AMPETRONIC

Datasheet

W5-2 Wall Mounted MultiLoop Hearing Loop Driver

The W5-2 professional induction loop driver has been engineered for special loop design processes and cost-efficient considerations, allowing for the delivery of high-quality, low-spill hearing loop performance in compact spaces.
Designed for straightforward and discreet wall-mounted installations, it offers a practical solution for improving audio accessibility within confined environments.
The W5-2 induction loop driver has been designed with ease of installation and use in mind.
The W5-2 operates as a Class D amplifier, ensuring increased efficiency and lower power consumption. Additionally, it features integrated test tones, Euroblock screw terminal connections and a cable management unit, enhancing the ease of the installation.

Features

- **Input 1 & 2** – 3 way 3.5mm euroblock screw terminal input
- **Balanced mic/line selectable**
- **100V line input** – 2 way 5mm euroblock screw terminal
- **Phantom Power** – 24V (globally switchable for both mic inputs)
- **Loop Output Drive Current** – W5-2 – 5A RMS per channel
- **Loop Output Connectors** – 2 way 5mm Euroblock screw terminal per channel
- **Built-in Test Tones** (1KHz sine, tri-tone signal)
- **Phase shift** – 90° (always on)
- **Metal Loss Correction** – 0 to 3dB per octave frequency correction (1KHz remains constant)
- **Three stage inductance compensation** – to correct frequency response with different loop lengths
- **DC Out** – 24V DC Fuse protected output for ancillary devices.

Applications include:

Small rooms where there is no AV rack and no network monitoring requirements:

- Community Centres
- Board rooms
- Interview rooms
- Meeting rooms
- Classrooms

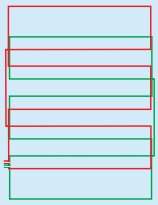
MultiLoop™ System Design Configurations

MultiLoop Drivers can be used for different types of loop layout. You will need a MultiLoop system design for the loop layout which you can obtain from Ampetronic, produce your own using Loopworks™ Design or download the W5-2 design templates available from the QR code on the next page.

Loss Control MultiLoops™

Multiple loop segments in two patterns each driven by one output channel.

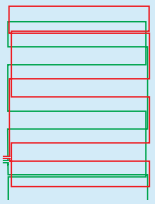
Best for optimal evenness of coverage across any area. Suitable for large areas and buildings with metal construction.



Low Spill MultiLoops™

Suitable for applications where loops are close together or where confidentiality is an issue. Low Spill MultiLoops™ require careful and precise design.

Similar in design to a Loss Control MultiLoop™ but with a more complex pattern that requires more cable.



Inductance switch position recommendation

Recommended Inductance Switch Position	1.0mm² Flat Copper Tape (m)		1.2mm² Twin Core Flat Copper Tape (m)		Loop Inductance (uH)	
	Min	Max	Min	Max	Min	Max
Low	0	55	0	15	0	80
Med	55	105	15	30	80	143
High	105	150	30	45	143	200

W5-2 Product Information

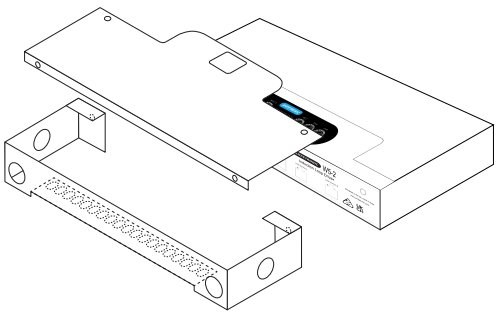
These products are designed to form part of a system that can meet all requirements of the international loop performance standard IEC60118-4, and the relevant parts of IEC TR 63079. To fully meet requirements of these standards, correct design, installation, commissioning and maintenance are required.

All data has been compiled in accordance with IEC62489-1, the international reporting standard for audio frequency induction loop equipment. Specifications should only be compared if compliant to this standard.

Drivers are marked with UKCA, CE mark & Regulatory Compliance Mark (RCM) to comply with RED to all relevant safety and EMC standards.

Optional Accessories Part code:

- W5-2 - Amplifier and cable tray
- W5-2X - Amplifier only



Installation Advice:

SCAN ME

For full operating and maintenance instructions, plus design templates and other associated information please visit: **www.ampetronic.com/w52**

INPUTS & SIGNAL PROCESSING	MIC	Line	UNITS
Input figures quoted at maximum front panel gain control setting.			
INPUT 1 & 2: (mic/Line) 3 way, 3.5mm phoenix, balanced, suitable for up to 600Ohm microphones or line level.			
Input impedance	8,700	8,700	Ω
Sensitivity	-69	-45	dBu
Overload	-33	-9	dBu
100V: Isolated 100V line input			
Input impedance	120,000		Ω
Sensitivity	+11		dBu
Overload	+47		dBu
AGC: Compression of signal indicated by green INPUT LED when active and RED when overloaded.			
Input range	>36		dB
Output range	±1		dB
Min. input level for AGC	See sensitivity		
Attack time	3.5		ms
Decay time	1.4		s
METAL LOSS CORRECTION: Specially designed adjustable filter to compensate for the effects of metal loss. Gain @ 1kHz remains constant.			
Min. slope	0		dB/oct.
Max. slope	+3		dB/oct.
LOOP IND: High shelf filter options to compensate for the effect of loop inductance on the class D output stage			
Low	No effect		
Med	3dB max starting from ~1kHz		
High	4.8dB max starting from ~1kHz		
Test Signals: Internally generated signals for commissioning which when activated interrupt the input audio signal.			
Off	Audio signal passed		
Field	Single 1k tone		Hz
Freq	Combined 100, 1k & 5k sine tones		Hz

DC Power		
Power figures for reference only. With unit set for maximum output with the input in AGC. **Only use the provided DC power supply.**		
Voltage	24	V
Current idle	0.28	A
Current pink noise	1.3	A
Current sine	3.2	A

OUTPUTS		UNITS
LOOP OUTPUT: 2x 2way, 5mm, phoenix.		
Voltage	7.8	V_{RMS}
Current	5	A_{RMS}
Continuous pink noise	2.5	A_{RMS}
THD +N (1kHz, sine, max output)	0.5	%
Maximum loop resistance	0.6 (at maximum current)	Ω
Frequency response	±3dB, 100 to 5000Hz	
DC OUT: 2 way, 3.5mm, Phoenix. Fuse protected output for ancillary devices.		
Voltage	24	V
Current	0.1	A
Status: 2 way, 5mm, Phoenix. Volt free relay contacts indicating fault condition when open.		
Contact rating (resistive load)	12A, 125Vac 10A, 250Vac 10A, 30Vdc	

PROTECTION FEATURES		UNITS
Thermal Protection: If the PA amplifier reaches a pre-determined level the output current will be gradually attenuated followed by shutdown.		
Output attenuation	Max -4dB @ 90	°C
Unit shutdown. (Requires power cycle to recover)	PA chip junction temp>155 °C	°C
DC input over-current		
Output attenuation	Max 4dB >5A dc input	
Output over-current		
Unit shutdown. (Requires power cycle to recover)	>10A loop current	

PHYSICAL CHARACTERISTICS		UNITS
Dimensions: Width	270	mm
Height	152	mm
Depth	42	mm
Weight	1.1	kg
Operating temperature	-10 to 40	°C
Ingress protection rating	30	IP

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Issue no UP3AE01-1