

***AMPETRONIC***

**HLS-DM1**  
**Hearing Loop System - Driver Module**  
**Installation Handbook**

[www.ampetronic.com](http://www.ampetronic.com)

## Handbook Contents

- Safety
- Installation & Connection
- Specification
- Warranty Information
- Declaration of conformity

## Box Contents

- 1 x HLS-DM1
- 1 x Control Card
- 1 x Wago Tool





**This symbol is used to alert the user to important operating or maintenance instructions.**



**The Lightning bolt triangle is used to alert the user to the risk of electric shock.**

## SAFETY

1. It is important to read these instructions, and to follow them.
2. Keep this instruction manual in an accessible place.
3. No user serviceable parts. Refer all servicing to qualified personnel.
4. Clean only with a dry cloth. Cleaning fluids may affect the equipment.
5.  Install in accordance with the manufacturer's instructions.
6. Do not install this equipment near any heat sources such as radiators, heating vents or other apparatus that produces heat.
7. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as a power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to any rain or moisture, does not operate normally or has been dropped.
8.  **WARNING** – To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.



**TO PREVENT ELECTRIC SHOCK REFER  
SERVICING TO QUALIFIED PERSONNEL**

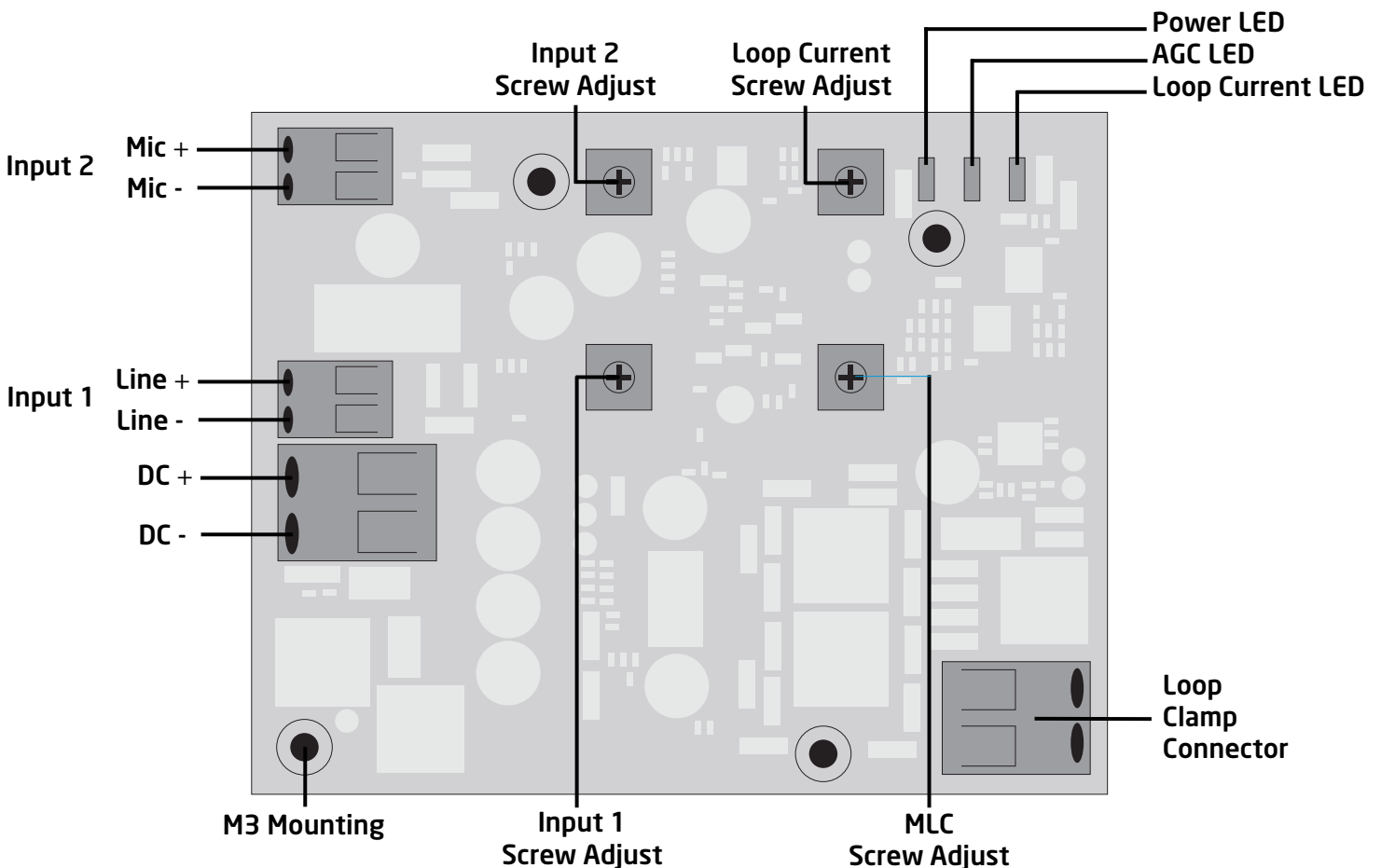
## Installation and Connection

1. The unit can be securely mounted using the 4 M3 mounting holes or an insulated sticky pad.
2. Connect loop feed cable to the loop clamp connector (see diagram).
3. Connect the low impedance speaker cable to input 1.
4. Use a screened cable <1m to connect an electret microphone to input 2.
5. Observing correct polarity, connect the DC power supply and apply power (see diagram). The power indicator will illuminate.
6. With the input signal on, increase the Input control until the green AGC LED illuminates with a normal signal.
7. Adjust the Output control until the amber Current LED is illuminated with signal peaks.
8. Use an Ampetronic FSM to test the system and adjust as required to be consistent with the requirements of the latest IEC 60118-4 Standard. Use the MLC control to adjust for high frequency loss.

