VARIODYN D1 System description, specification texts 5

1 Standards 5
2 Product & Service Development and Cyber Security 5
2 General description 6
3 Special performance features 9
3.1 Performance features 9
3.1.1 Audio monitoring 9
3.1.2 Alarm mode 9
3.1.3 Digital signal processing (DSP) 9
3.1.4 Audio memory/signals 9
3.1.5 Connection of a source to a target taking the following into account 9
3.1.6 Error display 9
3.1.7 Remote control, remote maintenance 10
3.1.8 Graphical user interface 10
3.1.9 Backup amplifier 10
3.1.10 Intercom call stations 10
3.1.11 Configuration 10
3.1.12 Volume control 10
3.1.13 Message list 11
3.1.14 Power management 11
3.1.15 Control inputs & control outputs 11
3.1.16 Monitoring 11
3.1.17 Wiring 11
3.1.18 Networking 11
3.1.19 Timer programs 11
3.1.20 Time synchronization 12
3.1.21 Destination – Group formation 12
3.1.22 Temporary storage of an announcement (automatic) 12
3.1.23 Temporary storage of an announcement (manual) 12
3.2 Performance features with value indication 12
3.3 Minimum performance features with value indication 12
4 Interfaces 12
4.1 Connection to fire alarm system 12
4.2 Connection to an Enterprise Building Integration (EBI) system for system display 13
4.3 Session Initiation Protocol (SIP) Ready Session Initiation Protocol (SIP) is a communications protocol used to signal and control multimedia communication sessions in applications based around Internet telephony for voice and video calls, in private IP telephone systems. The PAVA system shall afford an interface to support applications, such as Nursing Station Phone interfacing to facilitate ease of raising a local alarm. 14
5 Products 14
5.1 System components 14
583361.22 | Digital audio distribution and connection system for up to 8 loudspeaker zones 14
583362.22 | Digital audio distribution and connection system for up to 24 loudspeaker zones 17
583362.22 | Digital audio distribution and connection system for up to 24 loudspeaker zones 18
583381.31 | System Communication Unit (SCU) 20
5.2 Digital call stations 21
583527 | Ethernet Touch Call Station for Routine and Emergency Paging 21
583560 PC Touch Screen Call Station 22
583520 | Digital Call Station DCS plus 22
583526 | Digital Key Module DKM plus 24
583501.RE | Reduntant digital call station with 12 keys 25
583502.RE | Redunant digital call station with one key 27
583503.RE | Fire Control PA Panel with 12 keys 28
583504.RE | Fire Control PA Panel with one key 29
583505.RE | Digital fire control PA panel 30
583306.21 | Digital Keyboard Module 30
583307 | Wall Junction Box 31
583311 | Keyboard cover 31
583507 | Table mounting kit 31

584961| Housing for a DSCF fire control PA panel 31
584962 | Housing for two DCSF fire control PA panels 32
583300.HO | Label for “Honeywell by Honeywell” DCS Should this just be “Honeywell”? 32
583318 | Keyboard cover for DCS or DCSF 32
586102 | Table call station with DIGIM1 gong system 32
586103 | Table call station with DIGIM4 gong system 33
586104 | Flush-mounted box for DIGI system DIGIST09 table call stations 33
5.3 Interfaces 33
583331.21 | Universal Interface Module 33
583341.21 | Contact Interface Module 34
5.4 Amplifier 37
580242 | Power amplifier 4 x 125 W / 100 V, Class D, Integrated battery charger 37
580243 | Power amplifier 4 x 250 W / 100 V, Class D, Integrated battery charger 38
580231 | Power amplifier 2 x 250 W/100 V; class D, 24 V DC 39
580232 | Power amplifier 2 x 400 W/100 V; class D, 24 V DC 40
580248.11 | Power amplifier 4 x 300 W/100 V, Class D, 24 V DC 40
580249.11 | Power amplifier 4 x 500 W/100 V, Class D, 24 V DC 41
580261 | Power amplifier 4 x 300 W/100 V, Class D, ... 42
580262 | Power amplifier 4 x 500 W/100 V, Class D 43
5.5 Network and fibre optic components 43
583316.21 | Fibre optic converter for digital call stations 43
583317.21 | Fibre optic converter for digital call station, components at the digital call station 44
583315.02 | Power supply unit for the fibre optic converter 44
583394.11 | Fibre Optic switch 44
583392.11 | Fibre Optic module for FO Switch, multimode 45
583393.11 | Fibre Optic module for FO Switch, single mode 46
583396 | Power over Ethernet Switch 46
5.6 Accessories 47
583351 | VCM display/control module 47
583332 | Surge protection module for GPIO Contacts 47
583342 | Loop – Isolator – Module (LIM) 47
583371.21 | Mains switching unit 48
584970 | Under voltage and neutral supervision module 48
584971 | Switching contactor 49
583386.21 | TWI – RS232 - Adapter 49
583387.21 | GPS time synchronization module 49
583390 | Master clock SC 98.47 pro 49
583391 | Radio receiver FU 20.00 pro 50
583496 | End of Line Module EOL 50
583401.21 | Signaling cable 12 51
583422.21 | Backup cable 51
583451.21 | 100 V cable for 8 circuits for rear cabinet panel 51
583452.21 | 100 V cable for 6 circuits for rear cabinet panel 51
583476.21 | Output cable amplifier - DOM 51
583477.21 | Output cable 2 amplifier - DOM 51
583481 | Patch cable Cat5, 1 m, blue, (digital audio) 52
583482 | Patch cable Cat5, 2 m, blue, (digital audio) 52
583483 | Patch cable Cat5, 3 m, blue (digital audio) 52
583486 | Patch cable Cat5, 1 m, yellow (Ethernet) 52
583487 | Patch cable Cat5, 2 m, yellow (Ethernet) 52
583488 | Patch cable Cat5, 3 m, yellow (Ethernet) 53
583489 | XLR – cable, 1 m, plug-socket, length 1 m 53
583490 | XLR cable 1 m, plug-socket, length 1 m 53
583491 | Cable PA/VA system to final amplifier 53
583492 | Audio connection line, length 1.8 m 53
583492 | Audio connection line, length 1.8 m 53
581320 | Flush-mounted XLR panel jack 54
581321 | Flush-mounted – Volume control – 6 W 54
581322 | Flush-mounted – Volume control – 12 W 54
581323 | Flush-mounted – Volume controller – 50 W 54

581329 | Surface-mounted box ... 54
5.7 AVC Accessories ... 55
581310 | Dynamic sensor microphone in a ceiling speaker housing ... 55
581316 | Dynamic microphone ... 55
5.8 Upright cabinet - Accessories ... 55
583703 | Assembly kit ... 55
583704 | Dummy plate 1 HU ... 55
583705 | Dummy plate 2 HU ... 56
583706 | Dummy plate 3 HU ... 56
583707 | Dummy plate 4 HU ... 56
583709 | Dummy plate 4 HU - DCSF ... 56
583708 | Ventilation panel 1 HU ... 56
5.9 External devices, public address system ... 57
X-MAP04 | DVD/CD/MP3/FM/AM audio player ... 57
5.10 Emergency power supply ... 57
581722 | Emergency power manager for PA/VA system ... 57
581723 | Emergency power manager for PA/VA system ... 58
581721 | Emergency power manager for PA/VA system ... 59
581730 | Battery for PA/VA emergency power supply 12 V / 105 Ah ... 59
581731 | Battery for PA/VA emergency power supply 12 V / 150 Ah ... 60
805683 | External DCU 2403 power supply unit ... 60
018006 | Battery for external DCU 2403 power supply unit, 12 V DC / 24 Ah capacity ... 61
Installation of software package ... 61
Creation of graphic zone layout ... 61
Extending graphic zone layout ... 61
VAPA Management Software documentation ... 61
Extension of graphic zone layout with additional layer ... 61
Creation of graphic zone layout with audio ... 62
Extension of audio files ... 62
583652 | VAPA Management Software – Client ... 62
583653 | VAPA Management Software – Client/Server ... 62
583653 | VAPA Management Software – Client/Server for 10 Digital audio distribution and connection system 63
6. Upright cabinets ... 63
584900 | 19" Hinged frame cabinet, 24 HU, 800 x 800 mm ... 63
584900.R | 19" Hinged frame cabinet 24 HU, 800 x 800 mm, assembled ... 63
584901 | 19" Hinged frame cabinet 40 HU, 800 x 800 mm ... 64
584901.R | 19" Hinged frame cabinet 40 HU, 800 x 800 mm, assembled ... 64
584902 | 19" Hinged frame cabinet 24 HU, 800 x 600 mm ... 65
584902.R | 19" Hinged frame cabinet 24 HU, 800 x 600 mm, assembled ... 65
584903 | 19" Hinged frame cabinet 40 HU, 800 x 600 mm ... 66
584903.R | 19" Hinged frame cabinet 40 HU, 800 x 600 mm, assembled ... 66
584910 | 19" Upright cabinet 26 HU, 800 x 800 mm ... 67
584910.R | 19" Upright cabinet 26 HU, 800 x 800 mm, assembled ... 68
584911 | 19" Upright cabinet 42 HU, 800 x 800 mm ... 68
584911.R | 19" Upright cabinet 42 HU, 800 x 800 mm, assembled ... 69
584921 | Angle slide-in rails (set), 250 mm deep, for hinged frames ... 69
584922 | Cable tidy rail for hinged frame assembly ... 69
584923 | Heavy load - Slide-in rail 800 mm, for upright cabinets without hinged frames ... 69
584925 | Door contact switch with connecting cable for lamp ... 70
584926 | 19" Cabinet lamp 230 V/11 W ... 70
584929 | Mounting chassis (set) with lateral electrical perforation ... 70
584930 | L-shaped cable binding strip for cabinets 800 mm deep ... 70
584931 | 19" Eight-way socket strip with switch ... 70
584932 | Fan cartridge for roof installation, 2 fans, with thermostat ... 71
584933 | Set of wheels for upright cabinet, 584910 ... 71
584937 | Document compartment, 2 HU, RAL 7035 ... 71
584938 | Compartment floor 2 HU, RAL 7035 ... 71
584939 | Connector set ... 72
584940 | Equipotential bonding system ... 72

584942 | Document pocket for 19" upright cabinet 72
7.1 Loudspeaker 72
LSC-506 | 6 W 5" Ceiling Loudspeaker EN 54 with Fire Dome, Metal 72
LSC-606 | 6 W 6,5" Ceiling Loudspeaker EN 54 with Fire Dome, Metal 73
582480 | 24 W Coaxial Ceiling Loudspeaker EN 54, Metal 74
582470 | 6 W 4" Cabinet Loudspeaker EN 54, Metal 74
582479 | 15 W Horn Loudspeaker EN 54, ABS 75
582473 | 10 W Unidirectional Sound Projector EN 54, Metal 75
582474 | 20 W Unidirectional Sound Projector EN 54, Metal 76
582475 | 20 W Bidirectional Sound Projector EN 54, Metal 77
582476 | 20 W Column Loudspeaker EN 54, Metal 77
582477 | 40 W Column Loudspeaker EN 54, Metal 78
581263 | 6 W 5" Ceiling Loudspeaker, Metal 78
581274 | 6 W 3" Ceiling Loudspeaker, ABS 79
581270 | 6 W Cabinet Loudspeaker, ABS 79
581275 | 3 W Cabinet Loudspeaker, ABS 80
581276 |10 W Cabinet Louspeaker, ABS 80
581277 | 40 W Cabinet Loudspeaker, ABS 81
581258 | 20 W sound projector, ABS 81
581271 | 15W Horn Loudspeaker, ABS 82
581272 | 30 W Horn Loudspeaker, ABS 82

VARIODYN D1 System description, specification texts

1 Standards

Austria:
The installed emergency audio warning system must conform to the Austrian F 3012 and TRVB S 158 standards with respect to installation and operational requirements; the fire control PA panel must conform to the Austrian F 3033 standards.
This must be verified by means of positive test protocols conducted by an accredited body.

Germany:
The installed voice alarm system must conform to the VDE 0833-4 standard with respect to installation and operational requirements

UK:
The installed voice alarm system must conform to the requirements of BS 5839-8:2013 & BS EN 54

International:
The technical design must comply with EN 54-4 for emergency power supply and with EN 54-16 for the PA/VA system. Loudspeakers must comply with EN 54-24.
Compliance can be verified by means of a manufacturer declaration, CPD certificate or by obtaining approval from VdS or similar certification body.

Certification according to EN 54-16 is a mandatory requirement.

All components need to be compliant to EN 50849 requirements, which has to be approved by a relevant expert or authority.

The installation must be aswell compliant with EN 50849, also the system has to be checked if the STI (Speech Transmission Index) is better or equivalent to STI 0.5. The measurement has to be done as described in IEC 60268-16.

2 Product & Service Development and Cyber Security

The provider must have received industry recognition for its excellent software and product development and process improvement practices, no less than Maturity Level 5 of Capability Maturity Model Integration (CMMI). CMMI is a process appraisal and improvement framework administered by the CMMI Institute to determine the maturity of an organization's software and product development processes against recognized industry best practices.

The provider that executes the development and support for the offering, must hold ISO9001 certification and demonstrate commitment and practice that products and services are designed, developed, tested and maintained using a formal, auditable Quality Management System that is based on internationally accepted standards.

The following examples must be available for review:

- Software Configuration Management procedures
- Change control procedures for typical application code components
- Standards used for code development and internal procedures applied to source code
- Methodology used for developing or modifying code
- Training program and documentation on developer’s understanding of standards and methodology
- Quality Assurance procedures for independent internal review
- Allow the client to view source code for a typical, but inconsequential code module to get a feel for commenting levels, naming conventions, removal of dead code, etc.

- Share the testing conducted, demonstrating compliance with all documented procedures

Concerning Cyber Security the provider must have implemented a Secure Development Lifecycle standard for designing, developing and testing products, with regular evaluation of the security of the products and subjecting them to penetration testing to ensure they are as secure as possible in line with strict governance and mandatory auditing ensuring security policies are always adhered to.
Software components must be developed under a Secure Development Lifecycle standard with regular updates providing security enhancements to maintain security best practice as the threat landscape evolves over time.

The provider must exercise strict engineering standards to ensure products are deployed securely. Regular maintenance and disaster recovery procedures ensure secure operations over the lifetime of the system. These guidelines must be presented for review.
The provider must have an established process for reporting potential vulnerabilities, which are then managed by a team of cyber security experts until they are resolved. These details must be presented for review.

The provider must provide a company / corporate-wide cyber safety governance structure and process to implement DFARS 252.204-7012 and NIST SP 800-171, Rev 1.

The provider must comply with all 15 in-scope controls for FAR 52.204-21 Basic Safeguarding of Covered Contractor Information Systems. They must be aligned to industry-standard compliance frameworks, including but not limited to, National Institute of Standards and Technology (NIST) SP 800-171 and NIST SP 800-53, the International Organization for Standardization/ISO 27001, Payment Card Industry (PCI), and Sarbanes-Oxley (SOX) and 'Safe Harbour' certified annually.

2 General description

For the transmission of alarm signals in the event of a fire or other disaster, as well as for public announcements and playing music, an emergency audio warning system or a voice alarm system with self-monitoring functionality and alarm criteria should be installed in compliance with the relevant local standards as mentioned before.

The purpose of the system is to quickly evacuate people in an orderly manner via escape routes through the use of prepared clearly spoken instructions. In addition, it must also be possible to for all instructions that are announced live to be sent to loudspeaker circuits and groups.

There must be an intercom function between the digital call stations.

The failure of an amplifier or a loudspeaker circuit should not lead to the failure of a voice evacuation zone. For this reason, in addition to the backup amplifier where specified, the loudspeaker circuits may also require A/B wiring in all public areas.

Similarly, the connection to emergency microphones and all other security paging stations must be connected in a redundant way, so if one cable connection is lost, the second cable can take over.

In total, up to 9,600 programmable, monitored loudspeaker circuits must be available as well as up to 3,200 NF inputs (250 x 4 x 2) or 1,600 digital call stations.
Due to simultaneous program transmissions, there must be the facility for up to 120 simultaneous audio transmissions within the PA/VA system.

It must be possible to assign inputs (including digital call stations) and outputs throughout the system without any restrictions or bottlenecks.

A graphical user interface is used for simple and convenient configuration of the combination of groups, changes in loudspeaker circuits or key assignments without the need for any mechanical modifications.

When selecting the loudspeaker types and ratings, the electrical and acoustic audio frequencies, the following minimum sound pressure levels are used:

- 90 dB in larger public areas and
- for fire alarm/evacuation announcements, at least 12 dB higher than the maximum anticipated ambient noise with speech intelligibility STI > 0.5. The measurement has to be done as descript in IEC 60268-16:2011.

Loudness level and speech intelligibility must correspond to all the points of the above areas where required (e.g. in the event of an alarm or rescue operation) for evacuation purposes and transmission of information.

The public address system must be designed in accordance with the following basic requirements:
- provision of direct sound to widest possible area +/- 3 dB of the relevant ranges
- high level of system reliability
- optimal transmission quality

A fully digital, programmable, network-ready PA/VA system must be provided to ensure that the system is future-proof, flexible, and can be easily extended.
A 100 Mbit Ethernet LAN, also for proprietary use, serves as a means of transmitting signals.
It must be possible to design a redundant network by means of external modules.

It is particularly important that 100 V lines, power cords, control and modulation lines are properly isolated.

Amplifiers must have symmetrically audio inputs.

General description of the VAPA System

- Fully digital network-capable system with graphical user interface. Operating software for remote control and diagnosis of all systems states. Software for optional setup (configuration) of functions, modes and properties of system components, devices and controls including the connection of loudspeaker lines to public address areas, and the corresponding allocation of a selection key at the system digital call station; The user can modify the configuration using any client with an easy-to-understand, menu-driven user interface. Up to 120 simultaneous audio channels must be available over the network with an available bandwith of 100Mbit/s effective.

- Continuous, inaudible monitoring of all signal paths

- All errors must be detected, displayed, and recorded (log view) within maximum 100 seconds.

- Ability to easily program digital call stations for selective, group and collective calls (e.g. 1 fire control PA panel, 3 information call stations, more possible at any time).

- Continuous monitoring of power amplifiers with integrated noise detection and inaudible tone. If a power amplifier should fail, a backup amplifier will automatically and immediately replace the power amplifier in question.

- Double pole connection of 100 V loudspeaker modulation;

- Continuous processor - controlled line monitoring of all loudspeaker lines for short circuits, idling, ground faults and impedance value errors, independent of activated announcements. Monitoring must not be audible. Save error messages with the option for subsequent display; save set points of line parameters; Set up and interrogate system with easy-to-understand, menu-driven software. Non-reactive disconnection of loudspeaker circuits detected to be faulty without any consequence to any other speaker lines.

- To ensure continuous operation, the microphone for the digital call station must be acoustically monitored. Similarly, the malfunction of any button, component, cable, or any logical connection must be monitored and sent to the operating unit immediately via the LAN. The signal is transmitted between the digital call station and the central control unit in a digital audio format.

- Intercom function between digital call stations.

