

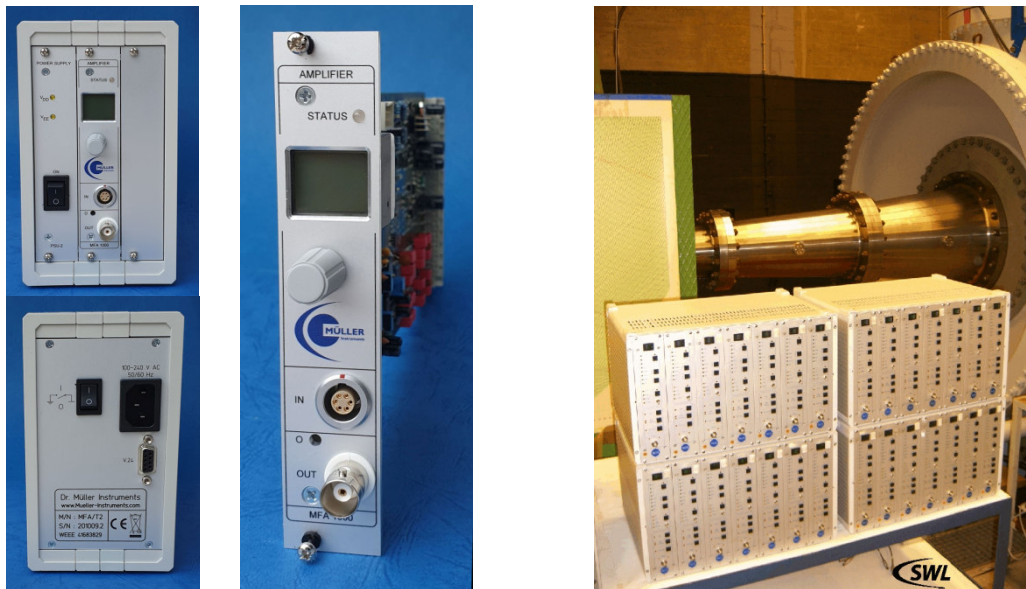
Multi-Functions-Amplifier MFA 1000

High-Frequency Voltage Amplifier with Integrated Sensor Supply

Applications

This multi-purpose amplifier fulfils several tasks at the same time. On the one hand, it is a precision high-frequency amplifier with different amplification factors. On the other hand, it can also supply sensors with different constant currents simultaneously.

It has been used successfully for years to supply and amplify thin-film thermometers, piezoresistive pressure sensors, thermocouples and similar sensors. Its original version was developed for flow experiments on the European space glider Hermes in the shock wave wind tunnel in the 80s, where pressure sensors from e.g. Kulite, Entran and Endevco etc. as well as thermocouples and thin film probes were used.



Front and Back side of MFA 1000
incl. Spannungsversorgung (3. Generation)

4 Racks mit je 7 MFA 1000 der 2. Generation
im Stoßwellenlabor der RWTH Aachen
(mit freundlicher Genehmigung durch Prof. Dr. H. Olivier,
Stoßwellenlabor der RWTH Aachen)

With its unique wide frequency range, covering all settings above 1 MHz, it is the universal amplifier for all applications. Its particular strength lies in experiments in the shock wave and explosion wave range, where data must be acquired quickly.

It can also be used just as well for stationary processes. Various constant currents can be used as sensor supply independently of the amplifier section. Two different inputs (2-pole and 6-pole) make it possible to connect all types of sensors.

The handling of the amplifier with its clear display leads to a quick overview of all settings.

The MFA 1000 is available in housings with 2, 6, 10 or 16 amplifiers including power supply and optionally with RS 232 interface.

The MFA100 of the former MF Instruments GmbH is identical to our amplifier.

Technical Data

Input voltage:	±3.5 V
Operating range:	±2.5 V Wide range compensation range (ZI adjustment) after compensation (ZI) ±1.0 V signal range
Input resistance:	1 MOhm
Input connectors:	BNC negative, Lemosa 6-pole, RS 232
Noise:	10 µVRMS/ 150 µVp-p@ V = 500, open bandwidth
Gain range:	1-2000
Gain accuracy:	< ±1 ‰ error
Bandwidth:	for gain up to 100 ~1000 kHz upper FG. at amplification up to 1000 ~1300 kHz upper FG lower cut-off frequency approx. 1.0 Hz with AC coupling
Filter:	2-4-10-20-40-100-200-400 kHz
Zero adjustment:	±2.5 V
Output voltage:	±10 V, 10 nF, short-circuit proof
Output connectors:	BNC negative
Constant current source:	5.0 / 7.0 / 10 mA, voltage range 0-12 V
Control:	Adjustment manually or optionally via RS232 interface
Housing:	Housing incl. power supply for 2, 6 or 10 amplifiers
Dimensions (L x H x W):	220 x 128.5 (3 U) x 25.4 mm (5HP)
Mains connection:	100-240 V, ± 15V, +180 to -100 mA

Article Numbers

200-100-1	Müller multifunctional amplifier MFA 1000, 100-240 V
200-100-4	Table-top housing for up to two MFA 1000 incl. power supply
200-100-5	Table-top housing for up to two MFA 1000 incl. power supply and RS232 interface for setting the amplifier by computer
200-100-6	Table-top housing for up to 6 MFA 1000 incl. power supply (½ 19" 42 TE)
200-100-7	Table-top housing for up to 10 MFA 1000 incl. power supply (¾ 19" 63 TE)
200-100-8	Table-top housing for up to 16 MFA 1000 incl. power supply (19" 84 TE)
200-100-9	Surcharge for additional RS232 interface for setting the amplifier via computer
200-100-10	MFA 1000 dummy plate for unused slots
800-200-3	6-pole Lemosa connector for MFA 1000



Table-top Housing for
one, two or more
Amplifier incl. Power
Supply

