interface for a max. length of 15 m.

788606 **Housing kit**



Housing for the serial essernet interface.

784840.10 **essernet module, 62.5 kBd**



Network interface module for up to 16 network users (e.g. panels respectively SEI). Protocol: similar to DIN 19245 - 1 (Profibus). Topology: loop structure, short circuit and open circuit resistant.

784841.10 **essernet module, 500 kBd**



Same as 784840.10, but for a maximum of 31 network users (e.g. panels respectively SEI).

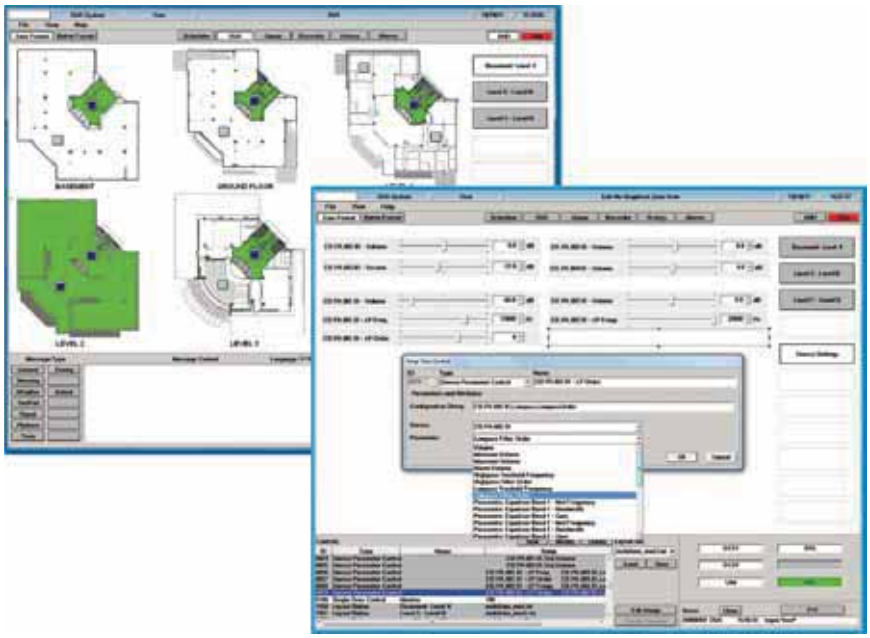
Features

- Multiple PAMMI on one server
- Server computer in redundant design with automatic switchover possible
- Control of VARIODYN D1 and its predecessor system VARIODYN D1 3000 from one central control panel
- Interface to different display systems (depending on manufacturer)
- Interface to automatic train control (depending on manufacturer)
- Interface to SCADA (depending on manufacturer)
- Interface to radio and telephone via DTMF
- Display system status (such as error messages)
- Graphical overview of zones and zone selection
- Display of occupied zones
- Storage of text blocks/alarms (in connection with SCU)
- Audio database for announcements
- Composition of automatic announcements ("Flight - LH3434 - to Vienna - is ready for boarding")
- Multiple languages with variables in different orders
- Scheduler for timed repetition of announcements (once, twice etc.)
- Live announcements (in combination with VARIODYN D1 call station on the PAMMI)
- Start music
- Logging for announcements, error messages, alarms etc.
- Secure user administration against unauthorized access
- Priority control
- Instant message (recording of announcement and repeated playback)
- Preview of recordings before output
- Simple, convenient programming, commissioning and use through Windows interface

The VARIODYN D1 PAMMI management system for the simple, convenient display of system information on the VARIODYN D1 and for the operation and use of the voice alarm or announcement system. It is installed as a software application on a personal computer with the Windows operating system and offers ideal flexibility and freedom in operation and use.
The graphical user interface can be custom designed in any way desirable and practical for the specific facility. Whether list views, building plans or other graphical views are desired, with PAMMI it can all be done quickly and easily.
This allows the entire voice alarm and announcement system to be operated and controlled from one or more places. This is provided by the proven server/client structure of PAMMI. Particularly for facilities like airports, train stations, distributed industrial plants, hotels, shopping centers etc., this offers great advantages and savings potential.

PAMMI = Public Address Man-Machine Interface

This product offers such extensive functionality that this description can only provide a brief overview. In any case, a comprehensive discussion with our specialists will be worthwhile.



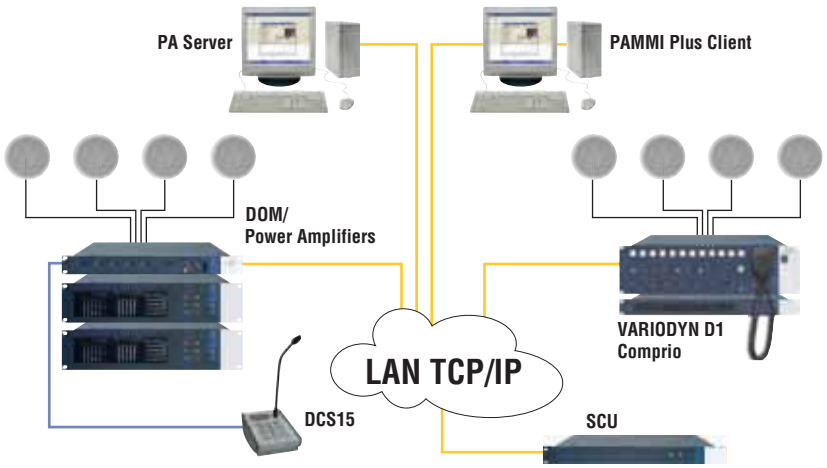
583651 PAMMI Plus PA Server

NEW

Features

- Checking and monitoring of alarms and evacuation
- Checking and monitoring of announcements and other audio notifications, scheduling of announcements
- Interface to other systems in facility
- Display and checking of system status of the VARIODYN D1 system
- Software license including USB dongle

The PAMMI Plus server application is the core of the VARIODYN D1 PAMMI Plus management system. It is used for system control and communication with the components of the VARIODYN D1 Voice Alarm System and the PAMMI Plus clients via Ethernet. The PAMMI Plus server manages and controls the announcements and audio notifications from different PAMMI Plus clients, time-dependent notifications. Furthermore, it is often possible to integrate the systems in the facility, such as flight control systems, personal information systems, train control systems, text-to-speech systems, into the PAMMI Plus management system. In addition to our current voice alarm and announcement system VARIODYN D1, of course, existing VARIODYN D1 3000 systems can also be integrated. Here, too, we are fully backwards compatible, just as for our own equipment. In parallel with the PAMMI Plus server, another PC can also be operated in hot standby, and the system can switch over to it in an emergency. That gives us a fully redundant solution with optimum failure safety.



583652 PAMMI Plus Client

NEW

Features

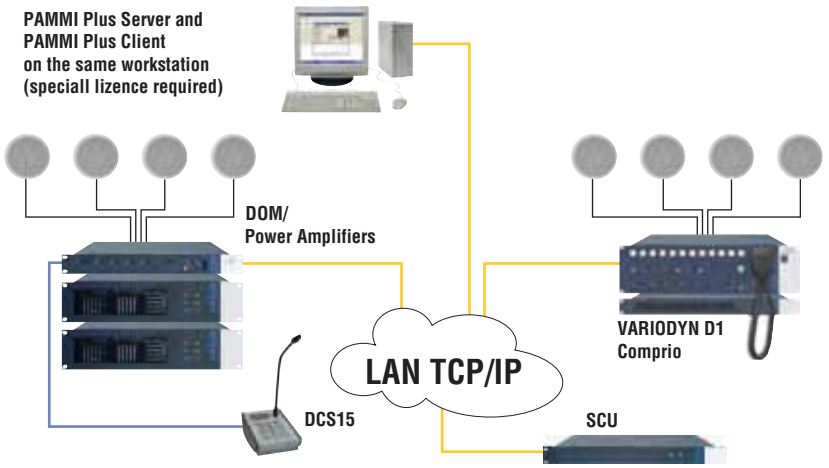
- Graphical user interface
- Checking and monitoring of alarms and evacuation
- Checking and monitoring of announcements and other audio notifications, scheduling of announcements
- Volume and noise control
- Zone selection
- Log book for documentation of executed functions
- Display and checking of system status of the VARIODYN D1 system
- Software license including USB dongle

The PAMMI Plus client application is a PC workstation with which input can be made to PAMMI Plus and information retrieved. The PAMMI Plus client is the graphical user interface or control console. The PAMMI Plus client is connected via Ethernet to the PAMMI Plus server and can be set up in a customer-specific way. Multiple PAMMI Plus clients can be operated with one PAMMI Plus server.
In connection with the intercom of a VARIODYN D1 system, PAMMI Plus clients can be used to output and control live voice messages and buffered messages. Thus, the user can record the message and then check it, for example. After checking the message, it can then be output. This prevents the risk of incorrect or poor-quality live announcements.

583653 **PAMMI Plus Server/Client**

NEW

Combination of PAMMI Plus server Part No. 583641 and client software Part No. 583642, so that the entire PAMMI Plus management system can be operated on one PC with full functionality.
This software includes the complete functionality of PAMMI Plus server Part No. 583641 and client Part No. 583642. Software license including USB dongle.



583615 **Creation of Graphical Loudspeaker Zones**

NEW

Creation of the graphical loudspeaker zone layout for up to 10 zones.

583616 **Expansion by 20 Loudspeaker Zones**

NEW

Expansion of a graphical loudspeaker zone layout by up to 20 loudspeaker zones.

583617 **Documentation Associated with PAMMI Plus**

NEW

Documentation of the project-specific PAMMI Plus system in connection with ordering a PAMMI Plus server Part No. 586341.

583618 **Expansion by 20 Loudspeaker Zones**

NEW

Expansion of the PAMMI Plus by up to 20 loudspeaker zones in a new layer.

583619 **Creation of a 10 Loudspeaker Zone Layout**

NEW

Creation of a layout for up to 10 loudspeaker zones, including audio information.

583620 **Expansion by 10 Loudspeaker Zones**

NEW

Expansion of the PAMMI Plus by up to 10 loudspeaker zones, including audio information.

583532 **PAMMI Plus Switch Box WRS D1**

NEW

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.

Available from Q2/2013

Our VARIODYN D1 Voice Alarm System offers the option of a data connection to media control systems and touch link panels by Extron. To do this, a special driver was developed, by means of which this connection can be made simply and conveniently. Projects in which a voice alarm system and a media control system are required can be optimally implemented. It is also possible to provide the displays and controls for the VARIODYN D1 on a touch link panel.
If support is desired or needed when setting up or servicing this connection, please contact our technical service department.

583515 **Driver Extron Media Control**

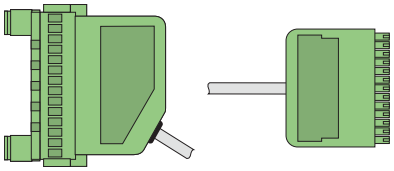
NEW

Software driver to connect an Extron Media Controller and/or touch link panels.



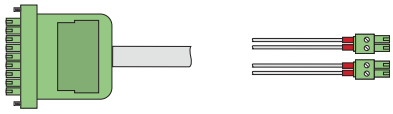
Available from Q4/2013

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.

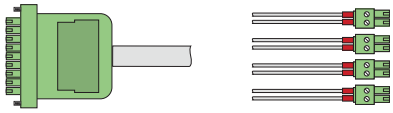
583422.21 **Backup Cable RC 22 VARIODYN D1**



Prefabricated cabling of 2 auxiliary channels to 4 bearer channels.

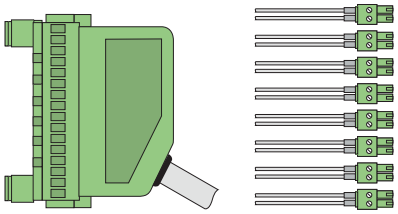
583444 **Backup Cable RC 44 VARIODYN D1**

NEW



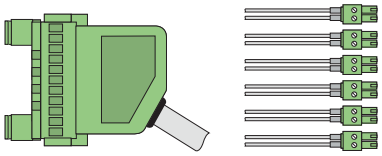
Prefabricated cabling of 4 auxiliary channels to 4 bearer channels.

