



AD320/30

*High Quality Toroidal Transformer
with wide bandwidth for 100V lines
30W power in DIN module*



TECHNICAL MANUAL – INSTALLATION PRELIMINARY DOCUMENTATION

Made in Italy by TEMA TELECOMUNICAZIONI S.r.l. WWW.TEMATLC.IT

Recommendations

1. Use only original spare parts and consumables supplied by Tema Telecomunicazioni Srl for this equipment. The company shall not be held responsible for any damage caused by the use of materials that they have not supplied.
2. The device has been carefully manufactured and tested. In any case, the product is not recommended for use in situations in which incorrect operating may result in damage to persons and/or property.
3. We recommend that you carefully read all this manual before starting to use the device.
4. Do not expose the device to sunlight and protect it from sources of heat, dust, humidity and chemical agents.
5. This manual is the property of Tema Telecomunicazioni Srl and any duplication and reproduction, even partial, as well as storage on any type of media is forbidden without written permission from Tema Telecomunicazioni Srl.

Revision	Date	Revision reason	Prepared	Checked/Approved
0	03/04/2018	First release	DP	FL

PRESENTATION

AD320/30 is a transformer used to drive 100V speaker lines starting from a power audio output for 8 Ω loads as is the output section of the AD300 series audio amplification systems. **AD320/30** is made of a standard 4-module DIN rail mounting box and has an input for the signal from an amplifier to be transformed from the typical impedance of 8 Ω to the right level to drive 100V line speakers connection. Adopting a 100V line for loudspeakers allows to remotely control the speakers without running into the constrictions and without the power losses deriving from the fact that the connection cable (when too long) has a resistance comparable to that of the load to be driven (the case of 4/8 Ω speakers). This leads to power losses along the cable and therefore a very poor performance in the transfer of the power delivered by the amplifier towards the loudspeakers. Therefore the 100V line allows to minimize such losses and to transfer practically all the power supplied by the amplifier to the single load or the different distributed loads even when placed far from the driving amplifier. The bandwidth of **AD320/30**, suitable for audio paging.

FEATURES

- Extremely simple to install and use, passive, does not need to be powered
- Optimal bandwidth, high fidelity, level adapter, isolation between input and output

PARTS COMPRISING THE SYSTEM (PACKING LIST)

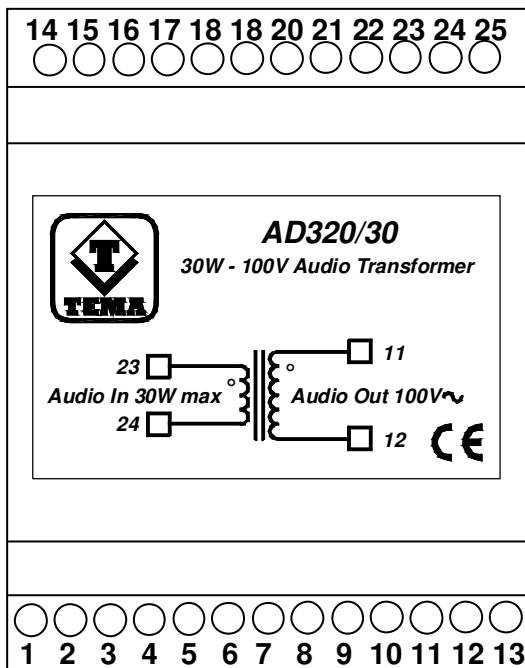
The **AD320/30** system consists of the parts included in the following list:

- One **AD320/30** device, one DIN rail segment, two anchors and two screws, this manual

TECHNICAL FEATURES

Type of transformer	High quality Toroidal and low leakage flux, efficiency > 90%
Input impedance / power	8 Ω / max 30W _{RMS} continuous, distortion around 1%
Output level / line length	Suitable for 100V speaker lines, maximum length 200 mt
Frequency response	60 Hz ÷ 20 KHz
Isolation between input and output	250V continuous
Dimensions and Weight and Mounting	W 72 x H 90 x D 60 mm (4U DIN), 500 g, DIN rail mounting

