VARIODYN ONE

Intelligent Network Controller – INC

APPLICATION

The INC (Intelligent Network Controller), as the name suggests, is the main controller of the VARIODYN® ONE PA/VA system. It is responsible for managing and monitoring all key components of the system including power amplifiers, speaker lines and call stations, etc.

INC supports 8 amplifier channels with the maximum capacity of 5 A current per channel and you can add up to 48 speaker lines using 6 speaker line modules with 8 speaker lines each in a single INC.

INC comes with an inbuilt storage that can be used to store both configuration and audio files. The four different configurations available in INC offer flexibility to choose the controller with the appropriate extension module as per your requirement.

INC supports Relay Matrix mode of operation that ensures that you can design your system efficiently as per your project requirement.

INC - 585000

INC-D - 585000.21

INC Dante - 585000.22

INC A - 585000.23

FEATURES AND BENEFITS

- Supports minimum 8 to maximum 48 speaker circuits per controller by expanding field mountable Speaker Circuit Modules with 8 speaker circuit/module

  (INC by default do not have any speaker circuit ,hence separate speaker module need to be added from 1 to max 6 in order to expand from 8 to max 48 speaker circuits)

- Inbuilt Relay Matrix Mode to dynamically allocate amplifier channels to speaker circuits

- Supports up to 8 Amplifier channels

- Supports 8 simultaneous Audio per controller

- Intuitive front facia or front panel ensuring you can easily understand the system status

- INC-D with 8 DAL ports and 12 GPIOs

- INC-A with 6 Audio In/Out with 12 GPIOs

- INC - DANTE with 8 In and 8 Out DANTE port with 12GPIOs

- New software to provide ease of commissioning

- All INC controllers offer Modbus protocol over Serial link (RS485) to integrate with 3rd Party Modbus interface

- INC Controller offers Advance DSP capability by offering flexibility to change and save following parameters/Amplifier channels:

  - Volume

  - High Pass /Low pass filters

  - Parametric Equalizer

  - Dynamic Range Control

  - Delay

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INC VARIANTS

INC – 585000

Features – INC:

- "Direct Drive" or "Relay Matrix" operating modes provide flexibility
- Built-in memory for configuration and audio files (0.9 GB/ 5 hrs.)
- Manages up to 8 amplifier channels (max. 500 W per channel)
- Up to 48 speaker circuits divided into 6 modules with 8 speaker circuits each (max. 500 W per loudspeaker line)
- 8 simultaneous Audio streams per controller
- Intuitive Display interface ensuring you can easily understand the system status

INC–D (WITH DAL PORTS) – 585000.021

Features – INC–D:

- "Direct Drive" or "Relay Matrix" operating modes provide flexibility
- Built-in memory for configuration and audio files (0.9 GB/ 5 hrs.)
- Manages up to 8 amplifier channels (max. 500 W per channel)
- Up to 48 speaker circuits divided into 6 modules with 8 speaker circuits each (max. 500 W per loudspeaker line)
- 8 simultaneous Audio streams per controller
- Intuitive Display interface ensuring you can easily understand the system status
- 8 DAL bus inputs for intercoms and UIM
- 12 Contact inputs/outputs
  - *4 ports configurable as input with supervision or output*
  - *4 ports configurable as input without supervision or output*
  - *4 ports input without supervision*

INC–DANTE –585000.22

Features – INC–DANTE:

- "Direct Drive" or "Relay Matrix" operating modes provide flexibility
- Built-in memory for configuration and audio files (0.9 GB/ 5 hrs.)
- Manages up to 8 amplifier channels (max. 500 W per channel)
- Up to 48 speaker circuits divided into 6 modules with 8 speaker circuits each (max. 500 W per loudspeaker line)
- 8 simultaneous Audio streams per controller
- Intuitive Display interface ensuring you can easily understand the system status
- Redundant Dante network ports
  - *8 x Dante Audio Inputs and 8 x Dante Audio Outputs*
- 12 Contact inputs/outputs
  - *4 ports configurable as input with supervision or output*
  - *4 ports configurable as input without supervision or output*
  - *4 ports input without supervision*

INC–A–585000.23

Features – INC–A:

