

## Miniature measuring amplifier for inductive displacement sensors



- Suitable for LVDT and LVIT
- < 4 cm, space-saving inline amplifier
- Supply:  $\pm 15$  V or +24 V
- Output:  $\pm 10$  V
- Adjustment of gain, electrical zero and phase by easy to reach trimming potentiometers

### Technical Specifications

Linearity error	< 0,1 % FSO
Carrier frequency	5 kHz $\pm 5$ % (sine); optional 1...20 kHz
Dynamic bandwidth	500 Hz ( $\pm 3$ dB) (max. 1/10 of carrier frequency)
Excitation voltage (primary)	approx. 2 V <sub>rms</sub> @ 5 kHz, sinusoidal max. 12 mA <sub>rms</sub>
Input resistance (secondary)	approx. 200 k $\Omega$
Output signal	$\pm 10$ VDC, ballast resistor > 10 k $\Omega$
Noise level and residual carrier voltage	< 5 mV <sub>rms</sub>
Temperature coefficient of zero point	< $\pm 2 \times 10^{-4}$ / K
Temperature coefficient of gain	< $\pm 3 \times 10^{-4}$ / K
Operating temperature	0...60 °C
Storage temperature	-25...85°C
Electromagnetic compatibility	DIN EN 61326-1
Supply voltage	Stabilized and filtered +/-15 VDC $\pm 10$ % or +23 ... 30 VDC
Power consumption	approx. 1 W
Electrical connection	cable with colour-coded leads
Dimensions	B x T x H = 38 x 20 x 20 mm
Weight	approx. 0,1 kg



## Suitable sensors

Inductive differential transformers (LVDTs)	with 4-wire technology
Differential inductors (LVITs) and long-stroke sensors (eddy current design)	Inductive half bridges with 3-wire technology
Rated output	20...130 mV/ V => / V6 130...600 mV/ V => standard
Input impedance	100...1000 Ω

## Overview of types and options

MBI 46.13/ x y /zzz	
<b>Power supply</b>	<b>Options</b>
±15 VDC 1 5	/nn kHz Altern. carrier frequency in the range (1...20 kHz)
+24 VDC 2 4	/0-10 V Output signal 0...10 V
	/ V6 with 6x-preamplifier for sensors with a rated output < 130 mV/V