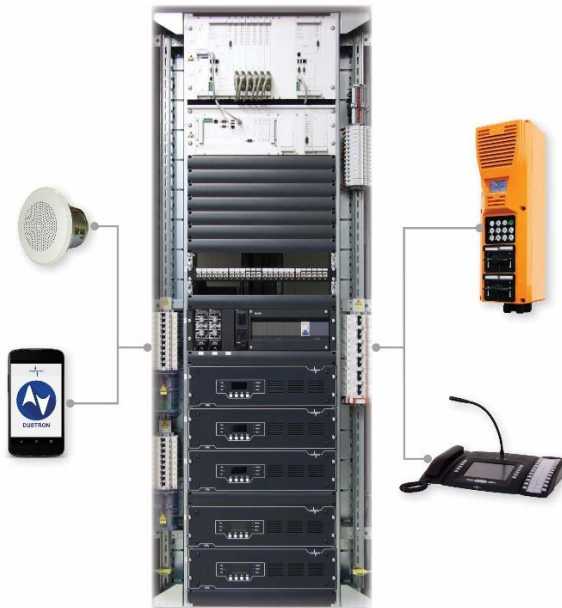


netLIS® Hybrid Communication System



Features and Functions

- Intercom, Paging and Alarming
 - Digital, analog and IP connectivity
 - Redundancy capable
 - 42 RU, 19" frame in 800 mm pre-wired cabinet
 - 2,400 Watts of primary amplification*
 - 16 independently addressable speaker loops*
 - 72 digital call stations*
 - 200 IP devices*
 - SIP-based interfacing
- *Maximum configuration

The NFPA 72 compliant *netLIS*® Hybrid Communication System by INDUSTRONIC synergizes customization and flexibility with quality and speed of delivery. Its ability to provide Intercom, Paging and Alarming by using a single processor, the industry leading INTRON-D *plus* is unique in the field of industrial communication.

Using Plug & Play technology, connectivity via wireless, copper, Ethernet and fiber optic media, the *netLIS*® is the solution of simple and complex communication.

In addition, this model is capable of interfacing fire and gas detection systems, CCTV, IP-based telephony systems and competing PAGA, Intercom and Emergency Paging systems.

INTERCOM

Whether you require point-to-point communication, a party channel or pre-defined group calls, the line of INDUSTRONIC digital and IP-based call stations and Access Panels combined with the *netLIS*® Communication System addresses all of your intercom needs.

PAGING

The NPA series of amplifiers can easily be added to the system in a Plug & Play manner. The flexibility of multi-zone addressability and power configurations from 150 W to 600 W of amplification power per amplifier, provide a cost-effective approach to paging. The NPA series can also be utilized in a decentralized manner communicating to the *netLIS*® system via your local area network.

ALARMING

The *netLIS*® pre-wired cabinet combines the ability to use both sound and light to alert a plant or campus in an emergency. Standard with a digital audio processor and logic, pre-programmed announcements and flashing strobe routines can be utilized by the single push of a button or automatically enacted via detection interfaces.

