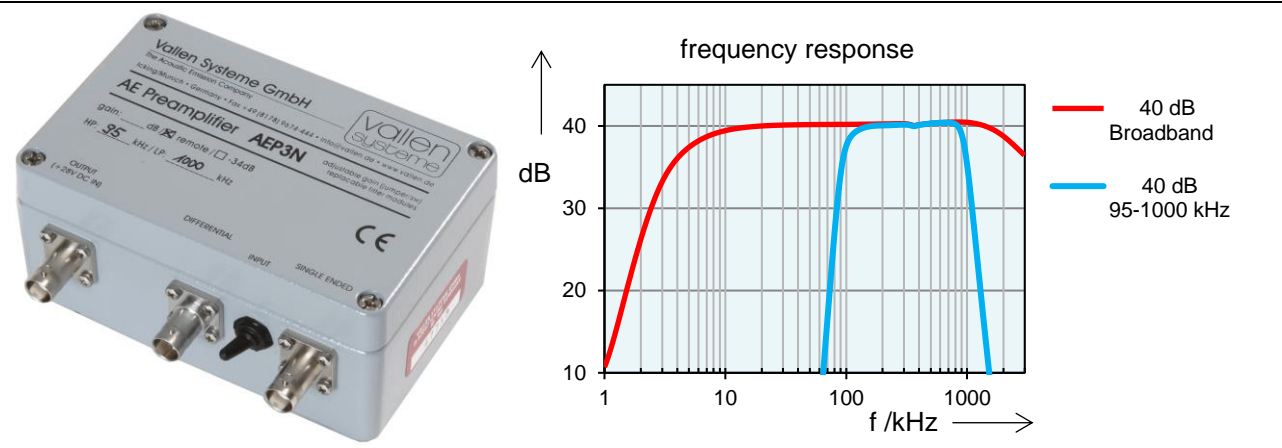


AE–Preamplifier Data Sheet

AEP3N

The AEP3N is an Acoustic Emission preamplifier with inputs for differential or single ended sensors. Its gain can be set by AMSY-5/6 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.

Standard frequency pass band is 95 kHz to 1000 kHz. Other frequency pass band configurations are available as well as separate high-pass and low-pass modules (see "Acoustic Emission Sensors and Preamplifiers Specification" on <https://www.vallen.de/quote-ref> for more information).




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 Acoustic Emissions System 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		Certifications
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)	5, 17, 20, 30, 50, 75, 95, 400
Available low pass filter modules [kHz] (5th order – 30 dB/octave)	310, 440, 550, 1000, 2000

Supplemental directives

Read the “Acoustic Emission Sensors and Preamplifiers” description and specification (<https://www.vallen.de/quote-ref>). Make sure that you comply with regulations at the installation site. Store these instructions for a later usage.

NOTICE	<i>NOTICE indicates a property damage message.</i>
<p>Improper handling damages an AE-Preamplifier</p> <ul style="list-style-type: none"> 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 <p>How to avoid using a non-functional AE-Preamplifier</p> <ul style="list-style-type: none"> Check function of AE-Preamplifier in regular intervals or when suspected to be damaged or have undergone severe environmental conditions 	

	<p>Redemption and Disposal Information of used Vallen Equipment.</p> <ul style="list-style-type: none"> Equipment labelled with the symbol shown on the left must be disposed separately from unsorted municipal waste within the European Union. Owners of old instruments request our agreement to return old electronic equipment. The goods to be returned must be described unambiguously and identified by serial and/or identification number. You can fill in our contact form (www.vallen.de/contact/) or send us an email to sales@vallen.de. Upon our approval owners may ship the goods free of costs to us. We will dispose the goods according to the relevant laws and regulations on our costs. Goods returned without our approval will not be accepted and returned to the owner on his account. We explicitly point out that according to § 19a ElektroG3 you are responsible to delete any personal data on the appliances considered for disposal.
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