

350A

HIGH INTEGRITY AUDIO AMPLIFIER

DS-011 Issue 07



Thank you for your interest in Zitel - we are a UK based manufacturer of PAGA and Intercom products. Our systems are mainly designed for use in the Hazardous Oil, Gas and Petrochemical industries.

Class G amplification eliminates the weakness of class A/B, class D amplifier architectures whilst guaranteeing high efficiency with excellent sonic performance.

350A incorporates an on-board micro system to manage amplifier and associated loudspeaker circuit supervision. File update capability eliminates the requirement for physical chip exchanges and ensures that 350A remains at the front of the PAGA amplifier technology.



ZITTEL 350A 350 WATT PAGA AMPLIFIER

High density design – *Space saving, smaller rack foot print*

Class G design - *Consumes less energy than conventional designs*

Dynamic diversity supervision – *Designed for life safety critical applications*

Totally enclosed - *Very robust*

Remote GUI capability – *Simple maintenance*

The ZEST 350A class G industrial amplifier unit is designed to provide efficient service in alarm and voice broadcast applications with optional remote supervision via ZMIS Zitel monitoring subsystem. The unit is based upon a highly compact industry standard size 'Euro-rack' card module designed to plug in/out of a host 3U high sub rack; type 350ASR. The 350A class G architecture uses patent techniques to minimize both fixed power losses and output dependent variable power losses. Power switching enables the amplifier to operate efficiently under full load/drive conditions. The 350A marks a huge leap forward in industrial PAGA amplifier technology and has come from examining how the final equipment is to be used in operation rather than striving for a marketable arbitrary technical specification. The 350A amplifier eliminates risk of radiated EMC and line matching problems associated with class D designs.

The amplifier carries an integral supervisory which automatically monitors amplifier, associated loudspeaker critical path continuity, integrity of loudspeaker line cable insulation and % deviation in connected loudspeaker load (ZEST diversity current and voltage supervisory scheme).

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The 350A incorporates a detailed diagnostic display which facilitates rapid service thereby providing the engineer with a warning of amplifier performance deterioration - essential for high security PAGA applications, these display parameters can be extended by Ethernet to a remote monitoring position GUI package. 350A supports Ziztel addressable loudspeaker package which can be specified to allow interrogation of individual loudspeaker devices allowing recovery and configuration of voice coil status and speaker tapping/volume settings.

350A features ZEST energy saving technology which delivers highly efficient power to audio signal conversion (greater than 85%) with very low standby power consumption thereby minimising UPS power/battery requirements and room HVAC capabilities.

Amplifier frequency response bandwidth extends to 25 kHz enabling automatic amplifier/line checking at inaudible supersonic frequencies and a tailored low frequency response (80Hz -3dB point) prevents damage to industrial loudspeakers due to possible excessive low frequency drive.

The 350A is fully electronically protected against open circuit, short circuit, any abnormal load, excessive temperature and earth fault conditions, with automatic restoration once the fault condition is removed. Line output is standard 100V line with 70V line as an option. Output regulation is carefully controlled to ensure that the line voltage is locked thereby protecting loudspeakers from excessive voltage/voltage over-shoots.

350A class G amplifier incorporates optically isolated input/output address and data communication lines and can be safely withdrawn or connected without the requirement to de-energise the mains supply to the equipment (Hot swap).

The 350A is one of the smallest high security amplifier units available on the market today, it is possible to fit up to nine 350A class G amplifier modules into a compact space-saving 3U high 19inch rack mount location.

The amplifier is available in optional 250 Watt and 500 Watt versions, see DS213 for further information.

