PENTON

25m | 30m | 40m | 60m | 70m

DIGITAL LINE ARRAY | DAC300

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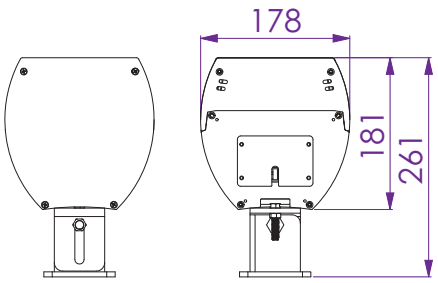
VERTICAL ACTIVE DSP ARRAY SYSTEM 18 LOUDSPEAKERS HIGH

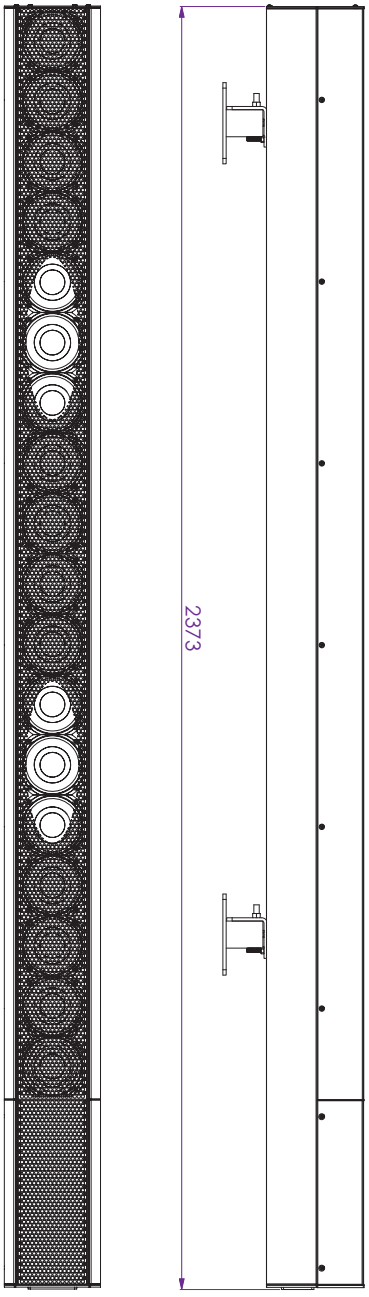
DAC300 has 18 loudspeakers (2373mm total length) and offers up to 94dB at 30m.

DAC300 is a steerable line–array system specially designed for high quality speech and background music applications in reverberant acoustic environments where it is difficult to meet contractual speech intelligibility requirements. Each array is equipped with remote control facilities and a dual–mode redundant power supply. The system can be operated using a 24V battery backup and has fault contacts and line surveillance to comply with EN 54–4. An RS485 data bus is provided for status reporting and PC–based remote setup (up to 32 DAC Series Line Arrays on the bus). Ethernet connectivity for remote access via WAN is also included.

Each DAC300 array has a very tightly controlled beam which can be shaped as required for specific applications or environments requiring symmetrical or asymmetrical, single, dual or triple lobe designs. To meet future standards, DAC300 has been equipped with networking facilities. The input section has been designed to broadcast standards and now has two fully controllable audio inputs and outputs with override functions and hardware bypass function. The output to the slave unit carries either the pre–processed mixed signal of the input mix for easier room control.

Integrated DSP control features 7–band parametric EQ, noise gate, delay rooms, peak limiter, VOX–control and contact control on the audio inputs and level raising microphone for ambient noise sensing. The adaptable acoustic centre allows the acoustic centre to be freely moved up and down the array to match lobe shape within the listening area. Lobe switching provides quick coverage change by applying a contact. This offers the possibility to integrate or exclude a certain section of the audience area by simply adding a second lobe.





BRIEF SPECIFICATION:

- 18 loudspeakers
- Max SPL: 94dB at 30m
- Frequency Range: 100Hz –18kHz
- Dual audio input: Music 0dB; Alarm 0dB with contact
- DSP module: ADSP21369-400 2.4 G flops 400 tabs/filter/ch, 24-channels
- Speaker element: 18 x 4.25" dual cone with inverted surround in weatherproofed aluminium enclosure
- Flexible Mounting Height: 1.5m - 4m
- Mains Power Supply: 230V AC
- Emergency Power Supply: 18 – 27V DC
- Dimensions (HxWxD): 2373 x 178 x 181mm (261mm including mounting bracket).
- Weight: 44kg

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TECHNICAL SPECIFICATION | DAC300