- Redunant cable conection between two Digital audio distribution and connection system and call station

- To adjust the volume in public address areas with constantly changing noise levels, an automatic volume control must always be available in real time, independent of the ambient noise level. This function is activated using software tools from the appropriate central output modules for this area.

- Digital storage and playback of at least 16 different alarm signals and texts for 1 hour in non-volatile memory.

- Dedicated digital storage recording and playback device of at least 16000 different files for 2000 hours on Harddisk and 120 minutes in non-volatile memory.

- Input of external signal sources (independent programs/background music) in the PA/VA system via separate input modules and via NF inputs in the system digital call stations.

- Connection to a fire alarm system

- Very advanced logical linkage of events e.g. for fire control functions

3 Special performance features

3.1 Performance features

3.1.1 Audio monitoring

- All audio information can be selected locally on the PA/VA system using the monitor button and can be monitored via the integrated loudspeaker.
- The monitor function can be deactivated automatically by pressing a button or via a user-defined timeout.

3.1.2 Alarm mode

- The system switches to an alarm mode for alarm announcements.
- Announcements with low priority, such as background music, are stopped.
- Standard-compliant alarm signaling.

3.1.3 Digital signal processing (DSP)

- Per digital audio bus audio stream
    * Adjustable volume
    * Configurable limiter for the call station microphone
- Per Amplifier channel
    * Adjustable volume
    * Automatic volume control (AVC)
    * High-pass filter
    * Low-pass filter
    * Delay (2.000 msec or longer)
    * Parametric equalizer, 8 bands or more
- Level indicator for audio inputs and outputs.

3.1.4 Audio memory/signals

- Audio memory for critical alarms such as evacuation announcements in accordance with IEC EN 50849 on non-volatile flash memory. 16 memory places for 1 hour in total are available. E.g. for pre recorded audio signals (gongs, signals, texts, etc.), in each digital audio distribution and connection system. Up to four of those saved audio files can be played back the same time

-System wide audio memory for critical alarms such as evacuation announcements in accordance with IEC EN 50849 on non-volatile flash memory. The memory capacity is approximately 120 minutes.
- Audio memory for non security relevant announcements such as advertising texts or music on a hard drive. The memory capacity shall be minimum 2000 hours.

3.1.5 Connection of a source to a target taking the following into account

- Connection time limit
- Activation type – press/toggle
- Individual volume
- With/without automatic volume control
- Multisource; an audio source can be used by several connections simultaneously.
- Priority (1-250)
- Recording the activation or deactivation of the connection.
- Saving the announcement
- Partial connection
- Timeout
- Warning signal, e.g. an attention signal such a gong
- Reconnection
- Repetition

3.1.6 Error display

- The error message can be displayed based on the location.
- Error display either by LED or control contact and by means of an entry in the message list.

- Error messages are always reported as “OK” after the underlying cause has been rectified.
- Error messages can also be automatically reset – if necessary.
- Error messages can also be manually acknowledged by means of key(s) or contact(s).
- Potential error-specific signaling to LEDs and control outputs.
- Monitoring can be completely switched on or off at the device level for each Digital audio distribution and connection system.

3.1.7 Remote control, remote maintenance

- The system can be remotely maintained via an open data protocol.
Building management systems, path control machines, or airline passenger information systems, for example, can set any individual announcements and obtain status information from the system.
- The system can be maintained remotely.
Configuration changes and read outs of all events can be performed over long distances.

3.1.8 Graphical user interface

- A user interface customized to specific customer requirements can be implemented easily and flexibly.

3.1.9 Backup amplifier

- In the event of failure of an amplifier channel, the system automatically switches to a backup amplifier or amplifier backup channel (just “backup amplifier” in the following)
- The system switches to the backup amplifier dynamically. In the case of two faulty amplifiers within a group of amps which are connected to one backup amp, the priority of the announcement decides which amplifier is switched to the backup.
This must be dynamically. That means no fixed backup / amp combination. If another time the priority of another unavailable amp is higher, this will be replaced.
- The volume from the faulty amplifier channel is transferred over.
- The ratio and the number of main to backup amplifiers can be defined by the user between 4 and 12 amplifier channels to one backup amp

3.1.10 Intercom call stations

- Digital call station to digital call station.
- Digital call station to digital call station and other loudspeaker circuits.
- Digital call station to several digital call stations.
- Digital call station to several digital call stations and other loudspeaker circuits.

3.1.11 Configuration

- Configuration via graphical user interface.
- Parameters can be read and modified in real time.
- Certain user privileges can be allocated via user management.

3.1.12 Volume control

- Automatic volume control
  - Each amplifier channel is regulated dynamically depending on the ambient noise and taking into account predefined parameters and back ground music.
  - Announcements (mostly alarms/evacuations) with a certain priority can be played out on a fixed configured volume, without automatic volume control.
  - The ratio of ambient noise to changes in volume can be set individually.
  - The automatic volume control inputs for the sensor microphones can also be used as audio signal inputs, if necessary.
  - Background music must not have an influence on the automatic volume control
- Manual volume control for all audio inputs/outputs via buttons and contacts.
  - Alarms/evacuations can be output with maximum volume per configuration (Manual volume control is ignored).
- Time-based volume control for all audio inputs/outputs, e.g. reduced volume at tram stops at night time.

3.1.13 Message list

- All system-related events are recorded in the message list.
- download of error message with a PC/Notebook.
- “External systems”, e.g. emergency power supplies can create entries in the message list.

3.1.14 Power management

- Primary power supply: 230 V AC
- Secondary power supply (emergency power): 24 V DC
- Less important announcements (e.g. background music) can be switched off when there is an outage in the primary power supply (230 V AC).
- Software to calculate the resistance of cables for fault free monitoring of batteries.- Fault tolerant Battery monitoring

3.1.15 Control inputs & control outputs

- Keys with associated LEDs or contacts
- Any allocation of control inputs and control outputs for functions, e.g. for triggering priority relays for 100V volume controllers.

3.1.16 Monitoring

- Monitoring of connection from digital call station to PA/VA system.
- Acoustic monitoring of digital call station microphone or hand microphone (fire control PA panel).
- Acoustic monitoring of amplifier channel.
- Monitoring of loudspeaker line for short circuits, interruptions and impedance changes via impedance measurement – independent of connections.
The thresholds for short circuits, open lines, and ground faults can be customized.
- Monitoring of loudspeaker line for short circuits or interruptions by means of EOL (end of line module) – independent of connections.
- Monitoring of loudspeaker line for ground faults.
Independent of circuit-entering loudspeaker lines:
- Monitoring of the communication of several PA/VA systems on the network.
- Lamp tests/contact tests via button or contact.
- Error in data interface to fire panels (e.g. Honeywell, Notifier)
- Failure in primary and secondary power supply (emergency power)

3.1.17 Wiring

- Each required system can be wired quickly and clearly using only a few system cables.

3.1.18 Networking

- Up to 400 digital audio distribution and connection systems on a network.
- Networking via 10, 100 Mbit(recommended) or Gbit Ethernet.
- Up to 120 audio data channels on a 100 Mbit network.
- Up to 16 different audio channels items per digital audio distribution and connection systems can be processed simultaneously over the network.
- SNMP (Simple Network Management Protocol) to monitor network elements from a central station.
- Specified delay of local destination for a connection to offset the latency period of the network destinations.
- VLAN ID can be adjusted for integration in existing network structures,
e.g. taking into account other network systems such as CCTV, etc.

3.1.19 Timer programs

- Time-controlled connection for bell systems, e.g. in schools.
- Time-based volume control for all audio inputs/outputs,
e.g. reduced volume at tram stops at night-time.
- Time-controlled activation/deactivation of monitoring of loudspeaker lines.
- Time-controlled actuation/deactivation of amplifier channels monitoring.

3.1.20 Time synchronization

- The individual devices are synchronized. Master/Slave configuration possible.
- External time synchronization via NTP (Network Time Protocol) possible.
- External time synchronization via GPS possible.
- Automatic adjustment for daylight saving changes.

3.1.21 Destination – Group formation

- Any circuits (destinations) can be grouped together in pre-selection points.
- Circuits can be grouped in any nested format.

3.1.22 Temporary storage of an announcement (automatic)

- Announcements can be automatically saved and played back within a user-defined timeout period when the required points are released.
- Status display and control options via buttons and control contacts.

3.1.23 Temporary storage of an announcement (manual)

- Record, listen and playback possible.

3.1.24 Audio matrix

- Any input can be route to any output without any restrictions
    - Input can be a call station, analog audio input, and audio memory
    - Output can be a loudspeaker line, call station and analog audio output

3.2 Performance features with value indication

Max. number of addressable audio inputs: 3,200
Max. number of audio data items that can be transmitted simultaneously via 100 Mbit Ethernet: 120
Max. number of addressable amplifier channels: 1,600
Max. number of addressable loudspeaker circuits: 9,600

3.3 Minimum performance features with value indication

Min. number of addressable analogue audio inputs (line level): 2
Min. number of addressable analogue audio inputs (mic level): 1
Min. number of addressable analogue audio outputs: 2
Min. number of addressable amplifier channels: 4
Min. number of addressable loudspeaker circuits per channel: minimum 8; maximum 24
Min. number of monitored digital inputs (GPI): 8
Min. number of digital outputs (Relay): 8

4 Interfaces

4.1 Connection to fire alarm system

This system also allows for alarm management with prepared texts in the case of an emergency by means of an interface to the fire detection system. For this, the system must be connected to the emergency power supply, and the loudspeakers should be installed in such a way that they are fire resistant in the event of a fire escaping beyond the fire compartment (see instructions). All PA/VA systems must be approved as alarm detector systems by an authorized testing body.

Interface: RS232
Data rate: 19,200 bps

The interface is monitored continuously; in the event of a failure/interruption, an error message occurs on the PA/VA system and the fire alarm control panel. The triggering of the alarm can be defined via control zones.

Any other errors that may arise, such as the failure of a power amplifier, digital call station or routing to the loudspeakers, will be forwarded to the fire alarm control panel as a trouble alarm. Trouble alarms can be reset via the fire alarm control panel. A date/time synchronization can be configured between the PA/VA system and the firm alarm control panel.

Possibility of multiple redundant connection from the fire panel to the PA/VA system

4.2 Connection to an Enterprise Building Integration (EBI) system for system display

A building management system (or safety management system) and the PA/VA system must be linked by means of the PA Server Software and Real Time Data Services (RTDS) software module; mere contact connections/controls nor OPC are **not acceptable**.

With regard to the PA/VA system that is to be linked to the safety management system, the following functions at the very least must be in operation or available from the head end:

- A minimum of 26 work stations
- Display of graphics and alarms from a cellular device, tablet or smart phone.
- Circuit or zone selection including multiple or all zones / circuit to be selected from the station
- Group call (groups can be defined freely in terms of software)
- Redundancy via two separate PC workstations that support rea time database synchronisation and manual fail over
- Via custom graphics created from within the Integration software ability to send:
    - Pre-recorded messages
    - Live Audio Messages
    - Chime messages
- System synchronization (messages, time)
- Message fault PA/VA System, DOM, Amplifier, SCU, DCS, Speaker Circuit, State
- Custom graphics that indicate:
    - Zone state – Fault, Activated, Muted, Ready for Command
    - Announcement State – Fault, Initiated, Pre-Signal, Playing, Waiting, Complete, Deleted, Interrupted
    - Controller status – Fault, Normal
    - Microphone and Line Status – Fault, Normal

- Full-screen application, suitable for use via touch screen
- Graphical view (e.g. building layout) for zone selection and status display
- Zone display in table form with selection and status display
- LIVE announcements via PTT (press to talk) button on screen or call station
- Status display for each zone – assigned or error
- Distributed Server Architecture
- Indicate system status (such as error signals)
- Graphical overview of zones + zone prefixes
- Display of occupied zones
- Audio database for announcements
- Assembly of automatic announcements ("Flight LH3434 to Vienna is ready for boarding")
- Scheduler for timed release of announcements (once, multiple times)
- Start playing music
- Logging of announcements, error signals, alarms, etc.
- Definable Multi User access administration
- Priority control
- Alarm Management and Priority control

The interface must also support integration into other building applications: Fire Detection, Intrusion, CCTV, BMS, Energy Management and Access Control.

4.3 Session Initiation Protocol (SIP) Ready

Session Initiation Protocol (SIP) is a communications protocol used to signal and control multimedia communication sessions in applications based around Internet telephony for voice and video calls, in private IP telephone systems. The PAVA system shall afford an interface to support applications, such as Nursing Station Phone interfacing to facilitate ease of raising a local alarm.

5 Products

5.1 System components

583361.22 | Digital audio distribution and connection system for up to 8 loudspeaker zones

Module with audio signal processing for connecting and controlling power amplifiers and for connecting loudspeaker circuits.
Four independent audio outputs for connecting power amplifiers (up to 500 Watts per channel) and for simultaneous processing of up to four different audio information items per module. Connection of an audio signal to one or two user-defined loudspeaker zones. In total up to eight loudspeaker circuits per module. Either up to 8 loudspeaker circuits can be operated as transmission line technology or as up to 4 loops with *loop technology.* Where required, the two technologies can used in combined mode e.g. *as two loops and 4* transmission lines. Upgrade to a complex alarm/public address system through integrated LAN interfaces with four Ethernet 100 Mbit/s interface connections with switch function.

Display

The Central Control Module shall have the following control and indications as a minimum
4 LEDs for device operating state:
in operation, warning/error, emergency control option, power-saving mode
8 LEDs for indicating the control contacts state
4 LEDs for indicating the state of each of connected power amplifier
8 error and 8 loudspeaker circuit relay LEDs

Continuous monitoring of power amplifiers by means of a 22 kHz test tone. In the event of a failure of a power amplifier, a backup amplifier will automatically and dynamically replace the faulty power amplifier. The defined loudness level is also taken into account for the backup amplifier.
Continuous inaudible monitoring of loudspeaker lines (ground faults, short circuits, interruptions, and impedance deviations with specified tolerances for each loudspeaker circuit), even in power-saving mode, independent of activated announcements. An end of line module can also optionally be used as a line termination and the line to the EOL can be monitored.
The monitoring ensures that short-circuited loudspeaker circuits are disconnected without affecting the rest of the system.Continuous monitoring of line and microphone of up to four connectable digital call stations or universal interface modules. The microphones can be also connected with a second redundant cable to a second Digital audio distribution and connection system e.g. the emergency microphones.

All errors are detected, displayed and recorded (message list) within seconds.

Audio filters such as parametric equalizers, high and low-pass filters and delays per audio channel can be set. Also it is possible to use Boolean functions:
AND and OR gate for logic combinations
Counter elements (>=m)
Each input and output can be inverted separately
Toggle mode

For each of the four amplifier channels, there are four sensor inputs for optional, continuous and automatic volume control in real time, independent of the ambient noise level.
It is possible to monitor locally all of the input and output channels via the integrated loudspeaker and monitor button.
Eight programmable, potential-free contact outputs for controlling external components (e.g. priority relays) or for signalling various indicator states (collective fault messages).

Integrated TWI bus for optional connection of an additional module (e.g. time synchronization using TCM-GPS). Display for indicating operation status, errors, circuit connection, and active power-saving mode via multi-colored LEDs.
Emergency control operation during a power failure to preserve battery capacity – this means not activating background music or low-priority announcements when there is a failure in the primary power supply. The connected amplifiers are switched to stand-by mode.
Non-volatile audio memory for up to 1 hour, freely scalable, for user-specific canned audio. Various gong and alarm signals .
Emergency 24 V power supply input as secondary power supply.

Operating elements
A button for sequential monitoring local audio channels and acknowledging an acoustic error message
1 monitoring loudspeaker

Alternative text
(Please use either the above or the below):

583361.22 | Digital audio distribution and connection system for up to 8 loudspeaker zones

Central control module with audio signal processing for connecting and controlling power amplifiers and loudspeaker circuits and shall be capable of the following:

- It shall be possible to connect up to 400 Digital Output Modules (DOM's) on a single network
- The unit shall have four independent audio outputs for connecting power amplifiers (up to 500 Watts per channel) and be capable of simultaneous processing of up to four different audio information items per module.
- Up to eight loudspeaker circuits per module.
- Up to 4 loudspeaker loops
- Upgrade to a complex alarm/public address system through integrated LAN interfaces. Maximum distance between DOM's 100M (Copper Screened CAT5) or up to 2000M's using multimode fibre optic cable.
- Continuous monitoring of power amplifiers by means of a 22 kHz test tone. In the event of a failure of a power amplifier, a backup amplifier will automatically and dynamically replace the faulty power amplifier. The defined loudness level is also taken into account for the backup amplifier.
- Continuous inaudible monitoring of loudspeaker lines (earth faults, short circuits, interruptions, and impedance deviations with specified tolerances for each loudspeaker circuit), even in power-saving mode, independent of activated announcements. An end of line module can also optionally be used as a line termination and the line to the EOL can be monitored. This ensures that short-circuited loudspeaker circuits are disconnected without affecting the rest of the system.
- Continuous monitoring of line and microphone of up to four connectable digital call stations or universal interface modules.
- Possibility of connecting the call station redundant to another central control module
- All faults are detected, displayed and recorded (message list) within seconds.
- Audio filters such as parametric equalizers, high and low-pass filters and delays per audio channel can be set.
- For each of the four amplifier channels, there are four sensor inputs for optional, continuous and automatic volume control in real time, independent of the ambient noise level
- It shall be possible to monitor locally all of the input and output channels via the integrated loudspeaker and monitor button.
- Eight programmable, potential-free contact outputs for controlling external components (e.g. priority relays) or for signaling various indicator states (collective fault messages).
- Four Ethernet 100 Mbit/s interface connections with switch function.
- Integrated TWI bus for optional connection of an additional module (e.g. time synchronization using TCM-GPS). Display for indicating operation status, faults, circuit connection, and active power-saving mode via multi-coloured LEDs.

- Emergency control operation during a power failure to preserve battery capacity – this means not activating background music or low-priority announcements when there is a failure in the primary power supply. The connected amplifiers are switched to stand-by mode.
- Non-volatile audio memory for up to 1 hour, freely scalable, for user-specific canned audio. Various gong and alarm signals in accordance with DIN VDE 33404, ZBV.
- Emergency 24 V power supply as secondary power supply.

