

# Compact 4/8-Channel Front-End m+p VibPilot



## KEY FEATURES

- 4 or 8 analog input channels
- 204.8 kHz simultaneous sampling
- IEPE sensor conditioning user selectable on each channel
- TEDS support
- 2 source output channels
- Safety shutdown and power loss protection for source channels
- 2 tacho inputs
- Digital I/O's for remote control, e.g. climatic chamber control
- DSP powered real-time processing
- Synchronization of multiple m+p VibPilot front-ends
- Ethernet and USB host interfaces
- Dust-proof, rugged housing
- Battery option
- Fan-less, noise-free operation
- AC/DC supply floating or grounded, only 20 W power consumption

With the 4/8-channel m+p VibPilot, m+p international sets a new standard for affordable performance in vibration control and dynamic signal analysis. m+p VibPilot is based on the latest generation of IC technology resulting in high-precision measurement ability and impressive real-time performance in signal analysis.

### Operation Indoors and Outdoors

Compact and rugged, m+p VibPilot has a robust look and feel and a clearly arranged front panel with four or eight BNC connectors. Thanks to its dust-proof design, you can operate it indoors or outdoors even under harsh conditions. m+p VibPilot provides both Ethernet and USB connectivity to a host PC or laptop and is operated by either an external AC mains power supply or by a DC supply, e.g. for in-car operation. The fan-less, noise-free operation facilitates noise measurements requiring a quiet environment.

Battery operation enables portable applications in the field and in the lab: Whether you want to take professional on-site measurements, do some quick troubleshooting in the field or place the instrument close to the specimen and sensors to minimize cable runs and noise. The optional battery is helpful in all test environments where no power supply is available.

### Support of Multiple Front-Ends

To extend input channel capability, m+p VibPilot devices can be synchronized via the clock in/clock out circuitry

without influencing their excellent measurement performance. This allows you to use additional channels (e.g. 2 x 8 input channels) or to combine vibration tests and dynamic signal acquisition applications with ease. m+p Analyzer for noise and vibration analysis supports up to six m+p VibPilot devices with a total of 48 input channels.

m+p VibPilot. Small in size. Huge in performance.

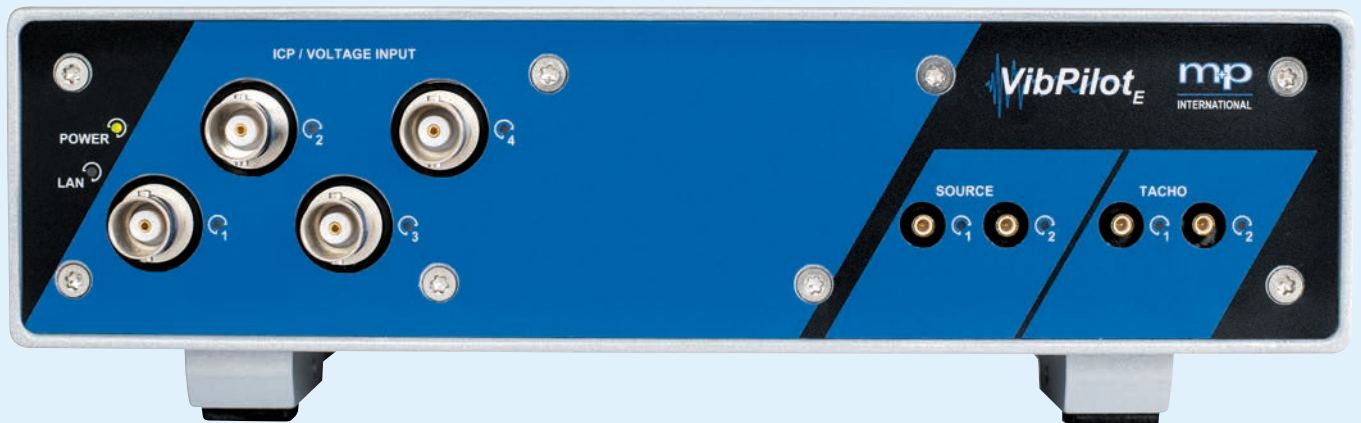


### Input/Output Channels

Equipped with 24-bit sigma-delta A/D converters with up to 204.8 kHz sampling rate, m+p VibPilot allows for alias-protected measurements in a frequency range up to 80 kHz and with more than 120 dB spurious-free dynamic range. The analog input circuits have advanced sigma-delta converters which offer advantages such as simultaneous sampling by independent A/D converters on each input, reduced noise and improved accuracy due to 64 times oversampling on each input. Both analog and digital filtering are used for full aliasing protection and they provide excellent low-level signal-to-noise performance and differential linearity. The input voltage range of  $\pm 1$  V and  $\pm 10$  V peak full scale is selectable per channel.

As well as normal differential voltage inputs with AC/DC coupling, signal conditioning for the analog input channels also provides source capabilities for IEPE sensors, including cable break indicators, and an interface for accessing standardized Transducer Electronic Data Sheets (TEDS). TEDS support allows automatic front-end setup based on information stored in the transducer, e.g. sensitivity, calibration data and serial number.

