CF Measuring Amplifier MBI 46.32

Measuring amplifier for operation of inductive displacement sensors

- Suitable for LVDT and LVIT
- 1-channel- or 2- channel -version
- Supply: ±15 V or +24 V
- Output: ±10 V or 4...20 mA
- Adjustment of gain, electrical zero and phase by potentiometers on front panel
- Pot for rough adjustment of gain

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 k*
Output signal	4...20 mA, impedance < 500 Ω or ±10 VDC, ballast resistor > 10 kΩ
Noise level and residual carrier voltage	< 5 mV_{rms}
Temperature coefficient of zero point	< 0,10 % / 10 K @ 100 mV/V < 0,15 % / 10 K @ 20 mV/V
Temperature coefficient of gain	< 0,05 % / 10 K @ 100 mV/V < 0,15 % / 10 K @ 20 mV/V
Operating temperature	0...60 °C
Storage temperature	-25...85°C
Electromagnetic compatibility	DIN EN 61326-1
Supply voltage	MBI 46.32.1y: ±15 VDC stabilized MBI 46.32.3y: +20...+36 VDC MBI 46.32.4y: +20...+36 VDC for 2-channel version
Power consumption	max. 2 W per channel
Electrical connection	19-pin terminal block
Dimensions without see-through cover Dimensions with see-through cover	approx. W 100 x H 75 x D 110 mm approx. W 100 x H 75 x D 125 mm
Weight	approx. 0.35 kg (1-channel version) approx. 0,45 kg (2 channel version)

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...600 mV/V
Input impedance	100...1000 Ω

Overview of types and options

MBI 46.32. x y		**/zzz**
Power supply	**Output signal**	**Options**
±15 VDC **1**	**1** ±10 V- output	**/nn kHz** Alternative carrier frequency in the range (1...20 kHz)
+24 VDC **3**	**2** 4 ... 20 mA- output	**/0-10 V** [1)] Output signal 0...10 V
2-channel **4** +24 VDC		**/0-20mA** Output signal 0...20 mA
		/GP “Course pot” for rough adjustment of gain