NPA

IP-BASED PUBLIC ADDRESS UNIT

DECENTRALIZED PA UNIT CONTROLLED OVER ETHERNET/IP

The decentralized unit can be connected to the INDUSTRONIC system via Ethernet/IP network. There are two network interfaces available which allow for a redundant network access. If one network interface fails, data is transmitted via the second one. 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.

- 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
- N+1 redundancy through intelligent backup control
- Redundant network interface
- Class-D amplifier technology

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 fault message output

4 independent open collector outputs (e.g. as mandatory call output)

CONNECTIONS AND INTERFACES

- 1 x analog PTT audio and control input
- 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 open collector outputs
- 1 x USB service interface
- 1 x control voltage output 48 V DC / 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

MECHANICAL DATA

Design	19" rack mounting, 3 RU
Width x height x depth	482 mm x 132 mm x approx. 330 mm (19.02" x 5.20" x approx. 12.99")
Display	128 x 64 screen resolution
Weight	Max. 13.5 kg (max. 29.76 lbs) (depending on device type)

ELECTRICAL DATA

AC supply voltage	100 V AC to 276 V AC
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 V DC to 72 V DC
DC current consumption at 48 V DC	Type 300 NPA: quiescent 0.12 A, max. 8.1 A Type 600 NPA: quiescent 0.15 A, max. 16 A
Output power	Type 300 NPA: max. 300 W Type 600 NPA: max. 600 W
Output voltage	100 V_{RMS}
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

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

ORDER DATA

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 111*	300 NPA 112	300 NPA 121*	300 NPA 122
Amplifier slot 1	1 x 300 W	1 x 300 W	2 x 150 W	2 x 150 W
Amplifier slot 2	-	-	-	-
Total output	300 W	300 W	300 W	300 W
Amplifier channels	1	1	2	2
Speaker circuits	4	4	4	4
AC power supply	1	2	1	2
DC power supply	1	1	1	1
Type number	302-144-100	302-145-100	302-144-200	302-145-200

* INDUSTRONIC standard type

Type	600 NPA 121*	600 NPA 122	600 NPA 131	600 NPA 132	600 NPA 141*	600 NPA 142
Amplifier slot 1	1 x 300 W	1 x 300 W	1 x 300 W	1 x 300 W	2 x 150 W	2 x 150 W
Amplifier slot 2	1 x 300 W	1 x 300 W	2 x 150 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	3	3	4	4
Speaker circuits	8	8	8	8	8	8
AC power supply	1	2	1	2	1	2
DC power supply	1	1	1	1	1	1
Type number	302-144-300	302-145-300	302-144-400	302-145-400	302-144-500	302-145-500

* INDUSTRONIC standard type