



## AVL AMPLIFIERS AND SIGNAL CONDITIONING

# MICROIFEM 2M1 MULTIPURPOSE

## MULTIPURPOSE AMPLIFIER FOR COMBUSTION ANALYSIS

The AVL MicroIFEM 2M1 is a 2-channel multipurpose amplifier for high-speed and high-precision combustion analysis on engine testbeds or in vehicle. The MicroIFEM Multipurpose supports a wide range of sensors such as: piezo-resistive sensors, strain-gage sensors, Wolff/Hall sensors, full-bridge sensors, voltage-supplied sensors. In combination with the AVL 3077 Oscillator Box the MicroIFEM 2M1 furthermore allows high-speed measurement of inductive pick-up signals. Each channel can be parameterized fully individually.

### TYPICAL APPLICATIONS

- Intake or exhaust manifold pressure
- Fuel rail pressure
- Injector nozzle needle lift
- Force applied on rocker arm
- Pushrod position

Its small dimensions (4.75", 1HU) and robustness allow ideal mounting close to the sensors e.g. in a cable boom-box, meaning short signal cables and lowest impact of electromagnetic interferences on the signal quality.



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Technical Data / Product Name

### MICROIFEM 2M1 MULTIPURPOSE

GENERAL	
Input channels	2
Dimensions WxHxD / Weigth	109 x 42 x 230 mm / 0.75 kg
Power supply	9.5 V ... 36 V DC
Power consumption	Operation: 9 W; Startup: 16 W
Temperature range	-40°C...+60°C (-40°F.....+140°F)
Sensor Data Management (AVL SDM™)	Supports IEEE 1451 TEDS (for current-supplied sensors)
Parameterization	Remote-controlled via PC interface (IndiSignal / IndiCom)
Linearity error	< 0.01% FSO
Low-pass filter	2 kHz, 5 kHz, 10 kHz, 20 kHz or 100 kHz upper cut-off frequency
Output signal	-10 V ... 10 V on BNC sockets
BRIDGE – VOLTAGE OUTPUT	
Input voltage range	+/-10 V; +/-50 V
Bridge output supply	0 V ... 10 V
Maximum output current	25 mA
BRIDGE – CURRENT OUTPUT	
Bridge output supply	0 mA ... 10 mA
Maximum voltage drop at sensor	17 V

### YOUR BENEFITS AT A GLANCE

- Optimization of test equipment pool thanks to versatility and multiple sensor types covered
- High signal robustness due to full galvanic isolation between supply and signal output
- Full integration in IndiCom: Parameterization, traceability, advanced sensor data logging

### OPTIONS / EXTENSIONS

- **TI060077A.01** AVL Oscillator Box 3077 for high-speed needle lift sensors
- **TI0600DNA/B.02** Injection nozzle adaption for needle lift measurement with Oscillator Box

### NEW!

- ✓ Now also compatible with the AVL 3077 Oscillator Box for needle lift measurement
- ✓ Now supports IEEE 1451 TEDS for piezo-resistive sensors
- ✓ New 2-channel format, compact and flexible