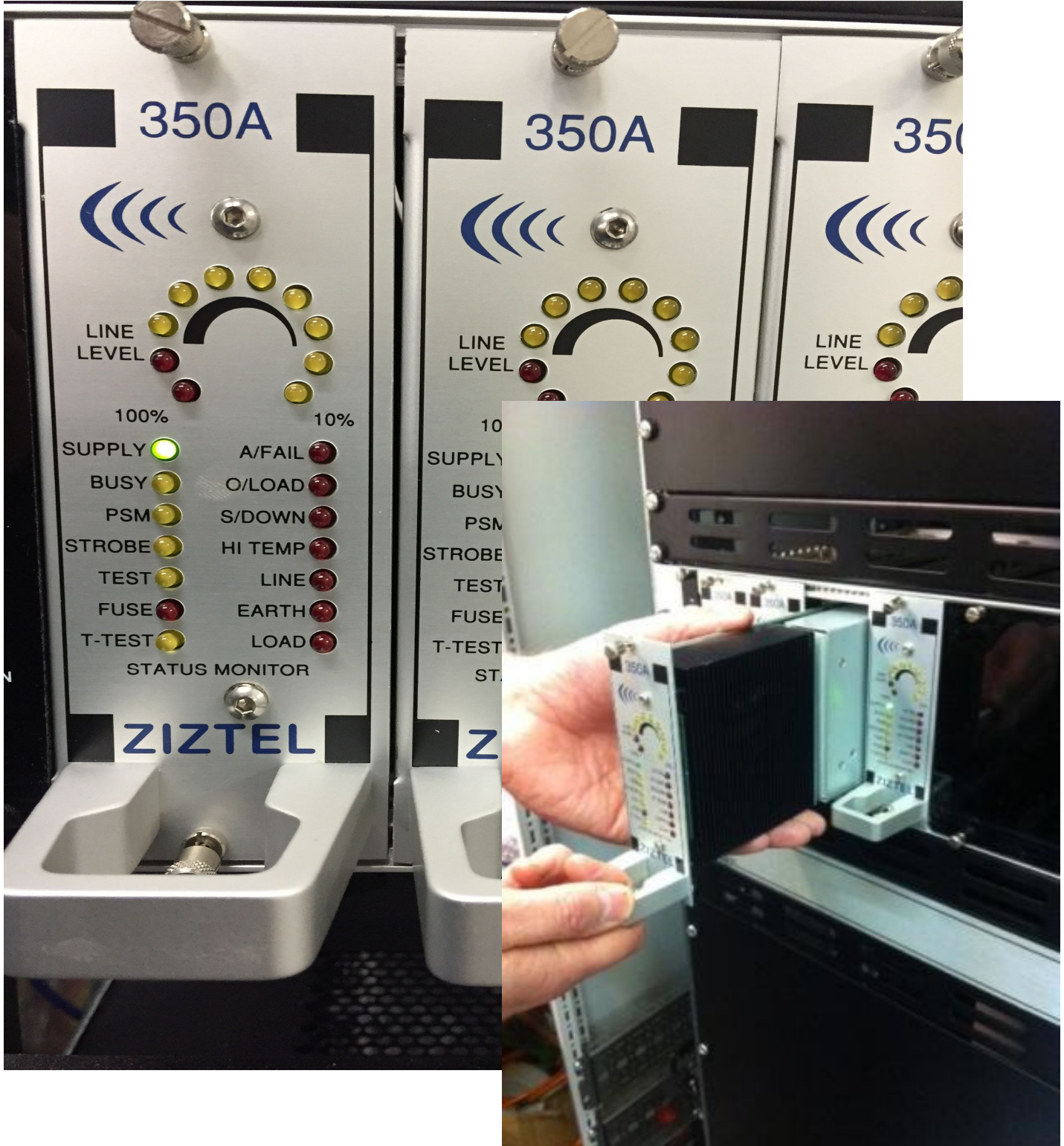
Electrical & Mechanical	
Power Output capability	350Watts (250Watts for 250W option)
Line voltage	100V line +/-1dB (70V to order)
Mains supply input	48Vdc unregulated
Consumption Iq	350mA
Input sensitivity	0dBm (770m V RMS)
Frequency response – 3dB points	80Hz to 25kHz
Distortion THD	Better than 1%
Regulation	Within 1dB
Line Output	100 or 70 Volt line within 1dB
Protection	V/I protection, temperature sensing, current monitoring, voltage monitoring
Signal to noise	-90 dB
Storage temperature range	-40 °C to +70 °C
Location	Safe area internal rack/panel
Dimensions	280mm deep, 3U (133mm) high, 40mm wide
Weight	2kg
Construction / Finish	Anodised alloy fascia and chassis
Operational Temperature Range	-25 °C to +65 °C
Humidity	25-85% non-condensing
Vibration	Maximum shock 1g (any direction)
Location	Safe area internal rack/panel
Variants	
3501A – 350W 100V line Version	3507A – 350W 70V line Version
2501A – 250W 100V line Version	2507A – 250W 70V line version

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In excess of 3000 Watts audio power capability is available in only 3 Units of standard 19 inch rack space. Ziztel 350A Class G 350 Watt amplifier can also be bridged to provide up to 700 Watts single ended drive for heavily loaded loudspeaker lines – see BT700 bridging transformer data sheet DS 236 for more information.



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