



Plant Costs under Control

## Reduction of Overall Costs

### › Shorter Planning and Design Phases

*Profile PA Devices Provides Vendor-Neutral Engineering*

### › Free Choice of Supplier and Field Device

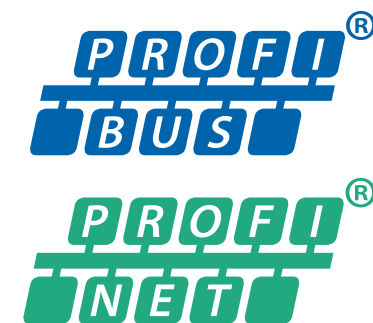
*Profile PA Devices Offers Standard Functionality for Field Devices;  
Numerous Vendors of Devices with New Profile for PA Devices Available*

### › Reduced Installation and Commissioning Efforts

*Automatic Installation Test;  
Remote Device Testing and Configuration*

### › Highly Effective Maintenance and Repair Processes

*Simplified Field Device Diagnosis According to NAMUR NE107;  
Easy Device Exchange without Complex Parameterization*



## PROFIBUS

PROFIBUS is the world's most successful fieldbus technology with millions of devices installed in the field worldwide. Utilizing a single, standardized communication protocol, PROFIBUS supports fieldbus solutions both in factory and process automation as well as in motion control and safety-related applications. Via a single bus cable, PROFIBUS links controllers or control systems with decentralized field devices and also enables consistent data exchange with higher level communication systems.

## PROFINET

PROFINET is the leading Industrial Ethernet standard in the automation market. This globally established and future-oriented technology is supported by many product vendors, thus ensuring long-term availability and investment protection. PROFINET uses standard IEEE Ethernet with enhanced capabilities to meet the much more challenging conditions in industrial applications as well.

## Profile for PA Devices

In Process Automation (PA), quick installation and easy operation and exchange of field devices are important user requirements, required of all device manufacturers. Therefore, a common set of device parameters for commissioning, operation, maintenance and diagnostics has been defined for process control devices. This Profile PA Devices for transmitters, actuators, analyzers and others simplifies utilization of devices for many years. In 2017 PI has developed the new Profile PA Devices 4.0 that can be used with PROFIBUS as well as PROFINET.

## FDI

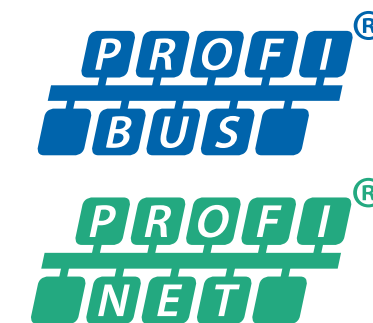
The "Field Device Integration" technology offers an uniform solution for the handling of information derived from intelligent field devices. FDI supports all required measures during the life cycle of devices, from configuration and commissioning up to diagnostics and calibration. No other procedures are required anymore, FDI is the consistent solution that addresses all end user requirements.

More Information  
on the PI Technologies:  
[www.profibus.com/technology](http://www.profibus.com/technology)



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## Unmatched in Performance and Benefits



## PROFIBUS and PROFINET for Process Automation





# Comprehensive User Benefit

Key Technologies: PROFIBUS, PROFINET, Profile PA Devices 4.0 and FDI



Plant Performance Always in Sight



Long-Term Protection of Installed Equipment



Bridge to IIoT and Industrie 4.0

## Increased Overall Performance

- › Increased Plant Availability and Asset Utilization  
*Wide Information Base Cares for Undisturbed Plant Operation*
- › Highest Possible Measuring Accuracy  
*Fully-Digital Data Handling Ensures Highest Possible Process Quality*
- › Extensive Consideration of User Expertise  
*NAMUR Device Diagnosis and Core Parameters Simplify Device Handling*
- › Freedom of Supplier and Manufacturer Selection  
*Profile PA Devices Stands for Best Possible Interoperability*

## Integration of Existing Technologies

- › Linking of Past and Present  
*Plant Operation with Proven System Technology yet Modernized Field Devices*
- › Supporting Legacy Field Devices  
*Superior Proxy Technology Protects Investments by Integrating Existing Installations in Modern Networks*
- › Seamless Modernization in Small Steps  
*Evolution not Revolution – Plant Modernization only Where and When the Requirement Exists*

## Path to the Future

- › Seamless Connectivity between Automation Technology and IIoT World  
*Digital Connectivity to the Last Mile Provided by PROFIBUS and PROFINET; Easy Access to all Data from Everywhere*
- › Full Compatibility to TCP/IP, Internet and Web  
*PROFINET Allows Parallel Communication e.g. through TCP/IP – and Is More than just a Bus, It's an Information Network*
- › Supporting FDI as Future-Proof Device Integration Technology  
*Profile PA Devices Provides Comprehensive Semantic Information for e.g. Big Data Applications*
- › PI as Platform for Integration Existing with Future Technologies  
*Development of New Technologies with Partners from All Steps of the Value Chain (OPC UA, FCG, NAMUR) to Create Open Solutions for All Requirements from a Process Plant.*