Display

The Central Control Module shall have the following control and indications as a minimum

- 4 LEDs for device operating state: in operation, warning/fault, emergency control option, power-saving mode
- 8 LEDs for indicating the control contacts state
- 4 LEDs for indicating the state of each of connected power amplifier
- 8 fault and 8 loudspeaker circuit relay LEDs
- Operating elements button for sequential monitoring local audio channels and acknowledging an acoustic fault message

End alternative text

Technical data for 583361.22 | Digital audio distribution and connection system for up to 8 loudspeaker zones (To be add if required)

Audio output	
Output type	electronically symmetrical
Nominal level	0 dBu
Max. output level	+6 dBu
Frequency range	20 Hz to 20 kHz
Distortion factor at nominal level	< 0.03% at 1 kHz
Signal-to-noise ratio at nominal level	>75 dB (A) > 70 dB
Load impedance	min. 5 kΩ, max. 500 pF
Sensor input (AVC*)	
Input type	symmetrical, non-earthed
Nominal level	-51 dBu
Nominal level for emergency call station	0 dBu
Frequency range	100 Hz to 8 kHz
Max. deviation from linear frequency	± 6 dB in frequency range
Distortion factor at nominal level	< 0.2% at 1 kHz
Max. distortion factor	1% in frequency range
Signal-to-noise ratio at nominal level	> 65 dB (A) > 60 dB
Input impedance	typ. 200 Ohm
Control contacts	
Max. voltage	100 V DC/1 A
Impulse withstand voltage	> 2.5 kV
Pass-through contacts	
Max. voltage	250 V AC, 30 V DC/5 A
Impulse withstand voltage	> 1.5 kV
Power supply	
Rated voltage	90 V AC to 264 V AC
Nominal frequency	47 Hz to 63 Hz

Power rating with/without 4x digital audio	40 W/70 W at 230 V AC
Emergency power supply input	
Voltage range	21.6 V DC to 30 V DC
Ambient temperature range	-5°C to +55°C
Relative humidity	15% to 90%
EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: DOM 4-8
Part no.: 583361.22

*AVC = Automatic Volume Control

583362.22 | Digital audio distribution and connection system for up to 24 loudspeaker zones

Module with audio signal processing for connecting and controlling power amplifiers and for connecting loudspeaker circuits.
Four independent audio outputs for connecting power amplifiers (up to 500 Watts per channel) and for simultaneous processing of up to four different audio information items per module.
Connection of an audio signal to one or two user-defined loudspeaker zones. In total up to twenty four loudspeaker circuits per module. Either up to 24 loudspeaker circuits can be operated as transmission line technology or as up to 4 loops with *loop technology.* Where required, the two technologies can used in combined mode e.g. *as two loops and 4* transmission lines.
Upgrade to a complex alarm/public address system through integrated LAN interfaces with four Ethernet 100 Mbit/s interface connections with switch function.

Display

The Central Control Module shall have the following control and indications as a minimum
4 LEDs for device operating state:
in operation, warning/error, emergency control option, power-saving mode
8 LEDs for indicating the control contacts state
4 LEDs for indicating the state of each of connected power amplifier
24 error and 24 loudspeaker circuit relay LEDs

Continuous monitoring of power amplifiers by means of a 22 kHz test tone. In the event of a failure of a power amplifier, a backup amplifier will automatically and dynamically replace the faulty power amplifier. The defined loudness level is also taken into account for the backup amplifier.
Continuous inaudible monitoring of loudspeaker lines (ground faults, short circuits, interruptions, and impedance deviations with specified tolerances for each loudspeaker circuit), even in power-saving mode, independent of activated announcements. An end of line module can also optionally be used as a line termination and the line to the EOL can be monitored

The monitoring ensures that short-circuited loudspeaker circuits are disconnected without affecting the rest of the system. Continuous monitoring of line and microphone of up to four connectable digital call stations or universal interface modules. The microphones can be also connected with a second redundant cable to a second Digital audio distribution and connection system e.g. the emergency microphones.

All errors are detected, displayed and recorded (message list) within seconds.

Audio filters such as parametric equalizers, high and low-pass filters and delays per audio channel can be set. Also it is possible to use Boolean functions:
AND and OR gate for logic combinations
Counter elements (>=m)
Each input and output can be inverted separately
Toggle mode

For each of the four amplifier channels, there are four sensor inputs for optional, continuous and automatic volume control in real time, independent of the ambient noise level.
It is possible to monitor locally all of the input and output channels via the integrated loudspeaker and monitor button.
Eight programmable, potential-free contact outputs for controlling external components (e.g. priority relays) or for signaling various indicator states (collective fault messages).

Integrated TWI bus for optional connection of an additional module (e.g. time synchronization using TCM-GPS). Display for indicating operation status, errors, circuit connection, and active power-saving mode via multi-coloured LEDs.
Emergency control operation during a power failure to preserve battery capacity – this means not activating background music or low-priority announcements when there is a failure in the primary power supply. The connected amplifiers are switched to stand-by mode.
Non-volatile audio memory for up to 1 hour, freely scalable, for user-specific canned audio. Various gong and alarm signals .
Emergency 24 V power supply input as secondary power supply.

Operating elements
A button for sequential monitoring local audio channels and acknowledging an acoustic error message
1 monitoring loudspeaker

Alternative text
(Please use either the above or the below):

583362.22 | Digital audio distribution and connection system for up to 24 loudspeaker zones

Central control module with audio signal processing for connecting and controlling power amplifiers and loudspeaker circuits and shall be capable of the following:

- It shall be possible to connect up to 400 Digital Output Modules (DOMs) on a single network
- The unit shall have four independent audio outputs for connecting power amplifiers (up to 500 Watts per channel) and be capable of simultaneous processing of up to four different audio information items per module.
- Up to twenty four loudspeaker circuits per module.
- Up to 4 loudspeaker loops
- Upgrade to a complex alarm/public address system through integrated LAN interfaces. Maximum distance between DOM's 100M (Copper Screened CAT5) or up to 2000Ms using multimode fibre optic cable.
- Continuous monitoring of power amplifiers by means of a 22 kHz test tone. In the event of a failure of a power amplifier, a backup amplifier will automatically and dynamically replace the faulty power amplifier. The defined loudness level is also taken into account for the backup amplifier.
- Continuous inaudible monitoring of loudspeaker lines (earth faults, short circuits, interruptions, and impedance deviations with specified tolerances for each loudspeaker circuit), even in power-saving mode, independent of activated announcements. An end of line module can also optionally be used as a line termination and the line to the EOL can be monitored. This ensures that short-circuited loudspeaker circuits are disconnected without affecting the rest of the system.
- Continuous monitoring of line and microphone of up to four connectable digital call stations or universal input modules.
- Possibility of connecting the call station redundant to another central control module
- All faults are detected, displayed and recorded (message list) within seconds.
- Audio filters such as parametric equalizers, high and low-pass filters and delays per audio channel can be set.
- For each of the four amplifier channels, there are four sensor inputs for optional, continuous and automatic volume control in real time, independent of the ambient noise level

- It shall be possible to monitor locally all of the input and output channels via the integrated loudspeaker and monitor button.
- Eight programmable, potential-free contact outputs for controlling external components (e.g. priority relays) or for signaling various indicator states (collective fault messages).
- Four Ethernet 100 Mbit/s interface connections with switch function.
- Integrated TWI bus for optional connection of an additional module (e.g. time synchronization using TCM-GPS). Display for indicating operation status, faults, circuit connection, and active power-saving mode via multi-coloured LEDs.
- Emergency control operation during a power failure to preserve battery capacity – this means not activating background music or low-priority announcements when there is a failure in the primary power supply. The connected amplifiers are switched to stand-by mode.
- Non-volatile audio memory for up to 1 hour, freely scalable, for user-specific canned audio. Various gong and alarm signals in accordance with DIN VDE 33404, ZBV.
- Emergency 24 V power supply as secondary power supply.

Display

The Central Control Module shall have the following control and indications as a minimum

- 4 LEDs for device operating state: in operation, warning/fault, emergency control option, power-saving mode
- 8 LEDs for indicating the control contacts state
- 4 LEDs for indicating the state of each of connected power amplifier
- 24 fault and 24 loudspeaker circuit relay LEDs
- Operating elements button for sequential monitoring local audio channels and acknowledging an acoustic fault message

End alternative text

Technical data for 583362.22 | Digital audio distribution and connection system for up to 24 loudspeaker zones (To be add if required)

Audio output	
Output type	electronically symmetrical
Nominal level	0 dBu
Max. output level	+6 dBu
Frequency range	20 Hz to 20 kHz
Distortion factor at nominal level	< 0.03% at 1 kHz
Signal-to-noise ratio at nominal level	>75 dB (A) > 70 dB
Load impedance	min. 5 kΩ, max. 500 pF
Sensor input (AVC*)	
Input type	symmetrical, non-earthed
Nominal level	-51 dBu
Nominal level for emergency call station	0 dBu
Frequency range	100 Hz to 8 kHz
Max. deviation from linear frequency	± 6 dB in frequency range
Distortion factor at nominal level	< 0.2% at 1 kHz
Max. distortion factor	1% in frequency range
Signal-to-noise ratio at nominal level	> 65 dB (A) > 60 dB
Input impedance	typ. 200 Ohm
Control contacts	
Max. voltage	100 V DC/1 A
Impulse withstand voltage	> 2.5 kV

Pass-through contacts	
Max. voltage	250 V AC, 30 V DC/5 A
Impulse withstand voltage	> 1.5 kV
Power supply	
Rated voltage	90 V AC to 264 V AC
Nominal frequency	47 Hz to 63 Hz
Power rating with/without 4x digital audio	40 W/70 W at 230 V AC
Emergency power supply input	
Voltage range	21.6 V DC to 30 V DC
Ambient temperature range	-5°C to +55°C
Relative humidity	15% to 90%
EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: DOM 4-8
Part no.: 583361.22

*AVC = Automatic Volume Control

583381.31 | System Communication Unit (SCU)

The system communication unit acts as a digital audio memory for the PA/VA system. The unit shall allow more than 50 channels of audio data to be recorded and played back at the same time – regardless of the available bandwidth from the network. The connection to a PA/VA system network shall be established via Ethernet and shall monitor continuously. As per IEC EN 50849, the audio data for critical alarms and evacuation messages shall be stored on non-volatile flash memory. The memory capacity shall be a minimum of 2 hours. Additional messages, such as announcements, signals or advertising texts, shall be stored on a hard drive. The memory capacity shall be a minimum of 2,200 hours.

The component will also be capable of logging and recording announcements. These shall be stored on the hard disk and saved with the date, time and trigger information. The unit shall have a call stacker function which will allow announcements to be temporarily stored and played back simultaneously and automatically within a particular time limit when the desired point is released. The unit shall have a 24 V DC emergency power supply as secondary power supply.

Technical Specification

Audio capacity flash memory	Min. 2 hours.
Audio capacity hard drive	Min. 2200 hours.
Power supply	
Nominal voltage	90 V AC to 264 V AC
Nominal frequency	47 Hz to 63 Hz
Nominal current	typ. 0.5 A @ 230 V AC
Emergency power supply	
Voltage range	21.6 V DC to 30 V DC
Ambient temperature range	-5°C to +45°C
Relative humidity	15% to 90%
EN 54-16 approved	0786 – CPD – 20997
Model:	Honeywell
Type:	SCU
Part no.:	**583381.31**

5.2 Digital call stations

583527 | Ethernet Touch Call Station for Routine and Emergency Paging

The ethernet touch call station shall be BS EN 54-16 compliant and provide a 7 inch TFT LCD display with capacitive sensor which provides a smart phone style, intuitive user interface. Bi-colour LEDs shall be used for status indications which include microphone fault, system fault and connection states of two redundant Ethernet ports. Due to the two Ethernet ports, it is possible to connect the call station with a second Ethernet cable to the digital audio distribution and connection system to make sure that even in the event of a cable break or short circuit on one of the connection to the call station still work as before. For safety reasons, powering the ethernet touch call station shall be possible via redundant Power over Ethernet (PoE) Switch to the two Ethernet ports or via external power supply for non emergency use.

A covered red button can be configured to activate an emergency announcement. The gooseneck microphone is replaceable and monitored by the call station. The ethernet touch call station includes a built-in loudspeaker that can be used for pre-listening local audio and can also be used as an intercom between other call stations.

The ethernet touch call station shall support multiple languages which can be switched dynamically without resetting the device. There shall be at least three types of user permission levels which can provide different layouts and operations for each user. It shall be possible to store up to 27 hours of speech, audio or recordings on the call station, accessible from any call station on the system. The active call list and system fault list shall always be easily accessible during touch screen operation.

The call station shall support manual calls or pre-defined calls from it's home page. For manual calls, after selecting the target zone(s) and/or zone group(s), the call station shall provide a minimum of five different audio sources to choose from which will include USB stick audio, local storage audio, pre-recorded audio, network audio or live announcement. For pre-defined calls, when the call is activated, it will directly play the selected pre-recorded messages to target zones/groups which shall all be pre-configurable by the system configuration tool. The broadcast volume for non-emergency messages shall also be adjustable during the calls, directly from the touchscreen.

The ethernet touch call station shall provide scheduler functions to manually set up automatically timed annoucements. Minimum daily or weekly scheduled annoucements shall be possible. Additionally it shall support to record announcements via the microphone, pre-listen to it, manage and play manually or via the scheduler function.
An audio input for connecting external audio devices (e.g. CD-Player or MP3 player) and an audio output shall be available independently from other sources like USB stick audio or live announcements.

The call station shall support multiple installation methods, including in-desk mount, flush wall mount, and provide optional hard button extension unit which has minimum 18 buttons and LEDs.

Technical data for 583527 | Ethernat Touch Call Station ETCS

Audio output:	
Nominal level	0 dBu +/- 0.5dBu
Transmission range	0 ... 20000 Hz
Audio input:	
Nominal level	0 dBu
General:	
Microphone	Electret, uni-directional
Swan-neck	400 mm
Loudspeaker	2 W
Sample rate	48 kHz
Current consumption	Max. 6W
Ambient temperature	-5 °C … +45 °C

Air humidity	15 % … 95 % rel. hum. (non-condensing)
Color	black, similar with RAL 9005
Weight	approx.1.65kg
Dimensions (W x L x D)	200 × 49.4 × 200 mm
Specification	EN 54-16

Model: HONEYWELL
Type: Ethernat Touch Call Station ETCS
Part no.: 583527

583560 PC Touch Screen Call Station

The PC Touch Screen Call Station shall be an easy-to-use, computer-based call station that enables operation via a monitor with a touch-sensitive screen, without the necessity for additional operating elements such as buttons, switches, keyboard or computer mouse.

The monitor screen should have a size of at least 15 inches and a resolution of at least 1366 x 768 pixels. The possible brightness of the monitor should be at least 200 cd and the contrast at least 1:650.

An integrated Intel computer is to be supplied in order to ensure adequate performance. This should have at least an Intel Celeron processor with a clock frequency of 2.4 GHz. The minimum size of the RAM must be 2 GB and that of the hard drive 300 GB and the computer must have at least one integrated audio connection for the gooseneck microphone that is also to be supplied. Exclusively fanless hardware is to be used to prevent noise and interference with announcements.

An operating system is to be supplied if necessary and optimised for the type of application.
The call station software must meet the following minimum requirements:

- Call station function for switching through live connections and for playing back stored, variably combinable text messages (in combination with a system communication unit)
- Time-controlled playback of stored text messages
- Recording of own announcements for time-controlled and/or later playback
- Monitoring of the voice alarm and public address system
- Setting/control of operating parameters for the voice alarm and public address system with various operating levels
- Level display for audio signals of the amplifier and DCS microphones of the voice alarm and public address system, for example, for monitoring or control purposes
- Online configuration of the call station user interface and operating parameters
- Reading of the voice alarm and public address system configuration directly from the connected system
- Navigation between any number of parallel or hierarchically arranged system views

The gooseneck microphone to be supplied should have a cardioid characteristic with a frequency range from 50 Hz to 18 kHz with a sensitivity of -56 dB (+/- 3 dB @ 1 kHz). The impedance should be 500 Ohms and the length of the gooseneck 27 cm +/- 2 cm.

Model: HONEYWELL
Type: PC TS Call Station
Part no.: 583560

583520 | Digital Call Station DCS plus

Integrated broadband loudspeaker for monitoring and previewing purposes as well as intercom functions.

Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.

Digital transmission of control signals and all four audio signals to and from the digital call station and the supply voltage via digital audio link.

The digital call station is connected to the PA/VA system in star-shaped topology via one or two CAT 5E cables (shielded) and RJ45 socket (up to 300 meteres distance). Due to the two connectors, it is possible to connect the call station with a second cable to a second digital audio distribution and connection system to make sure that even in the event of a cable break or short circuit on one of the cables the call station will still work as before.

Optional fibre optic connection for distances up to 2,000 metres.
RJ12 socket for connection with up to 6 expansion modules via daisy chain.

Fully digital call station with electret microphone (cardioid characteristic) on a flexible about 400 mm long gooseneck which is exchangeable and protected by using a specific tool to lock/unlock.

12 freely programmable buttons, which can be labelled.
15 integrated and 12 freely programmable LED display elements including a combined operation and error display.

An audio input with 2 cinch sockets at the back of the digital call station for connecting an auxiliary device allows audio playback outside of the central control unit.
An audio output can be used for monitoring purposes or for audio distribution or recording.

In- and output are independent from the microphone and can be used simultaneously

A 3 m long CAT5 standard connection cable for copper cabling is included as standard.

Alternative text

The units shall have the following as a minimum

- The digital call station is connected to the PA/VA system in star-shaped topology via CAT 5E cable (shielded) and RJ45 socket (up to 300 metres distance) and shall have the following optional connections.
  - Optional fibre optic connection for distances up to 2,000 metres.
  - RJ12 socket for connection with up to 6 expansion modules via daisy chain.
  - Full redundant back up connection allowing a call station to be connected to 2 Digital Output Modules (DOMs) simultaneously providing a redundant back up path for the call station in the event of a single cable of Digital Output Module failure.

- A fully digital call station with electret microphone (cardioid characteristic) on a flexible about 400 mm long gooseneck.
- Integrated broadband loudspeaker for monitoring and previewing purposes as well as intercom functions.
- Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.
- Digital transmission of control signals and all four audio signals to and from the digital call station and the supply voltage via digital audio link. An audio input with 2 cinch sockets at the back of the digital call station for connecting an auxiliary device allows audio playback outside of the central control unit.
- A 3 m long CAT5 standard connection cable for copper cabling is included as standard.
- Capable of being expanded to accept up to 6 Digital Key Module DKM plus 583526
- 12 freely programmable buttons, which can be individually labelled.
- 15 integrated and 12 freely programmable LED display elements including a combined operation and fault display.

- An audio output can be used for monitoring purposes or for audio distribution or recording. In- and output are independent from the microphone and can be used simultaneously

---

Alternative text end

Technical data for 583520 | Digital Call Station DCS plus

Audio output	
Nominal level	0 dBu
Max. output level	< 6 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.1 % @ 1 kHz
Signal/Noise ratio	> 90 dB, A-weighting
Output impedance	210 Ω
Audio input	
Nominal level	0 dBu
Transmission range	20 ... 22000 Hz
Harmonic distortion at nominal level	< 0.1 %
Signal/Noise ratio	> 90 dB, A-weighting
General	
Microphone	Electret, uni-directional
Gooseneck	400 mm
Transmission range	60 ... 20000 Hz
Loudspeaker	2 W
Sample rate	48 kHz
AD/DA converter	24 Bit
Current consumption	< 70 mA
Ambient temperature	-5 °C … +45 °C
Storage temperature	-10 °C … +45 °C
Air humidity	15 % … 95 % rel. hum. (non-condensing)
Housing	metal
Colour	black, similar to RAL 9005
Weight	approx.1.42kg
Dimensions (W x L x D)	200 × 49.4 × 200 mm
Specification	EN 54-16

Model: HONEYWELL
Type: Digital Call Station DCS plus
Part no.: 583520

583526 | Digital Key Module DKM plus

Digital key module extends the Digital Call Station DCS plus with 18 freely configurable keys and 18 LEDs. Up to six Digital Key Module DKM plus can be conneced to the Digital Call Station DCS plus. This allows communication stations with up to 120 keys and 120 LEDs.
The key module is supplied with 24 V DC by the digital call station.

