



Application

- Signal conditioning for dynamic measurement with piezoelectric sensors for acceleration, force and pressure or sound
- Front-end with anti-aliasing filter for PC data acquisition systems
- Mobile measuring systems
- Test benches in laboratory and production facilities

Properties

- Very compact design
- 5 charge and 4 IEPE/AC voltage ranges with low noise provide a total dynamic range of 140 and 120 dB, respectively
- Output without integration or with single or double integration for the measurement of acceleration, velocity or displacement
- Low-pass filter with 0.1 / 1 / 10 / 50 kHz, high-pass with 0.1 and 3 Hz
- Input of transducer sensitivity with LED display for output scaling
- TEDS support, reads automatically the sensitivity of a connected transducer
- Operation via front panel push buttons

Technical Data

Measurement functions

| | | |
|------------------------------------|--|------------------|
| Measurands | Vibration acceleration | |
| | Vibration velocity/severity | |
| | Vibration displacement | |
| Measuring range acceleration | 0.0001 to 1000 (sensitivity 100 pC/ms-2) | m/s ² |
| | 0.1 to 1000000 (sensitivity 0.1 pC/ms-2) | m/s ² |
| | 0.00001 to 5 (sensitivity 1000 mV/ms-2) | m/s ² |
| | 0.1 to 50000 (sensitivity 0.1 mV/ms-2) | m/s ² |
| Voltage gain | 1; 10; 100; 1000 | |
| Charge gain | 0.1; 1; 10; 100; 1000 | mV/pC |
| Gain selection | Push button; Interface | |
| Input of transducer sensitivity | 4 digits; 0.001 to 9999; push buttons and display or interface | |
| Accuracy | ±0.5 (Gain = 0.1/1/10/100; > 10 % full scale; mid-band) | % |
| | ±1 (Gain = 1000; > 10 % of full scale; mid-band) | % |
| Output noise | <6 (charge input; 1 to 50000 Hz; G = 1000) | mVRMS |
| | <3 (charge input; 1 to 30000 Hz; G = 1000) | mVRMS |
| | <7 (IEPE input; 1 to 50000 Hz; G = 1000) | mVRMS |
| | <3 (IEPE input; 1 to 50000 Hz; G = 1000) | mVRMS |
| Lower frequency limit acceleration | 0.1; 3 | Hz |
| Lower frequency limit velocity | 3 | Hz |
| Lower frequency limit displacement | 3 | Hz |
| Upper frequency limit acceleration | 100; 1000; 10000; 50000 | Hz |
| Upper frequency limit velocity | 100; 1000 | Hz |
| Upper frequency limit displacement | 200 | Hz |
| Indication | LED seven-segment display for sensitivity and output level (%) | |
| | LED for input type | |
| | LEDs for filters and integration | |
| | LED for overload | |

Connectors

| | | |
|-----------------------|----------------------------------|----|
| Input channels | 1 | |
| Input signals | IEPE | |
| | Charge | |
| | AC voltage | |
| Input connector | BNC rear | |
| IEPE constant current | 3.5 to 4.5 | mA |
| TEDS support | IEEE 1451.4; templates 25 and 27 | |
| Output connector | BNC rear | |

Power Supply

| | | |
|-------------------------|-------------------------|-----|
| External supply voltage | 8 to 28 | VDC |
| External supply current | 60 to 250 | mA |
| Supply connection | DIN 45323; 1.9 mm; rear | |

Case Data

| | | |
|-------------------------------|---|----|
| Dimensions without connectors | 105 x 43 x 95 (W x H x D) | mm |
| Case material | Aluminum, hard anodized | |
| Weight | 380 | g |
| Operating temperature range | -10 to 55 (95 % rel. humidity without condensation) | °C |

Scope of delivery PS500 Mains plug adapter 115/230 VAC; 12 VDD; <500 mA

Optional accessories MQ20 Charge attenuator 1:10
MQ40 Charge attenuator 1:100

Metra Meß- und Frequenztechnik Radebeul GmbH & Co. KG

Meißner Str. 58a
01445 Radebeul
Tel. +49 (0)351 836 2191

Internet: www.MMF.de
Email: Info@MMF.de
Fax: +49 (0)351 836 2940

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