HÖRMANN Warnsysteme

WARNING AND NOTIFICATION

Electronic Siren ECN-D

Siren Head

- Sound Pressure Level up to 123 dB (A)/30 m
- 360° Omnidirectional Sound Propagation
- Directional Sound Propagation possible
- Modular Siren Head Construction
- Weatherproof Siren Horns
- Installation with Pole on Building, Installation with Mast on Ground

SIREN HEAD
Siren head consisting of self-supporting siren horns in modular construction. By slit diffraction of the sound at the horn opening 360° omnidirectional sound propagation is achieved.

Siren Cabinet

- Activation of Alarms, Voice Messages, Live PA Announcements
- 19" Technology with Swing Frame
- Easy Expansion and Adaption
- Batteries 24 VDC for independence from external Power Supply
- 230 VAC or 110 VAC+/-10% and/or Solar Power Supply
- Installation on Wall/Pole/Mast
- Minimum Maintenance Requirements

SIREN CABINET
Compact and clearly designed siren cabinet thanks to 19" plug-in technology and modular construction. Robust assemblies with long design life guarantee maximum reliability.

ECN-D Product Types

ELECTRONIC SIREN	ECN 600-D	ECN 1200-D	ECN 1800-D	ECN 2400-D	ECN 3000-D
Sound Pressure Level (SPL)	109 dB (A)/30 m	115 dB (A)/30 m	118 dB (A)/30 m	121 dB (A)/30 m	123 dB (A)/30 m
Number of Horns/Drivers	4	8	12	16	20
Head Dimension (W x H x D) in mm	300 x 950 x 850	300 x 1605 x 850	300 x 2260 x 850	300 x 2900 x 850	300 x 3550 x 850
Weight Siren Head	28 kg	59 kg	89 kg	121 kg	152 kg
Windload (160km/h)	522 N	1064 N	1614 N	2200 N	2650 N
Number of Class-D Amplifiers	2	4	6	8	10
Weight Siren Cabinet in kg (incl. Batteries)	84 kg	85 kg	86 kg	87 kg	88 kg

SYSTEM	
Fundamental Frequency	415 Hz/425 Hz
Alarms (Warning Tones)	9 (customized)
Messages (Pre-recorded Voice)	12 (customized)
Standby Time	up to 7 days
Batteries Capacity during 48h without charge	up to 20 minutes activation
Material of Horns	Aluminium (Alloy)

SIREN CABINET	
Operating Voltage/Batteries	24 VDC
Mains Power Supply (single phase) Solar Power Supply	230 VAC or 110 VAC +/- 10% optional
Maximum Charging Current	4 A
Cabinet Dimensions (W x H x D)	600 x 600 x 350 mm
Protection Class	IP66
Ambient Temperature Range	-25°C ... +65°C

Specifications are subject to change without notice.

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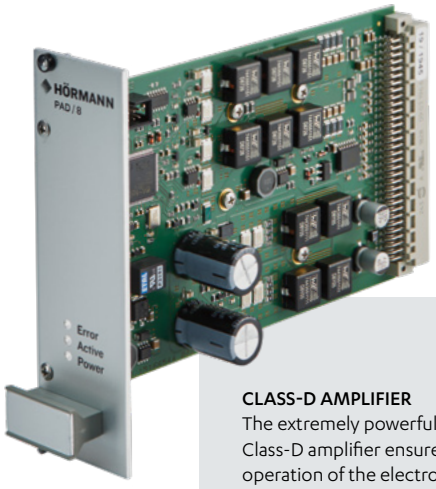
Class-D Amplifier PAD/8

- Output Power 300 Watt at 5-7 Ohm
- Bandwidth 100 Hz – 20 kHz
- Efficiency above 97%
- Distortion less 4%
- Overload Protection
- Short Circuit Protection
- Status LEDs
- 19“ Plug-in Module, 8 HP
- Weight 0,3 kg



CLASS-D AMPLIFIER
The extremely powerful and reliable Class-D amplifier ensures efficient operation of the electronic siren.

Siren Control Processor CP1+

- Embedded ARM7 CPU
- RTX-OS Realtime Multitasking Operating System
- HÖRMANN Process System Interface
- Diverse Interfaces: Ethernet (TCP/IP), Digital Radio, GSM/GPRS, Fibre Optic, Satellite, RS232/RS485
- Robust Foil Keypad as Input Device for all Operations
- LCD Display to show all Operating Steps and Results
- SD-Card Reader for Software Update (for Update of Alarms and Messages)

SIREN CONTROL PROCESSOR
The siren control processor monitors and controls the ECN-D siren and offers a wide range of interfaces for different communication methods.

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ECN-D Advantages and Key Features

The Concept of the Electronic Siren

Latest technology combined with our long time experience in siren development has led to the new siren generation ECN-D (electronic siren with digital amplifiers). The electronic siren ECN-D, supplied by inbuilt batteries for independence from external power supply during emergency conditions, offers local and remote operations, activation of 9 customized Alarms, 12 customized Messages and Live PA Announcements, a variety of inbuilt test routines; advantages and features already known for the long time proven electronic siren ECN.

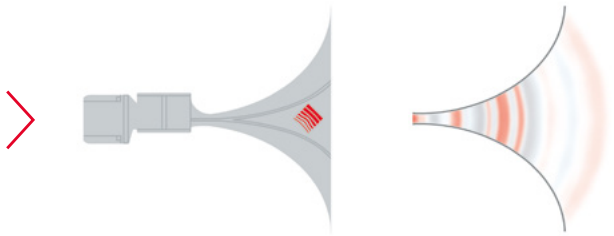
Use of new fully digital amplifiers increase the efficiency to above 97%. At the same time, energy consumption, weight and space requirement of the electronic cabinet are significantly reduced. Modular design, variable interfaces and the strict compliance with technical standards, make it possible to take special customer requirements into account and offer the best prerequisites for a reliable, customized siren warning system.

Acoustic – 360° Omnidirectional Sound Propagation

VERTICAL SOUND PROPAGATION

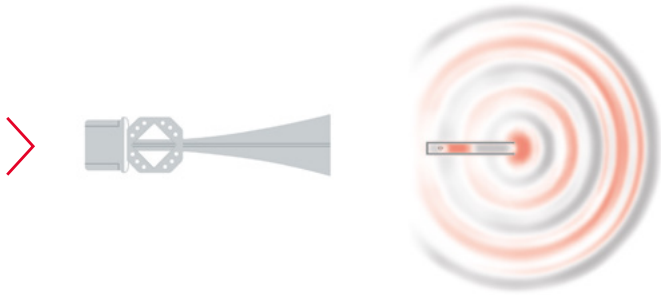
HÖRMANN designed and developed the horn for the ECN siren using and taking into consideration physical and acoustic laws, to achieve best propagation of the sound.

The 360° omnidirectional sound propagation pattern is created upon diffraction of sound on the slit of the siren horn. This physical effect allows sound penetrating the acoustic shadow.



HORIZONTAL SOUND PROPAGATION

To assure a 360° sound propagation pattern for siren head installations in the field, the siren head will be split in two channels, which are assembled in 180° opposite direction. The possibility of acoustic neutralisation by overlapping the sound waves is eliminated by generating the alarms with different fundamental frequency for the two channels.



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