

GUARDIAN² AGP^{3/5/7}

FIXED THRESHOLD ACTIVE TWO CHANNEL LOUDSPEAKER PROTECTION

DATASHEET V1.0 | 04-06-2024 | E&OE



AMINA
IMMERSIVE INVISIBLE SOUND

Product Description

The Guardian² is Amina's all-new two-channel active loudspeaker protection system for low impedance Amina loudspeakers. The AGP^{3/5/7} variants are supplied factory pre-configured, providing fixed protection thresholds for a specific loudspeaker model which cannot be altered.

Please see the 'Guardian²X' Datasheet for details on the site-configurable variant of the Guardian².

The 2-stage active circuit design responds to RMS and peak audio events in an instant, preventing any opportunity for Amina invisible loudspeakers to be overloaded with excess power from audio system events or user error, in an appropriately configured audio system.

RMS or average voltage protection continually monitors the power delivery over a short time window to detect any potential for thermal overload.

Peak voltage protection continually monitors for excessively powerful short-duration peaks which may otherwise have the potential to cause the speaker to exceed its mechanical limits.

If and when the peak or RMS monitoring thresholds are exceeded, the signal to the speaker is immediately attenuated, returning to a normal state once safe to do so.



Application

The Guardian² is intended to be a last-line-of-defence against accidental overloading and should not be used as a volume limiter or for gain reduction. It is always best practice to configure the audio system in a way that prevents overdriving or 'trip' events which interrupt the user experience. Amplifiers must be appropriately specified and/or the channel output power must be appropriately configured to the speaker it is driving: The maximum amplifier channel power limit is 275W per channel of protection.

Fixed Threshold Protection

The fixed-value Guardian² is supplied factory configured to match a particular speaker model, and cannot be changed. This can be useful to prevent mis-configuration, to reduce complexity and save time in larger projects or where there is only one model of speaker being installed in a project.

Please see the speaker compatibility table on the next page for more information.

Specifications

Number of Channels	2
Signal Connection	Phoenix Connectors (2.5mm to 1mm core conductor / 10-18 AWG)
Power Connection	Female Micro-USB (1m [39 ³ / ₈ "]) USB-A > Micro-USB Cable Provided)
Power Requirement	5V / 1A
Product Weight	71g (1/2 oz)
Product Dimensions (Including Connectors)	100mm x 48mm x 24mm / (3 ¹⁵ / ₁₆ " x 1 ⁷ / ₈ " x 1 ⁵ / ₁₆ "
Compatible Loudspeaker Ranges	All Mobius and Edge Loudspeakers
Maximum Amplifier Channel Power	275W
Relevant Regulatory Standards	CE Low Voltage Directive (LVD)
Manufacturer Limited Warranty	3 Years

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Speaker Compatibility

There are three pre-set protection thresholds available to suit the three power tiers of Amina invisible loudspeakers. Speaker compatibility with fixed value Guardian² is shown in the adjacent table:

Guardian2 Version	Compatible Speakers
Guardian2 - AGP3	Mobius3i, Mobius Duali, Edge3i
Guardian2 - AGP5	Mobius5i, Mobius5i/S200, Edge 5i
Guardian2 - AGP7	Mobius7i, Edge7i

Installation

The Guardian² is designed to connect between the amplifier and loudspeaker. It should be installed in an accessible location, usually behind the amplifier in the AV rack, and one channel of fixed protection must be used for each loudspeaker channel. (Note, the MobiusDuali stereo speaker panel requires two channels of Guardian protection.) The Guardian² should never be installed in wall or ceiling cavities, and the fixed value Guardian2 must not be used to protect speakers connected in parallel, series or series-parallel configurations.

Connections

Audio connections are made using the included industry-standard Phoenix connectors with both inputs on one side and both outputs on the other side for neat cable management.

Power is supplied via the included USB cable, connected to any 5V supply such as PoE (by using a 5VDC regulated PoE splitter), or any available powered USB ports.



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