583451.21 **Cable for Cabinet Rear Panel DOM4-8**



Prefabricated cabling of the 100 V-outputs of the DOM4-8 to the cabinet rear panel; 1 piece is connectable per DOM4-8. Also suitable for the cabling of the switch contacts of the DOM4-x to the cabinet rear panel.

583452.21 **Cable for Cabinet Rear Panel DOM4-24**



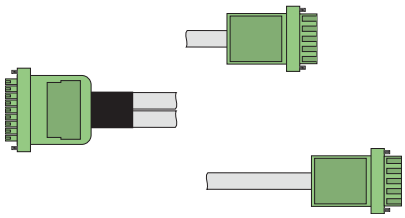
Prefabricated cabling of the 100 V outputs of the DOM4-24 to the cabinet rear panel; up to 4 pieces connectable per DOM4-24.

583476.21 **Output Cable Amplifier - DOM**



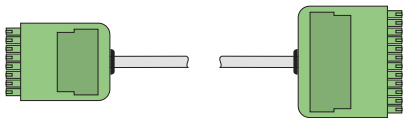
Prefabricated cabling of power amplifiers, 2 channels (max. 100 V) to the DOM.

583477.21 **Output Cable 2 Amplifiers - DOM**



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

583471.21 **Input Cable DOM (G1) - XV Amplifier (G1)**



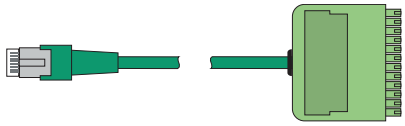
Prefabricated cabling from DOM to power output amplifier, 2 channels (LF, control).

583472.21 **Input Cable DOM (G1) - Amplifier (as of G2)**



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

583473.21 **Input Cable DOM (as of G2) - Amplifier (G1)**



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

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 **CAT5 Patch Cable, 1 m yellow (Ethernet)**

NEW



583467 **CAT5 Patch Cable, 2 m yellow (Ethernet)**

NEW



583469 **CAT5 Patch Cable, 3 m yellow (Ethernet)**

NEW



583489 **XLR Cable 1 m, Plug - Socket, length 1 m**



Audio connection line with XLR plug and XLR socket, e.g. for connecting an external audio device to the UIM.

583490 **XLR Cable 10 m, Plug - Socket, length 10 m**



Audio connection line with XLR plug and XLR socket, e.g. for connecting an external audio device to the UIM.

583491 **Input Cable DOM Amplifier, 0.5 m green**



Prefabricated cable from the DOM to the 2-channel power amplifier.

583492 **Audio Connection Line, length 1.8 m**



Audio cable, stereo cinch.

581340 **Peripheral Clip for Top Hat Rail**

NEW



Adapter box for connection of peripheral components, such as analog microphones, to the VARIODYN D1. The incoming installation cable is connected directly to the installation box. The cable shield of the installation cable can also be connected in the adapter box.
The output of the adapter box is directly connected with a pluggable connector cable (Part No. 583466, 583467 or 583469) to the corresponding input on the VARIODYN D1. The connection pinouts for the individual applications are listed in the VARIODYN D1 installation instructions (Part No. 798663).





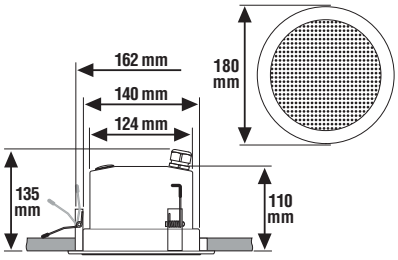
Loudspeaker with EN54-24 Certificate

Ceiling Speakers	54-58
Wall Surface Mounted Speakers	59-60
Horn Speaker	61-62
Soundprojector	63

In comparison to the first edition of our “Voice Alarm Systems” catalog we have significantly expanded and optimized our portfolio of loudspeakers. You will find all the relevant technical data in this chapter so that you can optimally and efficiently use these loudspeakers in your projects. Moreover, a planning handbook is available for you for download in the service area of our homepage. This handbook contains comprehensive calculation principles, planning examples, value tables and comments/tips on the standards and guidelines currently valid.

582400 Recessed Ceiling Loudspeaker DL 06-130/T-EN54





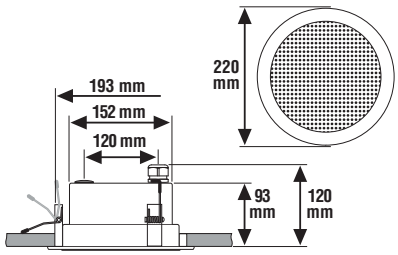
Approval: EN54-24

Modern ceiling installation loudspeaker in plastic-coated metal design (RAL 9010) with high efficiency and moisture-proof broadband loudspeaker chassis, certified as per EN54-24.
DL 06-130/T-EN54 (130 mm chassis) has a maximum power of 6 W and can be modified to 3 W or 1.5 W if required. Spring clamps with cropped leg spring, increased clamp force and shortened tension distance allow you to assemble it quickly and easily. A smart inner ring mounting prevents the grille from collapsing even under high load due to environmental influences. For additional safety, this EN54-24 ceiling installation loudspeaker is equipped with a ceramic clamp and thermal fuse, and fitted with a fire dome. It has a PG16 cable outlet and blind cover. The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through.

Delivery time on request

582401 Recessed Ceiling Loudspeaker DL 06-165/T-EN54





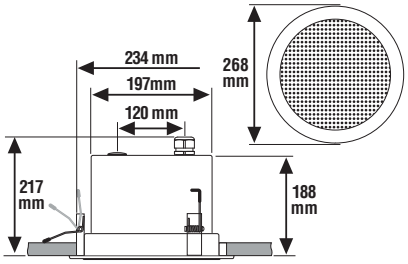
Approval: EN54-24

Modern ceiling installation loudspeaker in plastic-coated metal design (RAL 9010) with high efficiency and moisture-proof broadband loudspeaker chassis, certified as per EN54-24.
DL 06-165/T-EN54 (165 mm chassis) has a maximum power of 6 W and can be modified to 3 W or 1.5 W if required. Spring clamps with cropped leg spring, increased clamp force and shortened tension distance allow you to assemble it quickly and easily. A smart inner ring mounting prevents the grille from collapsing even under high load due to environmental influences. For additional safety, this EN54-24 ceiling installation loudspeaker is equipped with a ceramic clamp and thermal fuse, and fitted with a fire dome. It has a PG16 cable outlet and blind cover. The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through.

Delivery time on request

582402 Recessed Ceiling Loudspeaker DL 10-200/T-EN54



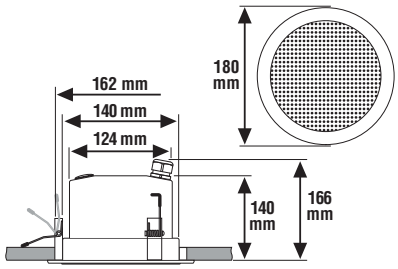


Modern ceiling installation loudspeaker in plastic-coated metal design (RAL 9010) with high efficiency and moisture-proof broadband loudspeaker chassis, certified as per EN54-24.
DL 10-200/T-EN54 (200 mm chassis) has a maximum power of 10 W and can be modified to 6 W, 3 W or 1.5 W if required. Spring clamps with cropped leg spring, increased clamp force and shortened tension distance allow you to assemble it quickly and easily. A smart inner ring mounting prevents the grille from collapsing even under high load due to environmental influences.
For additional safety, this EN54-24 ceiling installation loudspeaker is equipped with a ceramic clamp and thermal fuse, and fitted with a fire dome. It has a PG16 cable outlet and blind cover. The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through.

Delivery time on request

582403 Recessed Ceiling Loudspeaker DL 20-130/T-EN54



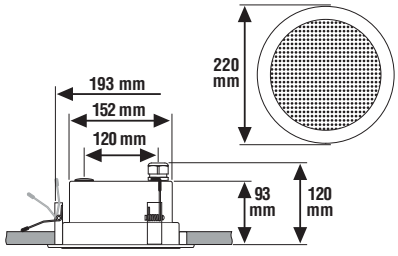


Modern ceiling installation loudspeaker in plastic-coated metal design (RAL 9010) with high efficiency and moisture-proof broadband loudspeaker chassis, certified as per EN54-24.
DL 20-130/T-EN54 (130 mm chassis) has a maximum power of 20 W and can be modified to 15 W, 10 W or 5 W if required. Spring clamps with cropped leg spring, increased clamp force and shortened tension distance allow you to assemble it quickly and easily. A smart inner ring mounting prevents the grille from collapsing even under high load due to environmental influences.
For additional safety, this EN54-24 ceiling installation loudspeaker is equipped with a ceramic clamp and thermal fuse, and fitted with a fire dome. It has a PG16 cable outlet and blind cover. The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through.

Delivery time on request

582404 Recessed Ceiling Loudspeaker DL 10-165/T plus-EN54





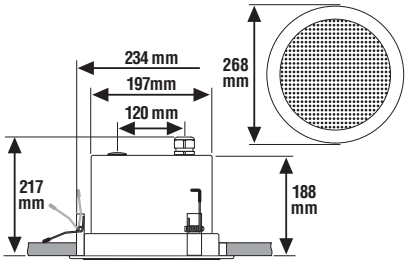
Approval: EN54-24

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.

Delivery time on request

582405 Recessed Ceiling Loudspeaker DL 20-200/T plus-EN54





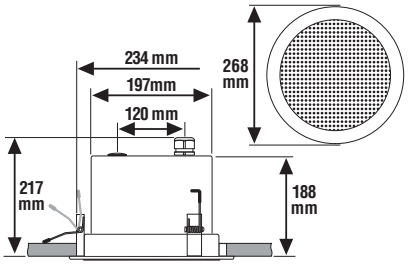
Approval: EN54-24

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 20-200/T plus-EN54 (200 mm chassis) has a maximum power of 20 W and can be modified to 15 W, 10 W or 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.

Delivery time on request

582406 Recessed Ceiling Loudspeaker DL-AB 06-200/T-EN54





The A/B line ceiling installation loudspeaker for voice alarms is certified as per EN54-24 and offers maximum safety for voice alarm projects.
The DL-AB 06- 200/T-EN54 is equipped with two mutually independent chassis's and two 100 Volt output transformers and enables cost-effective supply via two separate (A/B) lines. In case one line fails, the area can continue to be ensonified due to the loudspeaker redundance. Both the A and B lines are available for each installation position, which thus provides redundance.
The ceiling installation loudspeaker DL-AB 06-200/T-EN54, made up of power-coated metal (in RAL 9010) has 2 x 6 W power, can be modified to 2 x 3 W or 2 x 1.5 W and is equipped with a fire dome. It has a PG16 cable outlet and blind cover.
The fire dome prevents the suction action of the chimney effect with suspended ceilings in case of fire, after some of the loudspeaker membrane has been burnt through. The product standard IP54, 24 guarantees operational safety even under difficult ambient conditions. Both A/B line loudspeakers are respectively equipped with 2 integrated ceramic clamps and 2 thermal fuses. The chassis's are protected durably against the action of moisture.

Delivery time on request

582407 Ceilling Speaker DL-E 06-130/T-EN

NEW



EN54-24 approval pending

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

Ready-to-install recessed ceiling loudspeaker

Likely to be available for shipping from Q2/2013

Accessories

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

582407.FD Firedome for Ceiling Speaker Part No. 582407

NEW



EN54-24 approval pending

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

Likely to be available for shipping from Q2/2013

Features

- Fire dome in combination with Part No. 582407 is EN54-24 certified.

