

LFX-A

●With Built-in Amplifiers ●1, 3 kN

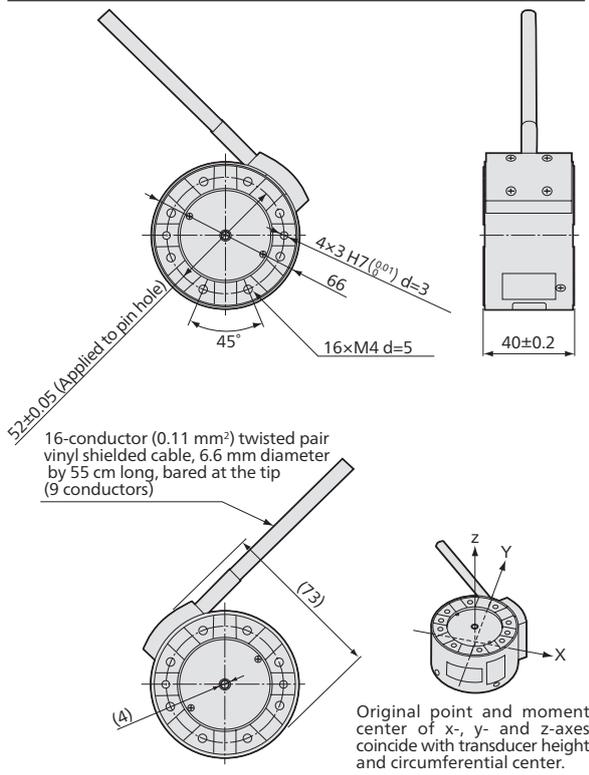
Compact 6-component Force Transducer with Built-in Amplifier



Compact Built-in Amplifiers φ4 Center Hole for Wiring

Enables simultaneous measurement of 3 components of force (Fx, Fy, Fz) in 3 axial directions orthogonal to the transducer and 3 moments (Mx, My, Mz) around the axes. It outputs 6 voltage signals proportionated to 6 detected components.

■ Dimensions



Specifications

Performance

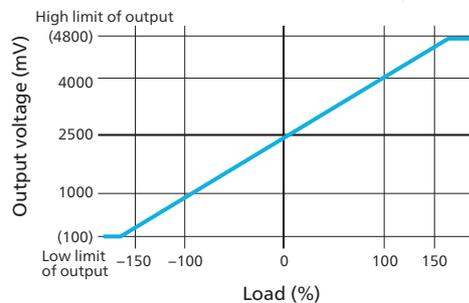
Rated Capacity	See table below.
Nonlinearity	Within ±0.5% RO
Hysteresis	Within ±0.5% RO
Interference	±1.5% RO (After correction by interference compensated coefficients stated in the Test Data Sheet)
Note	Output voltage signals of 6-component force should be compensated by using the interference compensated coefficients. the output interfere with each other.
Rated Output	Approx. ±1500 mV (From 2500 mV output with no load at the center, after compensation)

Environmental Characteristics

Safe Temperature	-10 to 70°C (Non-condensing)
Compensated Temperature	0 to 60°C (Non-condensing)
Temperature Effect on Zero	Within ±0.05% RO/°C
Temperature Effect on Output	Within ±0.05%/°C

Electrical Characteristics

No-load Output: 2500 mV at the center (See figure below.)



Cutoff Frequencies of AMP 500 Hz, amplitude ratio at cutoff point -3 ± 1 dB

Power Supply 5V DC, 160 mA or less

Cable 16-conductor (0.11 mm²) twisted pair vinyl shielded cable, 6.6 mm diameter by 55 cm long, bared at the tip (9 conductors) (Shield wire is not connected to the case.)

Mechanical Properties

Safe Overloads	150%
Materials	Main unit LFX-A-1KN: Aluminum (Metallic finish) Main unit LFX-A-3KN: SUS (Metallic finish) Cover : Black anodic oxide coating aluminum Cable holder : Anodic oxide coating aluminum
Weight	See table below (Excluding cable).
Degree of Protection	IP40 (IEC 60529)

*To obtain the rated output of ±1500 mV for each of 6-component force, zero drift due to installation conditions including tightening and loading should be made within ±200 mV.

Models	Rated Capacity	Weight
LFX-A-1KN	Fx: ±1000 N Fy: ±1000 N Fz: ±1000 N Mx: ±40 N·m My: ±40 N·m Mz: ±25 N·m	≈ 210 g
LFX-A-3KN	Fx: ±3000 N Fy: ±3000 N Fz: ±3000 N Mx: ±100 N·m My: ±100 N·m Mz: ±50 N·m	≈ 420 g

To Ensure Safe Usage

- Prepare a plate for installing the LFX-A with sufficient strength. It is recommendable that LFX-A-3KN should be applied on the steel plate whose thickness is more than 10 mm. With same reason, we recommend as follows. LFX-A should be applied on an aluminum alloy board which is not less than 15 mm thick. If the LFX-A is installed on a low rigid mounting plate, interference may be increased.

●Dynamic measurement

LFX-A
Recommended
products for
combination

Universal Recorder
EDX-200A
→ 3-55

Universal Recorder
EDX-100A
→ 3-63

Memory Recorder/Analyzer
EDX-5000A
→ 3-68