Technical data for 583526 | Digital Key Module DKM plus

Ambient temperature	-5 °C … +45 °C
Storage temperature	-10 °C … +45 °C
Air humidity	15 % … 95 % rel. hum. (non-condensing)
Housing	metal
Colour	black, similar to RAL 9005
Weight	approx.1.22kg

Dimensions (W x L x D)	200 × 49.4 × 200 mm
Specification	EN 54-16

Model: HONEYWELL
Type: Digital Key Module DKM plus
Part no.: 583520

583501.RE | Reduntant digital call station with 12 keys

Integrated broadband loudspeaker for monitoring and previewing purposes as well as intercom functions. Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.

Digital transmission of control signals and all four audio signals to and from the digital call station and the supply voltage via digital audio link.

The digital call station is connected to the PA/VA system in star-shaped topology via one or two CAT 5E cable (shielded) and RJ45 socket (up to 300 metres distance). Due the two connectors, it is possible to connect the call station with a second cable to a second Digital audio distribution and connection system to make sure that even in the event of a cable break or short circuit on one of the cables the call station still work as before.

Optional fibre optic connection for distances up to 2,000 metres.
RJ12 socket for connection with up to 6 expansion modules via daisy chain.

Fully digital call station with electret microphone (cardioid characteristic) on a flexible about 26cm long gooseneck.

12 freely programmable buttons, which can be labelled.
14 integrated and 12 freely programmable LED display elements including a combined operation and error display.

An audio input with 2 cinch sockets at the back of the digital call station for connecting an auxiliary device allows audio playback outside of the central control unit.
An audio output can be used for monitoring purposes or for audio distribution or recording.

In- and output are independent from the microphone and can be used simultaneously

A 3 m long CAT5 standard connection cable for copper cabling is included as standard.

Alternative text

The units shall have the following as a minimum

- The digital call station is connected to the PA/VA system in star-shaped topology via CAT 5E cable (shielded) and RJ45 socket (up to 300 metres distance) and shall have the following optional connections.
  - Optional fibre optic connection for distances up to 2,000 metres.
  - RJ12 socket for connection with up to 6 expansion modules via daisy chain.
  - Full redundant back up connection allowing a call station to be connected to 2 Digital Output Modules (DOMs) simultaneously providing a redundant back up path for the call station in the event of a single cable of Digital Output Module failure.

- A fully digital call station with electret microphone (cardioid characteristic) on a flexible about 260 mm long gooseneck.
- Integrated broadband loudspeaker for monitoring and previewing purposes as well as intercom functions.
- Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.
- Digital transmission of control signals and all four audio signals to and from the digital call station and the supply voltage via digital audio link. An audio input with 2 cinch sockets at the back of the digital call station for connecting an auxiliary device allows audio playback outside of the central control unit.
- A 3 m long CAT5 standard connection cable for copper cabling is included as standard.
- Capable of being expanded to accept up to 12 Digital Call Station Extension Modules 583306.21
- 12 freely programmable buttons, which can be individually labelled.
- 14 integrated and 12 freely programmable LED display elements including a combined operation and fault display.
- An audio output can be used for monitoring purposes or for audio distribution or recording. In- and output are independent from the microphone and can be used simultaneously

---

Alternative text end

Technical data for 583501.RE | Reduntant digital call station with 12 keys

Microphone	
Characteristic	electret, cardioid
Gooseneck	~260mm
Frequency range	100-15,000 Hz
Built in loudspeaker	
Power	1 W
Audio input	
Nominal level	0 dBu
Max. level	+6 dBu
Frequency range	20 Hz to 22 kHz
Signal-to-noise ratio	> 95 dB
Distortion factor (at nominal level)	< 0.1 %
Audio output	
Nominal level	0 dBu
Frequency range	20 Hz to 22 kHz
Signal-to-noise ratio	> 85 dB
Distortion factor (at nominal level)	< 0.1 %
Output impedance	180 Ohm
Sample rate	48 kHz
AD/DA converter	24 Bit
Max. power consumption	150 mA
Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved

Model: HONEYWELL
Type: Digital Call Station DCS 15 Redunant
Part no.: 583501.RE

583502.RE | Redunant digital call station with one key

Integrated broadband loudspeaker for monitoring and previewing purposes as well as intercom functions. Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.

Digital transmission of control signals and all four audio signals to and from the digital call station and the supply voltage via digital audio link.

The digital call station is connected to the PA/VA system in star-shaped topology via one or two CAT 5E cable (shielded) and RJ45 socket (up to 300 meters distance). Due to the two connectors, it is possible to connect the call station with a second cable to a second Digital audio distribution and connection system to make sure that even in the event of a cable break or short circuit on one of the cables the call station still work as before.

Optional fibre optic connection for distances up to 2,000 metres.
RJ12 socket for connection with up to 6 expansion modules via daisy chain.

Fully digital call station with electret microphone (cardioid characteristic) on a flexible about 26cm long gooseneck.

A freely programmable button, which can be labelled.
Two integrated and one freely programmable LED display elements including a combined operation and error display.

A 3 m long CAT5 standard connection cable for copper cabling is included as standard.

Alternative text

The units shall have the following as a minimum

- The digital call station is connected to the PA/VA system in star-shaped topology via CAT 5E cable (shielded) and RJ45 socket (up to 300 metres distance) and shall have the following optional connections.
  - Optional fibre optic connection for distances up to 2,000 metres.
  - RJ12 socket for connection with up to 6 expansion modules via daisy chain.
  - Full redundant back up connection allowing a call station to be connected to 2 Digital Output Modules (DOMs) simultaneously providing a redundant back up path for the call station in the event of a single cable of Digital Output Module failure.

- A fully digital call station with electret microphone (cardioid characteristic) on a flexible about 260 mm long gooseneck.
- Integrated broadband loudspeaker for monitoring and previewing purposes as well as intercom functions.
- Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.
- Digital transmission of control signals and all four audio signals to and from the digital call station and the supply voltage via digital audio link. An audio input with 2 cinch sockets at the back of the digital call station for connecting an auxiliary device allows audio playback outside of the central control unit.
- A 3 m long CAT5 standard connection cable for copper cabling is included as standard.
- Capable of being expanded to accept up to 12 Digital Call Station Extension Modules 583306.21
- 1 freely programmable button, which can be individually labelled.
- 2 integrated and 1 freely programmable LED display elements including a combined operation and fault display.
- An audio output can be used for monitoring purposes or for audio distribution or recording. In- and output are independent from the microphone and can be used simultaneously

Alternative text end

Microphone	
Characteristic	electret, cardioid
Gooseneck	~260mm
Frequency range	100-15,000 Hz
Built in loudspeaker	
Power	1 W
Sample rate	48 kHz
AD/DA converter	24 Bit
Max. power consumption	150 mA
Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved

Model: HONEYWELL
Type: Digital Call Station DCS 2
Part no.: 583502.RE

583503.RE | Fire Control PA Panel with 12 keys

Fully digital call station with handheld microphone and built-in loudspeaker for monitoring and previewing purposes and intercom functions in integrated housing. Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.

12 freely programmable buttons, which can be labelled.
13 integrated and 12 and freely programmable LED display elements including a combined operation and error display.

Digital transmission of control signals and all audio signals to and from the digital call station and to the supply voltage via digital audio link.

The digital call station is connected to the PA/VA system in star-shaped topology via one or two CAT 5E cable (shielded) and RJ45 socket (up to 300 metres distance). Due to the two connectors, it is possible to connect the call station with a second cable to a second Digital audio distribution and connection system to make sure that even in the event of a cable break or short circuit on one of the cables the call station will still work as before.

Optional fibre optic connection for distances up to 2,000 metres.
RJ12 socket for connection with up to 6 expansion modules via daisy chain.
A 3 m long CAT5 standard connection cable for copper cabling is included as standard.

Microphone	
Characteristic	electret, cardioid
Handheld microphone	
Frequency range	200-12,500 Hz
Built in loudspeaker	
Power	1 W
Sample rate	48 kHz

AD/DA converter	24 Bit
Max. power consumption	150 mA
Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved

Model: HONEYWELL
Type: Fire Control PA Panel DCSF 12
Part no.: 583303.21

583504.RE | Fire Control PA Panel with one key

Fully digital call station with handheld microphone and built-in loudspeaker for monitoring and previewing purposes and intercom functions in integrated housing. Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.

A freely programmable button, which can be labelled.
Two integrated and one freely programmable LED display elements including a combined operation and error display.

Digital transmission of control signals and all audio signals to and from the digital call station and to the supply voltage via digital audio link.

The digital call station is connected to the PA/VA system in star-shaped topology via one or two CAT 5E cable (shielded) and RJ45 socket (up to 300 metres distance). Due to the two connectors, it is possible to connect the call station with a second cable to a second Digital audio distribution and connection system to make sure that even in the event of a cable break or short circuit on one of the cables the call station will still work as before.

Optional fibre optic connection for distances up to 2,000 metres.
RJ12 socket for connection with up to 6 expansion modules via daisy chain.
A 3 m long CAT5 standard connection cable for copper cabling is included as standard.

Microphone	
Characteristic	electret, cardioid
Handheld microphone	
Frequency range	200-12,500 Hz
Built in loudspeaker	
Power	1 W
Sample rate	48 kHz
AD/DA converter	24 Bit
Max. power consumption	150 mA
Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved

Model: HONEYWELL
Type: Fire Control PA Panel DCSF 1
Part no.: 583304.21

583505.RE | Digital fire control PA panel

Fully digital call station with handheld microphone and built-in loudspeaker for monitoring and previewing purposes and intercom functions in surface-mounted or flush-mounted housing.
Continuous acoustic monitoring of microphone capsule. Acoustic monitoring is not only used to check the functioning of the voice coil but also of the capsule.

Five freely programmable buttons for the alarm
One button for the all-clear signal
One button for reset/acoustic
Three integrated LED display elements (in operation, fault, busy)

Digital transmission of control signals and all audio signals to and from the digital call station and the supply voltage via digital audio link.

The digital call station is connected to the PA/VA system in star-shaped topology via one or two CAT 5E cable (shielded) and RJ45 socket (up to 300 metres distance). Due to the two connectors, it is possible to connect the call station with a second cable to a second Digital audio distribution and connection system to make sure that even in the event of a cable break or short circuit on one of the cables the call station will still work as before.

Optional fibre optic connection for distances up to 2,000 metres.

Display window and locking mechanism in accordance with EN 54-11.
Conforms to the Austrian F 3033 standards and must be verified by a positive test protocol carried out by an accredited body.

Microphone	
Characteristic	electret, cardioid
Handheld microphone	
Frequency range	200-12,500 Hz
Built in loudspeaker	
Power	1 W
Sample rate	48 kHz
AD/DA converter	24 Bit
Max. power consumption	150 mA
Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved

Model: HONEYWELL
Type: Fire Control PA Panel DCSF7 Redunant
Part no.: 583505.RE

583306.21 | Digital Keyboard Module

Digital keyboard module for digital call stations
Allows an extension of 18 extra freely programmable keys that can be labelled as well as 18 LED display elements.
Digital transmission of control signals to the digital call station.
The keyboard module is supplied with 24 V DC by the digital call station.

Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved

Model: HONEYWELL
Type: Digital Keyboard Module DKM18
Part no.: 583306.21

583307 | Wall Junction Box

The wall junction box provides easy and comfortable connection of digital call stations. The surface-mounted installation box is supplied with an RJ-45 connection to connect the CAT-5 cable for the digital audio bus.

Model: HONEYWELL
Type: Wall junction box
Part no.: 583307

583311 | Keyboard cover

A transparent keyboard cover protects 3 horizontally arranged keys from being unintentionally pressed. The protected keys can only be pressed when the cover is raised.

Model: HONEYWELL
Type: Keyboard cover
Part no.: 583311

583507 | Table mounting kit

The table mounting kit is used to install the digital call station into a control panel or console. The solid, metallic design protects the integrated electronics from dust and EMC. The table mounting kit is also suitable for integrating a DKM18 digital keyboard module.

Model: HONEYWELL
Type: Table mounting kit
Part no.: 583312

584961| Housing for a DSCF fire control PA panel

Housing for installation of a DCSF-series fire control PA panel.

- Powder-coated in red
- Door with 180 x 120 mm viewing window with acrylic glass cover
- Prepared for installation of fire department lock
- Internal mounting plate for installation of digital call station
- Three cable entries on rear panel of housing
- One cable entry on the right-side and one on the left-side panel
- Two cable entries on the top and two on the bottom of the housing
- One mounting bracket for fibre-optic cable converter in housing

Colour:	red, similar to RAL 3000
Protection rating:	IP30
Weight:	4.8 kg
Dimensions (w x h x d):	350 x 265 x 100 mm

Model: HONEYWELL
Type: Housing for DSCF fire control PA panel
Part no.: 584961

584962 | Housing for two DCSF fire control PA panels

Housing for installation of two DCSF-series fire control PA panels

- Powder-coated in red
- Door with two 180 x 120 mm viewing windows with acrylic glass cover
- Prepared for installation of fire department lock
- 2 internal mounting plates for installation of digital call stations
- Six cable entries on rear panel of housing
- Two cable entries on the top and two on the bottom of the housing
- Two cable entries on the right-side and two on the left-side panel
- Two mounting brackets for fibre-optic cable converters in the housing
- Option for installing a DCSF fire control PA panel and a DKM18 digital keyboard module

Colour:	red, similar to RAL 3000
Protection rating:	IP30
Weight:	8.4 kg
Dimensions (w x h x d):	350 x 500 x 100 mm

Model: HONEYWELL
Type: Housing for two DSCF fire control PA panels
Part no.: 584962

583300.HO | Label for “Honeywell by Honeywell” DCS Should this just be “Honeywell”?

Label for the DCS-series digital call stations marked “Honeywell by Honeywell”

Model: HONEYWELL
Type: Label for “Honeywell by Honeywell” DCS, 10 units
Part no.: 583300.HO

583318 | Keyboard cover for DCS or DCSF

12 transparent keyboard cover replacements for the DCS or DCSF-series digital call stations.

Model: HONEYWELL
Type: Keyboard covers
Part no.: 583318

586102 | Table call station with DIGIM1 gong system

Table call station with DIGIM1 gong system in stylish housing. A markable key with LED display for key control and busy/in operation/gong display. Processor control with programming via diodes. Integrated limiter and special circuits to eliminate sounds when switching on the device. Integrated +6 dB NF amplifier with volume controller.
Distinctive short gong with volume and pitch controllers. Parallel connection of up to 40 digital call stations via JY(ST)Y6(4)x2x0.8(0.6) cable. 3 m connecting cable with 9-pin D-SUB connector. Cardioid gooseneck microphone with electret capacitor technology.

Operating voltage:	24 V DC
Power consumption @ 24 V DC:	approx. 24 mA

Housing:	ABS light grey
Colour:	black
Dimensions:	L: 250 mm; W: 125 mm; H: 30 mm; D: 150 mm

Model: HONEYWELL
Type: Table call station with DIGIM1 gong system
Part no.: 586102

586103 | Table call station with DIGIM4 gong system

Table call station with DIGIM4 gong system in stylish housing. 4 markable keys with LED display for key control and busy/in operation/gong display. Processor control with programming via diodes. Integrated limiter and special circuits to eliminate sounds when switching on the device. Integrated +6 dB NF amplifier with volume controller.
Distinctive short gong with volume and pitch controllers.
Parallel connection of up to 40 digital call stations via JY(ST)Y6(4)x2x0.8(0.6) cable. 3 m connecting cable with 9-pin D-SUB connector. Cardioid gooseneck microphone with electret capacitor technology.

Operating voltage:	24 V DC
Power consumption @ 24 V DC:	approx. 30 mA
Housing:	ABS light grey
Colour:	black
Dimensions:	L: 250 mm; W: 125 mm; H: 30 mm; D: 150 mm

Model: HONEYWELL
Type: Table call station with DIGIM4 gong system
Part no.: 586103

586104 | Flush-mounted box for DIGI system DIGIST09 table call stations

Flush-mounted box for DIGI system table call station with lockable 9-pin D-sub socket including EMI/RFI filter. Can be connected quickly with screw terminals. The socket outlet can be installed either vertically or slanted at a 30° angle. Complete with single mounting frame suitable for the Gira System 55 switch range, pure white. Can be surface mounted using surface-mounted housing (part no. 581329).

Model: HONEYWELL
Type: Flush-mounted box for DIGI system DIGIST09 table call station
Part no.: 586104

5.3 Interfaces

583331.21 | Universal Interface Module

Interface module for connecting two analogue audio inputs, two analogue audio outputs, and 48 control contacts.

- The two audio inputs shall both be asymmetrical (RCA) and symmetrical (XLR-f).
- The two audio outputs shall both be asymmetrical (RCA) and symmetrical (XLR-m).
- The 48 control contacts shall be set via software configurations in any combination as potential input contacts and/or output contacts; eight shall be capable of being monitored.
- Digital transmission of control signals and all audio signals to and from the PA/VA system and the supply voltage via digital audio link.

Display

- A green POWER LED
- A yellow FAULT LED
- 4 green SIGNAL LEDs for signaling potential audio modulation.

Audio inputs	
Nominal level	0 dBu
Max. level	+6 dBu
Frequency range	20 Hz to 22 kHz
Signal-to-noise ratio	> 95 dB
Distortion factor (at nominal level)	< 0.05 %
Input impedance XLR socket	100 kΩ, symmetrical, potential-free
Output impedance CINCH socket	1 kΩ, asymmetrical, potential-free

Audio outputs	
Nominal level	0 dBu
Frequency range	20 Hz to 22 kHz
Signal-to-noise ratio	> 85 dB
Distortion factor (at nominal level)	< 0.05 %
Output impedance XLR socket	200 Ω, symmetrical, potential-free
Output impedance CINCH socket	200 Ω, asymmetrical, potential-free
Control contacts	

Input contact	
Max. input voltage	+36 V DC

Output contact	
Contact rating	36 V DC/50 mA
Short-circuit proof for +24V	1 s

Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: Universal Interface Module (UIM)
Part no.: 583331.21

583341.21 | Contact Interface Module

Interface module for connecting eight control contacts.

- The eight control contacts shall be set via software configurations in any combination as potential input contacts and/or output contacts; four shall be capable of being monitored.
- Digital transmission of control signals and the supply voltage via TWI (two-wire interface).

