Low Noise Amplifier / Preamplifier for the 4 m, 3 m and 2 m bands 68 - 240 MHz

DESCRIPTION

- Miniature high-dynamic range low-noise preamplifier for the 4 m LMR band, the FM radio band, the VHF air band, the 2 m LMR band and the DAB radio band.
- Covers 68 - 240 MHz.
- For use where additional preamplification may be required:
  - In receiver systems to ensure low system noise figure
  - As buffer amplifier in RF signal distribution systems
  - As buffer amplifier to compensate high cable loss
  - As preamplifier for measuring instruments
- Adjustable gain.
- Very low noise figure ensures best possible S/N ratio of weak RF signals.
- Excellent large signal behaviour ensures handling of strong RF signals with very low level of IM and harmonic distortion.
- Low power consumption.
- Models for 12 VDC or 24 VDC supply voltage available (please see ordering designations).
- DC supply on solder terminal.
- RF connectors: N-female on input and output ports (other types on request).
- Low weight.
- Wide temperature range.
- Sturdy aluminium box.
- PRO-LNAHP-4-3-2 is coated with black vinyl to prevent corrosion.

SPECIFICATIONS

Electrical	
Model	PRO-LNAHP-4-3-2
Frequency	68 - 240 MHz
Amp. Gain	18 dB (Gain adjustment 3 dB to 18 dB)
Max. Output Power @ 1 dB Compression (P1dB)	> +17 dBm @ max. gain
Noise Figure	Max. 1.5 dB, typ. < 1.2 dB
Output 2. Order Intercept point (OIP2)	> +47 dBm @ max. gain
Output 3. Order Intercept point (OIP3)	> +31 dBm @ max. gain
Impedance	50 Ω
Max. Input Power (dBm)	17 dBm
Ripple	≤ ±2 dB
Input-Output Isolation	> 20 dB
VSWR	< 3.5:1 (typ. < 2.0:1)
DC Supply	11 to 14 V DC / 60 mA

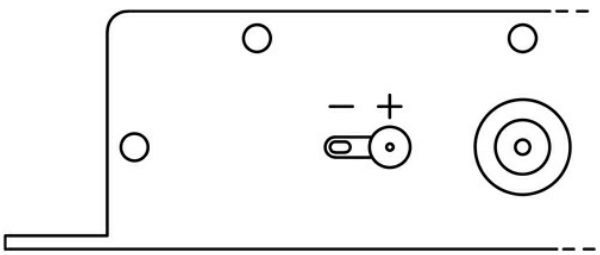
Mechanical	
Connection(s)	N(f) (standard), BNC, TNC or SMA on request
Dimensions	129 (incl. conn.) x 152 (incl. flanges) x 35 mm 5.08 x 5.98 x 1.38 in.
Weight	0.35 kg / 0.77 lb.
Mounting	4.3 mm dia. (4 holes)

Environmental	
Operating temperature range	-30 °C to +60 °C

ORDERING

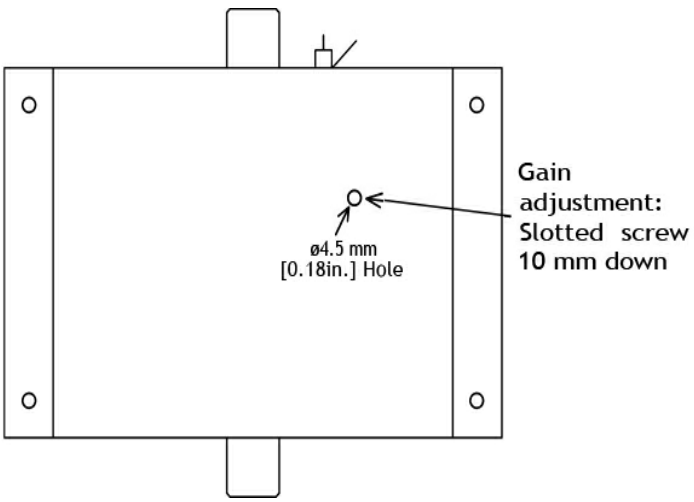
Model	Product No.
PRO-LNAHP-4-3-2-12V-N	210000175
PRO-LNAHP-4-3-2-24V-N	210002296

