

# AE–Preamplifier Data Sheet

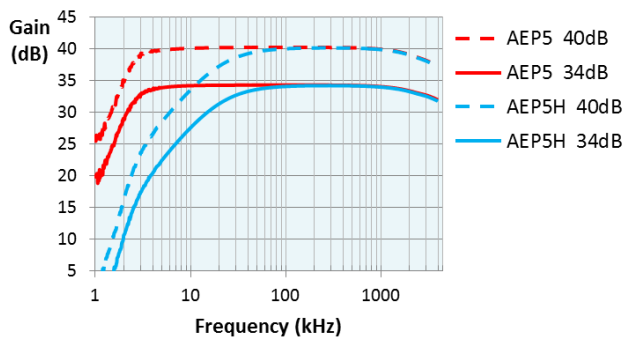
## AEP5 / AEP5H

AEP5 / AEP5H are general purpose wide-band preamplifiers supporting single ended AE sensors. The only difference between AEP5 and AEP5-H are different frequency bandwidths. Gain can be set to 34 dB or 40 dB by a switch located inside the preamplifier. Changing the gain requires opening of the housing as described in the specification of preamplifiers. Thereby accidental change of gain is excluded.

As every preamplifier of Vallen Systeme GmbH the AEP5 / AEP5-H can put a voltage pulse (up to 450 V<sub>PP</sub>) through the preamplifier to the connected AE-sensor (sensor coupling test) while the supply voltage for the preamplifier is interrupted.



Frequency Response



### Technical Specification (typical)

<b>Preamplifier Gain @ 50 Ω [dB]</b>	34, 40 switch selectable		
<b>Bandwidth 34 dB Gain (-3 dB) [kHz]</b>	2.5 to 2400 @ AEP5	20 to 2400 @ AEP5-H	
<b>Bandwidth 40 dB Gain (-3 dB) [kHz]</b>	2.5 to 2400 @ AEP5	20 to 2400 @ AEP5-H	
<b>Input Impedance [MΩ]   [pF]</b>	50   22		
<b>Power Supply [V<sub>DC</sub>]</b>	28 (fed in via signal cable)		
<b>Typ. Power Cons. [W]</b>	1.8		
<b>Input Range [mV<sub>Peak</sub>]</b>	100 @ Gain 34 dB	50 @ Gain 40 dB	
<b>Output Range into 50 Ω [V<sub>PP</sub>]</b>	10		
<b>Max. Puls Through [V<sub>PP</sub>]</b>	450 (suited for AMSY series)		
<b>Noise (max. 1/s for dB<sub>AE</sub> values)</b>	<b>Input 50 Ω</b>	<b>Input 330 pF</b>	<b>Input VS150-M</b>
<b>Filter 95 to 300 kHz [dB<sub>AE</sub>]   [μV<sub>RMS</sub>]</b>	12.5   0.8	10.9   0.7	24.7   4.3
<b>Filter 95 to 850 kHz [dB<sub>AE</sub>]   [μV<sub>RMS</sub>]</b>	18.5   1.6	16.9   1.3	25.8   4.9

### Mechanical and Environmental Specification

<b>Input Connectors</b>	BNC	<b>Case Material</b>	Aluminium
<b>Output Connector</b>	BNC	<b>Op. Temp. [°C]</b>	-20 to +85
<b>Vibration – Sinus sweep</b>	2 Oct/Min, 5 to 50 Hz, 20 g	<b>IP</b>	40
<b>Size (H x W x L) [mm]</b>	30 x 55 x 90	<b>Weight [g]</b>	160

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	
Mounting Holder	MAG4AEP5-V1, MAG4AEP5-V2
Cable	CBL-1-xM-V1 (BNC cable)
Filters	To be located in subsequent measurement chain (e.g. ASIP-2 with AMSY-6 series)

## 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	<i>NOTICE indicates a property damage message.</i>
<p><b>Improper handling damages an AE-Preamplifier</b></p> <ul style="list-style-type: none"> <li>Do not store, transport or operate the AE-Preamplifier outside its specified environmental conditions</li> <li>Do not drop the AE-Preamplifier and handle it with care</li> </ul> <p><b>How to avoid using a non-functional AE-Preamplifier</b></p> <ul style="list-style-type: none"> <li>Check function of AE-Preamplifier in regular intervals or when suspected to be damaged or have undergone severe environmental conditions</li> </ul>	

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