

ILD14 Audio Induction Loop Driver

The ILD14 is a robust loop amplifier providing local area coverage for installation in any environment, inside or out. The rugged aluminum enclosure is IP65 rated and vandal resistant. It features 3 independent inputs and metal loss correction. Delivers superior sound quality and intelligibility with compensation where there is metal content in the loop location. It is backed by Ampetronic's 5 year warranty and free technical support. Area coverage is in excess of 30m². The unit is ideally suited to outdoor, local loop applications in environments such as stations, car parks and drive throughs. With 3 transformer isolated inputs, it offers an alternative solution for lift applications where PA, VA and intercom is in use.



Features

- **Area coverage to > 30m² with a perimeter loop**
- **Compatible with Multi-turn 'counter style' loops**
- **Rugged aluminium construction – vandal resistant**
- **IP65 rated enclosure**
- **3 Independent inputs**
 - 100V line
 - low impedance speaker
 - factory configured low impedance speaker / mic
- **Metal loss correction**
- **5 year warranty**
- **Free Technical Support**

Applications include:

- **Car parks**
- **Stations**
- **Help points**
- **Information kiosks**
- **Drive throughs**
- **Lifts**
- **Outdoor leisure facilities**

Counter and other vertically mounted loops

The ILD14 can be used to drive small multi-turn 'counter' style loops. These offer limited area coverage, up to approximately 1m distance from the loop. However, they are often the most practical solution for installation. Ampetronic can provide a standard preformed loop, or a loop can be custom designed for your application. Consult our support team for more information.

Perimeter Loops – Area Coverage (maximum)

The ILD14 can be used to cover a small area using a perimeter loop in which case, a single turn loop should be used for optimum audio quality.

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

For maximum coverage, the follow conditions are assumed:

- the loop is 1-2m above or below the receiver height
- there are no metal structures in the plane of the loop
- there is sufficient voltage to drive the loop – check table below.

Maximum Cable Length

When maximum current output is required the ILD14 can drive:

- Loops with DC resistance from 0.3 to 1Ω
- Loop impedance up to a maximum of 1.5Ω

Maximum cable length is dependent on the cable type and on the application:

When operating below maximum output, the ILD14 can drive longer cable lengths – contact Ampetronic for more details.

Cable type	Maximum Total Cable Length (m)	
	Normal use*	Transient speech*
1.0mm ² copper	57	65
1.5mm ² copper	67	82
2.5mm ² copper	77	99
1.8mm ² flat copper tape	100	116

* Short term speech (e.g. service counter, airport PA system) can cope with limited clipping at high frequencies – Ampetronic recommends delivery of full current up to 1.2kHz for these applications. Longer term usage or signals with music or high quality audio must deliver full current to at least 1.6kHz to prevent fatigue and give acceptable intelligibility. Many commercially available systems do deliver sufficient voltage to reproduce critical high frequencies – ask Ampetronic for more details.

ILD14 Product Information

Power Options

There are 2 versions of the ILD14, a switchable 115/230V AC version and a 15V DC version

ILD14 230V AC

Nominal supply Voltage	230V AC 45 - 65 Hz
Fuse	T100mAL
Maximum current	83mA
Quiescent current	70mA
Power consumption	9W

ILD14 115V AC

Nominal supply Voltage	115V AC 45 - 65 Hz
Fuse	T200mAL
Maximum current	166mA
Quiescent current	140mA
Power consumption	9W

ILD14 15V DC

Nominal supply Voltage	12V DC
Supply Voltage range	12 - 18V
Fuse	T1.6AL
Maximum current	1A
Quiescent current	65mA
Power consumption	9W

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Loop ratio adaptor	5:1 ratio gives >15A into single turn loop Weight: 340g Ratio can be tailored to the application.
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Standards compliance

The ILD14 is CE marked to all relevant safety and EMC standards.

The ILD14 will meet the requirements of IEC118-4 and the relevant recommendations of BS7594 if specified and installed according to Ampetronics' instructions.



INPUTS

Power	Power on LED on control panel. See specifications on the left.
Input 1 Low Z Speaker	Input impedance: 5k Ω differential Sensitivity: 20dBu (78mVrms) for full output Overload: > 19dBu (6.8Vrms)
Input 2 100V line PA	Input impedance: 120k Ω Sensitivity +22dBu (10Vrms) for full output Overload: >+48dBu (190Vrms) Adjustment made on control panel Isolation : 1500V
Input 3 Low Z speaker or mic option (factory fitted)	Speaker – As input 1 Microphone – Input impedance: 8K Ω differential Sensitivity: -60dBu (1mVrms) for full output Overload: > -12dBu (195mVrms) suitable for electret microphones (8V DC bias)
NOTE	Each input has a dedicated gain control located on the control panel inside the unit.

OUTPUTS

Drive voltage	4.5V peak at max drive current
Drive current	<ul style="list-style-type: none">>3A peak into 1Ω with 1kHz sineAdjusted on control panelLED indicator on control panel
Loop connector	Cage clamp vibration proof. Push to connect
Loop Impedance	0.3 Ω to 1 Ω resistive 1.5 Ω impedance at 1.6kHz
Monitor	Dry isolated contact (1500V isolation). Closed when amplifier functional. Silver alloy contact rating: 3A 30V DC or 3A 125V AC.

AUDIO SYSTEM

Freq. response	80Hz to 5.5kHz \pm 1.5dB relative to 1kHz at low level, measured as loop current with no metal loss correction.
Automatic Gain Control	AGC optimised for speech Dynamic range 40dB Controlled by adjusting input level LED indicator on front panel
Metal Loss Correction	0dB to 3dB / octave boost Adjusted on control panel

PHYSICAL

Dimensions	width 120mm, length 220mm, height 85mm
Weight	2.04kg
Environment	IP65 suitable for external use: 20 to 90% relative humidity -30 to 75 $^{\circ}$ C operating temperature range

AMPETRONIC



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