582407.SAFE Ceilling Speaker DL-E 06-130/T-EN.SAFE

NEW



EN54-24 approval pending

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

Likely to be available for shipping from Q2/2013

Accessories

582407.FD Fire dome (FE 130.1)

582408 Ceilling Speaker DL-E 06-165/T-EN

NEW



EN54-24 approval pending

This novel EN54-24 certified recessed ceiling loudspeaker for metal ceilings (RAL 9010) visually blends into the ceiling due to its flat design. The moisture-impregnated 6.5" broadband loudspeaker chassis is characterized by high efficiency. Adaptation to 6 W, 3 W or 1.5 W is implemented in the usual form on the loudspeaker. The spring-loaded connector (two included) guarantees simple, quick mounting in the ceiling. By default, a plastic protective cover is mounted on the back of the loudspeaker, but a fire dome, which is also EN54-24 certified, is available as well. If the loudspeaker will be used as specified by BS 5839-8, it is also possible to order and install an optional thermal fuse as well as a ceramic connector clamp (also EN54-24 certified)

Ready-to-install recessed ceiling loudspeaker

Likely to be available for shipping from Q2/2013

Accessories

582408.FD Fire dome (FE 165.1) for recessed ceiling loudspeaker Part No. 582408
581286 Ceramic clip and thermal fuse

582408.FD Firedome for Ceiling Speaker Part No. 582408

NEW



EN54-24 approval pending

Fire dome (FE 165.1) for the 6" recessed ceiling loudspeaker (Part No. 582408) for increasing passive safety levels. This fire dome, together with the recessed ceiling loudspeaker above, is EN54-24 certified. The fire dome prevents chimney effect drafts through suspended ceilings in case of fire, should the speaker diaphragm burn through.

Likely to be available for shipping from Q2/2013

Features

- Fire dome in combination with Part No. 582407 is EN54-24 certified

582408.SAFE Ceilling Speaker DL-E 06-165/T-EN.SAFE

NEW



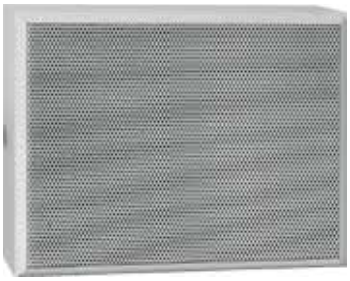
This novel EN54-24 certified recessed ceiling loudspeaker for metal ceilings (RAL 9010) visually blends into the ceiling due to its flat design. The SAFE variant has a ceramic connector clamp and thermal fuse mounted at the factory. The moisture-impregnated 6.5" broadband loudspeaker chassis is characterized by high efficiency. Adaptation to 6 W, 3 W or 1.5 W is implemented in the usual form on the loudspeaker. The spring-loaded connector (two included) guarantees simple, quick mounting in the ceiling. By default, a plastic protective cover is mounted on the back of the loudspeaker, but a fire dome, which is also EN54-24 certified, is available as well. This is also required to mount these SAFE in projects that require use in compliance with BS 5839-8.

Likely to be available for shipping from Q2/2013

Accessories

582408.FD Fire dome (FE 165.1)

582420 Wall Surface Mount Speaker WA 06-165/T-EN54

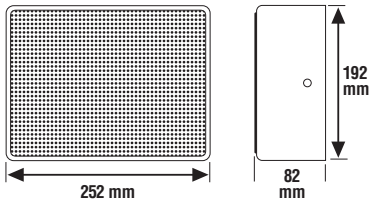


Approval: EN54-24

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

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

Delivery time on request

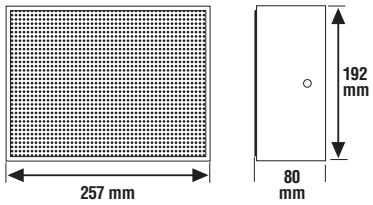


582421 Wall Surface mount Speaker WA 06-165/T Metal-EN54

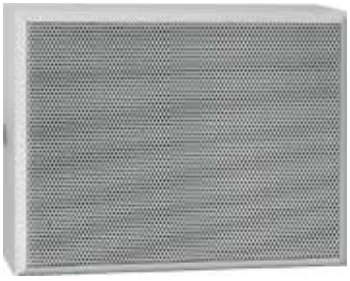


WA-06-165/T metal EN 54 is a vandal-proof wall-mounted loudspeaker designed entirely in metal with a maximum power of 6 W. It can be modified to 3 W or 1.5 W if required. Very good speech intelligibility is ensured by the 165 mm broadband chassis. The corrosion-resistant powder-coating (RAL 9010) ensures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

Delivery time on request

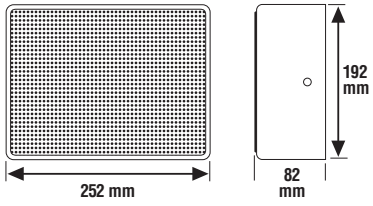


582422 Wall Surface Mount Speaker WA-AB 06-100/T-EN54



The A/B line wall-mounted loudspeaker for voice alarms is certified as per EN54-24 and offers maximum safety for voice alarm projects.
The WA-AB 06- 100/T-EN54 is equipped with two mutually independent chassis's and two 100 Volt output transformers. It enables the cost-effective power supply of the two separate (A/B) lines. In case one line fails, the area can continue to be ensonified due to the loudspeaker redundance. Both the A and B lines are available for each installation position, which thus provides redundance. The wall-mounted loudspeaker WA-AB 06-100/T-EN54 has 2 x 6 W power and can be modified to 2 x 3 W or 2 x 1.5 W. The high-density MDF wooden body (white) ensures low-resonance sound, the simple assembly is done via screw connectors with the rear panel. It has a PG16 cable outlet and blind cover. The product standard IP54, 24 guarantees operational safety even under difficult ambient conditions. Both A/B line loudspeakers are respectively equipped with 2 integrated ceramic clamps and 2 thermal fuses. The chassis's are protected durably against the action of moisture.

Delivery time on request

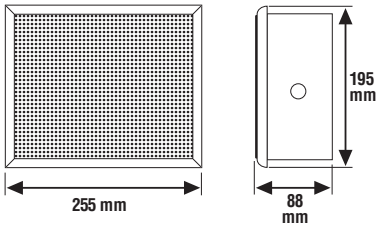


582425 Wall Flush Mount Speaker WU 06-165/T-EN54



The white WU 06-165/T EN has been especially developed for flush-mounted installations. The stable, rectangular flush-mounted wall loudspeaker with stable lattice grille made of steel plates is also attractive due to its decent Softline Look. It has a maximum power of 6 W, and can be modified to 3 W or 1.5 W if required. A high-quality 165 mm broadband loudspeaker chassis ensures balanced sound dynamics.
The loudspeaker is protected against dust and other environmental influences by an impact-resistant, ABS flush-mounted black plastic body. The loudspeaker is equipped with an integrated ceramic clamp and thermal fuse. In addition, the loudspeaker chassis's are protected against the action of moisture.

Delivery time on request



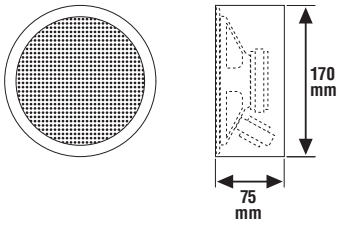
582423 Wall Surface Mount Speaker DL-A 10-165/T-EN54



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

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

Delivery time on request



582424 Wall Surface Mount Speaker DL-A 10-200/T-EN54

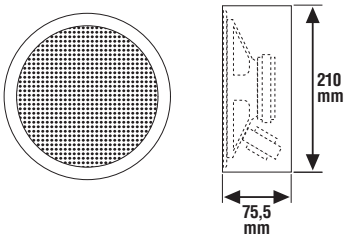


Approval: EN54-24

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

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

Delivery time on request

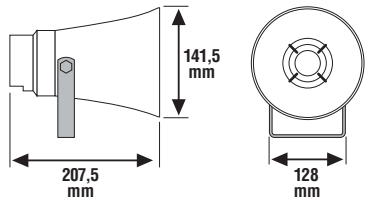


582430 Horn Loudspeaker DK 10/T EN54



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.

Delivery time on request



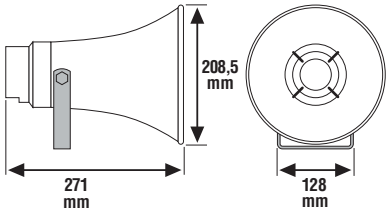
582431 Horn Loudspeaker DK 15/T EN54



Approval: EN54-24

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.

Delivery time on request

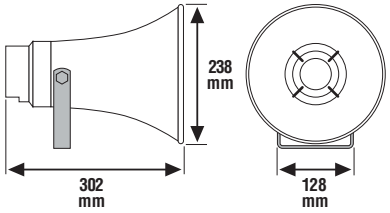


582432 Horn Loudspeaker DK 30/T EN54



The horn loudspeaker, DK 30/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, 30 W, 20 W, 10 W, 5 W. The DK 30/T-EN54 is also suitable for use in outdoor areas.

Delivery time on request

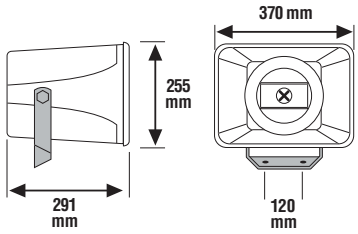


582433 **Horn Loudspeaker DK-MH 30/T plus-EN54**



The 2-way music horn DK-MH 30/T plus-EN54 with impact-resistant ABS light gray body (similar to RAL 7035) and protection class IP66 enhances the horn series for voice alarms. For more safety, the loudspeaker is additionally equipped with a thermal fuse. Enormous acoustic pressure and very good music quality are persuasive features, as well as the simple and flexible assembly for the rust-free universal aluminum bracket. The flexible power modification can easily be done at the rear of the loudspeaker, 30 W, 15 W, 7.5 W, 3.75 W. The DK MH30/T plus-EN54 is also suitable for use in outdoor areas.

Delivery time on request

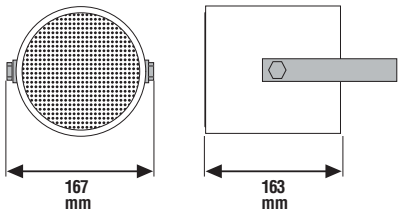


582440 Soundprojector DA-S 10-130/T EN54



The DA-S 10-130/T-EN54 sound projector with a 130-mm broadband loudspeaker chassis has high stability, is high-performance and certified as per EN54-24. Due to its good speech intelligibility, this sound projector is especially suitable for applications in corridors and work floors. Equipped with ceramic clamps and thermal fuse, the sound projectors meet the highest safety requirements. The sound projector has a maximum power of 10 W and can also be modified to 6 W, 3 W and 1.5 W. The chassis's of the sound projectors are best protected against humidity due to their special construction choice of material and production details. The DA-S sound projector with IP65 are completely made of robust aluminum and additionally plastic-coated with RAL 9010. Corrosion can thus not occur. Optionally, you can get a mast bracket (Part No. 581281) for the DA-S 10-130/T-EN54 for a mast diameter of about 200 mm.

Delivery time on request.

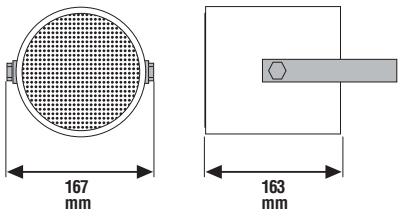


582441 Soundprojector DA-S 20-130/T EN54



Approval: EN54-24

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



Notes

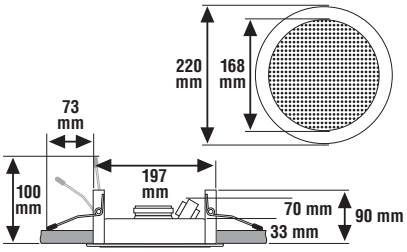


Standard-Loudspeaker

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581254 Ceiling Loudspeaker EDL 06-165/T





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

Technical Data

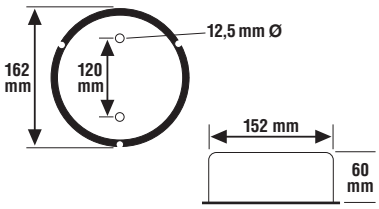
Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
SPL Pmax / 1 m	105.7 dB
SPL 1 W / 1 m	97.9 dB
Transmission range	100 ... 16000 Hz
Dispersion angle	180°
Color	white, similar to RAL 9010
Weight	approx. 1.3 kg
Dimensions	Ø: 220 mm D: 100 mm

Accessories

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

581255 Fire Dome (EF 165) for Ceiling Loudspeakers Part No. 581254





Fire dome (EF 165) for recessed ceiling loudspeakers (Part No. 581254) for increasing level of passive safety. The fire dome prevents suction in the chimney effect present with suspended ceilings should a fire occur after a possible blowing out of the loudspeaker membrane.

