

# AE–Preamplifier Data Sheet

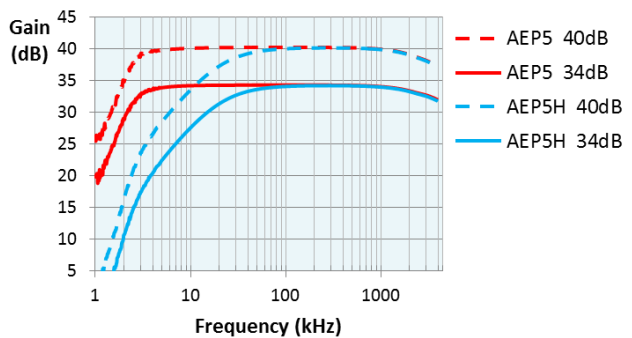
## AEP5 / AEP5H

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		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	
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 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><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>	

	<p><b>Redemption and Disposal Information of used Vallen Equipment.</b></p> <ul style="list-style-type: none"> <li>Equipment labelled with the symbol shown on the left must be disposed separately from unsorted municipal waste within the European Union.</li> <li>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 (<a href="http://www.vallen.de/contact/">www.vallen.de/contact/</a>) or send us an email to <a href="mailto:sales@vallen.de">sales@vallen.de</a>.</li> <li>Upon our approval owners may ship the goods free of costs to us.</li> <li>We will dispose the goods according to the relevant laws and regulations on our costs.</li> <li>Goods returned without our approval will not be accepted and returned to the owner on his account.</li> <li>We explicitly point out that according to § 19a ElektroG3 you are responsible to delete any personal data on the appliances considered for disposal.</li> </ul>
---	---

### Disclaimer

The material contained in this document is provided “as is” and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by applicable law, we, Vallen Systeme GmbH, disclaim all warranties, either expressed or implied with regard to this specification and any information contained herein, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. We, Vallen

Systeme GmbH, shall not be liable for errors or for incidental or consequential damages in connection with the furnishing, use, or performance of this document or any information contained herein. We shall not be liable for any direct, indirect, consequential or incidental damage arising out of the use or inability to use of the equipment delivered. We reserve the right to charge for any efforts taken to remedy any problems for which we are not responsible