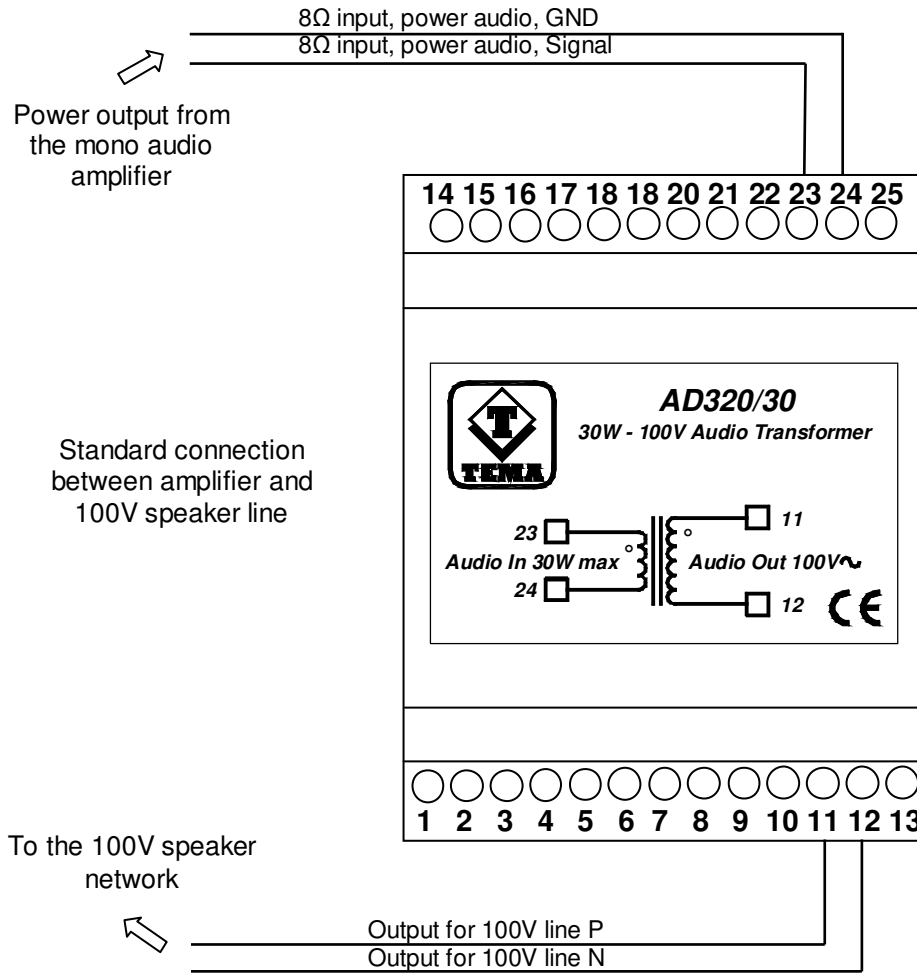
FRONT VIEW, INSTALLATION AND CONNECTIONS



Input terminals	
23	MONO power source audio input
24	GND audio source input (common)

Output terminals	
11	Audio output for 100V LINE (audio signal)
12	Audio output for 100V LINE (common)

CONNECTION EXAMPLE



The 100V line output allows to connect one or more loudspeakers both locally (near the amplifier) and far away, up to a maximum distance of 200 meters.

The available power when the transformer is driven, for example, by the AD301R system (which delivers max $30W_{RMS}$ on $4/8 \Omega$) is around 30W (the efficiency of the transformer is in fact greater than 90%).

This is the power value that can be completely absorbed by a single speaker or horn even if it is connected far from the amplifier (they are specific models to be connected to 100V lines such as the AD330/40T model).

Another possibility is to distribute the power absorption on different loads, connecting AD330/15T horns. Setting them to absorb each one for example 5W through the appropriate built-in selector, it will be possible to create an audio paging line consisting of six speaker points, all connected to the same 100V line generated by **AD320/30**.



DECLARATION OF CONFORMITY (DoC)

We, **TEMA TELECOMUNICAZIONI SRL** Via C. Girardengo, 1/4 - 20161 MILANO
declare under our sole responsibility that the product:

product name **Audio Transformer**
trade name **TEMA TELECOMUNICAZIONI Srl**
type or model **AD320/30**

to which this declaration relates is in conformity with the essential requirements and other relevant requirements of the R&TTE Directive (1999/5/EC).

The product is in conformity with the followings standards and/or other normative documents:

HEALT & SAFETY EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011

EMC ETSI EN 301 489-1 V1.9.2, ETSI EN 301 489-7 V1.3.1

MILANO, 16 July 2015

TEMA TELECOMUNICAZIONI SRL
D. Pontillo

A handwritten signature in black ink, appearing to be 'DP', located below the printed name 'D. Pontillo'.

I. IMPORTANT INFORMATIONS REGARDING THE RECOVERY AND RECYCLING OF THIS ELECTRONIC DEVICE

The crossed-out wheeled bin symbol below indicates that this electronic equipment is intended to be disposed in a separate collection and not in an unsorted municipal waste, in order to provide for the treatment of WEEE (Waste Electrical and Electronic Equipment) using best available recovery and recycling techniques.

Specific treatment for WEEE is indispensable in order to avoid the dispersion of pollutants and other hazardous substances into the waste stream, while recycling leads to reduction of disposal of waste and the negative impacts on environment and human health. That is, priority is given to reuse of WEEE in its components, subassemblies and consumables.

As the final holder, the user has an important role in contributing to reuse, recycling and other forms of recovery of WEEE and is responsible to return this waste in the collection facilities set up by EC Member States and to fulfill other duties in compliance with Directive 2002/96/EC and local laws.