Technical Data

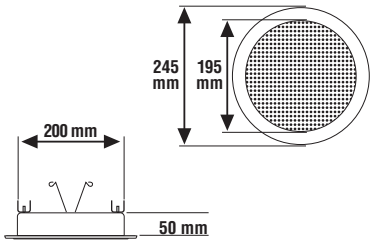
Color	black
Weight	approx. 0.35 kg
Dimensions	Ø: 162 mm D: 61 mm

The fire dome is not suitable as a concrete built-in dome.

Delivery time on request

581250 AB Recessed Ceiling Loudspeaker EDL-EN 06-200/T





The AB bayonet recessed ceiling loudspeaker (EDL-EN 06-200/T) is designed with two independent chassis and transformers and facilitates the cost-effective supply via two separate (A/B) lines.

Should one line fail, the area can still be provided with audio in compliance with VDE 0833-4 due to the loudspeaker-redundancy. Each installation position includes the A as well as the B line and so prevents any failure situation. This standardized loudspeaker is equipped with 2 integrated ceramic terminals and 2 thermal fuses.

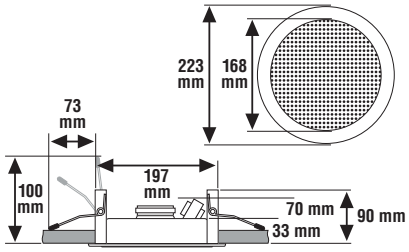
Technical Data

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
SPL Pmax / 1 m	109.8 dB
SPL 1 W / 1 m	93.6 dB
Transmission range	120 ... 20000 Hz
Dispersion angle	145°
Color	white, similar to RAL 9010
Weight	approx. 1.75 kg
Dimensions	Ø: 267 mm D: 100 mm

Delivery time on request

581282 Ceiling Loudspeaker, EDL 10-165/T





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

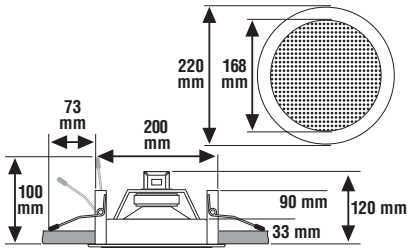
Technical Data

Loading capacity	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
SPL Pmax / 1 m	107.5 dB
SPL 1 W / 1 m	97.5 dB
Transmission range	100 ... 17000 Hz
Dispersion angle	177°
Color	white, similar to RAL 9010
Weight	approx. 1.35 kg
Dimensions	Ø: 220 mm D: 100 mm

Delivery time on request

581283 Ceiling Loudspeaker, EDL 10-165/T plus / 2-ways system





The bayonet recessed ceiling loudspeaker made of powder-coated metal in white (RAL 9010) offers excellent sound thanks to modern 2-way technology and its impressively small built-in depth.

Spring-loaded snap lock with cranked leg spring, increased clamping strength and shorter tension interval facilitate fast and easy mounting. Flush installation is possible even with suspended ceilings.

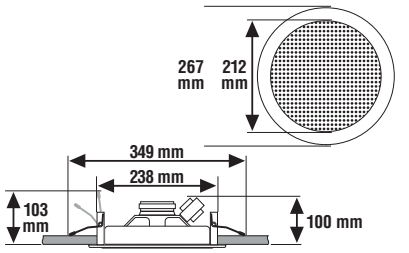
Technical Data

Loading capacity	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
SPL Pmax / 1 m	104 dB
SPL 1 W / 1 m	94 dB
Transmission range	63 ... 20000 Hz
Dispersion angle	180°
Color	white. similar to RAL 9010
Weight	approx. 1.66 kg
Dimensions	Ø: 220 mm D: 119 mm

Delivery time on request

581284 Ceiling Loudspeaker, EDL 20-200/T plus / 2-way system





The bayonet recessed ceiling loudspeaker made of powder-coated metal in white (RAL 9010) offers excellent sound thanks to modern 2-way technology and its impressively small built-in depth.

Spring-loaded snap lock with cranked leg spring, increased clamping strength and shorter tension interval facilitate fast and easy mounting. Flush installation is possible even with suspended ceilings.

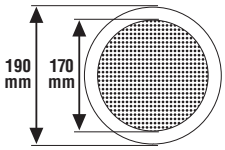
Technical Data

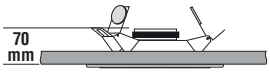
Loading capacity	20 W
Transformer power taps	20 / 15 / 10 / 5 W
SPL Pmax / 1 m	110.8 dB
SPL 1 W / 1 m	98 dB
Transmission range	80 ... 14300 Hz
Dispersion angle	180°
Color	white. similar to RAL 9010
Weight	approx. 2.24 kg
Dimensions	Ø: 267 mm D: 100 mm

Delivery time on request

581211 Recessed Ceiling Loudspeaker PC 5T, 10 W







Plastic ceiling loudspeaker with integrated 100 V transformer and metallic lattice. The PC 5T is perfect for recessed mounting. Mounts easily and almost invisibly.

Designed for quick and easy installation, recessed in hanging ceilings or panels, the PC series is ideal for background music and announcements. Equipped with a transformer for systems with constant voltage.

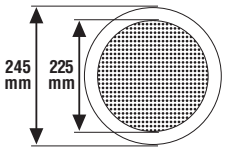
Technical Data

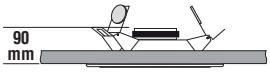
Loading capacity	10 W
Transformer power taps	100 V/10-5-2.5-1.25 W
SPL Pmax / 1 m	98 dB
SPL 1 W / 1 m	88 dB
Transmission range	90 ... 20000 Hz
Dispersion angle	120° konisch
Material	plastic
Color	white
Weight	approx. 1.1 kg
Dimensions	Ø: 190 mm D: 70 mm

Delivery time on request

581212 Recessed Ceiling Loudspeaker PC 8T, 20 W







Plastic ceiling loudspeaker with integrated 100 V transformer and metallic lattice. The PC 5T is perfect for recessed mounting. Mounts easily and almost invisibly.

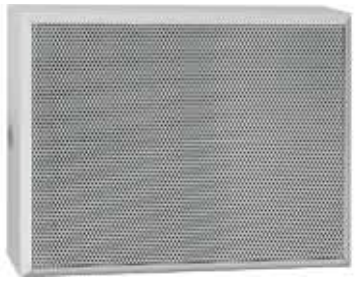
Designed for quick and easy installation, recessed in hanging ceilings or panels, the PC series is ideal for background music and announcements. Equipped with a transformer for systems with constant voltage.

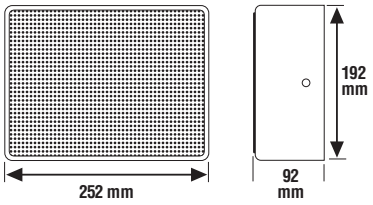
Technical Data

Loading capacity	20 W
Transformer power taps	100 V/20-10-5-2.5 W
SPL Pmax / 1 m	101 dB
SPL 1 W / 1 m	88 dB
Transmission range	80 ... 20000 Hz
Dispersion angle	120° konisch
Material	plastic
Color	white
Weight	approx. 2.1 kg
Dimensions	Ø: 245 mm D: 95 mm

Delivery time on request

581252 Wall Surface Mount Speaker EWA06-165/T, white





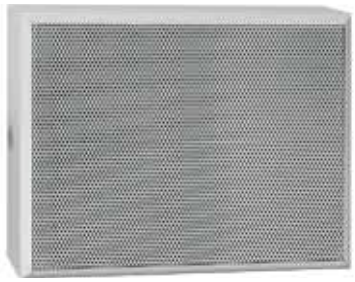
Wall surface-mount speaker EWA 06-165/T with high-quality 165 mm broadband loudspeaker chassis with softline design.

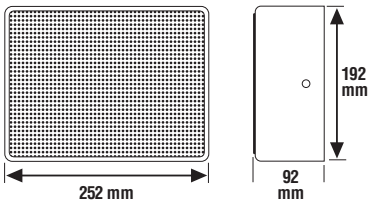
The wall surface-mount speaker with high density MDF wood casing for low resonance sound is very versatile in use, for example for providing PA services in government buildings, schools or hospitals. The proven spring-loaded snap lock on the back panel guarantees quick wall mounting.

Technical Data

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
SPL Pmax / 1 m	105.3 dB
SPL 1 W / 1 m	97.5 dB
Transmission range	125 ... 15000 Hz
Dispersion angle	180°
Color	white, similar to RAL 9010
Weight	approx. 1.8 kg
Dimensions	W: 252 mm H: 192 mm D: 82 mm

581253 Wall Surface Mount Speaker Impact-Resistant, EWA BW 06-165/T, white





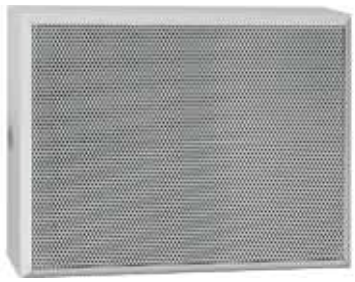
Same as 581252, but impact-resistant and therefore especially suitable for schools and gyms. The white lattice front is made of sheet steel and is extremely robust.

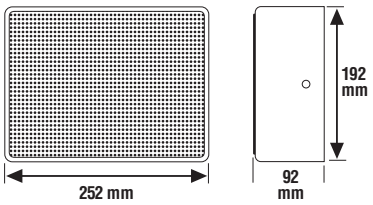
Technical Data

Loading capacity	6 W
Transformer power taps	6/3/1.5 W
SPL Pmax / 1 m	105.3 dB
SPL 1 W / 1 m	97.5 dB
Transmission range	125 ... 15000 Hz
Dispersion angle	180°
Color	white, similar to RAL 9010
Weight	approx. 1.8 kg
Dimensions	W: 252 mm H: 192 mm D: 82 mm

Delivery time on request

581251 AB Wall Surface Mount Speaker EWA-EN 06-100/T, white





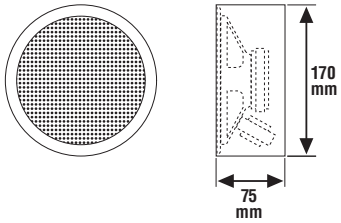
The AB wall surface-mount speaker (EWA-EN 06-100/T) is designed with two independent chassis and transformers and facilitates cost-effectiveness via two separate (A/B) lines. Should one line fail, the area can still be provided with audio in compliance with VDE 0833-4 thanks to the loudspeaker-redundancy. Each installation position includes the A as well as the B line and so prevents any overall failure situation. This standardized loudspeaker is equipped with 2 integrated ceramic terminals and 2 thermal fuses.

Technical Data

Loading capacity	6 W
Transformer power taps	6 / 3 / 1,5 W
SPL Pmax / 1 m	112.8 dB
SPL 1 W / 1 m	97.8 dB
Transmission range	230 ... 18000 Hz
Dispersion angle	150°
Color	white, similar to RAL 9010
Weight	approx. 2.1 kg
Dimensions	W: 252 mm H: 192 mm D: 82 mm

581257 Wall/Ceiling Loudspeaker Round EDL A 10-165/T





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

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

Technical Data

Loading capacity	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
SPL Pmax / 1 m	114.6 dB
SPL 1 W / 1 m	98.8 dB
Transmission range	300 ... 18000 Hz
Dispersion angle	180°
Color	white, similar to RAL 9010
Weight	approx. 1.23 kg
Dimensions	Ø: 170 mm D: 75 mm

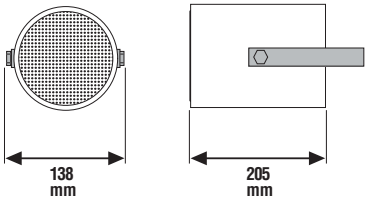
Delivery time on request

Features

- Vandal-proof

581232 Soundprojector SP 10, 10 W





This soundprojector is characterized by a large sound and its high sound quality in the reproduction of both music and voice.

The SP10 consists of high-quality plastics, manufactured with aluminum bracket. Due to its IP 55 protection it can be used in almost any commercial or industrial environment: Supermarkets, public swimming pools, warehouses, factories, railway stations, parking lots etc.