## Fault Conditions

**Overheating:** The amplifier will output max rated sine current for 1 minute into rated load. After this period an internal protection mechanism will attenuate the output.

**Overcurrent / Overvoltage:** The amplifier will shutdown if its capabilities are exceeded for a short period. The amplifier will resume normal operation when operated within the normal parameters.



## Technical Specifications According to IEC 62489-1:2010 Standard

PARAMETER	VALUE	
Max area coverage	45m <sup>2</sup>	
Power supply range	12-24V DC	
Fuse	PTC resettable 1.5A	
Current consumption (12V DC)	Continuous pink noise	240mA DC
	Quiescent	50mA DC
	Short term peak	1200mA DC
Input 1 (Speaker Line level)	Rated source EMF (sensitivity)	-16dBu
	Overload	+22dBu
	Input Isolation	1500V
	Rated Source Impedance	1.8k $\Omega$ differential
Input 2 (Unbalanced Mic level)	Rated source EMF (sensitivity)	-55dBu
	Overload	-23dBu
	Electret Bias Voltage	12V through 11k $\Omega$
	Rated Source Impedance	10k $\Omega$
Current (into rated load)	Sine 1kHz	>3A <sub>RMS</sub>
	Pink Noise	>1.5A <sub>RMS</sub>
Frequency response (0.6A <sub>RMS</sub> )	100Hz to 5kHz $\pm$ 1.5dB	
Compliance voltage	4.2V <sub>RMS</sub>	
Weight	44g	
Dimensions	90.5 x 72 x 9mm	
Connectors	Clamp Terminals	
Environmental	IP00, -30°C to +75°C, <90% relative humidity	
Typical heat dissipation	<3W	

### WARRANTY

This product carries a five year parts and labour warranty from date of shipment from Ampetronic. To qualify for the five year warranty, the product must be registered at [www.ampetronic.co](http://www.ampetronic.co) (products/warranty), without which the warranty will be valid for two years only.

The warranty could be invalidated if the instructions in this handbook are not followed correctly, or if the unit is misused in any way.

### DECLARATION OF CONFORMITY

Manufacturer: Ampetronic Ltd.  
Unit 2, Trentside Business Village, Farndon Road, Newark, Nottinghamshire,  
NG24 4XB, United Kingdom.

Declares that the product:

Description: Induction Loop Driver

Type name: HLS-DM1

Conforms to the following Directive(s) and Norm(s):

Directive 2004/108/EC

EMC: EN55103-1 : 2009+A1:2012 Emission (E1-5)  
EN55103-2 : 2009 Immunity (E1-5)

Directive 2006/95/EC

Safety: EN60065 : 2014

Directive 2011/65/EU RoHS

Date: March 2016

J.R. Pieters

Managing Director, Ampetronic Ltd.