

# MARENIUS

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# professional ducts

## BAL/IN BAL/OUT

### modules for balanced audio signals

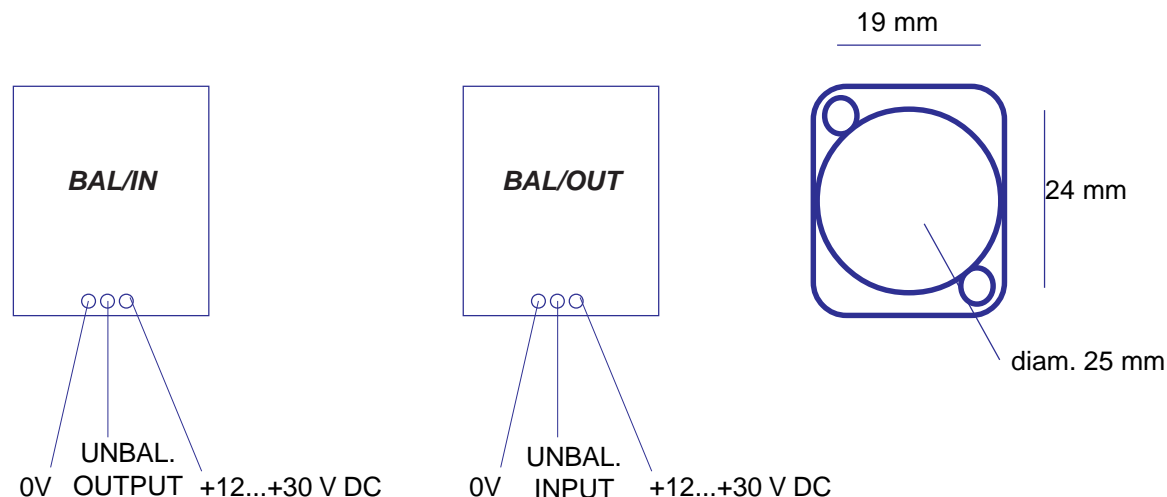
BAL/IN and BAL/OUT are tiny line amplifiers that are integrated with a XLR socket.



BAL/IN will convert a balanced line input signal to an unbalanced output signal. BAL/OUT has the inverse function. Both modules have variable gain within  $-20$  to  $+20$  dB. Power supply is 12 to 30 V DC. BAL/IN and BAL/OUT are ideal for modifying older equipment or upgrading consumer electronics to professional standard.

The modules are compact and it is possible to put them at the nominal distance of 26 mm (side-to-side) or 31 mm

(top-to-bottom). The integrated p.c.b. has the same dimension as the socket front.



#### TECHNICAL DATA

Input impedance	10 K $\Omega$
Max. output signal	+24 dBu (bal) @ 600 $\Omega$ , 30 VDC
Output impedance	2 x 100 $\Omega$
Gain	-20...+20 dB
THD	<0,05%
Dynamic range	>100 dB
Sockets	XLR3 (bal. inputs/outputs)
Frequency range	20 Hz ... 40 kHz +0/-1 dB
Power supply	10 mA @ 12...30 VDC
Size	W x H x D 26 x 31 x 40 mm
Panel cutout	see fig.

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# User Instructions

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## BAL/IN

## BAL/OUT

There are 3 pins on the back of the p.c.b.

- Pin 1 signal and power GROUND
- Pin 2 unbalanced input or output
- Pin 3 +V power supply, DC 12 ... 30 V @ 10 mA

**There is no protection for reversed power supply.**

Normally the module is mounted in a panel. Cutout is acc. to standard universal XLR cutout: one large hole dia. 25 mm and two smaller holes dia. 3,2 mm.

The XLR socket housing may be mounted to either the inside or the outside of the panel.

The XLR socket is detachable by opening the center screw less than a quarter turn and then pulling the inner part backwards.

Gain is adjustable by a small trimmer potentiometer on the p.c.b.

**NOTE: Do not short-circuit the signal pins 2 or 3 to GROUND pin 1.**

