

ILD300 Professional Audio Induction Loop Driver

The ILD300 is a professional audio induction loop driver capable of driving loop areas in excess of 400 m² with an unsurpassed clarity of sound for both music and speech for superior intelligibility. Based on proven and highly reliable technology it is backed by an unrivalled 5 year warranty and free technical support. Improved power output provides outstanding value without compromise. It has all the usual high quality features found on Ampetronic equipment such as metal loss correction and is compatible with our unique Ultra-Low Spill™ technology. The ILD300 is very compact and elegant, suitable for freestanding, wall mounting or rack mounting.



Features

- **Area coverage to >400 m²**
- **Low lifetime cost**
 - Excellent proven reliability
 - 5 year warranty
- **Unparalleled sound quality**
 - Excellent intelligibility
 - Speech optimised gain control
 - High voltage headroom avoids high frequency clipping
- **Metal loss corrector** corrects frequency dependent loss from metal structures
- **Very compact:** 215 x 220 x 44 mm
- **Microphone (XLR) and line inputs**
- Extensive **input adaptors** available for any audio input requirements
- **Free technical support line** for advice, design and install

Applications include

- **Conference facilities**
- **Theatres**
- **Sports halls**
- **Educational environments**
- **Confidential rooms**
- **Courts**
- **Lecture Halls**

Perimeter Loops – Area Coverage (maximum)

Room aspect ratio	1:1	2:1	3:1
Maximum area m ²	250	310	420

For any Induction Loop System, area coverage is dependent on several factors. Please check these assumptions and contact Ampetronic for advice if required:

- Loop must be 1-2 m above or below the receiver height
- There should be no metal structures in the plane of the loop
- Sufficient voltage to drive the loop – check the cable table below

Low Overspill or Low Loss Systems

ILD300 amplifiers are designed for use in combination with Ampetronic Ultra-Low Spill™ technology. This will require an SP5 phase shifter and an array design – Ampetronic can provide designs or guidance for any application. Used to drive an array, two ILD300s can:

- Minimise ‘spill’ – confines signal to within 1.5 m of room, suitable for adjacent rooms e.g. cinemas, classrooms, or confidential rooms
- Compensate for high losses due to metal structures – the only effective solution for high loss environments to meet IEC60118-4

Maximum Cable Length

The ILD300 is designed for SINGLE TURN loops for optimum audio quality:

- Loops with DC resistance from 0.2 to 1.2 Ω
- Impedance up to a maximum of 1.3 Ω

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

Cable type	Maximum Total Cable Length (m)	
	Normal use*	Transient speech*
1.0 mm ² copper	49	57
2.5 mm ² copper	67	85
4.0 mm ² copper	70	91
1.8 mm ² flat copper tape	87	101

* 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 1.2 kHz for these applications. Longer term usage or signals with music or high quality audio must deliver full current to at least 1.6 kHz to prevent fatigue and give acceptable intelligibility. Many commercially available systems do not deliver sufficient voltage to reproduce critical high frequencies – ask Ampetronic for more details.

ILD300 Product Information

Equipment supplied as standard with the ILD300

- Handbook and installation instructions
- 197 x 252 mm loop system present sign (deaf logo)
- Region specific mains cable
- Loop connector

ILD300 optional accessories

Ampetronic can supply a range of accessories to meet the specific needs of your installation:

- Installation accessories**
- 18 mm x 0.25 mm copper tape
 - PVC extrusion to protect copper tape
 - Installation / warning tape to fix cable or tape to a floor

Wall mount brackets **WML-1U**

Rack mount brackets **RM-1U**

Phase shifter **SP5** for an array system – use of and SP5 requires a design which can be provided by Ampetronic

Input adaptors A range of input adaptors and interface cables to accept most audio source inputs, see table below

Input adaptors and preamplifiers

By using the appropriate input adaptor or preamplifier the ILD300 will accept multiple additional inputs or audio inputs from other sources:

Input type	Adaptor
Additional microphone and/or line inputs	MP221 preamp provides up to 2 mic + 2 line inputs
100 V line Low impedance speaker line Line Level	ATT-UJ & ATT-UX transformer isolated attenuators
Unbalanced microphones	MAT1 adaptor

Standards compliance

The ILD300 is CE marked to all relevant safety and EMC standards.

All Ampetronic amplifiers can be used to create a system that meets the requirements of IEC118-4 and the relevant recommendation of BS7594, however the design and installation of the system is equally important to meet these Induction Loop standards.

Some Ampetronic products are CSA registered for sale in the USA and Canada – contact Ampetronic for details.

INPUTS

Power	35 W 230 V AC nominal, 45-65 Hz [120 V option available] Power switch and LED indicator on front panel
Microphone input	XLR balanced microphone input for 200-600 Ω microphones; 15 dB user selectable gain boost; + 15 V DC phantom power (selectable); sensitivity – 70 dBu; front panel recessed gain control
Line input	6.4 mm jack socket balanced line input; sensitivity – 30 dBu; overload protected; front panel recessed gain control
Slave I/O	6.4 mm jack insert point for connection of SP5 phase shifter 0 dBu signal can be used for recording

OUTPUTS

Drive voltage	6.4 V_{rms} (9.0V peak) at maximum output current
Drive current	<ul style="list-style-type: none"> • 4.9 Arms (7.0 A_{pk}) continuous 1 kHz sine wave • Short term peaks >10 A • Front panel recessed control • Drive current indicated on 4-LED display in 3 dB increments
Loop connector	Wieland ST17/2 (supplied)
Loop Monitor	Provides access to actual audio signal in loop 3.5 mm stereo headphone connector on front panel

AUDIO SYSTEM

Freq. response	80 Hz to 6.5 kHz
Distortion	THD+N <0.2 % with 1 kHz sine at full current
Automatic	The AGC is optimised for speech. Range >36 dBu
Gain Control	Front panel recessed input level control
Metal loss correction	<p>Corrects system frequency response due to metal structures in a building. Gain constant at 1 kHz, adjustable gain slope from 0 to 3 dB per octave</p> <p>This does not compensate for signal loss from metal structures, which can be significant</p>

ADDITIONAL FUNCTIONS

Fault Monitoring	<p>Three LED fault indicators on the front panel:</p> <ul style="list-style-type: none"> • Overload – delivering over the rated current • Overheat – unit is too hot (mutes output signal) • Loop error – short circuit / open circuit error
Ancillary	To supply Ampetronic ancillary units ± 15 V DC 0.15 A power outlet on rear panel
Cooling	Cooling is by natural convection from product casing

PHYSICAL

Size	Half width 1U 19" rack mount Width 215 mm Depth 220 mm Height 44 mm
Mounting options	<ul style="list-style-type: none"> • Freestanding • 1U 19" rack mount (requires additional rack tray) • Wall mounting (requires additional brackets)
Weight	2.25 kg
Environment	IP 20 protection; 20 to 90% relative humidity; 0 to 35 $^{\circ}$ C



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