Two precision low-noise analog outputs are available together with hardware shutdown circuitry which ramps down the source signals in a controlled manner in case of emergency.



4-channel m+p VibPilot



8-channel m+p VibPilot

### Tacho Inputs

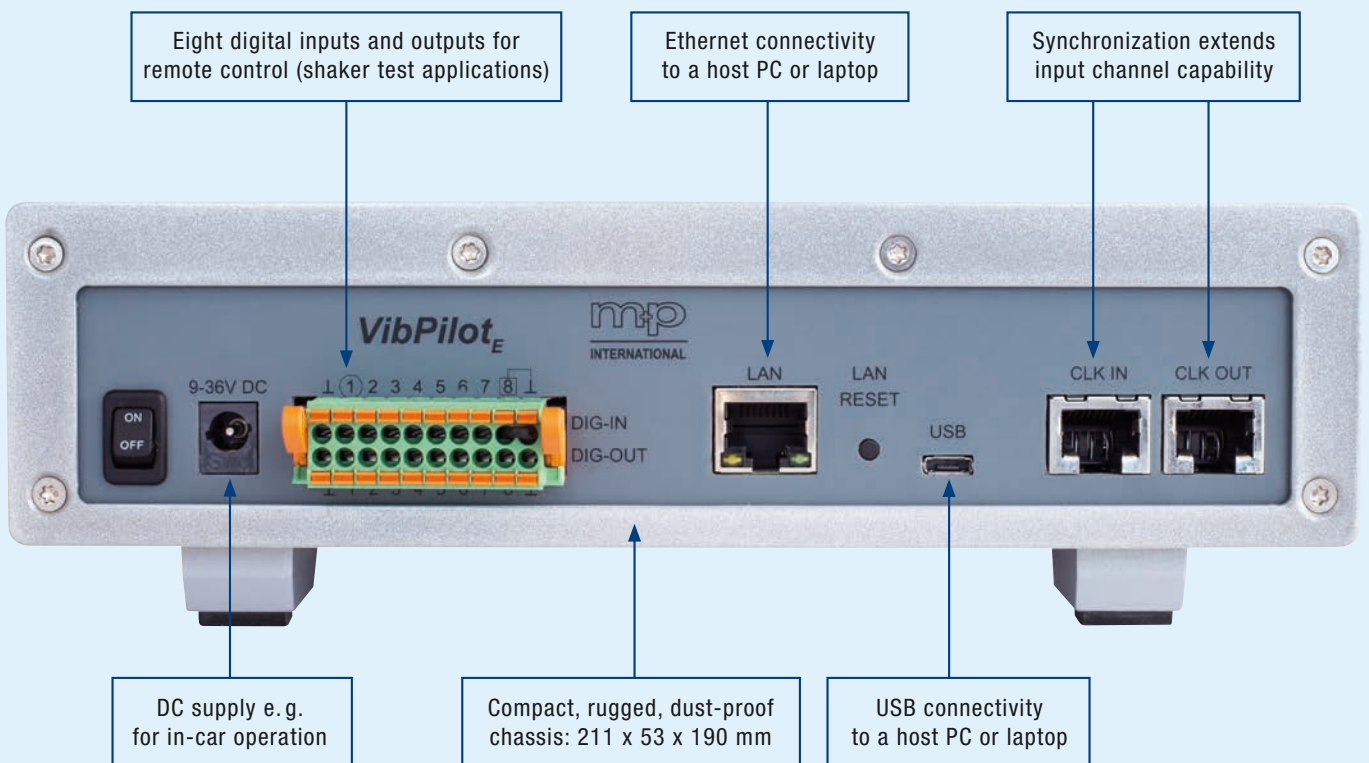
Two tacho inputs are included with 32-bit high-speed up/down counters for rotational vibration measurements or for use as COLA synch inputs for shaker sine reduction applications.

### Digital Inputs/Outputs

Eight digital inputs and eight digital outputs enable engineers to directly execute control functions for combined environmental tests (climatic chamber control) or for parallel functional tests of the specimen. Individual tests can be easily combined in any complexity of nested loops.

### Dynamic Signal Processors

Two 300 MHz floating-point dynamic signal processors in each m+p VibPilot pre-process the data, thus guaranteeing the high performance and short control cycles.





## **m+p international**

Founded in Hannover, Germany in 1980, m+p international develops and manufactures test and measurement systems for vibration testing, dynamic signal analysis, multi-channel data acquisition and monitoring and test stand engineering. Our product reputation and broad experience coupled with valuable user feedback have led to significant market share in numerous key industries worldwide.

The company has its headquarters in Hannover, Germany with sales/marketing subsidiaries in New Jersey (USA), England, France and China, along with representatives and agents in many countries.

Learn more on the full range of m+p international products and services and their applications. Select the m+p literature library on our website and download the desired product literature.

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