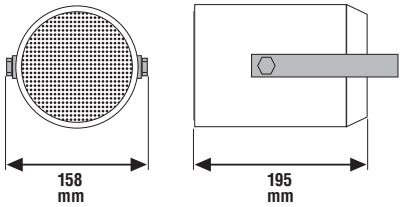
Technical Data

Loading capacity	10 W
Transformer power taps	10 / 5 / 2,5 W
SPL Pmax / 1 m	101 dB
SPL 1 W / 1 m	91 dB
Transmission range	130 ... 15000 Hz
Dispersion angle	130° conical
Type of protection	IP55
Material	ABS, stainless steel bracket
Color	white, similar to RAL 9016
Weight	approx. 1.6 kg
Dimensions	Ø: 138 mm D: 205 mm

Delivery time on request.

581258 Soundprojector EDA-P 20-130/T





Stable and reliable soundprojector with 130 mm broadband loudspeaker chassis. Due to its acoustic clarity the EDA-P 20-130/T is especially suitable for in corridors and halls.

The EDA series products share a common optical theme and offer high quality in both mounting and design.

Technical Data

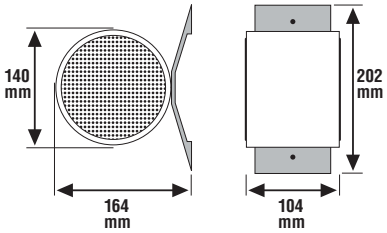
Loading capacity	20 W
Transformer power taps	20 / 10 / 5 / 2,5 W
SPL Pmax / 1 m	112.5 dB
SPL 1 W / 1 m	99.5 dB
Transmission range	150 ... 20000 Hz
Dispersion angle	360°
Type of protection	IP56
Color	white, similar to RAL 9010
Weight	approx. 1.35 kg
Dimensions	Ø: 140 mm D: 195 mm

Accessories

581281 Mast Holder MBS 200

581259 Soundprojector Double-Sided EDA 10-260/T





This stable and reliable double-sided loudspeaker EDA 10-260/T with two chassis stands out through its modern design. The vandal-proof base makes severing of the cable impossible and guarantees fast and easy mounting.

Due to its acoustic clarity the EDA 10-260/T is especially suitable for applications in corridors and halls.

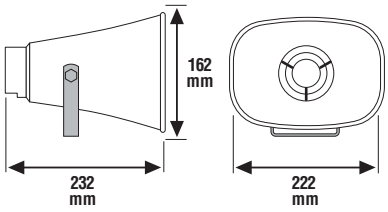
Technical Data

Loading capacity	10 W
Transformer power taps	10 / 6 / 3 / 1,5 W
SPL Pmax / 1 m	100 dB
SPL 1 W / 1 m	90.9 dB
Transmission range	150 ... 14000 Hz
Dispersion angle	360°
Color	white, similar to RAL 9010
Weight	approx. 2.2 kg
Dimensions	W: 164 mm H: 202 mm D: 164 mm

Delivery time on request

581202 Horn Loudspeaker HQ15, 15 W, IP66





Water-proof ABS plastic horn speaker with integrated 100 V transformer. Ideal for both clear playing of voice messages as well as background music.

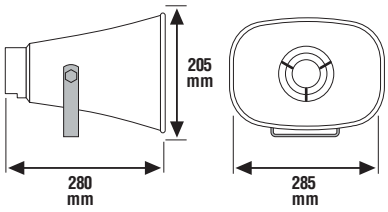
Technical Data

Loading capacity	15 W
Transformer power taps	15 / 7,5 W
SPL Pmax / 1 m	117 dB
SPL 1 W / 1 m	105 dB
Transmission range	400 ... 5000 Hz
Dispersion angle	140° (H), 90° (V)
Type of protection	IP66
Material	plastic, aluminium U bracket
Color	white, similar to RAL 9010
Weight	approx. 1.4 kg
Dimensions	W: 222 mm H: 162 mm D: 232 mm

Delivery time on request

581203 Horn Loudspeaker HQ30, 30 W, IP66





Water-proof ABS plastic horn speaker with integrated 100 V transformer. Ideal for both clear playing of voice messages as well as background music.

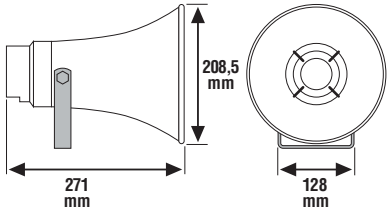
Technical Data

Loading capacity	30 W
Transformer power taps	30 / 15 W
SPL Pmax / 1 m	120 dB
SPL 1 W / 1 m	105 dB
Transmission range	400 ... 6000 Hz
Dispersion angle	140° (H), 90° (V)
Type of protection	IP66
Material	plastic, aluminium U bracket
Color	white, similar to RAL 9010
Weight	approx. 1.8 kg
Dimensions	W: 285 mm H: 280 mm D: 205 mm

Delivery time on request

581287 Pressure Chamber Loudspeaker EDK15/T





Reliable and UV-resistant pressure chamber systems with a lead out, 1 m connection cable for quick mounting. The enormous sound pressure, the high weather resistance and the wide frequency range are ideally suitable for industrial use! The EDK 15/T stands out by its low-distortion sound and its extremely space-saving design. You can also use the slim EDK 15/T as a built-in loudspeaker, thus broadening your range of applications.

The IP 66 class of protection ensures operating reliability even under difficult conditions. The impact-resistant ABS housing (in compliance with UL94V0) guarantees long-lasting stability.

A U-shaped, stainless V2A universal fastener for flexible mounting is included. Apart from a high sound pressure it is possible to adjust the power to 20 ohms. This adjustment can easily be carried out on the back of the loudspeaker.

Technical Data

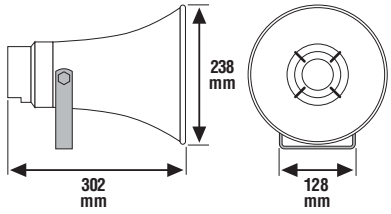
Loading capacity	15 W
Transformer power taps	15 / 7,5 / 3,75 / 1,87 W
SPL Pmax / 1 m	119.1 dB
SPL 1 W / 1 m	107.3 dB
Transmission range	300 ... 12500 Hz
Dispersion angle	140°
Type of protection	IP66
Color	gray, similar to RAL 7035
Weight	approx. 1.9 kg
Dimensions	Ø: 208.5 mm D: 271.5 mm

Accessories

581281 Mast Holder MBS 200

581288 Pressure Chamber Loudspeaker EDK30/T





Reliable and UV-resistant pressure chamber systems with a lead out, 1 m connection cable for quick mounting. The enormous sound pressure, the high weather resistance and the wide frequency range are ideally suitable for industrial use! The EDK 30/T stands out by its low-distortion sound and its extremely space-saving design. You can also use the slim EDK 30/T as a built-in loudspeaker, thus broadening your range of applications.

The IP 66 class of protection ensures operating reliability even under difficult conditions. The impact-resistant ABS housing (in compliance with UL94V0) guarantees long-lasting stability.

A U-shaped, stainless V2A universal fastener for flexible mounting is included. Apart from a high sound pressure it is possible to adjust the power to 20 ohms. This adjustment can easily be carried out on the back of the loudspeaker.

Technical Data

Loading capacity	30 W
Transformer power taps	30 / 20 / 10 / 5 W
SPL Pmax / 1 m	124.9 dB
SPL 1 W / 1 m	110.1 dB
Transmission range	300 ... 6000 Hz
Dispersion angle	130°
Type of protection	IP66
Weight	approx. 2.6 kg
Dimensions	Ø: 238 mm D: 302 mm

Delivery time on request

Accessories

581281 Mast Holder MBS 200

581281 Mast Holder EMB 200



Our mounting solution is made of powder-coated steel and includes mounting clamps. It guarantees for a lasting hold of the pressure chamber loudspeakers and sound projectors on masts even in ‘difficult’ surroundings.

The mast holder is suitable for a wide selection of venues such as stadiums, industrial plants, exhibitions etc.

Technical Data

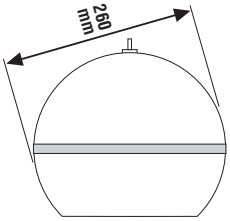
Material	steel
Color	silver, similar to RAL 9006
Weight	approx. 460 g
Dimensions	H: 200 mm

Suitable only for Part Nos. 581287, 581288 and 581258.

Delivery time on request

581285 Spherical Loudspeaker EDL K 20-165/T





The round spherical loudspeaker EDL K 20-165/T consists of a shockproof, resistant ABS housing (UL94 V0) and an efficient 165 mm broadband loudspeaker.

Connection occurs via a 2-wire, 5 m long cable capable of carrying a load of up to 40 kg and also continues to keep safety in the foreground.

The EDL-K 20-165/T power adjustments can be easily set by rotary threading tool at the top of the sphere. Low-impedance operation of this optically appealing spherical loudspeaker is also possible.

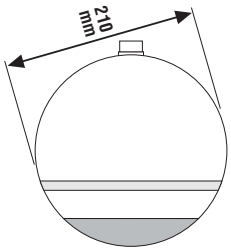
Technical Data

Loading capacity	20 W
Transformer power taps	20 / 15 / 10 / 5 / 2,5 W
SPL Pmax / 1 m	116.8 dB
SPL 1 W / 1 m	97.7 dB
Transmission range	190 ... 11800 Hz
Dispersion angle	240° (H), 240° (V)
Type of protection	IP35
Color	white, similar to RALL 9016
Weight	approx. 2.9 kg
Connection lead	max. 5 m
Dimensions	Ø: 260 mm

Delivery time on request

581215 Plastic Spherical Loudspeakers SL20M, 20 W, white





Spherical loudspeaker with real surround sound. A 360° horizontal and 140° 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.

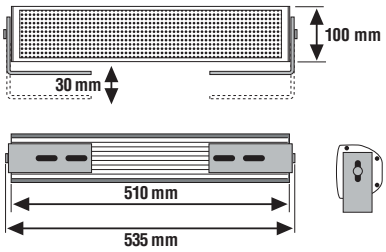
Technical Data

Loading capacity	20 W
Transformer power taps	20 / 10 / 5 W
SPL Pmax / 1 m	112 dB
SPL 1 W / 1 m	93 dB
Transmission range	180 ... 20000 Hz
Dispersion angle	160°
Color	white
Weight	approx. 1.7 kg
Connection lead	max. 2 m
Dimensions	Ø: 210 mm

Delivery time on request

581295 Sound Column ETS-C 20-500/T





Sound column for inside and outside use.

Technical Data

Loading capacity	20 W
Transformer power taps	20 / 15 / 10 / 5 W
SPL Pmax / 1 m	110.7 dB
SPL 1 W / 1 m	96.2 dB
Transmission range	210 ... 10900 Hz
Dispersion angle	270° (H), 155° (V)
Color	silver, similar to RAL 9006
Weight	approx. 3.2 kg
Dimensions	W: 100 mm H: 510 mm D: 92 mm

Includes 100 mm wall bracket.

Delivery time on request

581201 Sound Column COM 20 - 20 W



Water-proof column loudspeaker for outdoor usage. Large frequency range and high sensitivity make the speaker suitable for announcements and/or background music in large areas.

The COM 20 is usually used anywhere where high resistance to environmental influences is needed, such as railway stations, churches, factories, storage depots and outdoor parking lots.

Technical Data

Loading capacity	20 W
Transformer power taps	20 / 10 W
SPL Pmax / 1 m	105 dB
SPL 1 W / 1 m	92 dB
Transmission range	100 ... 15000 Hz
Dispersion angle	180° (H), 150° (V)
Type of protection	IP54
Material	aluminium
Color	grey, similar to RAL 7038
Weight	approx. 2.9 kg
Dimensions	W: 151 mm H: 378 mm D: 125 mm

Delivery time on request

581234 Sound Column COM 40 - 40 W



Water-proof column loudspeaker for outdoor usage. Large frequency range and high sensitivity make the speaker suitable for announcements and/or background music in large areas.

