CF Measuring Amplifier MBI 46.12

Miniature measuring amplifier for inductive displacement sensors

- Suitable for LVDT and LVIT transducers
- Available with grounding clip or mounting bracket for DIN EN rail mounting
- Supply voltage: ±15 V or +24 V
- Signal output: ±10 V
- Adjustment of gain, electrical zero and phase by trimming potentiometers

Technical Specifications

Linearity error	< 0,1 % FSO
Carrier frequency	5 kHz ±5 % (sine); optional 1...20 kHz
Dynamic bandwidth	500 Hz (± 3 dB) (max. 1/10 of carrier frequency)
Excitation voltage (primary)	approx. 2 V_{rms} @ 5 kHz, sinusoidal max. 12 mA_{rms}
Input resistance (secondary)	approx. 200 kΩ
Output signal	±10 VDC, ballast resistor > 10 kΩ
Noise level and residual carrier voltage	< 5 mV_{rms}
Temperature coefficient of zero point	< ± $2x10^{-4}$ / K
Temperature coefficient of gain	< ± $3x10^{-4}$ / K
Operating temperature	0...60 °C
Storage temperature	-25...85°C
Electromagnetic compatibility	DIN EN 61326-1
Supply voltage	Stabilized and filtered +/-15 VDC ±10% or +23 ... 30 VDC
Power consumption	approx. 1 W
Electrical connection	8-pin terminal block
Dimensions Dimensions with mounting bracket	approx. W 45 x H 20 x D 45 mm approx. W 45 x H 30 x D 60 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 46.12/ x y /zzz	
Power supply	**Options**
±15 VDC **1 5**	**/RS** with mounting bracket
+24 VDC **2 4**	**/0-10 V** Output signal 0...10 V
	/nn kHz Altern. carrier frequency in the range (1...20 kHz)
	/ V6 with 6x-preamplifier for sensors with a rated output < 130 mV/V