

MBB470 SERIES

MINIATURE FORCE TRANSDUCERS

FEATURES

- Nominal capacity: 0.5... 50 N
- Full bridge strain gauges
- Built-in high-capacity overload protection
- Small size for compact applications
- High-strength aluminum alloy measuring element

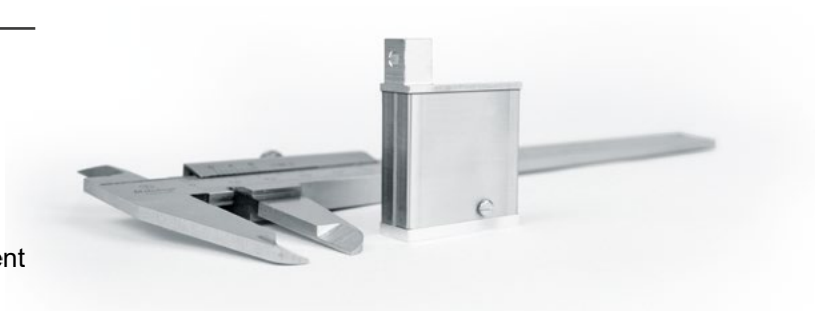


Fig. 1: MBB470 Series | Miniature Force Transducer (caliper not included)

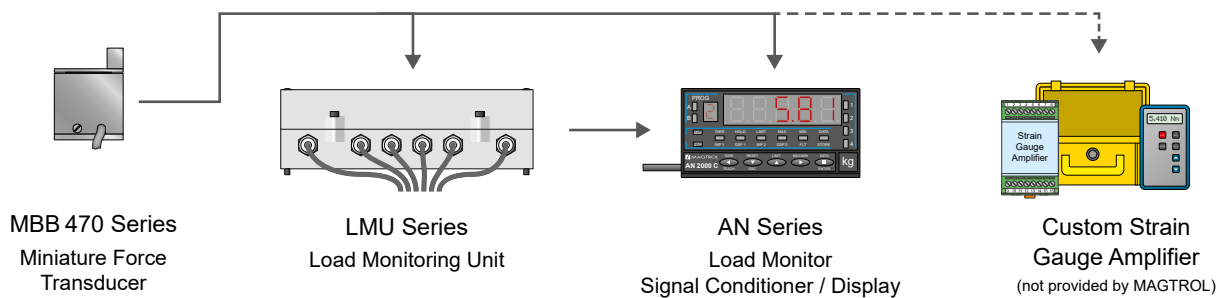
DESCRIPTION

The Magtrol MBB470 Series Miniature Force Transducers are designed for the measurement of very small positive and negative forces. Entirely made of aluminum, the MBB470 combines lightness and stability and has excellent overload capacity.

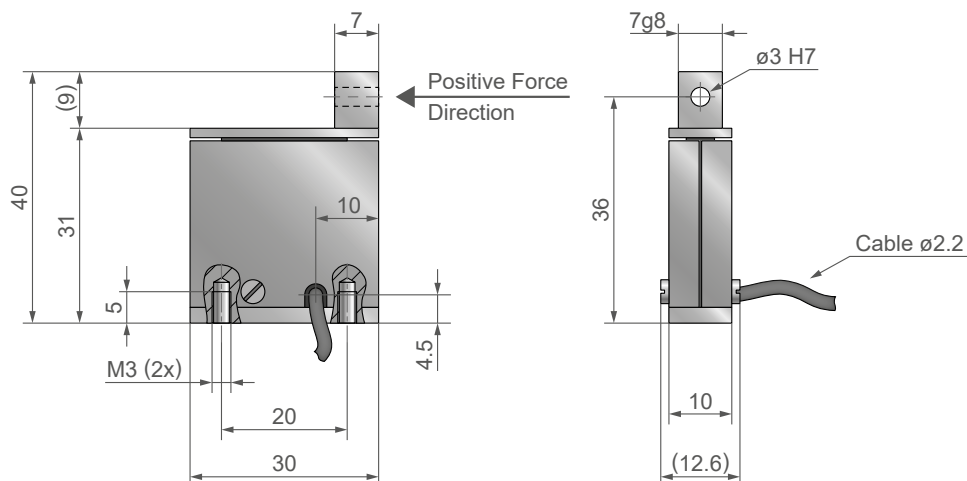
APPLICATION

The compact dimensions of the MBB470 Series Transducer allows adaptation to a wide range of small and precision applications as well as long term dynamic measurements.

SYSTEM CONFIGURATION



DIMENSIONS



SPECIFICATIONS

MODEL	MBB 473	MBB 474	MBB 475	MBB 476	MBB 477	MBB 478	MBB 479
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LOAD MEASURING

Nominal Load	±0.5N	±1N	±2N	±5N	±10N	±20N	±50N
Overload Limit	5N		50N			100N	
Displacement at Nominal Force	≤0.05mm			≤0.08mm			
Non-linearity + Hysteresis Error	≤±0.1%			≤±0.05%			
Angular Deviation of ø3 H7 Hole at Nominal Force	≤0.005°						

ELECTRICAL CHARACTERISTICS

Nominal Sensitivity	1 mV/V ±1%						
Input Impedance	1000 Ω ... 1200 Ω			345 Ω ... 450 Ω			
Output Impedance	1000 Ω ±10 Ω			350 Ω ±3 Ω			
Insulation Resistance	≥10 ⁹ Ω						
Supply Voltage	≤10V DC/AC				≤12V DC/AC		

MECHANICAL CHARACTERISTICS & ENVIRONMENT

Max. Relative Humidity (indoor conditions)	90%
Protection Class	IP42

ELECTRICAL CONNECTIONS

Connection cable	Shielded cable, length 0.5 m ^{a,b)}
Wiring diagram ^{c)}	

a) CAUTION: The length of the cable attached to the MBB470 **must never be shortened**. This would damage the internal adjustments specific to each sensor.

b) Other lengths available on request

c) The shield is not connected on the transducer side

SYSTEM OPTION & ACCESSORIES

AN SERIES - LOAD MONITOR DISPLAY WITH INTEGRATED SIGNAL CONDITIONER



AN Series
Load Monitor Display with integrated signal conditioner

The AN Series Load Monitor is designed to process and display signals coming from various types of transducers (weight, load, pressure, torque, etc.) that use standard strain-gauge bridges.

Standard features include the reading of the input variable as well as remote hold, reading and memorization of max and min values (peak / valley), tare and reset function.

LMU 209 - LOAD MONITORING UNIT



LMU 209 in polycarbonate housing for DIN-rail mount

The LMU209 is a versatile strain gauge amplifier, designed for signal conditioning and interfacing low level signals to programmable logic controllers (PLCs) or any control unit with analog inputs. The LMU209 features both voltage and current-type outputs. Due to its integrated DIP-switches, the amplifier can be easily configured to the desired input ranges.

This modularized amplifier is available either in polycarbonate housing for DIN-rails mount or in aluminum housing for hostile environments. All wires are connected to screw terminals.

ORDERING INFORMATION

ORDERING NUMBER	MBB47 _ /01X
3, 4, 5, ..., 9 : Model number	

Example: MBB470 Miniature Force Transducer, with nominal load 2N would be ordered as follows: **MBB 475/01X**.