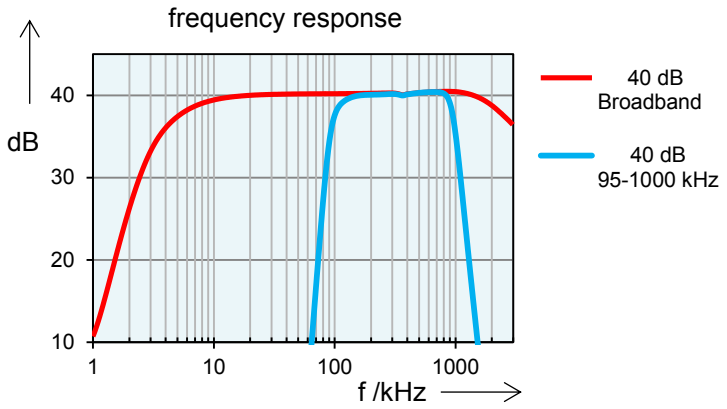
AE–Preamplifier Data Sheet

AEP3N

The AEP3N is an Acoustic Emission preamplifier with inputs for differential or single ended sensors.
Its gain can be set by Acquisition software or adjusted manually by dip switches if used stand-alone (i.e. without an AMSY-5/6 system). In case of very energetic AE-signals a 34dB attenuator can be manually activated by an internal switch.
Frequency pass band configuration can be individually configured by using available high-pass and low-pass modules.



Technical Specification (typical)	
Preamplifier Gain @ 50 Ω [dB] (software selectable)	34, 37, 40, 43, 46, 49 (with 34 dB switch selectable attenuator: 0, 3, 6, 9, 12, 15)
Max. Bandwidth (-3 dB) [kHz]	5 to 2000
Input Impedance [kΩ] | [pF]	10 | 15
Power Supply [V_{DC}]	28 (fed in via signal cable)
Typ. Power Cons. [W]	1.5
Input Range @ Gain 0 dB [mV_{Peak}]	5000
Input Range @ Gain 15 dB [mV_{Peak}]	890
Input Range @ Gain 34 dB [mV_{Peak}]	100
Input Range @ Gain 49 dB [mV_{Peak}]	17.7
Output Range into 50 Ω [V_{PP}]	10
Max. Puls Through [V_{PP}]	450 (suited for AMSY series)

Noise (max. 1/s for dB_{AE} values)	Input 50 Ω	Input 330 pF	Input VS150-M
Filter 95 to 300 kHz [dB_{AE}] | [μV_{RMS}]	14.0 | 1.1	16.7 | 1.5	20.4 | 2.6
Filter 95 to 850 kHz [dB_{AE}] | [μV_{RMS}]	20.0 | 1.8	19.6 | 1.7	22.1 | 2.7

Mechanical and Environmental Specification			
Input Connector single ended	BNC	**Case Material**	Aluminium
Input Connector differential	BNO	**Weight [g]**	525
Output Connector	BNC	**Op. Temp. [°C]**	+5 to +65
Vibration – Sinus sweep	2 Oct/Min, 5 to 50 Hz, 20 g	**IP**	40
Size (H x W x L) [mm]	57 x 80 x 125 (with Con.: W+18)		

Standards and Directives	
EMC Directive	2014/30/EU
EMC Standards	EN61326-1, EN61326-2-3, EN61000-6-2, EN61000-6-4
AE Standards	EN13477-1, EN13477-2

Accessories	
Cable	CBL-1-xM-V1 (BNC cable)
Available high pass filter modules [kHz] (9th order – 54 dB/octave)	17, 20, 25, 30, 35, 40, 50, 65, 75, 85, 95, 110,125, 140, 160,180, 230, 300, 340, 400, 520, 600
Available low pass filter modules [kHz] (5th order – 30 dB/octave)	310, 330, 380, 440, 550, 630, 800, 1000, 1350, 2000

Supplemental directives

Read the Acoustic Emission Preamplifier document (http://www.vallen.de/quote-ref). Make sure that you comply with regulations at the installation site. Store these instructions for a later usage.

NOTICE *NOTICE indicates a property damage message.*

Improper handling damages an AE-Preamplifier

- Do not store, transport or operate the AE-Preamplifier outside its specified environmental conditions
- Do not drop the AE-Preamplifier and handle it with care

How to avoid using a non-functional AE-Preamplifier

- Check function of an AE-Preamplifier in regular intervals or when suspected to be damaged or have undergone severe environmental conditions

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