

HLS02-15EL Audio Induction Loop Driver

The HLS02-15EL has been designed as a high quality stand-alone small area induction loop driver for the OEM market. It is intended for use with localised communication systems such as intercoms in lifts, transport environments, museum information points, interactive exhibits and similar locations.

The HLS02-15EL has two inputs that each allow connection to a low level line / low Z speaker. A monitor connection indicates unit status and connections are made via screw terminals.

The unit features a steel IP42 rated enclosure with two 20 mm knockouts for cable gland connection and 10 mm rear fixing points.

N.B. The HLS02-15EL solution may require a detailed application review by Ampetronic to ensure optimum operation in your application.



Features

- **Area coverage in lifts to >1.6 x 2.4 m**
For lifts with stainless steel inner ceiling
- **Area coverage in rooms to >35 m²**
For perimeter loop designs
- **Low lifetime cost**
 - Excellent reliability
 - 5 year warranty
- **Simple integration**
- **Power supply – 12 to 18 V DC**
- **2 transformer isolated floating inputs**
For low impedance speaker connection
- **Metal loss correction**
0 - 4 dB / octave boost.
- **Unrivalled intelligibility**
- **Free technical support**

Applications include:

- **Intercom systems for most environments:**
 - Lifts
 - Help points
 - Door entry systems
 - Car parks
 - Security barriers
 - Drive throughs
 - Refuge points
 - Toll booths
- **Information points**
- **Interactive exhibits**

Recommended Lift (Elevator) Installation

The HLS02-15EL can be used to drive induction loops in many lift cars where there is a stainless steel or non-metallic inner ceiling. The inner ceiling may be mounted in a lift car that has stainless steel or mild steel roof and wall panels.

Loop wire:	0.5 mm ² to 2.5 mm ² CSA insulated copper wire
Number of turns:	3 turns (in series)
Loop position:	Perimeter loop around top of inner ceiling
Max dimensions:	1.6 m x 2.4 m typical
Feed wire length:	Up to 3m in the same wire range as the loop

N.B. This installation method and/or loop driver is not suitable for lifts with mild steel or aluminium inner ceilings. It may also be possible to use alternative installation methods where this recommended solution is not viable. Please contact Ampetronic for advice .

Perimeter Loops Area Coverage

The HLS02-15EL can be used to cover a small area using a perimeter loop. A two-turn loop will give best results in these small areas:*

Room aspect ratio	1:1	2:1	3:1
Maximum area m ²	20	30	35

*Wire must be 2.5 mm² for optimum audio performance in maximum areas shown - see handbook for maximum area with each wire size. Contact Ampetronic for further advice.

Local Loops and Intercoms

For local loops at general intercoms, information points, and small interactive exhibits, there are a number of solutions depending upon installation practicality.

- **Small floor / ceiling loop (0.8 to 2 m square)**
This is the preferred method, where viable
- **Small vertical loop below intercom, in panel or on wall**
Produces a more varying field strength but may be easier to instal
- **Smaller loop inside intercom case**
Greatest field strength variation but may be only practical option
Often not viable if enclosure is mild steel or aluminium

In all cases, the number of loop turns and wire type depends on the loop size and your application - contact Ampetronic for advice.

HLS02-15EL

Product Information

Power

The HLS02-15EL requires a 12-18 V DC isolated power supply

Nominal supply Voltage	15 V DC
Voltage range	12-18 V DC
Fuse	T1.6A L
Power consumption (15 V DC)	9 W

Standards compliance

The HLS02-EL is CE marked to all relevant safety and EMC standards.

The HLS02-EL will meet the requirements of IEC118-4 and the relevant recommendations of BS7594 if specified and installed according to Ampetronic instructions.



INPUTS

Power Supply	Nominal voltage:	15V DC
	Voltage range:	12-18V DC
	Fuse:	T 1.6A L
	Power Consumption:	9W (550mA) continuous audio 1W (60mA) quiescent 17W (1100mA) short-term peak (at 2.1A rms sine 1kHz output)
	Indication:	LED on top panel
	Connector:	Fixed screw terminals, 5mm pitch - CON3
Input 1 & 2 Low Z Speaker	Input Impedance:	5kΩ differential,
	Input isolation:	1500V#
	Sensitivity:	-20dBu (78mV rms) for full output
	Overload:	> +19dBu (6.8V rms)
	Adjustment:	internal control, per channel
	Connector:	Fixed screw terminals, 5mm pitch - CON2

OUTPUTS

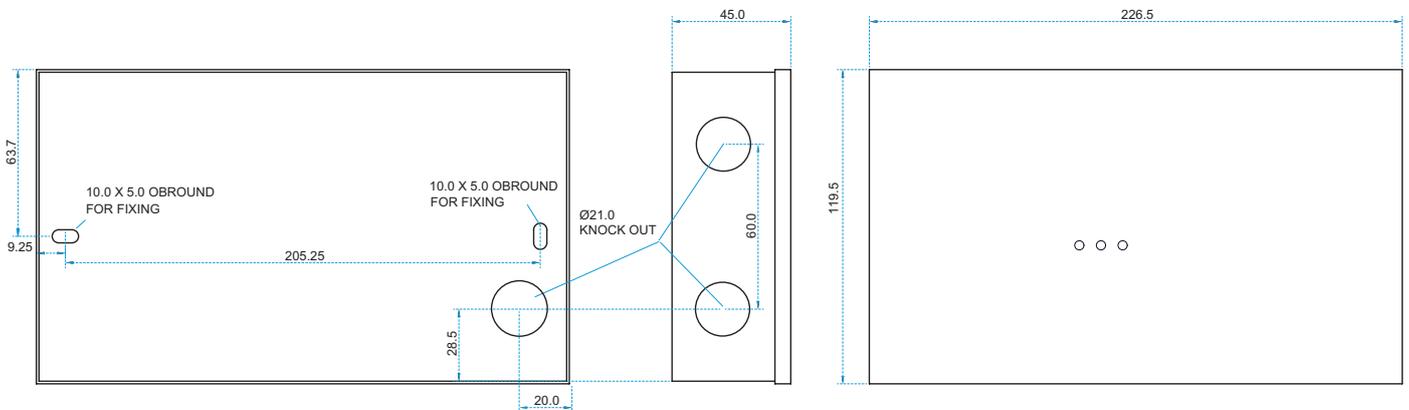
Loop Output	Voltage:	3.2Vrms (4.5Vpk) at max. drive current
	Current (into 1Ω):	>2.1Arms (3Apk) max short term, 1kHz sine >1.1Arms continuous pink noise
	Current Adjustment:	internal control
	Current Indication:	LED on top panel
	Connector:	Fixed screw terminals, 5mm pitch - CON1
Loop Impedance	0.3Ω to 1Ω resistive, 1.5Ω reactive at 1.6kHz	
Monitor/Status	Isolated contact, closed when amplifier functional	
	Isolation:	1500V
	Contact rating:	3A 30V DC or 3A 125V AC
	Connector:	Fixed screw terminals, 5mm pitch - CON2

AUDIO SYSTEM

Freq. Response	100Hz to 5kHz ±1.5dB relative to 1kHz at -12dB re: rated output, measured as loop current with no metal loss correction.	
Compression (AGC)	Time constants optimised for speech	
	Dynamic range:	>36dB
	Control:	by adjusting input level/gain
	Indication:	LED on top panel
Metal Loss Correction	0dB to 4dB / octave boost Adjusted on internal control	

PHYSICAL

Weight	827g
Environment	IP42 : 20 to 90 % relative humidity, -30 to 75 °C Installed unit must have sufficient heat sink through enclosure to dissipate the nominal power.



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