- "Direct Drive" or "Relay Matrix" operating modes provide flexibility
- Built-in memory for configuration and audio files (0.9 GB/ 5 hrs.)
- Manages up to 8 amplifier channels (max. 500 W per channel)
- Up to 48 speaker circuits divided into 6 modules with 8 speaker circuits each (max. 500 W per loudspeaker line)
- 8 simultaneous Audio streams per controller
- 8 hours of audio storage
- Intuitive Display interface ensuring you can easily understand the system status
- 6 potential-free audio inputs/outputs
  - *Audio inputs can be connected with microphone or audio source devices.*
  - *Audio inputs can be connected with microphone sensors for automatic volume control.*
  - *Audio outputs can be connected with external audio devices/systems.*
- 12 Contact inputs/outputs
  - *4 ports configurable as input with supervision or output*
  - *4 ports configurable as input without supervision or output*
  - *4 ports input without supervision*

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TECHNICAL DATA

GENERAL

Mains power supply	AC 115 V – 230 V (–15% … +10%), 50 … 60 Hz
Backup power supply	21.5 V - 28.8 V DC
Sampling rate	48 kHz, 24 bit
Encode/Decode	VARIODYN® ONE ADPCM
Audio storage	0.9 GB
Relative humidity	<95%, No condensing
Operation temperature	-5°C … +55°C
Storage temperature	-40°C … +70°C
Dimensions (W x H x D)	483 x 88 x 415 mm
Weight	11.9 - 12.45 kg

AF OUTPUT

Output Type	Electronically balanced
Audio Output Channels	8
Nominal Output Level	0 dBu
Max. Output Level	+6 dBu
Frequency Response	20 Hz … 20 kHz, ≤±1 dB
THD	< 0.03% at 1 kHz
SNR	> 85 dB A-weighted
Load impedance	Min. 5 kΩ, Max. 500 pF

SPEAKER LINES

Max. voltage of switching contact	250 V AC
Max. current of switching contact	5 A continuous current
Peak voltage resistance	Min. 1.5 kV
Slots of speaker line module	Max. 6
Number of speaker line per module	8
Line voltage	70 V/100 V

AUXILIARY AUDIO INPUT/OUTPUT(OPTIONAL)

Audio Input Channels	6
Input type	Potential-free
Nominal Input Level	Microphone: –51 dBu Line: 0 dBu … +6 dBu
Frequency Response	Microphone: 100 Hz … 8 kHz at ± 6 dB Line: 20 Hz … 20 kHz, ±3 dB
THD	< 0.05% at 1 kHz
SNR	Microphone: > 65 dB, A-weighted Line: > 95 dB, A-weighted
Input Impedance	Typical: 200 Ω
Audio Output Channels	6
Nominal Output Level	0 dBu
Frequency Response	20 Hz … 20 kHz, ±3 dB
THD	< 0.05% at 1 kHz
Max. distortion factor	1% in the frequency range
SNR	> 85 dB A-weighted
Output Impedance	200 Ω

DANTE (OPTIONAL)

Ethernet	Primary and secondary Ethernet ports, 100 Mbps
Audio Transport Format	Dante audio over IP, AES67 RTP
Sampling Rate	48 kHz/24 bit, PCM
Input channels	8
Output channels	8
Audio latency	<10 ms

CONTACT INTERFACE (OPTIONAL)
CONTACT INPUT

Max. Input Voltage	24 V DC (Over DAL Bus)
Input Voltage Logical 0	> 8.5 V DC @ 5.6 kΩ
Input Voltage Logical 1	< 7.5 V DC @ 4.5 kΩ
Input Resistance	10 kΩ

CONTACT OUTPUT

Max. External Voltage	24 V DC
Load Current per Output	Max. 50 mA
Short-circuit Proof Against + 24 V	1 s

ORDER INFORMATION

MODEL NAME	PART NO.	DESCRIPTION
INC	585000	Intelligent network controller without any optional modules
INC-D	585000.21	Intelligent network controller with DAL module (8 DAL ports) and 12 GPIOs
INC-Dante	585000.22	Intellegent network controller with Dante module (8x8) and 12 GPIOs
INC-A	585000.23	Intellegent network controller with Audio in/out module (6 in/out) and 12 GPIOs

ACCESSORIES

PART NO.	DESCRIPTION
585020	8 Speaker Line Module (SPKR-8)
585301	8 Channel amplifier output cable
585302	4 Channel amplifier output cable
585303	2 Channel amplifier output cable
585304	1 Channel amplifier output cable
583491A	Cat5 patch cable, 0.5m (green)
585308	Control cable 12 for INC

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