Control contacts

Input contact	
Max. input voltage	+36 V DC

Output contact	
Contact rating	36 V DC/50 mA
Short-circuit proof for +24V	1 s

Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%

EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: Contact Interface Module (CIM)

Part no.: 583341.21

Fire Alarm Integration (Gent Only)

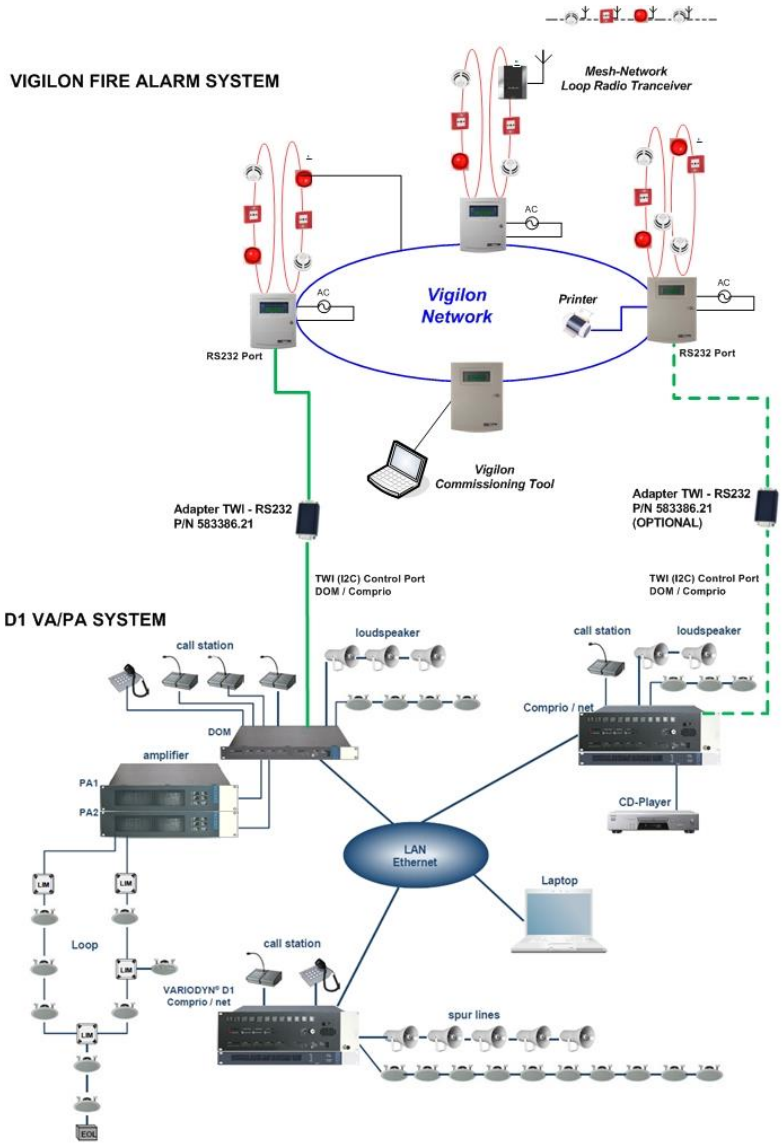
It shall be possible to connect the voice alarm system control and indicating equipment directly to the site fire detection and alarm control and indication equipment via a secure, dual redundant signal path. The connection shall be made utilising the 583356 RS232/TWI adaptor providing serial connection between a Digital audio distribution and connection system and a fire alarm control panel.

The connection between the voice alarm and fire alarm control panel shall be fully monitored and meet the requirements of BS EN 54-16 and BS 5839-8:2013. Loss of the connection between a Digital audio distribution and connection system and fire alarm control panel shall indicate a fault condition on both the voice alarm and fire alarm systems. In order to ensure system integrity the fire alarm and voice alarm systems shall be capable of being connected at 2 separate points within the building, 2 separate Vigilon control panels and 2 separate Digital audio distribution and connection system (Racks), providing a full redundant failure path should a single connection fail.

The cause and effect in the event of an emergency shall be transferred from the fire alarm system via the serial link to the voice alarm system without the need of deploying additional interface modules within the voice alarm racks.

Cause and effect change shall be made via the fire alarm and voice alarm system commissioning tools and deployed / controlled via software only.

Typical connection shall be as indicated below:



Fire Alarm Integration (ESSER Only)

It shall be possible to connect the voice alarm system control and indicating equipment directly to the site fire detection and alarm control and indication equipment via a secure, optional redundant signal path. The connection shall provide serial connection between a Digital audio distribution and connection system and a serial interface of the fire alarm control panel.

The connection between the voice alarm and fire alarm control panel shall be fully monitored and meet the requirements of EN54-16. Loss of the connection between a Digital audio distribution and connection system and fire alarm control panel shall indicate a fault condition on both the voice alarm and fire alarm systems. In order to ensure system integrity the fire alarm and voice alarm systems shall be capable of being connected

at 2 separate points within the building, 2 separate fire control panels and 2 separate Digital audio distribution and connection systems (Racks), providing a full redundant failure path should a single connection fail.

The cause and effect in the event of an emergency shall be transferred from the fire alarm system via the serial link to the voice alarm system without the need of deploying additional interface modules within the voice alarm racks.

Cause and effect change shall be made via the fire alarm and voice alarm system commissioning tools and deployed / controlled via software only.

5.4 Amplifier

580242 | Power amplifier 4 x 125 W / 100 V, Class D, Integrated battery charger

Power amplifier class D with four independent, electrically isolated amplifier channels and integrated battery charger.
The power amplifier and battery charger shall include the following characteristics:

- Delivers maximum possible power under overload or overdrive condition to maintain intelligibility of voice messages
- Microcontroller based extensive self monitoring and control
- Temperature management with variable speed fan assisted cooling, with airflow from front to back of device
- Independent protection per channel against overdrive, overload and overheating
- Possibility for configuring one amplifier channel as backup channel
- LED status display per channel for POWER, SIGNAL LOW, SIGNAL HIGH, CLIP and ERROR
- LED status display for MAINS POWER, BATTERY POWER, CPU STATUS and SYSTEM FAULT
- Fully balanced audio inputs and control via Cat 5 cable with RJ45 connector
- 100V outputs via pre-assembled system cable, lockable
- Integrated battery charger compliant to EN 54 Part 4, capable of charging up to 65A/h battery pack
- Temperature compensated battery charging via externally mounted temperature sensor
- Two independent 24V DC power outputs to power PA/VA controller or accessories
- CAN bus interface for service purposes

Rated output power (mains or battery powered)	4 x 125 W
Efficiency	>80% typical
Current consumption (mains power)	0.26 A (idle, all channels enabled)
	2.95 A (full power on all channels)
Power consumption (battery power)	5 W (idle, all channels disabled)
	21 W (idle, all channels enabled)
	636 W (full power on all channels)
Nominal voltage	230 V AC, +10% -15%
Nominal frequency	50 to 60 Hz
Emergency power supply	21.5V to 28.5V DC, provided via integrated battery charger (no external PSU required)
Functional principle	Class D, transformer less (direct-drive)
Frequency response at the rated power (±3 dB)	20 Hz to 22 kHz
Signal-to-noise ratio, A-weighted	90 dB
Distortion factor (at max. level / 1 kHz)	< 0.3 %
Channel separation	> 75 dB
Input impedance (balanced)	> 20 kΩ
Input sensitivity	0dBu for rated output power
Battery capacity and type	Lead-acid battery pack 38A/h or 65A/h
Battery charger current limit	3.4 A
Battery source impedance	0.2 Ω max.
DC power output voltage	19 V to 29.3 V DC

DC power output current	2.1 A +/- 0.1 A in total for both outputs or either output individually
Ambient temperature during operation	-5 °C to +55 °C
Relative air humidity	Up to 93%, non-condensing
Weight	9 kg
Dimensions	1U Height, 45 (H) x 483 (W) x 402 (L) mm
Compliance	EN 61000-6-3, EN 50130-4, IEC 60065
EN 54-16 approved	0786 – CPD – 20997
Model:	Honeywell
Type:	Power amplifier 4XD125B
Part no.:	580242

580243 | Power amplifier 4 x 250 W / 100 V, Class D, Integrated battery charger

Power amplifier class D with four independent, electrically isolated amplifier channels and integrated battery charger.
The power amplifier and battery charger include the following characteristics:

- Delivers maximum possible power under overload or overdrive condition to maintain intelligibility of voice messages
- Microcontroller based extensive self monitoring and control
- Temperature management with variable speed fan assisted cooling, with airflow from front to back of device
- Independent protection per channel against overdrive, overload and overheating
- Possibility for configuring one amplifier channel as backup channel
- LED status display per channel for POWER, SIGNAL LOW, SIGNAL HIGH, CLIP and ERROR
- LED status display for MAINS POWER, BATTERY POWER, CPU STATUS and SYSTEM FAULT
- Fully balanced audio inputs and control via Cat 5 cable with RJ45 connector
- 100V outputs via pre-assembled system cable, lockable
- Integrated battery charger compliant to EN 54 Part 4, capable of charging up to 105A/h battery pack
- Temperature compensated battery charging via externally mounted temperature sensor
- Two independent 24V DC power outputs to power PA/VA controller or accessories
- CAN bus interface for service purposes

Rated output power (mains or battery powered)	4 x 250 W
Efficiency	>80% typical
Current consumption (mains power)	0.26 A (idle, all channels enabled)
	6.2 A (full power on all channels)
Power consumption (battery power)	6 W (idle, all channels disabled)

W (idle, all channels enabled)

	1284 W (full power on all channels)
Nominal voltage	230 V AC, +10% -15%
Nominal frequency	50 to 60 Hz
Emergency power supply	21.5V to 28.5V DC, provided via integrated battery charger (no external PSU required)
Functional principle	Class D, transformerless (direct-drive)
Frequency response at the rated power (±3 dB)	20 Hz to 22 kHz
Signal-to-noise ratio, A-weighted	90 dB
Distortion factor (at max. level / 1 kHz)	< 0.3 %
Channel separation	> 75 dB
Input impedance (balanced)	> 20 kΩ
Input sensitivity	0dBu for rated output power
Battery capacity and type	Lead-acid battery pack 65-105A/h
Battery charger current limit	6.5 A
Battery source impedance	0.12 Ω max.

DC power output voltage	19 V to 29.3 V DC
DC power output current	2.1 A +/- 0.1 A in total for both outputs or either output individually
Ambient temperature during operation	-5 °C to +55 °C
Relative air humidity	Up to 93%, non-condensing
Weight	12 kg
Dimensions	2U Height, 90 (H) x 483 (W) x 402 (L) mm
Compliance	EN 61000-6-3, EN 50130-4, IEC 60065
EN 54-16 approved Honeywell D1	0786 – CPD – 20997
Model:	Honeywell
Type:	Power amplifier 4XD250B
Part no.:	580243

580231 | Power amplifier 2 x 250 W/100 V; class D, 24 V DC

Highly efficient class D power amplifier.

The power amplifier shall include the following characteristics:

- Complies with IEC BS EN 60268-3, 55013, and 55020 standards
- Self-monitoring and self-testing via microcontrollers
- Protected against overload, short circuits and over-heating
- Built-in fan with temperature-controlled rotation speed control, with airflow from front to back of device
- Monitoring of the fan itself, if one is failed – the left fan must set on 100% speed automatically.
- LED status display per channel for POWER, SIGNAL, CLIP, and FAULT
- LED status display for MAINS POWER; BATT POWER, CPU STATUS, SYS FAULT
- Emergency power supply via 24 V DC
- Symmetrical audio inputs and control via CAT 5 cable with RJ45 connector
- 100 V outputs via pre-assembled system cable, lockable

Technical Specification

Technology	Class D, 100 V outputs with transformers
Output power (at 230 V mains supply)	250 W with 40 Ω load
Output power (at 24 V DC emergency power supply)	250 W with 40 Ω load
Mains supply	230 V AC 50/60Hz +10% to -15%
Emergency power supply	21.5 V DC to 28.5 V DC
Frequency response	50 Hz to 22 kHz ± 3dB
Distortion factor	< 0.3% at 1 kHz sine
Signal-to-noise ratio	90 dB (A-weighted)
Channel separation	> 75 dB
Efficiency at maximum power	> 80%
Colour	RAL 7016
Ambient temperature range	-5 °C to +55 °C
Relative humidity	up to 90 % (non-condensing)
EN 54-16 approved Honeywell D1	0786 – CPD – 20997
Model:	Honeywell
Type:	Power amplifier 2 x D250
Part no.:	**580231**

580232 | Power amplifier 2 x 400 W/100 V; class D, 24 V DC

Highly efficient class D power amplifier.

The power amplifier includes the following characteristics:

- Complies with IEC BS EN 60268-3, 55013, and 55020 standards
- Self-monitoring and self-testing via microcontrollers
- Protected against overload, short circuits and over-heating
- Built-in fan with temperature-controlled rotation speed control, with airflow from front to back of device
- Monitoring of the fan itselfself, if one is failed – the left fan must set on 100% speed automatically.
- LED status display per channel for POWER, SIGNAL, CLIP, and FAULT
- LED status display for MAINS POWER; BATT POWER, CPU STATUS, SYS FAULT
- Emergency power supply via 24 V DC
- Symmetrical audio inputs and control via CAT 5 cable with RJ45 connector
- 100 V outputs via pre-assembled system cable, lockable

Technical Specification

Technology	Class D, 100 V outputs with transformers
Output power (at 230 V mains supply)	400 W with 25 Ω load
Output power (at 24 V DC emergency power supply)	400 W with 25 Ω load
Mains supply	230 V AC 50/60Hz +10% to -15%
Emergency power supply	21.5 V DC to 28.5 V DC
Frequency response	50 Hz to 22 kHz ± 3dB
Distortion factor	< 0.3% at 1 kHz sine
Signal-to-noise ratio	90 dB (A-weighted)
Channel separation	> 75 dB
Efficiency at maximum power	> 80%
Colour	RAL 7016
Ambient temperature range	-5 °C to +55 °C
Relative humidity	up to 90 % (non-condensing)
EN 54-16 approved Honeywell D1	0786 – CPD – 20997
Model:	Honeywell
Type:	Power amplifier 2 x D400
Part no.:	**580232**

580248.11 | Power amplifier 4 x 300 W/100 V, Class D, 24 V DC

Power amplifier class D with four independent, electrically isolated amplifier channels.
The power amplifier shall include the following characteristics:

- Inrush current limiter and soft start
- Built-in fan with temperature-controlled rotation speed control, with airflow from front to back of device
- LED status display per channel for POWER, SIGNAL, CLIP, and ERROR
- LED status display for AC POWER; DC POWER
- Emergency power supply via 24 V DC
- Symmetrical audio inputs and control via Cat 5 cable with RJ45 connector
- 100V outputs via pre-assembled system cable, lockable
- 4 x 300 Watt 100 Volt outputs
- Maximum 2U height 19” rack space

Nominal output power (sin.)	4 x 300 W
Efficiency	80%
Rated current	8 A
Power consumption in stand-by mode	0.5 VA (disconnected from mains)
Nominal voltage	230 V AC
Nominal frequency	50 to 60 Hz, +10 %/-5 %
Emergency power supply	24 V DC
Functional principle	Class D
Transmission frequency band (-1 dB)	20 Hz to 22 kHz
Signal-to-noise ratio, unweighted	> 100 dB
Distortion factor (at max. level/1kHz)	< 0.03 %
Channel separation	> 94 dB
Input impedance	> 20 kΩ, el. symmetrical
Ambient temperature during operation	-5 °C to +55 °C
Relative air humidity	40% to 93%, non-condensing
Weight	14 kg
Dimensions	88,9x483x454 mm
EN 54-16 approved Honeywell D1	0786 – CPD – 20997

Model: Honeywell
Type: Power amplifier 4XD300
Part no.: 580248.11

580249.11 | Power amplifier 4 x 500 W/100 V, Class D, 24 V DC

Power amplifier class D with four independent, electrically isolated amplifier channels.
The power amplifier shall includes the following characteristics:

- - Inrush current limiter and soft start
- - Built-in fan with temperature-controlled rotation speed control, with airflow from front to back of device
- - LED status display per channel for POWER, SIGNAL, CLIP, and ERROR
- - LED status display for AC POWER; DC POWER
- - Emergency power supply via 24 V DC
- - Symmetrical audio inputs and control via Cat 5 cable with RJ45 connector
- - 100V outputs via pre-assembled system cable, lockable
- 4 x 300 Watt 100Volt outputs
- Maximum 2U height 19” rack space

Nominal output power (sin.)	4 x 500 W
Efficiency	80%
Rated current	10.0 A
Power consumption in stand-by mode	0.5 VA (disconnected from mains)
Nominal voltage	230 V AC
Nominal frequency	50 to 60 Hz, +10 %/-5 %
Emergency power supply	24 V DC
Functional principle	Class D
Transmission frequency band (-1 dB)	20 Hz to 22 kHz
Signal-to-noise ratio, unweighted	> 100 dB
Distortion factor (at max. level/1kHz)	< 0.03 %
Channel separation	> 92 dB
Input impedance	> 20 kΩ, el. symmetrical
Ambient temperature during operation	-5 °C to +55 °C

Relative air humidity	40% to 93%, non-condensing
Weight	14 kg
Dimensions	88,9x483x454 mm
EN 54-16 approved Honeywell D1	0786 – CPD – 20997

Model: Honeywell D1
Type: Power amplifier 4XD500
Part no.: 580249.11

The AMP 580261 and 580262 don't have EN54-16 certification only by the reason of a missing 24 Volt DC back up power input. These AMPs are perfect for projects after EN60849 and EN50849 where no backup power is required or online backup power is on the main power side (230 Volt AC) provided.

580261 | Power amplifier 4 x 300 W/100 V, Class D,

Power amplifier class D with four independent, electrically isolated amplifier channels.

The power amplifier shall include the following characteristics:

- Inrush current limiter and soft start
- Built-in fan with temperature-controlled rotation speed control, with airflow from front to back of device
- LED status display per channel for POWER, SIGNAL, CLIP, and ERROR
- LED status display for AC POWER;
- Symmetrical audio inputs and control via Cat 5 cable with RJ45 connector
- 100V outputs via pre-assembled system cable, lockable
- 4 x 300 Watt 100Volt outputs
- Maximum 2U height 19" rack space

Nominal output power (sin.)	4 x 300 W
Efficiency	80%
Rated current	8 A
Power consumption in stand-by mode	0.5 VA (disconnected from mains)
Nominal voltage	230 V AC
Nominal frequency	50 to 60 Hz, +10 %/-5 %
Functional principle	Class D
Transmission frequency band (-1 dB)	20 Hz to 22 kHz
Signal-to-noise ratio, unweighted	> 100 dB
Distortion factor (at max. level/1kHz)	< 0.03 %
Channel separation	> 94 dB
Input impedance	> 20 kΩ, el. symmetrical
Ambient temperature during operation	-5 °C to +55 °C
Relative air humidity	40% to 93%, non-condensing
Weight	14 kg
Dimensions	88,9x483x454 mm
EN 54-16 approved Honeywell D1	0786 – CPD – 20997

Model: Honeywell
Type: Power amplifier 4XV300
Part no.: 580261

580262 | Power amplifier 4 x 500 W/100 V, Class D

Power amplifier class D with four independent, electrically isolated amplifier channels.

