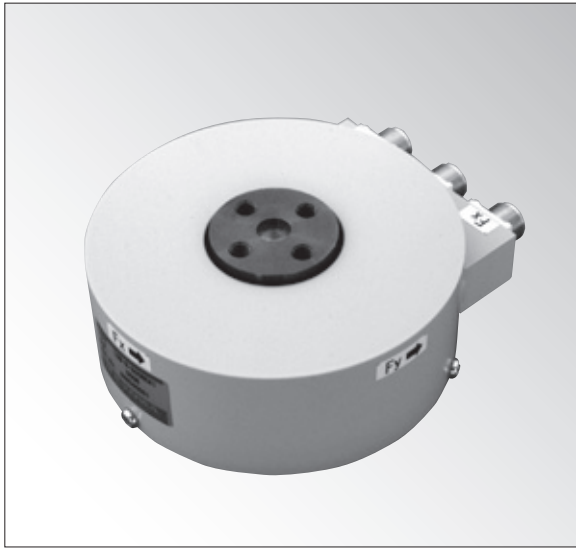


LSM-B-SA1

● 10 to 500 N

3-component Force Transducer



Enables Force Measurement in X, Y and Z Directions. The Compact & Lightweight Strain Gage Based Design is Suitable for Model Experiments.

Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.5\%$ RO
Hysteresis	Within $\pm 0.5\%$ RO
Rated Output	Approx. 0.5 mV/V
Interference	Within $\pm 3\%$ RO

Environmental Characteristics

Safe Temperature	0 to 80°C
Compensated Temperature	0 to 70°C
Temperature Effect on Zero	Within $\pm 0.05\%$ RO/°C
Temperature Effect on Output	Within $\pm 0.05\%$ /°C

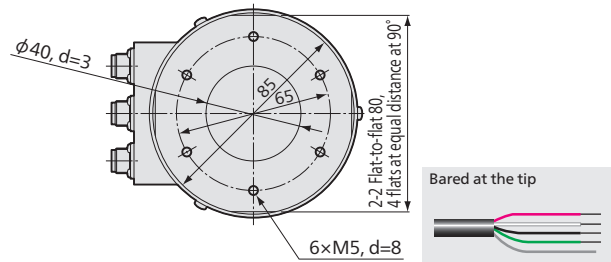
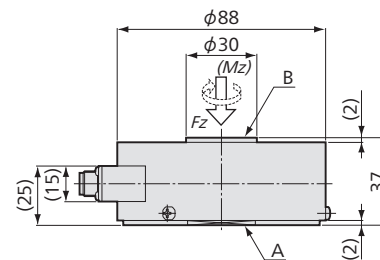
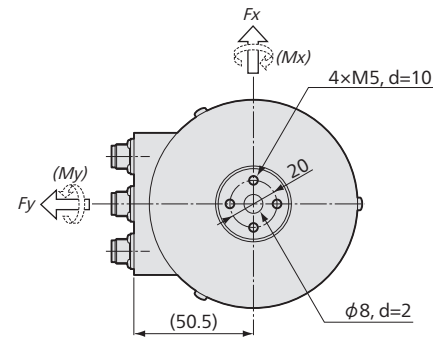
Electrical Characteristics

Safe Excitation	10 V AC or DC
Recommended Excitation	1 to 5 V AC or DC
Input Resistance	240 Ω $\pm 5\%$
Output Resistance	240 Ω $\pm 5\%$
Cable	4-conductor (0.08 mm ²) chloroprene shielded cable, 4 mm diameter by 5 m long, with a connector plug to the transducer side and bared to the amplifier side (Shield wire is not connected to the case.)

Mechanical Properties

Safe Overloads	150%
Natural Frequencies	See table below.
Weight	See table below (Excluding cable).
Safe Moments	See table below.

Dimensions



To Ensure Safe Usage

LSM-B-SA1 series does not feature waterproof structure.

- Note: 1. No moments of M_x , M_y , and M_z are measured.
2. Arrows indicate directions of component force in plus polarity acting to the B plane with the A plane fixed.

Models	Rated Capacity	Natural Frequencies			Safe Moment	Weight (Approx.)
	F_x, F_y, F_z	X	Y	Z	M_x, M_y, M_z	
LSM-B-10NSA1	± 10 N	≈ 0.3 kHz	≈ 0.2 kHz		1.2 N-m	600 g
LSM-B-20NSA1	± 20 N	≈ 0.4 kHz	≈ 0.3 kHz		2.4 N-m	
LSM-B-50NSA1	± 50 N	≈ 0.8 kHz	≈ 0.6 kHz		5.9 N-m	
LSM-B-100NSA1	± 100 N	≈ 1.3 kHz	≈ 0.9 kHz		9.8 N-m	
LSM-B-200NSA1	± 200 N	≈ 2.5 kHz	≈ 2.0 kHz		24 N-m	
LSM-B-500NSA1	± 500 N	≈ 2.2 kHz	≈ 1.8 kHz		59 N-m	1.6 kg

Safe moments are stated for reference to strength.

● Dynamic measurement

LSM-B-SA1
Recommended
products for
combination