The COM 40 is usually used anywhere where high resistance to environmental influences is needed, such as railway stations, churches, factories, storage depots and outdoor parking lots.

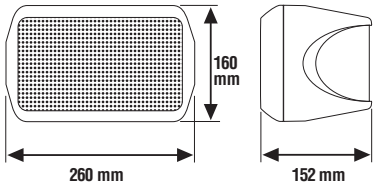
Technical Data

Loading capacity	40 W
Transformer power taps	40 / 20 W
SPL Pmax / 1 m	110 dB
SPL 1 W / 1 m	94 dB
Transmission range	100 ... 15000 Hz
Dispersion angle	180° (H), 150° (V)
Type of protection	IP54
Material	aluminium
Color	grey, similar to RAL 7038
Weight	approx. 4.7 kg
Dimensions	W: 151 mm H: 618 mm D: 125 mm

Delivery time on request

581289 Speaker EMS 30-130/T white





These impressive compact monitor speakers EMS 30-130/T have excellently synchronized loudspeaker components. Elegant in design, the speakers are serially equipped with woofer and midrange chassis, thus offering an enhanced music experience.

Thanks to its torsional ball joint, this 30 W loudspeaker can be easily adjusted to almost any position. All models can be used at 100-volt and in low-impedance operation. The extremely stable high-density ABS housing is available in white and black. This monitor speaker series is weatherproof and suitable for outdoor use.

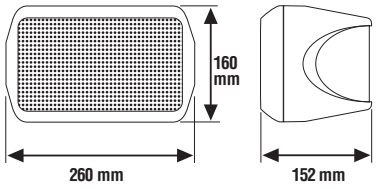
Technical Data

Loading capacity	30 W
Transformer power taps	30 / 15 / 7,5 / 2,5 W
SPL Pmax / 1 m	107.9 dB
SPL 1 W / 1 m	89 dB
Transmission range	150 ... 20000 Hz
Dispersion angle	240° (H), 310° (V)
Color	white, similar to RAL 9016
Weight	approx. 2.9 kg
Dimensions	W: 260 mm H: 160 mm D: 152 mm

Delivery time on request

581290 Speaker EMS 30-130/T black





These impressive compact monitor speakers EMS 30-130/T have excellently synchronized loudspeaker components. Elegant in design, the speakers are serially equipped with woofer and midrange chassis, thus offering an enhanced music experience.

Thanks to its torsional ball joint, this 30 W loudspeaker can be easily adjusted to almost any position. All models can be used at 100-volt and in low-impedance operation. The extremely stable high-density ABS housing is available in white and black. This monitor speaker series is weatherproof and suitable for outdoor use.

Technical Data

Loading capacity	30 W
Transformer power taps	30/15/7.5/2.5 W
SPL Pmax / 1 m	107.9 dB
SPL 1 W / 1 m	89 dB
Transmission range	150 ... 20000 Hz
Dispersion angle	240° (H), 310° (V)
Color	black, similar to RAL 9011
Weight	approx. 2.9 kg
Dimensions	W: 260 mm H: 160 mm D: 152 mm

Delivery time on request

581321 Flush-Mounted Volume Controller 6 watts



Flush-Mounted Volume Controller 6 watts, with compulsory relay (24 V DC). Fail to save series in which the relay is active during normal operation. GIRA System 55 pure white semi-matt.

Please use a pattress box with a minimum depth of 47 mm.

Delivery time on request

Accessories
581329 Surface-mounted box

581322 Flush-Mounted Volume Controller 12 watts



Flush-Mounted Volume Controller 12 watts, with compulsory relay (24 V DC). Fail to save series in which the relay is active during normal operation. GIRA System 55 pure white semi-matt.

Please use a pattress box with a minimum depth of 47 mm.

Delivery time on request

Accessories
581329 Surface-mounted box

581323 Flush-Mounted Volume Controller 50 watts



Flush-Mounted Volume Controller 50 watts, with compulsory relay (24 V DC). Fail to save series in which the relay is active during normal operation. GIRA System 55 pure white semi-matt.

Please use a pattress box with a minimum depth of 47 mm.

Delivery time on request

Accessories
581329 Surface-mounted box

581329 Surface-Mounted Box



Surface-mounted box for Part Nos. 581320 to 581323 / GIRA System 55

Technical Data

Color	pure white / silk-mat

Delivery time on request

581286 Ceramic Terminal and Thermal Fuse

A 3-pin ceramic terminal and a thermal fuse (activation temperature 240°C) provide the necessary protection in order to prevent short-circuiting of the loudspeaker in case of fire and to avoid further damages.

Delivery time on request



19" Rack

VARIODYN D1 Cabinet System – with Hinged Frame 80-81
VARIODYN D1 Cabinet System – without Hinged Frame 82-83
General Supplies 19" Rack 84-87
Electrical Operations Rooms 88

VARIODYN D1 Cabinet System – with Hinged Frame



Approval: G 210122

Delivery contains the basic cabinet elements. All further elements such as doors, side panels, base panels etc. are ordered separately as accessories. Supported by an integrated pivot ball, the cabinet can be opened and closed easily for installation and service even with the fully loaded hinged frame.

The heavy weight of the components such as power output amplifier and UPS was taken into consideration during the development of the VARIODYN D1 Cabinet System and therefore the carrying capacity of the hinged frame was radically increased.
The slight self-weight lowers the transport costs and makes mounting easier.

Features

- Dismantles completely
- Easily replaceable swing frame and door

Technical Data

Maximum weight load	250 kg
Type of protection	IP 40
Color	grey, similar to RAL 7035

Accessories

584756 Unit tray 3HE/350
584757 Unit tray 3HE/500
584759 Solid door fan cut-out - alu AKA
584760 Acrylic plastic door fan cut-out. AKA
584754 Slide-in rail 300

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 Upright Cabinet with Hinged Frame 24 HU (assembled)

Same as 584900 but includes assembly of the voice alarm components and incidentals.

Cables not included in prices!

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)

584901.R Upright Cabinet with Hinged Frame 40 HU (assembled)

Same as 584901 but includes assembly of the voice alarm components and incidentals.

Cables not included in prices!

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)

584902.R Upright Cabinet with Hinged Frame 24 HU - 600 mm deep (assembled)

Same as 584902 but includes assembly of the voice alarm components and incidentals.

Cables not included in prices!

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)

584903.R **Upright Cabinet with Hinged Frame 40 HU - 600 mm deep (assembled)**

Same as 584903 but includes assembly of the voice alarm components and incidentals.

Cables not included in prices!

Accessories VARIODYN D1 Cabinet System – with Hinged Frame

584921 **Angled Sliding Rail (set) 250 mm deep, for hinged frames**

For additional mounting of two stacked power output amplifiers.



584922 **Cable Clamping Rail Set, 2 HU**



VARIODYN D1 Cabinet System – without Hinged Frame



Approval: G 210122

The advantage of this cabinet systems lies in the space savings and the manifold configuration possibilities in combination with accessibility from the front and the back. Due to the permanently fixed 19” guide rails a significantly higher weight load is possible. Delivery contains the basic elements of the rack.
All further elements such as doors, side panels, base panels etc. are ordered separately as accessories. This cabinet system is additionally equipped for a second mounting level which allows for the mounting of components to the front and the back of the cabinet, taking the depth of the components into consideration.
The high weight of the components such as power output amplifier and UPS was taken into consideration during the development of the VARIODYN D1 Cabinet System. The slight self-weight lowers the transport costs and makes mounting easier.

Features

- Replaceable door stop
- Dismantles completely

Technical Data

Maximale Belastung	400 kg
Type of protection	IP 40
Color	grey, similar to RAL 7035
Weight	approx. 6200 g

Accessories

584756 Unit tray 3HE/350
584757 Unit tray 3HE/500
584759 Solid alu doors fan cut-out AKA
584755 Slide-in angle 45*45
584760 Acrylic plastic door fan cut-out AKA

584910 **Upright Cabinet without Hinged Frame 26 HU**

Technical Data

Weight	approx. 120 kg
Dimensions	W: 800 mm H: 1400 mm D: 800 mm (H: incl. 100 mm base

584910.R **Upright Cabinet without Hinged Frame 26 HU (assembled)**

Same as 584910 but includes assembly of the voice alarm components and incidentals.

Cables not included in prices!

584911 **Upright Cabinet without 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)

584911.R **Upright Cabinet without Hinged Frame 42 HU (assembled)**

Same as 584911 but includes assembly of the voice alarm components and incidentals.

Cables not included in prices!

Accessories VARIODYN D1Cabinet System – without Hinged Frame

584923 **Runner, 800 mm**

Sliding rail for supporting heavy (>10 kg) 19" components in upright cabinets.

584925 **Door Contact Switch with Connection Cable for Light**



With connecting cable for cabinet light and Wieland plug ST 17/2, completely wired and connection-ready, with mounting material.

584926 **19" Cabinet Light 230V / 11W**



- 230 V/11 W with mains switch and integrated socket
- Optional mounting on cabinet profile or on the 19" plane.
- Mounting height 1 HU
- Includes 3.0 m connection line

584929 **Mounting Chassis (Set), with Lateral Electrical Perforation**



584930 **L-Form Cable Binding Strip for Cabinets, depth 800 mm**

584931 19" 8-way Socket Strip with Switch



- 16 A/250 V AC
- With 8 sockets, 35° rotation
- Connection line L= 2 m
- Protection against accidental switching
- Universal mounting option
- Protective contact system CEE7/III

584932 Fan Cartridge, Roof Installation, 2 Fans with Thermostat



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

584937 Document Compartment 2 HU, RAL 7035



- Front mounting
- Cylinder lock
- Telescopic rails, fully extendable

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 HE, 19")

Includes mounting material.

584938 Compartment Floor 2 HU, RAL 7035



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 HE)

Includes mounting material.

584939 **Connector Set**



For connecting cabinets.

Set (4 pieces) with mounting material.

584940 **Equipotential Bonding System**



Equipotential bonding system with sealable protective cover in compliance with VDE 0609.

Connection options:
1 x circular conductor RD 8-10 mm
1 x flat-band with width of up to 30 mm or circular conductor RD 8-10 mm
7 x single or multistrand conductor up to 25 mm² or fine-wire conductor up to 16 mm²

584941 **Attachment Set, 100 screw set**



For attachment of drawers and front panels to the 19" profiles.

Includes cage nut, plastic flat washer and 12 mm fillister-head screw.

583704 **Dummy Plate 1 HU**



Cover plate in VARIODYN D1 design with a height unit to cover free installation space in the cabinet.

583705 **Dummy Plate 2 HU**



Cover plate in VARIODYN D1 design with two height units to cover free installation space in the cabinet.

583706 **Dummy Plate 3 HU**



Cover plate in VARIODYN D1 design with three height units to cover free installation space in the cabinet.

583707 **Dummy Plate 4 HU**



Cover plate in VARIODYN D1 design with four height units to cover free installation space in the cabinet.

583708 **Ventilation Panel 1 HU**



Ventilation panel in VARIODYN D1 design with a height unit to cover free installation space in the cabinet.

583708.ES **Ventilation Panel 1 HU with ESSER Logo**

NEW

Ventilation panel in VARIODYN D1 design with a height unit and printed ESSER logo.



583708.HO **Ventilation Panel 1 HU with Honeywell Logo**

NEW

Ventilation panel in VARIODYN D1 design with a height unit and printed Honeywell logo.



583703 **Mounting Kit 1**



Each contains 24 cage nuts, screws and washers.

583709 **Cover Plate 4 HU for DCSF**



Cover plate for installing a fire department Digital Call Station DCSF12 or DCSF1 in the upright cabinet. The plate has a height of 4 HU and features a cut-out for the Digital Call Station and holes for the fastening screws. The fastening screws are included.

584942 **Document Pocket for 19" Upright Cabinet**

Document pocket for storing system documentation such as plans, logs, etc. in the upright cabinet.

584945 **Rollsocket for Rack 800 x 800**



Heavy-duty roller base for supporting a standing cabinet without pivoting frame Part No. 584910 or 584911. The roller device consists two heavy-duty rails with rollers, which are screwed on the right and left under the standing cabinet. Because of the required stability increases the depth of the cabinet on 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)

Two heavy-duty rails with rollers

583710 **Cover Plate 4 HU for DCSF and DKM**



Cover plate to install 2 DCSF12 or DCSF1 in the cabinet. The cover plate has a height of 4 HU and 2 sections for the call stations or DKM18. For installing a DKM18 digital button module, the installation kit Part No. 583312 and a standard RJ11 cable are required.

