

# CF-Measuring Amplifier Module

MBI 46.13

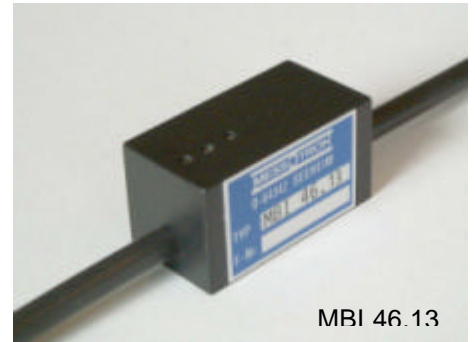
**MESSOTRON**

## CF-Measuring Amplifier

- Mini-Module, for in-cable usage
- Fully potted electronics
- Power supply +/-15 VDC, option: 24 VDC
- Output +/-10V or 0...10V (dep. on sensor)

The CF amplifier can be used for operation of half bridge or full bridge (LVDT) inductive sensors.

Multiple sensor operation on parallel amplifiers with common power supply may cause interference.



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## Amplifier

The amplifier generates the 5 kHz sensor excitation signal (other frequency optional). The sensor return signal is demodulated to a position-proportional DC output of +/-10V or 0...10V, depending on sensor type (symmetric or asymmetric).

The module is powered by +/-15 VDC (option: 24 VDC). Note that the amplifier output stability relies on stable power supply. For 24 VDC supply, power return and output return must not be connected (refer to "Connection").

## Compatible sensors

The amplifier module is suitable to operate inductive displacement (position) sensors, preferably Messotron products (available in free or guided core (probe) version, half-bridge or LVDT, stroke range from  $\pm 0.1$  mm to  $\pm 500$  mm or 0 ... 1000 mm, linearity classes to  $\pm 0.1\%$ , pressure resistant or high-temperature).

Use non-magnetic material to mount the sensor core. The sensor provides magnetic shielding. Avoid high-intensity magnetic fields in sensor proximity.

For known sensors, the a basic factory pre-adjustment of the module is made before shipment.

## Specifications

Suitable for sensors	Inductive sensors (in half or full bridge configuration)
Sensitivity	20 ... 400 mV/V
Sensor excitation	ca. $2V_{\text{eff}}$ (option: up to $5 V_{\text{eff}}$ )
Excitation (carrier) frequency	5 kHz $\pm 5\%$ typical , (other frequency on request)
Accuracy	$< \pm 0,5\%$ (for stabile power supply)
Temperature coeff. Zero	$< \pm 2 \times 10^{-4} / \text{K}$
Span	$< \pm 3 \times 10^{-4} / \text{K}$
Power supply (stabilised, filtered)	+/-15 VDC $\pm 10\%$ (option: 23 ... 30 VDC), ~ 1W
Power rating	approx. 1 W
Operating / Storage temperature	0 ... +60°C / -25 ... +90°C
Dimensions	W x D x H = 35 x 20 x 20 mm (w/o cable)
Mass	ca. 0.1 kg (w/o cable)
Electr. connection	cable with colour-coded leads

Subject to change without prior notice