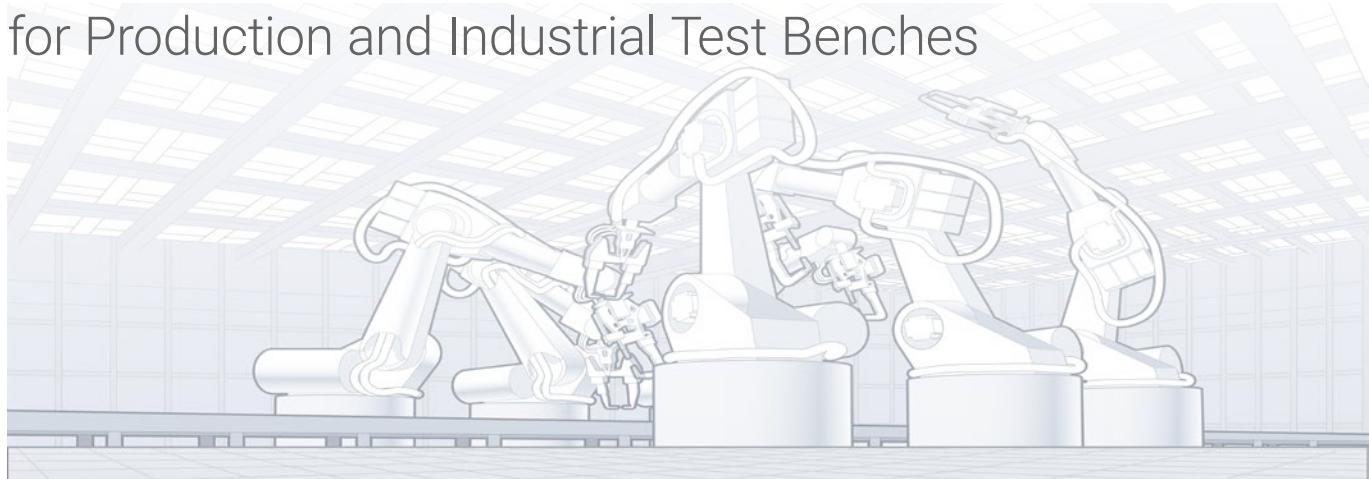


# 5 KEY FACTORS

You Need to Consider When Selecting an Amplifier  
for Production and Industrial Test Benches



The use of amplifiers in production is an essential part of your quality assurance process. What are the decision-making criteria you should consider when selecting a new industrial amplifier?

When deciding on a new industrial amplifier system consider the following key factors to enable you to face the requirements of the future:



- 1. Accuracy: Does the amplifier provide the necessary accuracy?** Enhanced measurement accuracy is a prerequisite for detailed insights into the production process. This enables the tolerance limits in production to be safely utilized and downtimes to be avoided. The interference-proof carrier frequency technology (CF) used in HBM's amplifiers combined with automatic sensor identification via TEDS ensures additional precision and reliability.



- 2. Sampling rate: Does the sampling rate comply with my application?** The faster measured values are sampled, the more precise their subsequent analysis. If sampling rates are too low this results in loss of information or even measurement errors – in this case, the measurements cannot be used. Loss of production control data and information will be a thing of the past.



- 3. Integrated intelligence: Does the amplifier offer "integrated intelligence"?** "Integrated intelligence" enables the amplifier to perform quality-critical algorithms and calculations by itself, during production monitoring. This includes, for instance, monitoring of tolerance windows or integrated mathematical

or logical operations through to control functions. In addition to accuracy, the "intelligence" and the "ability to learn" that are offered by software integrated in industrial amplifiers are the factors that make the difference on the market.



- 4. Real-time technologies: Is the amplifier ready for leading-edge real-time technologies?** Industrial Ethernet is a megatrend in manufacturing automation. Real-time communication systems are increasingly used in production systems; the communication channels between "man" and "machine" and production processes in the machine and system control are becoming ever faster. It is essential that an industrial amplifier seamlessly integrates into this concept.



- 5. Production environment integration: Can the amplifier be integrated into your production environment?** Regardless of whether central or distributed modules are used in the manufacturing system: Modern industrial amplifiers provide you with both modular structure and scalable setup. When choosing your amplifier system make sure that it is capable of "growing" with the increasing requirements in your production, for instance, through plug-in cards or scalable systems. Is the system open to integration into your software environment? Modern systems offer open programming libraries that are available to users for creating proprietary user interfaces and functionalities. This enables you to protect your know-how and to be prepared for the future.