POWER SUPPLY CONNECTION

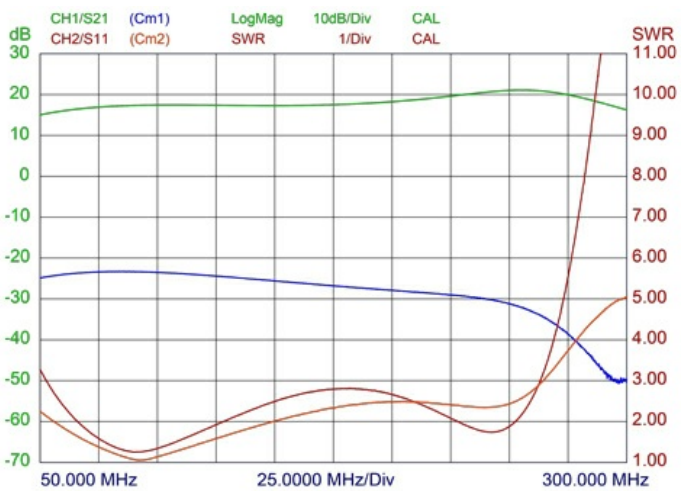


GAIN ADJUSTMENT

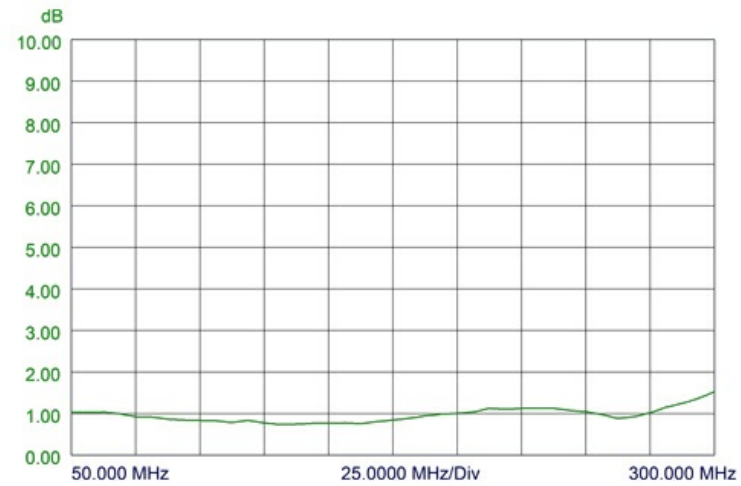
- The PRO-LNAHP is provided with gain adjustment option.
- Gain is adjusted by turning a gain adjustment screw located 10 mm below a 4.5 mm hole on the top of the PRO-LNAHP housing. See drawing below.
- Access to the adjustment screw hole is made by removing the black label on the top of the box.
- The adjustment screw is a slotted type, which can be adjusted by an ordinary 2.5 mm screwdriver.



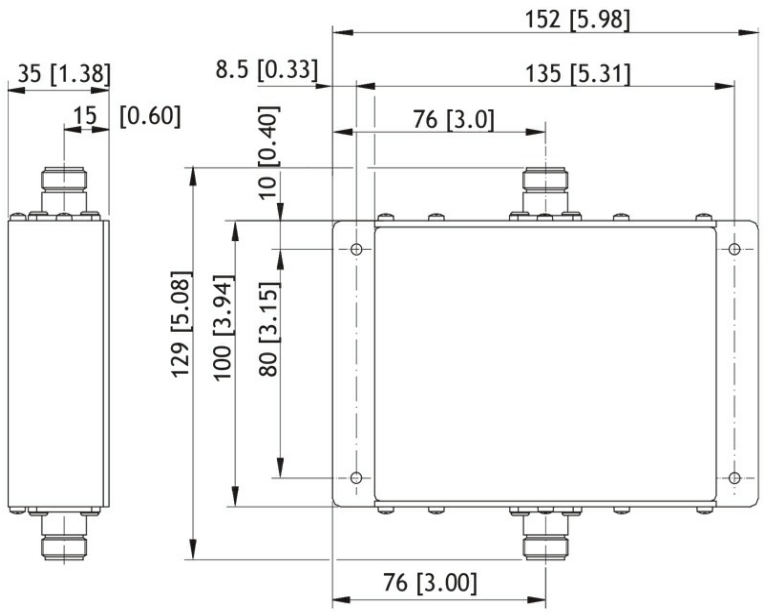
TYPICAL GAIN AND VSWR CURVE



TYPICAL NOISE FIGURE



MOUNTING DETAILS



All dimensions are given in mm [in.]

EU AND UK DECLARATION OF CONFORMITY

Hereby Amphenol Procom declare that the product type PRO-LNAHP-4-3-2 is in compliance with EU Directive 2014/53/EU and the UK Radio Equipment Regulations 2017 (S.I. 2017 No. 1206).
The full text of the Declaration of Conformity is available at:

https://amphenolprocom.com//images/shop/catalog/pdf-for-catalouges/Declaration-of-Conformity-PRO-LNAHP.pdf