Electrical Operations Rooms



Some federal states require that fire and voice alarm systems (VAS) must be in completely separate rooms for reasons concerning fire protection. Since the necessary number of individual rooms is not always available everywhere, this requirement often represents a very practical problem.

That's why we offer the following electrical operations rooms. These rooms allow a voice alarm system, a fire alarm system or both to be built in one room and yet kept separate for reasons concerning fire protection.

These electrical operations rooms are subsequently built around the already existing installation. The assembly of the electrical operations room is carried out by professionals and is included in the delivery price.

Please note the following room dimensions during project planning.

PRIORIT AG
designed security

Technologiepark Hanau
Rodenbacher Chaussee 6
63457 Hanau-Wolfgang
Deutschland
E-Mail: info@priorit.de

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TERMS AND CONDITIONS
Except as agreed in writing the following terms and conditions apply without exception to all sales by **Novar GmbH**, Dieselstr. 2, 41469 Neuss, Germany ("Novar") to Buyer.

1. SOLE TERMS.
Novar's sale is expressly limited to the terms herein. Any additional or different terms or conditions on Buyer's purchase order or any other instrument, agreement, or understanding are deemed to be material alterations and are rejected and not binding upon Novar. Novar's acceptance of Buyer's purchase order is expressly conditional upon Buyer's assent to the terms and conditions contained herein in their entirety. Buyer's acceptance of delivery from Novar constitutes Buyer's acceptance of these terms and conditions in their entirety.

2. QUOTE/ PRICES.
a) Information in any quotations and in attached drawings and illustrations about the goods, their measurements and weights are only approximate unless they are expressly stated as being binding.

b) Content and scope of the supply are determined exclusively on the basis of Novar's written quotation and order confirmation.

c) Novar's quotations are subject to change until accepted by the Buyer. If an offer is stated as being binding, it shall be binding for 3 months from its date of issue.

d) Novar reserves the right to make technical changes to construction, form and material of good - also during the delivery time - providing these changes are reasonably acceptable to Buyer. If agreed by the parties, changes to goods or services to be supplied, Novar is entitled to claim additional costs with immediate effect and is not obliged to perform the contract until Buyer agrees to make such payments.

e) Buyer must request shipment of the entire quantity of goods ordered within 12 months from date of order; otherwise, Novars's standard prices at time of shipment may, at Novar's option, apply to those quantities actually delivered, even if already invoiced.

f) Unless specifically agreed in writing prices for goods do not include the cost of packaging, or services such as installation, start-up, commissioning or maintenance. If Novar has expressly agreed to ship goods, shipment costs will be as per the quote or if none mentioned the relevant catalog.

g) All tooling, designs, drawings, and other intellectual property produced or delivered hereunder are owned by Novar.

3. PAYMENT.
a) Unless otherwise expressly agreed in writing, all payments are to be in EUROS and are due net in Novar's account within 30 days from date of invoice.

b) All bank charges in connection with any payment shall be paid by Buyer. Checks and/or bills of exchange will only be accepted in payment's stead and in accordance with a special written agreement. They are deemed as payment only when they have been cashed in.

c) Novar at all times reserves the right to evaluate Buyer's credit standing and if Buyer fails to qualify for credit under Novar's criteria, Novar may modify or withdraw credit terms without notice and require guarantees, security or payment in advance for further deliveries of goods. If these are not provided within a reasonable period following a notice, Novar may rescind the contract and/or claim costs, losses or damages.

d) Invoices remaining unpaid after their due date will be subject to an interest charge of 8%-points above the respective base rate published by the German Federal Bank per year, unless buyer is not responsible for the default. Buyer will pay all costs necessary for collection of unpaid amounts, including attorneys' fees, unless Buyer is not responsible for the default.

4. DELIVERY, EXAMINATION, RETENTION OF TITLE, COOPERATION.
a) All delivery dates are estimates unless agreed otherwise by Novar in writing.

b) Novar may make deliveries under any order in one or more shipments, to the extent that this is reasonably acceptable to Buyer, and may issue separate invoices.

c) Any fixed dates for deliveries agreed in writing are conditional upon the timely provision of all documents by the Buyer, any required authorizations and approvals, in particular of plans and the provision of all necessary information. If these requirements are not fulfilled in a timely manner, the fixed dates will be extended accordingly. This does not apply if Novar is responsible for the delay.

d) Novar may demand an appropriate extension of the delivery date in the event of subsequent changes agreed.

e) Delivery terms for goods are EX-WORKS (Incoterms 2000) Novar with all risk of loss or damage to goods passing to Buyer upon delivery to carrier.

f) Buyer must inspect all goods upon delivery without undue delay and must report i) obvious defects, transport damages, discrepancies and shortages without undue delay, and in no event later than 10 days after delivery, (ii) hidden defects without undue delay, and in no event later than 10 days after detection in writing to Novar. Otherwise all goods will be deemed delivered and accepted, unless Novar fraudulently neglected to disclose such faults. Buyer will return to Novar any goods that are rejected at its own expense. In the event Buyer refuses to accept delivery, Buyer shall be liable for increased costs incurred by Novar in accordance with section 7c).

g) Novar shall retain title in all goods delivered by Novar until payment has been made in full. In the event Buyer has credit with Novar, retention of title shall serve as security for any balance due to Novar.

h) Until title in the goods is transferred to Buyer, Buyer shall treat the goods with care; in particular it shall insure them sufficiently against fire, water and theft at reinstatement value at its own cost.

i) In the event of seizure or any other measure taken by third parties in relation to the goods, Buyer shall notify Novar in writing without undue delay so that Novar can initiate legal proceedings pursuant to § 771 of the German Code of Civil Procedure in order to prevent execution of any court order. If the third party is unable to reimburse the costs incurred in court and out of court of a claim pursuant to § 771 of the German Code of Civil Procedure, Buyer is liable for the damages incurred hereby.

j) Any processing of or alteration to the goods carried out by Buyer shall always be carried out for Novar. If the goods are processed using other items, which do not belong to Novar, Novar shall acquire co-ownership of the new item in the ratio of the value of the object delivered to the other processed items at the time of processing.

k) If the goods are irreversibly mixed using other items, which do not belong to Novar, Novar shall acquire co-ownership of the new item in the ratio of the value of the object delivered to the other mixed items at the time of mixing. If the mixing process takes place in such a way that Buyer's item must be regarded as the principal item the parties shall be deemed to have agreed that Buyer shall transfer shared title to Novar pro rata.

(l) Should Buyer sell the goods delivered – whether processed or not – in due course of business, it hereby assigns any claims from selling the goods with all ancillary rights vis-à vis its customer to Novar.

(m) On good cause Buyer is obliged, if requested by Novar, to inform Novar of any assignment to a third-party purchaser and to give Novar all information required for the assertion of its rights and to hand over any documents.

(n) Should the realizable value of Novar's security exceed the debt claim to be secured by more than 10 % Novar shall release part of the security – at its discretion – at the request of Buyer.

(o) Buyer shall make available in time all equipment and grant access to all facilities which Novar may require to perform any services.

5. TAXES.
The amount of any and all applicable taxes will be added to the price and paid by Buyer, unless Buyer has provided Novar with exemption certificates acceptable to the taxing authorities.

6. FORCE MAJEURE, DELAY.
a) Novar is not liable for any delay in production or delivery of goods if due to a force majeure event, which includes, among other things, shortages or inability to obtain materials or components, or refusals to grant an export license or the suspension or revocation thereof, or any other acts of any government that would limit Novar's ability to perform, fire, earthquake, flood, severe weather conditions, or any other acts of God, quarantines, epidemics, pandemics, or other regional medical crisis, labor strikes or lockouts, riots, strife, insurrection, civil disobedience, armed conflict, terrorism or war (or imminent threat of same), or any other cause whatsoever beyond Novar's reasonable control.

b) If the force majeure event continues for longer than 90 days, either party may terminate Buyer's purchase order. If Buyer terminates the order, Buyer will pay Novar for work performed prior to termination and all reasonable expenses incurred by Novar prior to termination. In the event of delays in delivery or performance caused by force majeure or Buyer, the date of delivery or performance shall be extended by the period of time Novar is actually delayed or as mutually agreed. Any claims for damages, costs or losses howsoever construed shall be excluded.

c) If, for reasons other than the foregoing, Novar should default or delay or not deliver goods, Buyer's sole remedy against Novar is an option to cancel Buyer's purchase order, through prior written notice to Novar. In as far as Buyer incurs damages due to a delivery delay, Novar's liability is limited to 0.5% of the order value of the delayed delivery per week up to a maximum amount of 5% of the order value of the delayed delivery. Buyer is only entitled to claim damages in lieu of performance in accordance with section 11 (limitation of liability).

7. TERMINATION, RETURN OF GOODS.
a) Buyer may not terminate or cancel a purchase order without Novar's prior written consent. Goods scheduled for shipment within 30 days cannot be rescheduled. Goods scheduled for shipment between 30 and 60 days may be rescheduled with Novar's prior written consent and if rescheduled beyond 60 days that quantity may not be further rescheduled. Buyer is nonetheless liable for termination charges, which may include i) a price adjustment based on the quantity of goods delivered, (ii) all costs, direct and indirect, incurred and committed for Buyer's terminated purchase order, (iii) the full cost of all unique materials required for custom goods, and (iv) a pro-rata compensation covering the prorated expenses and anticipated profits consistent with industry standards.

b) Novar may terminate a Buyer's purchase order in whole or in part upon Buyer's breach of these terms and conditions or Buyer's bankruptcy, insolvency, dissolution, or receivership proceedings without any further liability.

c) Returns of goods are only accepted in their original packed and sealed condition within six months after shipment. Software, customized products and products in opened packaging, lacquered and non-reusable parts cannot be returned. Goods can only be returned with an authorization number (RMA) obtained from Novar in advance of shipment to Novar. The RMA is specific to the relevant goods and quantity. Novar reserves the right to i) reject any return of other goods than specific to the RMA or (ii) charge an additional 25 € per return. In case of accepted returns, the purchase price shall be repaid with a deduction of up to 20% for processing, testing, administration and other overheads. The minimum charge for returns is 80.00 € per invoice. This does not affect the purchaser's rights under the product warranty. If the Purchaser withdraws from the Contract and is not entitled to do so, or if the Purchaser refuses to accept the delivery and is unjustified in doing so, the Seller is entitled to 15% of the agreed price as liquidated damages, unless the Purchaser proves that the Seller has not suffered any damage or to a lesser extent reserves the right to claim further damages.

8. INFRINGEMENT INDEMNIFICATION.
a) Novar agrees to i) defend or settle any claim, suit, or proceeding brought against Buyer based solely upon a claim that any goods manufactured and provided solely by Novar hereunder directly infringe any third party German patent, copyright, or maskwork, and (ii) to pay costs and damages finally awarded to the third party, provided that: i) Novar is notified promptly in writing of such claim, ii) Novar is provided sole control of such defense or settlement using counsel of Novar's choice, and ii) Buyer provides Novar with all available information and assistance. Because Novar has exclusive control over resolving infringement claims hereunder, in no event will Novar be liable for Buyer's attorneys' fees, if any.

b) Novar shall not be responsible for any settlement or compromise of any such third party claim made without Novar's written consent. Novar has no obligation and this Section 8 will not apply to any claim of infringement of any intellectual property right of a third party i) by goods not in Novar's catalog or goods developed pursuant to Buyer's direction, design, process, or specification, (ii) by the combination of any goods with other elements if such infringement could have been avoided but for such combination, (iii) by goods that have been modified if such infringement would have been avoided by the unmodified goods, (iv) by goods not used for their ordinary purpose, or (v) by software if such software is other than the latest version of the software released by Novar and provided to Buyer. Buyer agrees to defend, indemnify, and hold harmless Novar from and against any claims, suits, or proceedings whatsoever arising from such exclusions identified in this Section 8b), unless this is not caused by Buyer's failure.

c) At any time after a claim has been made or Novar believes is likely to be made, or a court of competent jurisdiction enters an injunction from which no appeal can be taken, Novar has at its option the discretion to i) procure for Buyer the right to continue using such goods, (ii) replace or modify such goods in a way that it does not further infringe any third party intellectual property rights and without affecting the functionality of said goods. In the event Novar fails to do so within a reasonable time limit to be set by Buyer, Novar shall accept the return of such goods and refund the purchase price less 20% annual depreciation from shipment date.

d) The foregoing states Buyer's exclusive remedy for any actual or alleged infringement of intellectual property rights. Buyer is only entitled to claim damages subject to section 11 (limitation of liability).