The power amplifier shall include the following characteristics:

- Inrush current limiter and soft start
- Built-in fan with temperature-controlled rotation speed control, with airflow from front to back of device
- LED status display per channel for POWER, SIGNAL, CLIP, and ERROR
- LED status display for AC POWER
- Symmetrical audio inputs and control via Cat 5 cable with RJ45 connector
- 100V outputs via pre-assembled system cable, lockable
- 4 x 300 Watt 100Volt outputs
- Maximum 2U height 19” rack space

Nominal output power (sin.)	4 x 500 W
Efficiency	80%
Rated current	10.0 A
Power consumption in stand-by mode	0.5 VA (disconnected from mains)
Nominal voltage	230 V AC
Nominal frequency	50 to 60 Hz, +10 %/-5 %
Emergency power supply	24 V DC
Functional principle	Class D
Transmission frequency band (-1 dB)	20 Hz to 22 kHz
Signal-to-noise ratio, unweighted	> 100 dB
Distortion factor (at max. level/1kHz)	< 0.03 %
Channel separation	> 92 dB
Input impedance	> 20 kΩ, el. symmetrical
Ambient temperature during operation	-5 °C to +55 °C
Relative air humidity	40% to 93%, non-condensing
Weight	14 kg
Dimensions	88,9x483x454 mm
EN 54-16 approved Honeywell D1	0786 – CPD – 20997

Model: Honeywell D1
Type: Power amplifier 4XV500
Part no.: 580262

5.5 Network and fibre optic components

583316.21 | Fibre optic converter for digital call stations

Components for connecting digital call stations to the PA/VA system via multimode fibre-optic cables. This makes a range of up to 2,000 m possible.

Connect the fibre optic cable to the digital bus of a Digital audio distribution and connection system. The Fibre optic component is powered by the Digital audio distribution and connection system over the digital bus.

Fibre-optic cable

Wavelength λ	1,308 nm
Range	up to 2,000 m
Recommended fibre type	Multimode λ =1,310 nm 50/125 µm GI, 62.5/125 µm GI
FOC connector	Duplex SC

EN 54-16 approved 0786 – CPD – 20997

Model: HONEYWELL
Type: FOC converter for digital audio to central control
Part no.: 583316.21

583317.21 | Fibre optic converter for digital call station, components at the digital call station

Components for connecting digital call stations to the PA/VA system via multimode fibre-optic cables. This makes a range of up to 2,000 m possible.

Connect the fibre optic cable to the digital bus of a call station. The Fibre optic component is powered by the separate PSU 583315.02.

Fibre-optic cable

Wavelength λ	1,308 nm
Range	up to 2,000 m
Recommended fibre type	Multimode λ =1,310 nm 50/125 µm GI, 62.5/125 µm GI
FOC connector	Duplex SC

EN 54-16 approved 0786 – CPD – 20997

Model: HONEYWELL
Type: FOC converter for digital audio, on side of digital call station
Part no.: 583317.21

583315.02 | Power supply unit for the fibre optic converter

Power supply unit without emergency power supply for fibre-optic cable – 583316.21 or 583317.21 for non-safety-related applications.

Model: HONEYWELL
Type: Power supply unit for FOC converter
Part no.: 583317.21

583394.11 | Fibre Optic switch

Ethernet Fibre Optic switch for setting up an Ethernet network in ring topology for voice alarm systems. On account of the loop structure, the network is fully redundant since, in the case of a fibre rupture, it is possible to still communicate through the other side of the loop. In addition, every Fibre Optic switch has two operating voltage inputs (24 V DC) and one relay for the forwarding of fault signals.
The Fibre Optic switch can be equipped with one (for point-to-point connection) or two (for redundant loop connection) Fibre Optic module(s). It should be possible to equip the Fibre Optic switch in mixed

constellation, also with a Fibre Optic module for multimode and a Fibre Optic module for single mode application.

Performance features

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

Technical Specification

Operating voltage	12-48VDC, Redundant Input
Power consumption	15 Watts
Ambient temperature	-5 °C … +45 °C
Air humidity	15 % … 95 % rel. hum. (non-condensing)
Housing	Metal, IP30 protection
Weight	Unit Weight: 0.87kg, Shipping Weight: 1.27kg
Dimensions	46 x 142 x 99 mm
Mounting	DIN-Rail Mounting

Type: Fibre Optic Switch
Part no.: 583394.11

583392.11 | Fibre Optic module for FO Switch, multimode

Pluggable Fibre Optic module for the Fibre Optic switch 583394.11 in 1310 nm multimode to provide a Fibre Optic cable length up to 2 km.

Performance features

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

Technical Specification

Transmission distance	2 km
Fibre specification	Multimode 50/125 µm, 62,5/125 µm
Ambient temperature	-5 °C … +45 °C
Air humidity	15 % … 95 % rel. hum. (non-condensing)
Housing	Metal
Weight	Approx.0.1kg

Type: Fibre Optic module for FO Switch, multimode

Part no.: 583392.11

583393.11 | Fibre Optic module for FO Switch, single mode

Pluggable Fibre Optic module for the Fibre Optic switch 583394.11 in 1310 nm multimode to provide a Fibre Optic cable length up to 20 km.

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

Technical Specification

Transmission distance	20 km
Fiber specification	Single mode 9/125 µm, 10/125 µm
Ambient temperature	-5 °C … +45 °C
Air humidity	15 % … 95 % rel. hum. (non-condensing)
Housing	Metal
Weight	Approx.0.1kg

Type: Fibre Optic module for FO Switch, single mode
Part no.: 583393.11

583396 | Power over Ethernet Switch

The Power over Ethernet (PoE) Switch should supply the ethernet touch call station directly via the Ethernet cable. The PoE Switch should be equipped with high efficient power supply technology which allows PoE injection at low input voltage, such as 12/24/48 V DC and need to be certified after BS EN54-16.

Performance features
- Min. 4xRJ-45 10/100/1000BaseT(X) auto negotiation
- Min. 4 Giga POE+ 802.3at/af PSE ports
- Redundant 12V-56 V DC Power Input
- Minimum one failure relay, contact load 24 V DC / 1 A
- Rugged Metal housing or equal
- Min. IP30 protection
- DIN Rail Mounting

Technical Specification

Operating voltage	12/24/48 V DC
Power consumption (without PoE)	max. 6 Watts
Power consumption (with PoE)	max. 130 Watts
Ambient temperature	-40 °C … +75 °C
Storage temperature	-40 °C … +85 °C
Air humidity	5 % … 95 % rel. hum. (non-condensing)
Housing	Metal, IP30 protection
Dimensions	43 x 142 x 105 mm
Mounting	DIN-Rail Mounting

Type: Power over Ethernet Switch
Part no.: 583396

5.6 Accessories

583351 | VCM display/control module

View control module for clear and easy display of collective messages and for operation of the voice alarm system in accordance with the EN 54-16 standard.

Display of collective messages in accordance with EN 54-16
Required for voice alarm systems in accordance with DIN VDE 0833-4 and EN 54-16
- 5 keys for operating the voice alarm system
- Integrated buzzer for acoustic signals
- 19” version, 1 U height
- Direct installation in 19” upright cabinet
- Option to connect directly to the GPIO universal interface module

Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%
EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: View Control Module (VCM)
Part no.: 583351

583332 | Surge protection module for GPIO Contacts

Surge protection module for additional EMC protection of 12 GPIO contact inputs/outputs. Four surge protection modules can be connected for each in and output module. In systems complying with EN 54-16, a surge protection module must be used for lines longer than 3 m that lead to external contacts. The component is designed for top-hat rail mounting. A connection cable is included.

EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: Surge protection module for UIM – Contacts
Part no.: 583332

583342 | Loop – Isolator – Module (LIM)

Loop isolator module for setting up a short circuit and wire-break tolerant 100 V loudspeaker – loop wiring system with loop technology. The modules monitor current in the loudspeaker loop. In the case of an overcurrent, they switch off the faulty section of the loudspeaker loop, for example in the event of a short circuit. The faults in the line are displayed at the Digital audio distribution and connection system . Each module has three two-pin terminals for connecting the loop and the loudspeaker. Wires with a cross section of up to 2.5 mm2 can be connected to the terminals. Additionally, a visual indicator of the operating status is displayed on the module. The loop isolator module is fitted with a stable, compact IP66 housing with sufficient room for wiring, and thus can be used in projects with difficult surroundings, e.g. for industry.

Operational voltage:	directly via the 100 V loudspeaker line
Power consumption:	150 mW
Ambient temperature:	-20 °C … 65 °C
Protection rating:	IP 66 (housing)
Housing dimensions (l x w x h):	114 x 114 x 57 mm

Model: HONEYWELL
Type: Loop – Isolator – Module (LIM)
Part no.: 583342

583371.21 | Mains switching unit

The mains switching unit is used to protect the power supply of all PA/VA system components that are installed in a cabinet.
Each of the three phases is protected by an overcurrent switch. The switch is simultaneously used as a manual power switch for devices in the current path, for maintenance purposes, for example.
The switching status is displayed by means of green indicator lights.
The switch position can be analyzed using auxiliary contacts.
A front 230 V IEC power socket and an RJ45 socket enables a maintenance PC/laptop to connected easily for system-wide parameterization/configuration and monitoring.

Connections and indicators
3 overcurrent switches with lamp (one per phase)
3 connections for auxiliary changeover contacts for each overcurrent switch
230 V IEC power socket, switched with L1
RJ45 socket for Ethernet connection

Temperature fuse protection	
Nominal current	18 A
Service life	10,000 switch cycles
De-activation	Single-pin
Auxiliary contacts	
Type	Change-over contact
Contact rating AC	250 V max. 4 A
Contact rating DC	0-24 V max. 4 A
Nominal current	60 V max. 1 A 110 V max. 0.5 A 220 V max. 0.25 A
Ambient temperature range	-5 °C to +55 °C
Relative humidity	15% to 90%
EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: Mains Switch Unit (MSU)
Part no.: 583371.21

584970 | Under voltage and neutral supervision module

To monitor the neutral conductor and protect against destruction the connected PA/VA system in case of loss of the neutral conductor when connecting the system with two or three 230 V AC phases.

Hint: This monitore module controls the switching contactor 584971.

Type: Under voltage and neutral supervision module
Part no.: 584970

584971 | Switching contactor

To switch off the 230 V phases in case of missing the neutral conductor, detected from the module 584970.

Hint: This switching contactor is controlled from the undervoltage and neutral supervision module 584970.

Max. switching current: 3x25 A

Type: Switching contactor
Part no.: 584971

583386.21 | TWI – RS232 - Adapter

The module is connected directly to the PA/VA system and is used for converting the TWI bus to RS232 as well as for serial connection of a fire detection system, from external devices or for servicing purposes.

EN 54-16 approved 0786 – CPD – 20997

Model: HONEYWELL
Type: TWI –RS232 - Adapter
Part no.: 583386.21

583387.21 | GPS time synchronization module

The module is connected to the PA/VA system directly and ensures time synchronization by means of GPS signals. This allows accurately timed, automated announcements (e.g. bell systems in schools), time-controlled volume adjustments (e.g. reduced volume at train stations at night-time), or simply precise time-logging of announcements or trouble alarms.
The module is connected to the PA/VA system directly using a standard CAT5 cable (max. 10m).
A fault in the module or satellite reception is entered in the message list.
The GPS signal is transmitted to the receiver via the antenna and coaxial cable.

EN 54-16 approved 0786 – CPD – 20997

Model: HONEYWELL
Type: Time Control Module (TCM)
Part no.: 583387.21

583390 | Master clock SC 98.47 pro

Master clock for time control in voice alarm systems. DCF77 time synchronization of the master clock can be carried out using the FU 20.00 radio receiver.

Performance features:

- For approx. 40 slave clocks (24 V DC, 300 mA, pole changing)
- Slave clocks protected against short circuiting.
- Automatic setting of slave clocks
- Backup device for slave clock range when power is restored
- (automatic setting of slave clock time)
- Automatic adjustment for daylight saving changes
- Monitoring of slave clock range and error indication in display
- PIN encryption security
- Illuminated display

Model: HONEYWELL
Type: Master clock SC 98.47 pro
Part no.: 583390

583391 | Radio receiver FU 20.00 pro

DCF77 – Radio receiver for connection to master clock SC 98.47 pro. Up to 10 master clocks can be connected.

Performance features:
- Receipt of DCF77 telegram. Time and date are
- Automatically provided to the timer switches
- Daylight savings time switching via DCF telegram
- Control light flashes when receiving.
- Easy installation, rotatable housing in the mounting bracket
- Supply cable: 2-core, no shielding, selectable cross-section
- Max. line length of 200 m between FU 20.00 and SC 98.47 pro

Model: HONEYWELL
Type: Radio receiver FU 20.00 pro
Part no.: 583391

583496 | End of Line Module EOL

End-of-line module for terminating loudspeaker lines for standard-compliant monitoring for short circuits or interruptions, independent of the number of loudspeakers connected per line and independent of the loudspeaker line topology.

- Terminating element for 100 V loudspeaker line with 2-wire technology.
- Different connection options for optimal line adaptation (3 connections).
- The module is sealed and has optimal protection against moisture.

EN 54-16 approved 0786 – CPD – 20997

Model: HONEYWELL
Type: End of Line Module EOL
Part no.: 583496

583401.21 | Signaling cable 12

Pre-assembled wiring from 12 control contacts of the PA/VA system to the cabinet rear panel.

Model: HONEYWELL
Type: Signaling cable 12
Part no.: 583401.21

583422.21 | Backup cable

Pre-assembled wiring from 2 backup amplifiers to 4 transmission channels.

Model: HONEYWELL
Type: Backup cable
Part no.: 583422.21

583451.21 | 100 V cable for 8 circuits for rear cabinet panel

Pre-assembled wiring of eight 100 V outputs of a Digital audio distribution and connection system with 8 loudspeaker lines of PA/VA system to rear cabinet panel.

Model: HONEYWELL
Type: 100 V cable for DOM 4-8 circuits for rear cabinet panel
Part no.: 583451.21

583452.21 | 100 V cable for 6 circuits for rear cabinet panel

Pre-assembled wiring of six 100 V outputs of a Digital audio distribution and connection system with 24 loudspeaker lines of the PA/VA system to the rear cabinet panel.

Model: HONEYWELL
Type: 100 V cable for DOM 4-24 for rear cabinet panel
Part no.: 583452.21

583476.21 | Output cable amplifier - DOM

Pre-assembled wiring for connecting two - channes of a power amplifier to the Digital audio distribution and connection system .

Model: HONEYWELL
Type: Output cable amplifier - DOM
Part no.: 583476.21

583477.21 | Output cable 2 amplifier - DOM

Pre-assembled wiring for connecting four channels of a power amplifier to the Digital audio distribution and connection system.

Model: HONEYWELL
Type: Output cable 2 amplifier - DOM
Part no.: 583477.21

583481 | Patch cable Cat5, 1 m, blue, (digital audio)

Patch cable for connecting a digital audio – bus components in system.

Model: HONEYWELL
Type: Patch cable Cat5, 1m, blue, (digital audio)
Part no.: 583481

583482 | Patch cable Cat5, 2 m, blue, (digital audio)

Patch cable for connecting a digital audio – bus component in the system.

Model: HONEYWELL
Type: Patch cable Cat5, 2 m, blue (digital audio)
Part no.: 583482

583483 | Patch cable Cat5, 3 m, blue (digital audio)

Patch cable for connecting a digital audio – bus component in the system.

Model: HONEYWELL
Type: Patch cable Cat5, 3 m, blue, (digital audio)
Part no.: 583483

583486 | Patch cable Cat5, 1 m, yellow (Ethernet)

Patch cable for connecting an Ethernet component in the system.

Model: HONEYWELL
Type: Patch cable Cat5, 1 m, yellow (Ethernet)
Part no.: 583486

583487 | Patch cable Cat5, 2 m, yellow (Ethernet)

Patch cable for connecting an Ethernet component in the system.

Model: HONEYWELL
Type: Patch cable Cat5, 2 m, yellow (Ethernet)
Part no.: 583487

583488 | Patch cable Cat5, 3 m, yellow (Ethernet)

Patch cable for connecting an Ethernet component in the system.

Model: HONEYWELL
Type: Patch cable Cat5, 3 m, yellow (Ethernet)
Part no.: 583488

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.

Model: HONEYWELL
Type: XLR cable, 1 m
Part no.: 583489

583490 | 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.

Model: HONEYWELL
Type: XLR cable, 10 m
Part no.: 583490

583491 | Cable PA/VA system to final amplifier

Pre-assembled wiring from PA/VA system to final amplifier.

Model: HONEYWELL
Type: Cable PA/VA system to final amplifier
Part no.: 583491

583492 | Audio connection line, length 1.8 m

Audio connection line, stereo – cinch, e.g. for connecting an external audio device.

Model: HONEYWELL
Type: Audio connection line
Part no.: 583492

583492 | Audio connection line, length 1.8 m

Audio connection line, stereo – cinch, e.g. for connecting an external audio device.

Model: HONEYWELL
Type: Audio connection line
Part no.: 583492

581320 | Flush-mounted XLR panel jack

Flush-mounted box with a XLR 3-pin panel jack, GIRA system 55

Color: pure white/satin matt

Model: HONEYWELL
Type: Flush-mounted XLR panel jack
Part no.: 581320

581321 | Flush-mounted – Volume control – 6 W

Flush-mounted – Volume controller – 6 W, with priority relay (24 V DC). Fail-to-safe series, where the relay is activated in the normal state, GIRA system 55.

Color: pure white/satin matt

Model: HONEYWELL
Type: Flush-mounted – Volume controller – 6 W
Part no.: 581321

581322 | Flush-mounted – Volume control – 12 W

Flush-mounted volume controller 12 W, with priority relay (24 V DC). Fail-to-safe series, where the relay is activated in the normal state, GIRA system 55.

Color: pure white/satin matt

Model: HONEYWELL
Type: Flush-mounted – Volume controller – 12 W
Part no.: 581322

581323 | Flush-mounted – Volume controller – 50 W

Flush-mounted volume controller 50 W, with priority relay (24 V DC). Fail-to-safe series, where the relay is activated in the normal state, GIRA system 55.

Color: pure white/satin matt

Model: HONEYWELL
Type: Flush-mounted volume controller 50 W
Part no.: 581323

581329 | Surface-mounted box

Surface-mounted box for flush-mounted components 581320 to 581323, GIRA System 55.

Color: pure white / satin matt

Model: HONEYWELL
Type: Surface-mounted box
Part no.: 581329

5.7 AVC Accessories

581310 | Dynamic sensor microphone in a ceiling speaker housing

The sensor shall be a very high quality product from Europe with elastic anti shock mount of the sensor microphone it self in the speaker housing.

Directional characteristic:	Cardioid
Frequency response:	60 Hz - 18 kHz
Transmission factor:	2.5 mV/Pa
Impedance:	200 Ohm

Model: HONEYWELL
Type: Dynamic microphone for AVC in ceiling speaker housing
Part no.: 581310

581316 | Dynamic microphone

Dynamic microphone with cardioid-like directional characteristic, integrated tripod mount and clamp mounting for defining the room acoustics for automatic volume control.

Directional characteristic:	Cardioid
Frequency response:	60 Hz - 18 kHz
Transmission factor:	2.5 mV/Pa
Impedance:	200 Ohm

Model: HONEYWELL
Type: Dynamic microphone for AVC
Part no.: 581316

5.8 Upright cabinet - Accessories

583703 | Assembly kit

For proper assembly of 19” integrated devices.
Includes 24 cage nuts, 24 screws and 24 washers.

Model: HONEYWELL
Type: Assembly kit
Part no.: 583703

583704 | Dummy plate 1 HU

Dummy plate designed with height unit for covering extra installation space in the upright cabinet.

