

NPA

IP-based Public Address Unit



Illustration similar

Features and Functions

- Decentralized PA unit controlled by the INTRON-D *plus* over Ethernet/IP
- Exchangeable amplifier modules allow for a maximum output power of 600 W
- Can process up to 4 simultaneous and independent amplifier channels
- Up to 8 integrated, selectively addressable speaker circuits
- Optional integrated speaker monitoring
- Simplicity of system design: NPA can be placed anywhere on the LAN
- Intelligent backup control
- Redundant network interface
- Integrated web interface

The multi-channel, IP-based PA unit of the NPA series is used to control up to 8 selectively addressable speaker circuits. Via Ethernet / IP network, the decentralized unit can be connected to the INTRON-D *plus* communication and public address system from INDUSTRONIC and can be operated within a network of systems.

Via the integrated speaker monitoring system there is the option to continuously monitor speaker circuits for short circuit, earth leakage, line interruption, and impedance changes.

Navigate through the intuitive user interface, implemented in the LCD display, using the 4 function keys. Utilize the integrated web interface and define settings via a standard web browser installed on a PC.

The intelligent backup control offers unlimited possibilities. Depending on your requirements, the power supply unit or individual amplifier modules can be configured according to the N+1 redundancy principle, all in one device. It's also possible to operate the entire NPA unit redundantly. As an option, you can use the ring topology for speaker circuits.

The modular design of the NPA allows for a maximum output power of 600 W. The two amplifier slots provided in the NPA unit can be equipped with amplifier modules that are available in two different output power versions: 2 x 150 W and 1 x 300 W. They can be configured in any combination and swapped or added to at a later date due to the simplicity of the configuration interface.

Other Features

- Easy-to-use via LCD display and function keys on the front panel
- N+1 redundancy can be defined for the power supply unit, the amplifier module, or the NPA unit as a whole
- Interface to connect external expansion modules
- Great diversity, as you can combine different amplifier modules that can be individually plugged into the amplifier slots
- Easy-to-service - easily exchange the power supply unit, and the amplifier modules
- 1 separate analog AF input with controllable push-to-talk control input
- 1 independent analog AF input with 0 dB level input for entertainment functions (currently without function)
- 1 fault message output
- 4 independent open collector outputs (e.g. as mandatory call output)

Mechanical Data

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|--------------------------|--|
| • Design | 19" rack mounting |
| • Height x width x depth | 132 mm x 430 mm x approx. 330 mm
(5.2" x 16.9" x 13") |
| • Display | 128 x 64 screen resolution |
| • Weight | Max. 13.5 kg (max. 29.8 lbs)
(depending on device type) |

Electrical Data

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|------------------------------------|---|
| • AC supply voltage | 100 VAC to 276 VAC |
| • AC power consumption | Quiescent 14 VA, max. 850 VA |
| • Power frequency | 47 Hz to 63 Hz |
| • Power factor correction (PFC) | 0.95 |
| • DC supply voltage | 42 VDC to 72 VDC |
| • DC current consumption at 48 VDC | Type 300 NPA: quiescent 0.12 A, max. 8.1 A
Type 600 NPA: quiescent 0.15 A, max. 16 A |
| • Frequency response | 150 Hz to 16 kHz (+/-3 dB) |
| • Efficiency | > 80 % |
| • Signal-to-noise ratio | > 80 dB |
| • Distortion factor | < 0.5 % |
| • Control voltage output | 48 V / 0.5 A |

Connections and Interfaces

- 1 x analog PTT audio and control input
- 1 x analog audio input (currently without function)
- 1 x RS485 interface for expansion modules
- 1 x fault message output
- 1 x Ethernet port LAN1
- 1 x Ethernet port LAN2 for redundant connection
- 1 x fault message input
- 4 x mandatory call outputs
- 1 x USB service interface
- 1 x control voltage output 48 VDC / 0.5 A
- 2 x mains voltage input
- 1 x DC voltage input

Network Requirements

- IPv4 network
- Support of UDP-, SCTP-, RTP- und RTCP protocols
- Quality of Service (QoS)
 - Ideal latency value: < 20 ms (max. 50 ms)
 - Jitter max. 10 ms
- 10Base-T/100Base-TX Ethernet (IEEE 802.3), 100 MBit/s recommended
- 200 kBit/s basic bandwidth and 100 kBit/s per active amplifier channel

Environmental Requirements and Standards

- | | |
|--|--------------------------------------|
| • Ambient temperature during operation | -5 °C to +50 °C (+23 °F to +122 °F) |
| • Relative humidity (non-condensing) | Max. 95 % |
| • EMC | IEC/EN 61000-6-2
IEC/EN 61000-6-4 |

Options

Description	Type Number
ACT-NPA Speaker Circuit Monitoring Activation of speaker circuit monitoring for the INDUSTRONIC IP-based PA unit NPA	101-200-101

The chart below describes the different configuration options and resulting number of power supplies, independent amplifier channels and speaker circuits.

Type	300 NPA 10	300 NPA 11*	300 NPA 12	300 NPA 20	300 NPA 21*	300 NPA 22
Amplifier slot 1	1 x 300 W	1 x 300 W	1 x 300 W	2 x 150 W	2 x 150 W	2 x 150 W
Amplifier slot 2	-	-	-	-	-	-
Total output	300 W	300 W	300 W	300 W	300 W	300 W
Amplifier channels	1	1	1	2	2	2
Speaker circuits	4	4	4	4	4	4
AC power supply	-	1	2	-	1	2
DC power supply	1	1	1	1	1	1
Type number	302-140-100	302-141-100	302-142-100	302-140-200	302-141-200	302-142-200

* INDUSTRONIC standard type

Type	600 NPA 20	600 NPA 21*	600 NPA 22	600 NPA 30	600 NPA 31	600 NPA 32
Amplifier slot 1	1 x 300 W	1 x 300 W	1 x 300 W	1 x 300 W	1 x 300 W	1 x 300 W
Amplifier slot 2	1 x 300 W	1 x 300 W	1 x 300 W	2 x 150 W	2 x 150 W	2 x 150 W
Total output	600 W	600 W	600 W	600 W	600 W	600 W
Amplifier channels	2	2	2	3	3	3
Speaker circuits	8	8	8	8	8	8
AC power supply	-	1	2	-	1	2
DC power supply	1	1	1	1	1	1
Type number	302-140-300	302-141-300	302-142-300	302-140-400	302-141-400	302-142-400

* INDUSTRONIC standard type

Type	600 NPA 40	600 NPA 41*	600 NPA 42
Amplifier slot 1	2 x 150 W	2 x 150 W	2 x 150 W
Amplifier slot 2	2 x 150 W	2 x 150 W	2 x 150 W
Total output	600 W	600 W	600 W
Amplifier channels	4	4	4
Speaker circuits	8	8	8
AC power supply	-	1	2
DC power supply	1	1	1
Type number	302-140-500	302-141-500	302-142-500

* INDUSTRONIC standard type

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