9. SOFTWARE.
a) The use of software, if provided separately or installed on a good supplied, is governed by the following terms unless a software license agreement is included with such software.

b) Subject to Buyer's compliance with these terms and conditions, Novar grants to Buyer a personal, limited, nonexclusive license to use the object code of the software solely for Buyer's internal purposes. The license is limited to such kinds of goods as are specified on Buyer's purchase order, quotation or acknowledgment. No other use is permitted.

c) Novar retains for itself (or, if applicable, its suppliers) all title and ownership to any software delivered hereunder, all of which contains confidential and proprietary information and which ownership includes, without limitation, all rights in patents, copyrights, trademarks, and trade secrets.

d) Buyer shall not attempt any transfer without prior written consent of Novar, sublicense, or redistribution of the software except as expressly permitted herein. Buyer is entitled to copy the software in as far as necessary for the contractual purpose. Buyer is entitled to make back-up copies in as far as necessary. Furthermore Buyer shall not disclose, distribute, or display any such software, or otherwise make it available to others (except as Novar authorizes in writing) or allow any unauthorized use of the software. Buyer is only entitled to reverse compile the software within the scope of § 69e UrhG. Buyer is only entitled to modify, upgrade or alter the software in any other way within the scope of § 69c UrhG.

e) Novar may terminate this license if Buyer breaches fundamental provisions under these terms and conditions. If the software is delivered with a good, Buyer may only transfer its license of the software to a third party in conjunction with the sale by Buyer of the good on which the software is installed.

10. WARRANTY.
a) To the extent permitted by law Novar shall only be liable in accordance with the following warranty conditions, which replace any other warranties or guarantees. Any other claim shall be excluded. In particular (unless otherwise agreed in writing) Novar does not warrant the fitness of the product for any specific use which would not be the use for which the product was designed by its manufacturer.

b) Except as otherwise expressly provided herein, Novar warrants goods in all material respects to be free of defective materials and faulty workmanship and as conforming to applicable specifications and/or drawings. Unless otherwise agreed in writing commencing with Novar's date of shipment, the warranty period shall run for 12 months. Warranty for spare parts is limited to 12 months from delivery.

c) Non-complying goods returned to Novar in accordance with Section 4 f) will be repaired or replaced, at Novar's option, and return-shipped at the lowest cost, transportation prepaid. The costs of transportation to Novar have to be borne by Buyer. In the event Novar fails to repair or replace the non-complying good within a reasonable time limit set by Buyer, Novar shall accept the return of such goods and refund the purchase price less 20% annual depreciation from shipment date. The foregoing states Buyer's exclusive remedy in case of defects. Buyer is only entitled to claim damages subject to section 11 (limitation of liability).

d) If so requested by Novar, the Buyer shall give Novar sufficient opportunity to verify any fault, in particular to provide faulty goods and their packaging to Novar for inspection. If the Buyer refuses, Novar shall not be liable for such defects. No goods will be accepted for return without an authorization number obtained in advance of shipment to Novar.

e) Goods subject to wear and tear or burnout through usage shall not be deemed defective because of such wear and tear or burnout. No warranty shall apply if the defect or damage was caused by or related to installation, combination with other parts and/or products, modification to or repair of any goods other than by Novar, or resulted from Buyer's acts, omissions, misuse, or negligence.

f) Repaired or replaced goods shall be warranted for the remainder of the unused warranty term or for 90 days from shipment, whichever is longer.

g) It is Buyer's responsibility to ensure that the goods are fit for the application in which they are used.

h) Software, if supplied separately or installed on goods supplied, and warranted by Novar, will be furnished on a medium that is free of defect in materials or workmanship under normal use for so long as the hardware and/or system is under warranty. During this period, Buyer has the rights listed in section 10 c) with regard to any defects of the software. Unless stipulated otherwise in a separate software license agreement no further warranty is given in respect of software.

i) If Novar provides any services to the Buyer, including but not limited to training or assistance with configuration and installation of the goods, Novar shall provide such services in accordance with normal industry practice at such rates as may be specified by Novar in its price list from time to time. In case of non-conformance which Novar has been notified of correctly and promptly, Novar will repeat services and/or correct accordingly. To the extent permitted by law Novar accepts no liability to the Buyer arising out of the provision of such services.

j) Novar does not represent or warrant that the goods may not be compromised or circumvented or that the goods will prevent any personal injury or property loss, burglary, robbery, fire or otherwise, or that the goods will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm may only reduce the risk of burglary, robbery, fire or other events occurring without providing an alarm, but it is not an insurance or guarantee that such will not occur or that there will be no personal injury or property loss as a result.

k)These warranties are for the benefit of the Buyer only and are not assignable or transferable.

l) Subject to appropriate storage and handling according to the manual Novar grants a guarantee of durability (in the meaning of §443 II German Civil Code) for 24 months from delivery date to the customer. Excluded are device software, consumables and spare parts. At Novar's discretion the product will either be replaced or repaired. Defects which occur within the guarantee period must be reported in writing immediately on detection or if earlier when it should have been recognized.

11. LIMITATION OF LIABILITY.
a) Novar is liable for intent and gross negligence on its part, on the part of its legal representatives and vicarious agents. If Novar has not acted intentionally Novar's liability is restricted to typical, foreseeable damage.

b) Novar shall also be liable in the event of negligent injury to life, body and health caused by Novar, its legal representatives or vicarious agents and in the event of wilful failure to disclose a defect. Where a guarantee is provided by Novar, then the extent of Novar's liability is to be determined pursuant to the guarantee declaration.

c) Novar shall also be liable for the negligent failure to comply with any of its obligations that are fundamental to the purpose of the agreement. If Novar has not acted intentionally Novar's liability is restricted to typical, foreseeable damage.

d) Additionally Novar shall be liable in cases of mandatory statutory liability, for example pursuant to the Product Liability Act.

e) Buyer shall indemnify Novar against any claims, damages, losses, costs and expenses incurred by Novar as a result of either claims made against Novar by third parties arising out of the combination or use of the goods with any incompatible ancillary products that may be connected to the goods or any other matter for which Novar would not be liable to Buyer under these terms and conditions .

f) Other than stated herein any liability of Novar is excluded, regardless of the theory of liability, whether based in contract, tort, indemnity or otherwise.

g) Buyer shall notify and consult with Novar without undue delay and comprehensively if it intends to take legal recourse in accordance with the afore-mentioned provision. Buyer has to allow Novar to investigate and examine the damages.

12. RECOMMENDATIONS.
Any recommendations or assistance provided by Novar concerning the use, design, application, or operation of the goods shall not be construed as representations or warranties of any kind, express or implied, and such information is accepted by Buyer at Buyer's own risk and without any obligation or liability to Novar. It is the Buyer's sole responsibility to determine the suitability of the goods for use in the Buyer's application(s). Other than in cases of statutory obligations the failure by Novar to make recommendations or provide assistance shall not give rise to any liability to Novar.

13. LAWS.
a) Buyer will comply with all applicable laws, regulations, and ordinances of any governmental authority in any country having proper jurisdiction, including, without limitation, those laws of the United States or other countries that regulate the import or export of the goods provided by Novar and shall obtain all necessary import/export licenses in connection with any subsequent import, export, re-export, transfer, and use of all goods, technology, and software purchased, licensed, and received from Novar. Unless otherwise mutually agreed in writing, Buyer agrees that it will not use or permit third parties to use the goods in connection with any activity involving nuclear fission or fusion, any use or handling of any nuclear material, or any nuclear, chemical, or biological weapons.

b) Goods and services delivered by Novar hereunder will be produced and supplied in compliance with all applicable laws and regulations in the Federal Republic of Germany. Buyer confirms that it will ensure that all goods are properly installed and used in accordance with the applicable safety at work laws and regulations, and Buyer will indemnify Novar in respect of any costs, claims, actions or liability arising out of that Act, or otherwise arising out of the supply by Buyer or use by others of the goods, unless this is not caused by Buyer's failure.

14. PRECLUSION AGAINST SETOFF.
Buyer is only entitled to set off any amount against any amount due or to become due from Novar to Buyer or its affiliates that are undisputed or final absolute.

15. WEEE.
a) Prices do not include the costs of recycling goods covered by the European WEEE Directive 2002/96/EC and such costs may be added to the prices quoted.

b) Unless a charge has been made therefore under section 15 a) above, if the provisions of the WEEE Directive 2002/96/EC as implemented in any local jurisdiction apply to goods, the financing and organization of the disposal of waste electrical and electronic equipment are with the exception of goods which are b2c as per Novar catalog the responsibility of the Buyer who herewith accepts this responsibility, and Buyer will indemnify Novar in respect of all such liabilities. The Buyer will handle the collection, processing and recycling of the goods in accordance with all applicable laws and regulations, and shall pass on this obligation to the final user of the goods. Failure by the Buyer to comply with these obligations may lead to the application of criminal sanctions in accordance with local laws and regulations.

16. APPLICABLE LAW.
These terms and conditions are subject to the Laws of the Federal Republic of Germany. These terms and conditions are excluded from the United Nations Convention on Contracts for the International Sale of Goods, 1980, and any successor thereto. The competent court at the seat of Novar will have exclusive jurisdiction to adjudicate any dispute related to these terms and conditions.

17. INDEMNIFICATION.
Buyer shall indemnify Novar for all costs and damages, including attorneys' fees, suffered by Novar as a result of Buyer's culpable actual or threatened breach of these terms and conditions.

18. MISCELLANEOUS.
a) The parties may exchange confidential information during the performance or fulfilment of any supply. All confidential information shall remain the property of the disclosing party and shall be kept confidential by the receiving party for a period of 10 years following the date of disclosure. These obligations shall not apply to information which is: (i) publicly known at the time of disclosure or becomes publicly known through no fault of recipient, (ii) known to recipient at the time of disclosure through no wrongful act of recipient, (iii) received by recipient from a third party without restrictions similar to those in this section, or (iv) independently developed by recipient. Each party shall retain ownership of its confidential information, including without limitation all rights in patents, copyrights, trademarks and trade secrets. A recipient of confidential information may not disclose such confidential information without the prior written consent of the disclosing party, provided that Novar may disclose confidential information to its affiliated companies in the sense of §§15ff AktG, and its and their employees, officers, consultants, agents, and contractors.

b) These terms and conditions (including those agreed separately in writing) constitute the entire agreement of Novar and Buyer, superseding all prior agreements or understandings, written or oral, and cannot be amended except by a mutually executed writing.

c) Buyer may not assign any rights or duties hereunder without Novar's written prior consent. Novar may subcontract its obligations hereunder without Buyer's consent. No representation, warranty, course of dealing, or trade usage not contained or expressly set forth herein will be binding on Novar.

d) Headings and captions are for convenience of reference only and do not alter the meaning or interpretation of these terms and conditions.

e) No failure by Novar to enforce at any time for any period the provisions hereof shall be construed as a waiver of such provision or of the right of Novar to enforce thereafter each and every provision.

f) In the event any provision herein is determined to be illegal, invalid, or unenforceable, the validity and enforceability of the remaining provisions shall not be affected and, in lieu of such provision, a provision as similar in terms as may be legal, valid, and enforceable shall be added hereto.

g) Provisions herein which by their very nature are intended to survive termination, cancellation, or completion of supply shall survive such termination, cancellation, or completion.

h) All stenographic and clerical errors are subject to correction. i) These terms and conditions shall confer no benefit on any third party.

19. LANGUAGE
The German language version of these terms and conditions will prevail in case of conflict with any translations provided for convenience purposes.

Neuss, February 2012

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