Voice Alarm

Digital Output Module (DOM)

The Digital Output Module (DOM) is the central control element of the Honeywell Voice Alarm System. It has interfaces to all input/output modules, manages and monitors the loudspeaker circuits.

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The Digital Output Module (DOM) is the heart of the Honeywell Voice Alarm and Public Address system. Managing either 8 or 24 zones the DOM routes up to 4 channels of audio via amplifiers to any individual zone or groups of zones.

The 2 variants, DOM4-8 and DOM4-24 are both equipped with four independent audio outputs in order to access four channels. Each audio channel controls up to 8 loudspeaker zones with each DOM managing 8 zones (DOM 4-8) or 24 zones (DOM 4-24).

The loudspeaker circuits are constantly monitored for short-circuit, earth fault and failure as well as for impedance deviation. Defective loudspeaker zones are isolated with the operation of all other zones unaffected.

The system can accommodate either impedance or end of line monitoring providing a flexible solution to both new build and existing retrofit projects regardless of the type of loudspeakers currently installed.

Key Features:

- Certified to EN54-16
- Message store for pre-recorded emergency messages
- Network ready for larger systems and / or distributed rack system
- Continuous monitoring of all vital system components
- Automatic and dynamic switching to backup amplifier
- Automatic volume control (AVC) on all channels
- Remote monitoring and configuration via ethernet across internet or VPN
- Emergency standby power supply via 24 V DC
- Monitoring of complete audio path including loudspeaker circuits
- 4 connections for paging and emergency microphones via proprietary Digital Audio Line (DAL)
Networking
Larger Honeywell Voice Alarm and Public Address systems are established by connecting DOMs within a rack via a dedicated Ethernet network. For very large systems a fault redundant network of copper or fibre may be built to form a distributed system capable of managing hundreds of simultaneous messages.

Modern, user-friendly configuration tools allow flexible system planning with minimal training and costs.

Connections - Per DOM
- Four digital audio links (DAL) for connection of microphones and interface modules.
- Four automatic volume control (AVC) inputs
- Four backup power amplifier inputs
- Loudspeaker zones:
  - DOM4-8: 4 channels, 2 circuit relays each (8 loudspeaker zones)
  - DOM4-24: 4 channels, 6 circuit relays each (24 loudspeaker zones)
- Eight output control contacts
- TWI databus for connection to other systems
- 230 V AC mains supply input
- 24 V DC emergency power supply input

Input/Output
- Push-button for sequential monitoring of local audio channels
- Built in loudspeaker to monitor broadcast to zone circuits

Ethernet
The DOM has a 4-Port Fast-Ethernet-Switch for communication with other system components (DOM, SCU). The maximum range according to the norm with a CAT 5 cable is 90 m (plus 2 x 10 m patch cable). Increased operating distance/range and networking over fibre optics is possible with standard ethernet media converters.

Automatic Volume Control Inputs (AVC)
The integrated automatic volume control function can continually regulate the volume of one or more of the amplifier channels of the DOM according to the sound level of the surrounding environment.

Four sensor microphone inputs with a nominal level of -51 dB are available for this purpose. Up to two sensor microphones can be connected to each channel.

Power-Save Mode
The Power-Save Mode enables the automatic termination of announcements during a power failure. For example, background music or advertising announcements will no longer be carried out.

Software tool
The Honeywell VA Designer is a comprehensive software tool that facilitates the planning and configuration of complex voice alarm and public address systems. With the help of the Honeywell designer, systems can be individually created and subsequently configured.

- System planning (hardware)
- Individual configuration (software)
- Generate configuration data

Design and configuration tool
## Technical Specifications

### SPECIFICATION

#### DIMENSIONS
- Height: 44 mm
- Width: 483 mm
- Depth: 345 mm / 1 HE, 19"
- Weight:
  - DOM 4-8: 5.7 kg
  - DOM4-24: 6.8 kg
- Housing color: Grey, similar to RAL 7016

#### AUDIO OUTPUT
- Output type: Electronically balanced
- Nominal level: 0 dB
- Max. output level: +6 dB
- Transmission range: 20 Hz to 20 kHz
- Max. deviation from the linear transmission: ±1 dB in transmission range
- Harmonic distortion at the nominal level: < 0.03 % at 1 kHz
- Max. harmonic distortion: 0.1 % in transmission range
- Unweighted signal-to-noise ratio at the nominal level:
  - > 75 dB (A)
  - > 70 dB
- Load impedance: Min 5 kΩ, max. 500 pF

#### SENSOR INPUT (AVC*)
- Input type: Symmetric ungrounded
- Nominal level: -51 dB
- Nominal level for emergency microphone / telephone station: 0 dB
- Transmission range: 100 Hz to 8 kHz
- Max. deviation from the linear transmission: ±6 dB in transmission range
- Harmonic distortion at the nominal level: < 0.2 % at 1 kHz
- Max. harmonic distortion: 1 % in transmission range
- Unweighted signal-to-noise ratio at the nominal level:
  - > 65 dB (A)
  - > 60 dB
- Load impedance: Typ 200 Ω

#### CONTROL CONTACTS
- Max. voltage: 100 V DC / 1 A
- Surge voltage resistant: > 2.5 kV

#### CONNECTION CONTACTS
- Max. voltage: 250 V AC, 30 V DC / 5 A
- Surge voltage resistance: > 1.5 kV

#### MAINS VOLTAGE
- Voltage range: 90 V AC to 264 V AC
- Frequency range: 47 Hz to 440 Hz
- Power consumption:
  - DOM4-8 with/without 4 x DAL: 40 W/70 W @ 230 V AC 50/60 Hz
  - DOM4-24 with/without 4 x DAL: 50 W/80 W @ 230 V AC 50/60 Hz

#### EMERGENCY POWER SUPPLY
- Nominal voltage: 24 V DC
- Power consumption: 24 W

#### ENVIRONMENTAL SPECIFICATIONS
- Ambient temperature: -5 °C to +55 °C
- Humidity: 15% to 90% relative humidity (non-condensing)

* Automatic Volume Control
Additional Information

Any complex system configuration can be implemented through the networking of multiple DOMs via built-in Ethernet. The DOM4-8 and DOM4-24 modules are equipped with four independent audio outputs in order to access four channels. Each audio output controls connected loudspeaker zones: the DOM4-8 operates two zones (total of 8 circuits) while the DOM4-24 operates six zones (a total of 24 zones).

Each DOM has storage for up to 1 hour of audio recordings, for voice alarm texts and attention tones. The volume of each audio source and each channel amplifier can be individually controlled and the quality of audio managed with additional filters such as parametric equalizers, high and low pass filters and delays. All critical areas of the system are monitored and faults are identified, and announced within seconds.

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<th>DESCRIPTION</th>
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