

With an inbuilt power supply and 24V battery charger, Tecum DCA2500 is a 2X500W transformer-less (Direct-drive) 100V power amplifier. Completely following EN54-4 and EN54-16 standards with certification, it is a vital element of a voice evacuation system or public address installation that requires a high level of safety.

The main application of the DCA2500 utilizes the TECUM proprietary AMP LINK protocol and operates as a native component of the TECUM IVC voice evacuation system. With the enhanced I/O interface and in-built autonomous functions, the DCA2500 easily merges with a third-party PA/VA matrix controller, putting in an entire, EN54-4 certified power supply solution, with charging capabilities of 100Ah. You can also use this as an independent power amplifier or battery charger, even when there is no external control device.



Technical specifications

Amplifier	
Output power	2 x 500 W RMS (continuous @1kHz, all channels driven @20 Ω)
Output voltage (Direct-drive output)	100 Vrms @ 0 dBu input
Output load	from 4Ω to OPEN
Output impedance	< 50 mΩ
Input level	max. 775 mVrms / 0 dBu (balanced) @100 Vrms output
Input gain control	from -30 dB to 0 dB
Input impedance @ 1 kHz	15 kΩ
Frequency response (-3 dB)	3 Hz - 35 kHz
S/N @ 1 kHz rated power (3 Hz – 35 kHz)	>90 dB
THD @ 1 kHz rated power-3 dB (20 Hz – 20 kHz)	<0,1 %
Channel crosstalk (20 Hz – 20 kHz) @ rated	<-100 dB
Power supply	
Mains AC input	110 - 230 V AC, 50/60 Hz, selection by input fuse rating
Mains power consumption	max. 1300 W max. 12 A @ 110 V AC / 6A @ 230 V AC
Inrush current	40A @110V AC, 20A @230V AC, 10ms
DC input voltage	18 – 30 V DC (nominal 24 V DC)
DC current consumption	max. 45 A @ 24 V
Idle AC power consumption	24 W / 1 W (all channels on / standby)
Idle DC current consumption	34 mA (0.9 W) (all channels standby)
Power efficiency @ rated load	89% @ 230V AC / 93% @ 24V DC
DC output	18 – 30 V DC (max. 60W / 2A @30 V DC nominal)

Battery charger	
Charging voltage	max. 27.9V DC, temperature compensated
Charging current	max. 4A
Battery requirements	rechargeable sealed lead-acid battery for stationary use
Capacity (54-4)	max. 110 Ah (measured @ 80% of battery capacity after 24h of charging)
Charging time (80% of max. capacity)	< 24 h
Rated voltage	24 V DC
Battery cut-off voltage	18 V DC
Battery circuit internal resistance	max. 70 mΩ (total, incl. leads, connectors, fuses, etc.)
Connectivity / recommended cabling	
Mains	IEC - 3
DC input	Phoenix PC 6-16/2-G1-10, 16
DC output	2 pin Phoenix 5.08 mm / 2 x 1.5mm ²
Audio input	3 pin Phoenix 3.81 mm, 2x, shielded microphone cable
100 V audio output	3 pin Phoenix 5.08 mm
I/O (Fault out, lamp test in, control in/out)	8 pin Phoenix 5.08 mm (2 x parallel)
AMP-Link (interface to IVC-M)	2 x RJ45 CAT5 straight UTP, max. 3 m
Mechanical	
Dimensions (HxWxD)	88.5 x 442 x 350 mm
Front panel width (incl. brackets)	483 mm
Weight	8.2 kg
Dimensions / weight incl. package	150 x 600 x 460 mm / 9.5 kg
Housing material	Steel
IP rating	IP 30
Mounting	19" rack mounted, 2U