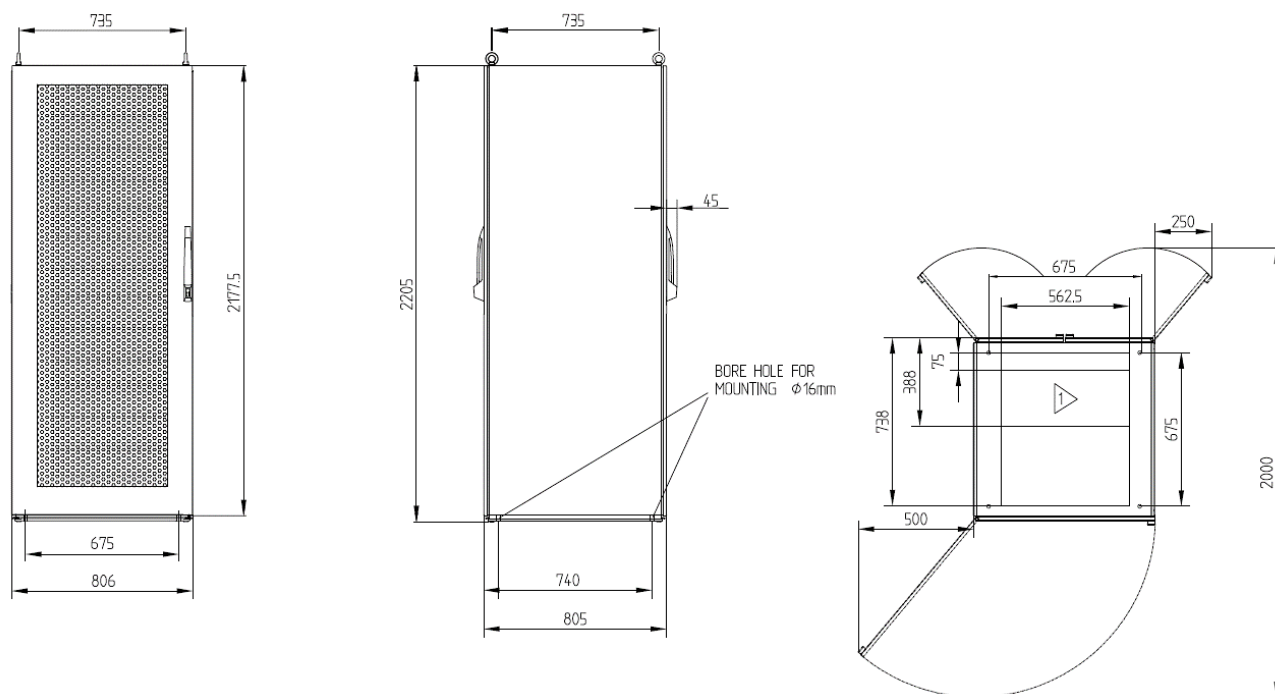


Fig. 1: Dimensional drawing cabinet

Mechanical Data

• Housing	Sheet steel (perforated)
• Height x width x depth	2000 mm x 800 mm x 800 mm (78.7" x 31.5" x 31.5")
• Main color	Gray (RAL 7035)
• Curb weight	190 kg to 250 kg (419 lbs to 550 lbs)
• Degree of protection*	IP20 according to EN 60529
• Thickness of door sheet steel	2 mm (0.08")
• Thickness of side sheet steel	1.5 mm (0.06")
• Installation frame	19", 42 RU
• Opening angle of doors	180° front / 130° rear

*The degree of protection is only valid if the outer cabinet housing has not been modified. Additional openings or attachments (e.g. ventilation equipment, warning strobes, etc.) on the outer housing can result in a lower degree of protection.

Electrical Data

• Operating voltage range	120 VAC, 60 Hz
• Consumption range	Standby mode approx. 900 VA, max. 8,800 VA (varies on configuration)
• Internal operating voltage	48 VDC
• Surge protection for mains	Type 2

Environmental Requirements and Standards	• Ambient temperature during operation	-5 °C to +40 °C (+23 °F to +104 °F)
	• Relative humidity (non-condensing)	Max. 95%
System Processor	• Standard configuration	Single processor PAGA
	• Component redundancy (DDCS)	Dual processor PAGA
	• For digital station connectivity	Single processor intercom
Cabinet Accessories	• Cabinet illumination	1 (with power socket)
	• DIN-rail power sockets (for customer switches)	4
Other Features	• Pre-wired strobe loops	6 (ATS supported and optional with line monitoring)
	• Pre-wired loudspeaker loops	16
	• Pre-wired 5 VDC supply	2 (not included in base configuration)
	• Pre-wired 12 VDC supply	1 (not included in base configuration, for NCP-Rack)
	• Pre-wired 24 VDC supply	1 (not included in base configuration, for strobe line monitoring LME)
	• I/O modules (19/19 NSG 001)	2 (14 inputs pre-reserved for F&G)
	• Minor and major fault output	Each 1 (total 2, dry contact)
	• Spare relay outputs	2 (dry contacts)
Intercom	Maximum Connection Capacity	
	• Digital direct wired call stations	72
	• IP-based call stations	200
	• Max. number of simultaneous conversations digital - digital	36
	• Max. number of simultaneous conversations IP - IP	200
	• Max. number of simultaneous conversations digital - IP	24

Paging

Centralized Amplifier Chassis Capacity

- | | |
|---------------------------------|---|
| • Primary amplification devices | 4 |
| • Backup amplification device | 1 |

Decentralized Amplifier Chassis Capacity

- | | |
|---------------------------------|-----|
| • Primary amplification devices | 100 |
|---------------------------------|-----|

Amplifier Types

- | | |
|--------------------------|--------------|
| • 2 x 150 W or 1 x 300 W | Max. 2 Loops |
| • 4 x 150 W or 2 x 300 W | Max. 4 Loops |

Backup Power Availability

- 2+1 (if 150 W amplifier modules used)
- 4+1 (if 300 W amplifier modules used)

Paging Functions

- | | |
|---------------|----------------------|
| • All Call | • Pre-tone |
| • Group Calls | • Dynamic Group Call |

Alarming

Safe Zone

- Indoor / outdoor strobes
- Indoor / outdoor speakers and horns
- Visual displays

Hazardous Area (Class I Div II)

- Strobes
- Indoor / outdoor speakers and horns

Alarming Functions

- Zoned alarming
- Manual initiation
- Voice-over-Alarm
- Automated pre-set alarm and voice scenarios

Network Requirements

- IPv4 network

 - 10Base-T/100Base-TX Ethernet (IEEE 802.3),
100 MBit/s recommended

 - Support of UDP, TCP, SCTP, RTP and RTCP protocols

 - Quality of Service (QoS)
 - Ideal latency value < 20 ms (max. 50 ms)
 - Jitter: max. 10 ms

 - NTP support for access to a central NTP time server

 - Required bandwidths
 - 1 MBit/s basic bandwidth and 200 kBit/s per IP voice connection for system networking
 - For each IP intercom station: 200 kBit/s basic bandwidth and 200 kBit/s per active audio channel
 - For each IP public address unit NPA: 200 kBit/s basic bandwidth and 100 kBit/s per active audio channel
-

Order Data**Type Number**

320-900-700

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