PARAMETERS	SPECIFICATIONS	DETAILS
ACOUSTICAL		
Freq. Range	90 – 18000 Hz	
Max SPL	93 (±1) Continuous dB	Pink noise C–weighted @ 30m
Coverage	Vertical 5° – 45° Horizontal 145°	Steps: 5, 7, 10, 15, 20, 25, 30, 35, 40 & 45 From Symmetrical to Asymmetrical in 10 steps
Lobe shaping	Centred on driver No: 1, 3, 5, 7, 10, 12, 14, 16 & 18	Selectable with a resolution of 1°
Lobe steering	–25° to 0° to +25°	runs Sym. AND Asym. lobes AND any combination
Triple lobe software	Yes	
S/N ratio	> 110 dB	A–weighted with input shorted
AUDIO INPUT 1		
Sensivity	775 mV	103 dB SPL / 5 – 30m.
Gain stage	–20 to +20 dBu	Software controlled in 0.5 dB steps
Type	600 Ohm	Transformer Balanced
Gain	0 dBu	Peak limiting software at –0.1 dB
Connector	3–pin	Phoenix type
AUDIO INPUT 2		
Sensivity	775 mV	103 dB SPL / 5 – 30m.
Gain stage	–20 to +20 dBu	Software controlled in 0.5 dB steps
Type	600 Ohm	Transformer Balanced
Gain	0 dBu	Peak limiting software at –0.1 dB
Connector	3–pin	Phoenix type
AUDIO OUTPUT		
Gain	775 mV	Slave audio output
Gain stage	–20 to +20 dBu	Software controlled in 0.5 dB steps
Type	600 Ohm	Transformer Balanced
Connector	3–pin	Phoenix type
COMMUNICATION		
Data control	RS485 CAT 5 RS232 Sub–D	Phoenix type connector 4–pin IN and slave–OUT On main connection board
Ethernet link	CAT 5 RJ45	
Address setup	1 – 32	Individual address
POWER SUPPLY MAIN INPUT		
Power requirement	240 / 115 VAC	+5% / –10%
Power consumption	277 Watts	Full load at 0 dBu Pink Noise
Fuse rating	6 Amp	Slow
Mains plug	IEC 3–pin 90 degrees	Connector located behind service panel with integrated fuse holder
POWER SUPPLY DC-INPUT		
Power requirements	16 – 27 VDC	Battery back–up supply for Voice Evac applications
Max. Power consumption	10.95 Amp	Full load at 0 dBu Pink Noise
Quiescent power consumption	0.45 Amp	With AUTO–MUTE set on ENABLE
DC–Plug	Automotive type	Connector located behind service panel with separate Fuse holder
GENERAL		
Temperature range	–10 ~ 50℃	
Tranducer type	4.25"	Fibre, weatherproof, wide range
Qty of Tranducers	18 Pieces	
Weight	44kg 50kg	Net weight Shipment weight incl, wall brackets
Size	2373mm w 177mm d 181mm	Depth with brackets: 261
Color	9016 RAL	Other colours available on request
Wall brackets	1 Set supplied with each unit	White, RAL 9016
External controller – Size	1/2 – 1U –19" rack frame	

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DAC300 | TECHNICAL SPECIFICATION

PARAMETERS	SPECIFICATIONS	DETAILS
DSP MODULE		
Type	32–bit F.P / 1330 Mflops	ADI Shark 21369
Quantitiy	1 Pcs	
Memory	2 Mb SrAM	external memory
Output filter	24 Channels	400 tabs
AUDIO PROCESSING		
AD–Convertors	24 Bits	Delta–sigma 64 x oversampling
Internal Processing	32 Bits	Floating point
Sampling frequency	48 KHz	
POST PROCESSING		
Pre–delay	1000 mS	@32–bit, Signal alignment – Q 0,4 to Q10, Gain
Equalising	7 band parametric	from –20 to +20 dB with 5 predefined filter settings. Software package: MControl
Input sensitivity setting	–20 to +20 dBu	Software package: MControl
Line out gain	–20 to + 20 dBu	Software package: MControl
Messenger volume gain	–40 to +10 dBu	Software package: MControl
Noise gate	Level adjustable: – 20 to –100 dBu Hold time: 100 – 2000 mS Soft fade: 100 – 2000 mS	 Software package: MControl
Peak limiter	Level adjustable: 0 to –20 release time: 200 to 5000 mS	 Software package: MControl
Mute	On / Off	
Signal indicators	Clipping detect, Limiter activated,	
	Noise gate activated	Software package: MControl
POWER AMPLIFIER		
Type	Class D	RMS
Power rating	18 x 30 Watt	Measured at 4 Ohm
Amplifier quantity	3 x 6 pcs	6 channels per Amplifier board
Protection	Circuit protection activated at 125° C	Circuit protection
Communication	I^2S	LVDS
VE-PROPERTIES		
Backup battery supply	24 VDC	Cut–off off status is enabled @16 VDC or below
Input signal detection	18 – 20 KHz	Line detection on input 1 and/or 2 HF–carrier surveillance on all speakers
Internal surveillance	400 KHz	
CONTACT INTERFACE OUTPUT		
Line array error	Normally activated potential free switching contact, 1 Amp	Speaker has gone into fault Service required
Pre–warning	Normally activated potential free switching contact, 1 Amp	
CONTACT INTERFACE INPUT		
Selection Lobe 1 or 2	Opto–isolated contact	Needs an external floating contact
Select input 1 or 2	Opto–isolated contact	Needs an external floating contact

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