Model: HONEYWELL
Type: Dummy plate 1 HU
Part no.: 583704

583705 | Dummy plate 2 HU

Dummy plate with two height units designed for covering available installation space in the upright cabinet.

Model: HONEYWELL
Type: Dummy plate 2 HU
Part no.: 583705

583706 | Dummy plate 3 HU

Dummy plate with three height units designed for covering available installation space in the upright cabinet.

Model: HONEYWELL
Type: Dummy plate 3 HU
Part no.: 583706

583707 | Dummy plate 4 HU

Dummy plate with four height units designed for covering available installation space in the upright cabinet.

Model: HONEYWELL
Type: Dummy plate 4HU
Part no.: 583707

583709 | Dummy plate 4 HU - DCSF

Dummy plate with four height units and a section for installing a digital call station DCSF.

Model: HONEYWELL
Type: Dummy plate 4 HU – DCSF
Part no.: 583709

583708 | Ventilation panel 1 HU

Ventilation panel with one height unit in design for covering extra installation space in the upright cabinet.

Model: HONEYWELL
Type: Ventilation panel 1 HU
Part no.: 583708

5.9 External devices, public address system

X-MAP04 | DVD/CD/MP3/FM/AM audio player

Audio device with integrated DVD drive (which also supports CDs), an MP3 player and an FM/AM tuner, as well as an USB/SD interface. The device shall support two modes of operation. Mode of operation 1: DVD/USB/SD and FM/AM tuner can be operated simultaneously via two separate ports. Mode of operation 2: DVD/USB/SD and FM/AM tuner can be switched. The selected signal is transmitted via a joint audio output. DVD videos and JPEG are supported. Audio Outputs: RCA. Suitable for 24-hour operation. The unit shall not be higher than 1U.

• Two independent audio outputs for DVD / USB / SD and FM / AM Tuner
• Two independent volumes can be set
• One mixed audio output

Technical Data
DVD\CD\Audio:
Harmonic distortion at nominal level < 0.05 %
Signal-to-noise ratio > 80 dB
Channel separation > 75 dB

Tuner:
Frequency band AM 531 ... 1710 kHz
Frequency band FM 87,5 ... 108 MHz

Common technical data:
Rated voltage 230 V AC
Power consumption 13 W
Outputs
1 x RCA for FM/AM-Tuner,
1 x RCA for DVD/USB/SD, 1 x
1 x RCA for mixed signal

5.10 Emergency power supply

581722 | Emergency power manager for PA/VA system

The power supply (PSU) should be capable of supporting up to two independent 24V DC battery connections, each being capable of charging 150Ah capacity minimum. The overall battery capacity should be 320Ah. The battery charging current must be compliant with EN54-4/A2 and the power supply should also have a battery bulk charging function implemented. The PSU voltage shall be balanced for each battery circuit to make sure that the battery lifetime is extended to their optimum.

The battery circuit resistance measurements should be automatically tested independently every 2 minutes as a minimum. The battery resistance must be measured with a reading output value in mΩ. The power supplies should also measure the output current value and the current of each connected battery circuit.

The PSU shall have the option to consider the cable diameter and length to set the resistant value at the commissioning on a minimum.

The device should be able to provide up to 180A current to consumer load.

An LCD Display, status LED, sound and remote indication system should be included. The LCD display provides the information on the power supply parameters and status. The power supply should be able to receive and operate at least two external control signals. The PC communication via USB is mandatory for system configuration and current status feedback.

The power supply should be designed for mounting in the 19” rack cabinet. The maximum acceptable height is 1HU (one height unit).

The power supply unit must be certified according to the EN54-4/A2.

The following characteristics are required:
- Constant monitoring of fuses
- Monitoring of battery charge power
- Monitoring of battery charge status
- LED displays for mains, battery, consumer load
- Temperature sensor
- Potential-free contacts for transmission of fault messages
- 8 individually fused outputs for amplifier
- 2 fused outputs for control devices
- Battery capacity of up to 2 x 2 x 12 V / 150 Ah
- Maximum output current of 180 A in case of emergency power supply

EN 54-4 (A2) approval

Model: Honeywell
Type: Emergency power manager 1HU
Part no.: 581722

581723 | Emergency power manager for PA/VA system

The power supply (PSU) should be capable of supporting up to four independent 24V DC battery connections, each being capable of charging 150Ah capacity minimum. The overall battery capacity should be 640Ah. The battery charging current must be compliant with EN54-4/A2 and the power supply should also have a battery bulk charging function implemented. The PSU voltage shall be balanced for each battery circuit to make sure that the battery lifetime is extended to their optimum.

The battery circuit resistance measurements should be automatically tested independently every 2 minutes as a minimum. The battery resistance must be measured with a reading output value in mΩ. The power supplies should also measure the output current value and the current of each connected battery circuit.

The PSU shall have the option to consider the cable diameter and length to set the resistant value at the commissioning on a minimum.

The device should be able to provide up to 180A current to consumer load.

An LCD Display, status LED, sound and remote indication system should be included. The LCD display provides the information on the power supply parameters and status. The power supply should be able to receive and operate at least two external control signals. The PC communication via USB ~~or Ethernet~~ is mandatory for system configuration and current status feedback.

The power supply should be designed for mounting in the 19” rack cabinet. The maximum acceptable height is 2HU (two height units).

The power supply unit must be certified according to the EN54-4/A2.

The following characteristics are required:
- Constant monitoring of fuses
- Monitoring of battery charge power
- Monitoring of battery charge status
- LED displays for mains, battery, consumer load
- Temperature sensor
- Potential-free contacts for transmission of fault messages
- 8 individually fused outputs for amplifier
- 2 fused outputs for control devices
- Battery capacity of up to 4 x 2 x 12 V / 150 Ah
- Maximum output current of 180 A in case of emergency power supply

EN 54-4 (A2) approval

Model: Honeywell
Type: Emergency power manager 2HU
Part no.: 581723

581721 | Emergency power manager for PA/VA system

Emergency power manager for use as emergency power supply for a PA/VA system.
The emergency power manager is approved in accordance with EN 54-4/A2 standards.

The following characteristics are required:
- Constant monitoring of fuses
- Monitoring of battery charge power
- Monitoring of battery charge status
- LED displays for mains, battery, consumer load
- Temperature sensor
- Potential-free contacts for transmission of fault messages
- 6 individually fused outputs for amplifier
- 3 individually fused outputs for control devices (DOM)
- Battery capacity of up to 2 x 12 V / 225 Ah
- Maximum output current of 100 A in case of emergency power supply
- design

EN 54-4 (A2) approval 0333 – CPD – 075381

Model: Honeywell
Type: Emergency power manager 2HE
Part no.: 581721

581730 | Battery for PA/VA emergency power supply 12 V / 105 Ah

Lead-free emergency power battery for use in emergency power supplies by the PA/VA system.

- Battery capacity 105 Ah
- Voltage 12 V DC
- Optimized for use in 19" cabinets
- Front terminal

Dimensions: W: 502 mm ; H: 111 mm ; D: 236 mm

Weight: approx. 32.5 kg

Model: Honeywell
Type: Emergency power battery 12 V/105 Ah
Part no.: 581730

581731 | Battery for PA/VA emergency power supply 12 V / 150 Ah

Lead-free emergency power battery for use in emergency power supplies by the PA/VA system.

- Battery capacity 150 Ah
- Voltage 12 V DC
- Optimized for use in 19" cabinets
- Front terminal

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

Model: Honeywell
Type: Emergency power battery 12 V/150 Ah
Part no.: 581731

805683 | External DCU 2403 power supply unit

External power supply unit in compact metal housing for installation of up to two 12 V/24 Ah batteries for use in fire and voice alarm systems. The power supply unit enables an uninterrupted power supply for remote devices such as call stations, FOC converters, etc. There are four potential-free relay outputs available for transferring faults (mains fault, earth fault, battery fault and common fault). External LED display for operation and common faults at lockable front door, internal LEDs for detailed detection of emergency power operation, battery fault and earth fault individual monitoring. Two batteries are required for 24 V operation.

Rated voltage: 230 V AC
Rated frequency: 50 ... 60 Hz
Output voltage: 12 V DC or 24 V DC; 1 % (temperature controlled)
Output current: 6 A @ 12 V DC or 3 A @ 24 V DC
Battery capacity: max. 48 Ah @ 12 V DC / max. 24 Ah @ 24 V DC
Relay contact rating: max. 125 V / 1.5 A / 60 VA
Ambient temperature: -5 °C … 40 °C
Storage temperature: -20 °C … 45 °C
Protection rating: IP 30
Housing: Sheet steel
Colour: Gre y, similar to RAL 7035
Weight: Approx. 23 kg (incl. 2 batteries, each 12 V DC / 24 Ah)
CE certificate: 0786-CPD-20935
Dimensions: W: 310 mm; H: 410 mm; D: 211 mm

EN 54-4 (A2) approval: 0786-CPD-20935

Model: Honeywell
Type: External DCU 2403 power supply unit
Part no.: 805683

018006 | Battery for external DCU 2403 power supply unit, 12 V DC / 24 Ah capacity

Battery for integration in external DCU 2403 power supply unit.
2 batteries are required for each power supply unit.
Battery capacity: 12 V DC/24 Ah

Model: Honeywell
Type: Emergency power battery 12 V/24 Ah
Part no.: 018006

Installation of software package

Requirements for installing VAPA Management Software software.

Model:
Type:

Creation of graphic zone layout

Requirements for creating a graphic zone layout and a description (operating instructions) for a project with up to 10 zones and one layer.

Model:
Type:

Extending graphic zone layout

Requirements for extending a graphic zone layout and a description (operating instructions) for another 20 zones on the same layer.

Model: Honeywell
Type:

VAPA Management Software documentation

Requirements for creating project-specific VAPA Management Software documentation.

Model: Honeywell
Type:

Extension of graphic zone layout with additional layer

Requirements for extending a graphic zone layout and a description (operating instructions) for another 20 zones and an additional layer.

Model: Honeywell
Type:

Creation of graphic zone layout with audio

Requirements for creating a graphic zone layout and a description (operating instructions) for a project with up to 10 zones and one layer including 10 audio files.

Model: Honeywell
Type:

Extension of audio files

Requirements for extending a graphic zone layout and a description (operating instructions) for another 10 audio files.

Model:

583651 | VAPA Management Software - Server
Software license with dongle for use with one or more PC call stations (clients) or for adapting an interface to an external subsection.

Model: Honeywell
Type: VAPA Management Software Plus server
Part no.: 583641

583652 | VAPA Management Software – Client

Software license with dongle for use with a PC call station in cooperation with a VAPA Management Software server.

Model: Honeywell
Type: VAPA Management Software Plus client
Part no.: 583642

583653 | VAPA Management Software – Client/Server

Software license with dongle for use with a PC call station and VAPA Management Software server on a hardware basis. Enables an interface to be adapted to an external discipline.

Model: Honeywell
Type: VAPA Management Software Plus server/client
Part no.: 583643

583653 | VAPA Management Software – Client/Server for 10 Digital audio distribution and connection system

Software license with dongle for use with a PC call station and VAPA Management Software server on a hardware basis. Enables an interface to be adapted to an external discipline.

For maximum 10 Digital audio distribution and connection systems

Model: Honeywell
Type: VAPA Management Software Plus Slim server/client
Part no.: 583654

6. Upright cabinets

584900 | 19" Hinged frame cabinet, 24 HU, 800 x 800 mm

Stable, 19" hinged frame cabinet with 24 HU, for simple installation and convenient access for service operations.

- Can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports loads of up to 250 kg
- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel
- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Height x Width x Depth [mm]	1300 x 800 x 800
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: 19" Hinged frame cabinet 24 HU, 800 x 800 mm
Part no.: 584900

584900.R | 19" Hinged frame cabinet 24 HU, 800 x 800 mm, assembled

Stable, 19" hinged frame cabinet, 24 HU, for simple installation and convenient access for service operations.

- Can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports loads of up to 250 kg
- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel

- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Cabinet completely wired, checked, and labelled.

Height x Width x Depth [mm]	1300 x 800 x 800
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: 19" Hinged frame cabinet 24 HU, 800 x 800 mm, assembled
Part no.: 584900.R

584901 | 19" Hinged frame cabinet 40 HU, 800 x 800 mm

Stable, 19" hinged frame cabinet with 40 HU, for simple installation and convenient access for service operations.

- Can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports load of up to 250 kg
- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel
- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Height x Width x Depth [mm]	2000 x 800 x 800
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997

Model: HONEYWELL
Type: 19" Hinged frame cabinet 40 HU, 800 x 800 mm
Part no.: 584901

584901.R | 19" Hinged frame cabinet 40 HU, 800 x 800 mm, assembled

Stable, 19" hinged frame cabinet with 40 HU, for simple installation and convenient access for service operations.

- can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports loads of up to 250 kg
- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate

- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel
- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Cabinet completely wired, checked, and labelled.

Height x Width x Depth [mm]	2000 x 800 x 800
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Hinged frame cabinet 40 HU, 800 x 800 mm, assembled
Part no.: 584901.R

584902 | 19" Hinged frame cabinet 24 HU, 800 x 600 mm

Stable, 19" hinged frame cabinet with 24 HU, for simple installation and convenient access for service operations.

- can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports load of up to 250 kg
- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel
- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Height x Width x Depth [mm]	1300 x 800 x 600
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Hinged frame cabinet 24 HU, 800 x 600 mm
Part no.: 584902

584902.R | 19" Hinged frame cabinet 24 HU, 800 x 600 mm, assembled

Stable, 19" hinged frame cabinet with 24 HU, for simple installation and convenient access for service operations.

- Can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports loads of up to 250 kg

- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel
- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Cabinet completely wired, checked, and labelled.

Height x Width x Depth [mm]	1300 x 800 x 600
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Hinged frame cabinet 24 HU, 800 x 600 mm, assembled
Part no.: 584902.R

584903 | 19" Hinged frame cabinet 40 HU, 800 x 600 mm

Stable, 19" hinged frame cabinet with 40 HU, for simple installation and convenient access for service operations.

- Can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports loads of up to 250 kg
- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel
- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Height x Width x Depth [mm]	2000 x 800 x 600
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Hinged frame cabinet, 40 HU, 800 x 600 mm
Part no.: 584903

584903.R | 19" Hinged frame cabinet 40 HU, 800 x 600 mm, assembled

Stable, 19" hinged frame cabinet with 40 HU, for simple installation and convenient access for service operations.

- Can be completely dismantled
- Hinged frame and door can be changed with little effort
- Hinged frame supports load of up to 250 kg
- Welded 100 mm base, with perforation for floor mounting and cable entry
- Removable rear panel and side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Front door with 4 mm tempered-glass panel
- Door catch with swivel arm for 40 mm lock cylinder and multiple-point locking
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Cabinet completely wired, checked, and labelled.

Height x Width x Depth [mm]	2000 x 800 x 600
Max. load of hinged frame	250 kg
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Hinged frame cabinet 40 HU, 800 x 600 mm, assembled
Part no.: 584903.R

584910 | 19" Upright cabinet 26 HU, 800 x 800 mm

Stable, 19" hinged frame cabinet, 26 HU, for simple installation and convenient access for service operations.

- Can be completely dismantled
- Changeable door hinge
- Base with 4 leveling feet, passive ventilation
- Base frame with 19" level front and back
- Front door with 4 mm tempered-glass panel
- Sheet steel back door
- Door catches with swivel arm for 40 mm lock cylinder and multiple-point locking
- Removable and lockable side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Height x Width x Depth [mm]	1300 x 800 x 800
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Upright cabinet 26 HU, 800 x 800 mm
Part no.: 584910

584910.R | 19" Upright cabinet 26 HU, 800 x 800 mm, assembled

Stable, 19" upright cabinet with 26 HU, for simple installation and convenient servicing.

- Can be completely dismantled
- Changeable door hinge
- Base with 4 leveling feet, passive ventilation
- Base frame with 19" level front and back
- Front door with 4 mm tempered-glass panel
- Sheet steel back door
- Door catches with swivel arm for 40 mm lock cylinder and multiple-point locking
- Removable and lockable side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Cabinet completely wired, checked, and labelled.

Height x Width x Depth [mm]	1300 x 800 x 800
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Upright cabinet 26 HU, 800 x 800 mm, assembled
Part no.: 584910.R

584911 | 19" Upright cabinet 42 HU, 800 x 800 mm

Stable, 19" upright cabinet with 42 HU, for simple installation and convenient servicing.

- Can be completely dismantled
- Changeable door hinge
- Base with 4 leveling feet, passive ventilation
- Base frame with 19" level front and back
- Front door with 4 mm tempered-glass panel
- Sheet steel back door
- Door catches with swivel arm for 40 mm lock cylinder and multiple-point locking
- Removable and lockable side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Cabinet completely grounded
- Surface powder-coated in RAL 7035 light grey

Height x Width x Depth [mm]	2000 x 800 x 800
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Upright cabinet 42 HU, 800 x 800 mm
Part no.: 584911

584911.R | 19" Upright cabinet 42 HU, 800 x 800 mm, assembled

Stable, 19" upright cabinet with 42 HU, for simple installation and convenient servicing.

- Can be completely dismantled
- Changeable door hinge
- Base with 4 leveling feet, passive ventilation
- Base frame with 19" level front and back
- Front door with 4 mm tempered-glass panel
- Sheet steel back door
- Door catches with swivel arm for 40 mm lock cylinder and multiple-point locking
- Removable and lockable side panels
- Three-part floor plate
- Roof with brush strip and cover plate
- 2 optional fan cartridges with 2 installable fans
- Cabinet completely grounded
- Surface powder-coated RAL 7035 light grey

Cabinet completely wired, checked, and labelled.

Height x Width x Depth [mm]	2000 x 800 x 800
EN 54-16 approved	0786 – CPD – 20997
VdS approved	G 210122

Model: HONEYWELL
Type: 19" Upright cabinet 42 HU, 800 x 800 mm, assembled
Part no.: 584911.R

584921 | Angle slide-in rails (set), 250 mm deep, for hinged frames

Heavy load – angle slide-in rails (set with 2 units), 250 mm deep, installation in hinged frames, for installation of heavy devices such as power amplifiers, for example.

Model: HONEYWELL
Type: Angle slide-in rails for hinged frames
Part no.: 584921

584922 | Cable tidy rail for hinged frame assembly

Cable tidy rail for installation in hinged frames and for tidy cabling behind installed devices.

Model: HONEYWELL
Type: Cable tidy rail for hinged frame assembly
Part no.: 584922

584923 | Heavy load - Slide-in rail 800 mm, for upright cabinets without hinged frames

Heavy load - Slide-in rail 800 mm, for upright cabinets without hinged frames, for installation of heavy devices such as power amplifiers, for example.

Model: HONEYWELL
Type: Heavy load - Slide-in rail, for upright cabinets without hinged frames
Part no.: 584923

584925 | Door contact switch with connecting cable for lamp

Door contact switch with connection cable for cabinet lamp and ST 17/2 Wieland plug, fully wired and connection-ready, with fastening materials.

Model: HONEYWELL
Type: Door contact switch with connection cable for lamp
Part no.: 584925

584926 | 19" Cabinet lamp 230 V/11 W

19" cabinet light, 230 V/11 V, with mains switch, integrated socket and 3 m connection cable. Optional fastening to cabinet profile or 19" level. Mounting height 1 HU.

Model: HONEYWELL
Type: 19" cabinet lamp 230 V/11 W
Part no.: 584926

584929 | Mounting chassis (set) with lateral electrical perforation

Mounting chassis (set) with electrical perforation, for lateral installation in upright cabinet for assembly of cable ducts, for example.

Model: HONEYWELL
Type: Mounting chassis (set) with lateral electrical perforation
Part no.: 584929

584930 | L-shaped cable binding strip for cabinets 800 mm deep

L-shaped cable binding strip for cabinets 800 mm in depth, to secure wires and ensure tidy wiring.

Model: HONEYWELL
Type: L-shaped cable binding strip for cabinets 800 mm in depth
Part no.: 584930

584931 | 19" Eight-way socket strip with switch

19" eight-way socket strip with switch for installation in an upright cabinet.

- 16 A/250 V
- 8 sockets, 35° rotation
- Connecting cable, length 2 m

- Protection against accidental switching
- Universal mounting options
- Protective contact system

Model: HONEYWELL
Type: 19" eight-way socket strip with switch
Part no.: 584931

584932 | Fan cartridge for roof installation, 2 fans, with thermostat

Fan cartridge for roof installation in an upright cabinet for ventilation of system and heat dissipation. The fan cartridge consists of 2 fans, with thermostat.

EN 54-16 approved 0786 – CPD – 20997
VdS approved G 210122

Model: HONEYWELL
Type: Fan cartridge for roof installation
Part no.: 584932

584933 | Set of wheels for upright cabinet, 584910

Set of 4 wheels for optimal layout of an upright cabinet of type 584910, with brakes. Load-bearing capacity of 70 kg.

Model: HONEYWELL
Type: Set of wheels for upright cabinet, 584910
Part no.: 584933

584937 | Document compartment, 2 HU, RAL 7035

Document compartment 2 HU for installation in an upright cabinet.

- Front mounting:
- Cylinder lock
- Telescopic rails, fully extendable
- 1.5 mm sheet steel, powder-coated
- Light grey, similar to RAL 7035
- W: 405 mm; H: 88 mm; D: 75 mm

Model: HONEYWELL
Type: Document compartment 2 HU, RAL 7035
Part no.: 584937

584938 | Compartment floor 2 HU, RAL 7035

Compartment floor 2 HU for front installation in an upright cabinet.

- 1.5 mm sheet steel, powder-coated

- Light grey, similar to RAL 7035
- W: 405 mm; H: 88 mm; D: 250 mm

Model: HONEYWELL
Type: Compartment floor 2 HU, RAL 7035
Part no.: 584938

584939 | Connector set

Connector set, consists of 4 units, for connecting adjacent upright cabinets.

Model: HONEYWELL
Type: Connector set
Part no.: 584939

584940 | Equipotential bonding system

Equipotential bonding system for installation in an upright cabinet.

- 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 multi-strand conductors up to 25 mm² or fine-wire conductors up to 16 mm²

Model: HONEYWELL
Type: Equipotential bonding system
Part no.: 584940

584942 | Document pocket for 19" upright cabinet

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

Model: HONEYWELL
Type: Document pocket for 19" upright cabinet
Part no.: 584942

7.1 Loudspeaker

LSC-506 | 6 W 5" Ceiling Loudspeaker EN 54 with Fire Dome, Metal

6 W, 100 V, certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

6 W recessed ceiling loudspeaker with moisture proof 130 mm broadband loudspeaker chassis.
Integrated ceramic terminal block and thermal fuse.
Metal housing.
Mounting via 2 spring-loaded snap locks with cranked leg spring, increased clamping strength and shorter tension interval.
With fire dome for increasing passive safety levels.
It is connected via a pressure terminal.

In compliance with RoHS standards.

Technical Data:	
Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 / 0,75 W
Rated impedance	1,7 / 3,3 / 6,7 / 13 kΩ
Sensitivity EN 54-24, 1 W / 1 m	91 dB
Sensitivity EN 54-24, max 1 m	99 dB
Transmission range	180 ... 20000 Hz
Dispersion angle	173° (H), 174° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Material	Metal
Colour	white, similar to RAL 9003

Declaration of Performance:	CPR-DoP-2013002
Model:	HONEYWELL
Type:	6 W 5" Ceiling Loudspeaker EN 54 with Fire Dome, Metal
Part no.:	LSC-506

LSC-606 | 6 W 6,5" Ceiling Loudspeaker EN 54 with Fire Dome, Metal

6 W, 100 V, certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

6 W recessed ceiling loudspeaker with moisture-proof 165 mm broadband loudspeaker chassis, integrated ceramic terminal block and thermal fuse.
Metal housing.
Mounting via 2 spring-loaded snap locks with cranked leg spring, increased clamping strength and shorter tension interval.
With fire dome for increasing passive safety levels.
It is connected via a pressure terminal.
In compliance with RoHS standards.

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

Declaration of Performance	CPR-DoP-2013002
Model:	HONEYWELL
Type:	6 W 6,5" Ceiling Loudspeaker EN 54 with Fire Dome, Metal

Part no.:	LSC-606

582480 | 24 W Coaxial Ceiling Loudspeaker EN 54, Metal

24 W, 100 V, must be certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

24 W recessed ceiling loudspeaker with moisture-proof 165 mm broadband loudspeaker chassis, integrated ceramic terminal block and thermal fuse. 2-way-technology.
Metal housing.
Mounting via 2 spring-loaded snap locks with cranked leg spring, increased clamping strength and shorter tension interval.
With fire dome for increasing passive safety levels.
It is connected via a pressure terminal.
In compliance with RoHS standards.

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

Declaration of Performance	CPR-DoP-2014004
Model:	HONEYWELL
Type:	24 W Coaxial Ceiling Loudspeaker EN 54, Metal
Part no.:	582480

582470 | 6 W 4" Cabinet Loudspeaker EN 54, Metal

6 W, 100 V, certified in accordance with EN 54-24, in compliance with BS 5839:2013

6 W wall surface-mounted loudspeaker with full metal design, with 102 mm broadband loudspeaker chassis, integrated ceramic terminal block and thermal fuse.
The housing is impact-resistant and tamper-proof.
In compliance with RoHS standards.

Technical Data:	
Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 / 0,75 W
Rated impedance	1,7 / 3,3 / 6,7 kO
Sensitivity EN 54-24 1 W / 1 m	91 dB
Sensitivity EN 54-24 max 1 m	99 dB

Transmission range	300 ... 15000 Hz
Dispersion angle	175° (H), 174° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Material	Metal
Colour white,	similar to RAL 9003
Weight approx.	1.56 kg
Dimensions	L: 170 mm W: 170 mm
Declaration of Performance	CPR-DoP-2013002
Model:	HONEYWELL
Type:	6 W 4" Cabinet Loudspeaker EN 54, Metal
Part no.:	582470

582479 | 15 W Horn Loudspeaker EN 54, ABS

15 W, 100 V, certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

UV-resistant horn speaker, integrated ceramic terminal block and thermal fuse.
Impact proof ABS-plastic housing.
IP66 certified and weatherproof.
Wall and ceiling mounting by a rust-proof, U-shaped metal bracket.
Direct cable connection without additional junction box.
In compliance with RoHS standards.
To operate the product according to EN 54-24 standard, please use a 31-band Equalizer (1/3 octave) and adjust the frequency response. The details are shown in the product sheet attached in the delivery.

Technical Data	
Rated Power	15 W
Transformer power taps	15 / 10 / 5 W
Rated impedance	0.667 / 1 / 2 kΩ
Sensitivity EN 54-24, 1 W / 1 m	105 dB
Sensitivity EN 54-24, max 1 m	117 dB
Transmission range	300 ... 16000 Hz (-10 dB)
Dispersion angle	124° (H) / 143° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Type of protection	IP 66
Material	ABS
Colour	light grey, similar to RAL 7035
Weight	approx. 2.05 kg
Dimensions	Ø: 213 mm D: 265 mm
Declaration of Performance:	CPR-DoP-2014005
Model:	HONEYWELL
Type:	15 W Horn Loudspeaker EN 54, ABS
Part no.:	582479

582473 | 10 W Unidirectional Sound Projector EN 54, Metal

Aluminum, 10 W, 100 V, certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

10 W sound projector, aluminum housing, integrated ceramic terminal block and thermal fuse, moisture-resistant chassis.
IP65 certified and weatherproof. It is mounted using a corrosion-proof aluminum installation bracket.
Supplied with a one-metre long external 5-core connecting cable.
In compliance with RoHS standards

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

Declaration of Performance	CPR-DoP-2014002
Model:	HONEYWELL
Type:	10 W Unidirectional Sound Projector EN 54, Metal
Part no.:	582473

582474 | 20 W Unidirectional Sound Projector EN 54, Metal

Aluminum, 20 W, 100 V, certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

20 W sound projector, aluminum housing, integrated ceramic terminal block and thermal fuse, moisture-resistant chassis.
IP65 certified and weatherproof.
It is mounted using a corrosion-proof aluminum installation bracket.
Supplied with a one-metre long external 5-core connecting cable.
In compliance with RoHS standards.

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

Declaration of Performance:	CPR-DoP-2014002
Model:	HONEYWELL
Type:	20 W Unidirectional Sound Projector EN 54, Metal
Part no.:	582474

582475 | 20 W Bidirectional Sound Projector EN 54, Metal

Aluminum, 20 W, 100 V, must be certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

20 W bi-directional sound projector, aluminum housing, integrated ceramic terminal block and thermal fuse, moisture-resistant chassis.
IP65 certified and weatherproof.
It is mounted using a corrosion-proof aluminum installation bracket.
Supplied with a one-metre long external 5-core connecting cable.
In compliance with RoHS standards.

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

Declaration of Performance:	CPR-DoP-2014002
Model:	HONEYWELL
Type:	20 W Bidirectional Sound Projector EN 54, Metal
Part no.:	582475

582476 | 20 W Column Loudspeaker EN 54, Metal

Aluminum, 20 W, 100 V, certified in accordance with EN 54-24, in compliance with BS 5839-8:2013

20 W column loudspeaker, aluminum housing, integrated ceramic terminal block and thermal fuse, moisture-resistant chassis.
IP66 certified and weatherproof.
It is mounted using a corrosion-proof aluminum installation bracket.
Supplied with a one-metre long external 5-core connecting cable.
In compliance with RoHS standards

Technical Data:	
Rated Power	20 W
Transformer power taps	20 / 10 / 5 / 2.5 W
Rated impedance	0,5 / 1 / 2 / 4 kΩ
Sensitivity EN 54-24, 1 W / 1 m	91 dB
Sensitivity EN 54-24, max 1 m	104 dB
Transmission range	300 ... 15000 Hz
Dispersion angle	146° (H) / 87° (V) @ 1 kHz
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Type of protection	IP 66
Material	Aluminium
Colour	white, similar to RAL 9003
Weight	approx. 3.75 kg

Dimensions	W: 165 mm H: 344 mm D: 150 mm
Declaration of Performance:	CPR-DoP-2014003
Model:	HONEYWELL
Type:	20 W Column Loudspeaker EN 54, Metal
Part no.:	582476

582477 | 40 W Column Loudspeaker EN 54, Metal

Aluminum, 40 W, 100 V, certified in accordance with EN 54-24, in compliance with BS5839-8

40 W column loudspeaker, aluminum housing, integrated ceramic terminal block and thermal fuse, moisture-resistant chassis.
IP66 certified and weatherproof.
It is mounted using a corrosion-proof aluminum installation bracket.
Supplied with a one-metre long external 5-core connecting cable.
In compliance with RoHS standards.

Technical Data:	
Rated Power	40 W
Transformer power taps	40 / 20 / 10 / 5 W
Rated impedance	0,25 / 0,5 / 1 / 2 kΩ
Sensitivity EN 54-24, 1 W / 1 m	94 dB
Sensitivity EN 54-24, max 1 m	110 dB
Transmission range	300 ... 15000 Hz
Dispersion angle	147° (H) / 48° (V) @ 1 kHz
Ambient	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Type of protection	IP 66
Material	Aluminium
Colour	white, similar to RAL 9003
Weight	approx. 5.75 kg
Dimensions	W: 165 mm H: 568 mm D: 150 mm
Declaration of Performance:	CPR-DoP-2014003
Model:	HONEYWELL
Type:	40 W Column Loudspeaker EN 54, Metal
Part no.:	582477

581263 | 6 W 5" Ceiling Loudspeaker, Metal

6 W recessed ceiling loudspeaker with 130 mm full range dual-cone loudspeaker chassis.
Metal housing.
Quick fit clamps allow easy and quick mounting into false ceilings.
In compliance with RoHS standards.

Technical Data	
Rated Power	6 W
Transformer power taps	6 / 3 / 1,5 W
Rated impedance	1,7 / 3,3 / 6,7 kΩ
SPL 1 W / 1 m	90 dB

Transmission range	120 ... 20000 Hz
Dispersion angle	160°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Material	Metal
Colour	white, similar to RAL 9003
Weight	approx. 0.71 kg
Cut-out size (Ø min.)	150 mm
Dimensions	Ø: 180 mm D: 55 mm

Model:	HONEYWELL
Type:	6 W 5" Ceiling Loudspeaker, Metal
Part no.:	581263

581274 | 6 W 3" Ceiling Loudspeaker, ABS

6 W 3" Ceiling Loudspeaker, ABS

6 W recessed ceiling loudspeaker with 64 mm full range dual-cone loudspeaker chassis.
High impact and fire resistant ABS plastic housing.
Quick fit clamps allow easy and quick mounting into false ceilings.
In compliance with RoHS standards.

Technical Data:

Rated Power	6 W
Transformer power taps	6 / 3 W
Rated impedance	1,7 / 3,3 kΩ
SPL 1 W / 1 m	91 dB
Transmission range	120 ... 20000 Hz
Dispersion angle	150°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Colour	white, similar to RAL 9003
Weight	approx. 0.42 kg
Cut-out size (Ø min.)	95 mm
Dimensions Ø:	103 mm D: 80 mm

Model:	HONEYWELL
Type:	6 W 3" Ceiling Loudspeaker, ABS
Part no.:	581274

581270 | 6 W Cabinet Loudspeaker, ABS

High impact ABS housing. Ceiling or wall mounting.
In compliance with RoHS standards.

Technical Data:

Rated Power	6 W
Transformer power taps	6 / 3 W

Rated impedance	1,7 / 3,3 kΩ
SPL 1 W / 1 m	90 dB
Transmission range	200 ... 20000 Hz
Dispersion angle	120°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Material	ABS
Colour	white, similar to RAL 9003
Weight approx	1 kg
Dimensions	W: 260 mm H: 162 mm D: 77 mm
Model:	HONEYWELL
Type:	6 W Cabinet Loudspeaker, ABS
Part no.:	581270

581275 | 3 W Cabinet Loudspeaker, ABS

Water-resistant cone. High impact and fire-resistant ABS housing for wall mounting.
In compliance with RoHS standards.

Technical Data:	
Rated Power	3 W
Transformer power taps	3 / 1,5 W
Rated impedance	3,3 / 6,7 kΩ
SPL 1 W / 1 m	88 dB
Transmission range	300 ... 6000 Hz
Dispersion angle	180°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Material	ABS
Colour	white, similar to RAL 9010
Weight approx	0.4 kg
Dimensions	W: 120 mm H: 60 mm D: 30 mm
Model:	HONEYWELL
Type:	3 W Cabinet Loudspeaker, ABS
Part no.:	581275

581276 |10 W Cabinet Louspeaker, ABS

High impact and fire resistant ABS housing for wall mounting.
In compliance with RoHS standards.

Technical Data:	
Rated Power	10 W
Transformer power taps	10 / 5 W
Rated impedance	1 / 2 kΩ
SPL 1 W / 1 m	92 dB
Transmission range	150 ... 17000 Hz
Dispersion angle	170°

Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Material	ABS
Colour	white, similar to RAL 9003
Weight	approx. 1.6 kg
Dimensions	W: 345 mm H: 240 mm D: 100 mm

Model:	HONEYWELL
Type:	10 W Cabinet Louspeaker, ABS
Part no.:	581276

581277 | 40 W Cabinet Loudspeaker, ABS

2-way loudspeaker with 5.25” woofer and 1” tweeter. Sturdy ABS housing with mounting bracket.
In compliance with RoHS standards.

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

Model:	HONEYWELL
Type:	40 W Cabinet Loudspeaker, ABS
Part no.:	581277

581258 | 20 W sound projector, ABS

High impact fire resistant ABS material.
Wall- and ceiling mounting by a rust-proof, U-shaped metal bracket.
In compliance with RoHS standards.

Technical Data:	
Rated Power	20 W
Transformer power taps	20 / 10 / 5 W
SPL 1 W / 1 m	92 dB
Transmission range	140 ... 20000 Hz (-10 dB)
Dispersion angle	150°
Ambient temperature	-20 °C ... 90 °C
Storage temperature	-40 °C ... 70 °C
Type of protection	IP 55
Colour	white, similar to RAL 9003

Weight	approx. 1.56 kg
Dimensions	Ø: 138 mm D: 201 mm
Model:	HONEYWELL
Type:	20 W sound projector, ABS
Part no.:	581258

581271 | 15W Horn Loudspeaker, ABS

High impact fire-resistant ABS material.
IP66 compliant and high weather-resistance. Ideal for outdoor and industrial application.
Wall- and ceiling mounting by a rust-proof, U-shaped metal bracket.
In compliance with RoHS standards.

Technical Data:	
Rated Power	15 W
Transformer power taps	15 / 7,5 W
Rated impedance	0,67 / 1,3 kΩ
SPL 1 W / 1 m	103 dB
Transmission range	350 ... 8000 Hz
Dispersion angle	140°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Type of protection	IP 66
Material	ABS
Colour	white, similar to RAL 9003
Weight	approx. 1.56 kg
Dimensions	W: 240 mm H: 225 mm D: 165 mm
Model:	HONEYWELL
Type:	15W Horn Loudspeaker, ABS
Part no.:	581271

581272 | 30 W Horn Loudspeaker, ABS

High impact fire-resistant ABS material.
IP66 compliant and high weather-resistance. Ideal for outdoor and industrial application.
Wall- and ceiling mounting by a rust-proof, U-shaped metal bracket.
In compliance with RoHS standards.

Technical Data:	
Rated Power	30 W
Transformer power taps	30 / 15 W
Rated impedance	0,33 / 0,67 kΩ
SPL 1 W / 1 m	104 dB
Transmission range	300 ... 10000 Hz
Dispersion angle	150°
Ambient temperature	-25 °C ... 55 °C
Storage temperature	-40 °C ... 70 °C
Air humidity	< 95 % non condensing
Type of protection	IP 66

Material	ABS
Colour	white, similar to RAL 9003
Weight	approx. 2.1 kg
Dimensions	W: 290 mm H: 285 mm D: 205 mm
Model:	HONEYWELL
Type:	30 W Horn Loudspeaker, ABS
Part no.:	581272