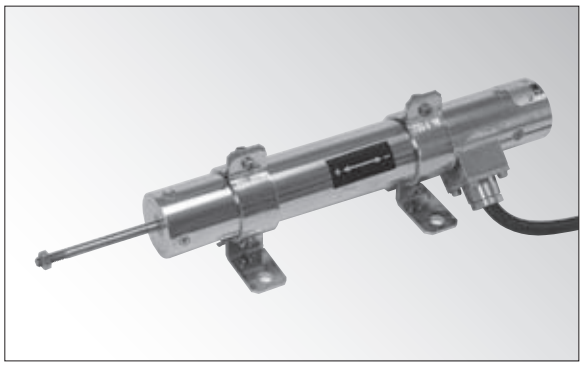
DLT-AS/BS

●5 to 500 mm

Inductance-type displacement transducer



Less friction and small measuring force Excellent linearity and high resolution

- ●Complete shielding against magnetism makes the transducers hard to receive external electric effects.
- ●Stable against temperature changes
- ●Noncontact design between the core and mainframe ensures durability.
- ●Also available in waterproof type (DLT-BS)

Using a differential transformer for the sensing element, the inductance displacement transducers convert mechanical displacement to an electric quantity (voltage). Since an amplifier excited by 5 kHz carrier is required for measurement, use the transducers in combination with a carrier-type dynamic strain amplifier in DPM series.
The transducers enable measurement of changing length or displacement initiated by unevenness, elongation/contraction or thickness change of an object. Watertight models conforming to IEC 60529 make transducers in this series further suitable for field measurement.

Specifications

Performance

Rated Capacity	See table below. (DLT-BS is watertight model conforming to IEC 60529)
Nonlinearity	Within ±0.5% RO
Hysteresis	Within ±0.5% RO
Rated Output	Approx. ±2 mV/V (4000 μm/m)

Environmental Characteristics

Safe Temperature Range	-15 to 75°C (Non-condensing)
Compensated Temperature Range	-10 to 60°C (Non-condensing)
Temperature Effect on Zero Balance	Within ±0.01% RO/°C
Temperature Effect on Output	Within ±0.01%/°C

Electrical Characteristics

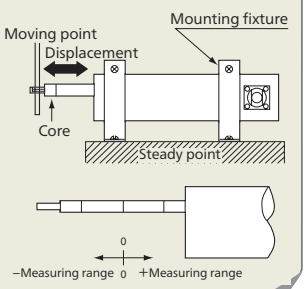
Detection Method	Inductance
Safe Excitation Voltage	5 VAC (Carrier frequency 5 kHz)
Recommended Excitation Voltage	2 VAC (Carrier frequency 5 kHz)
Input Resistance	120 Ω±1%
Output Resistance	120 Ω±1%
Cable	4-conductor (0.3 mm²) vinyl shielded cable, 7.6 mm diameter by 5 m long, terminated with connector plug

Mechanical Properties

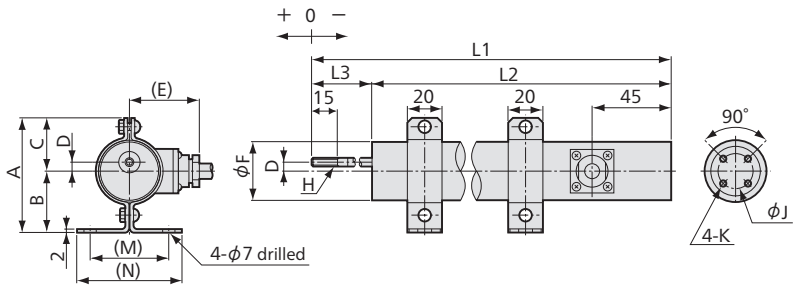
Frequency Response Range	See table below.
Weight	See table below.

To Ensure Safe Usage

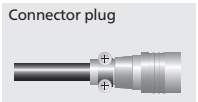
- ●The transducer may be mounted with an accessory mounting fixture or with the screws on the top of case.
- ●The carrier frequency affects the output voltage and characteristics of transducers. Thus, any dynamic strain amplifier with bridge excitation at other than 5 kHz cannot be used. (Also, any amplifier with DC bridge excitation cannot be used.)



■Dimensions



Connector plug



Models		Rated Capacity	Frequency Response Range	A	B	C	D	(E)	ϕF	H	ϕJ	K	L1	L2	L3	M	N	Weight (Approx.)
DLT-5AS	DLT-5BS	±5 mm	DC to 200 Hz	65	35	30	5	40	33	M5 P=0.8	20	M4 P=0.7 d=7	210	175	35	45	60	700 g
DLT-10AS	DLT-10BS	±10 mm	DC to 100 Hz															
DLT-20AS	DLT-20BS	±20 mm	DC to 50 Hz	65	35	30	5	40	33	M5 P=0.8	20	M4 P=0.7 d=7	270	215	55	45	60	800 g
DLT-30AS	DLT-30BS	±30 mm	DC to 30 Hz															
DLT-50AS	DLT-50BS	±50 mm	DC to 20 Hz	65	35	30	5	40	33	M5 P=0.8	20	M4 P=0.7 d=7	330	255	75	45	60	900 g
DLT-100AS	DLT-100BS	±100 mm	DC to 15 Hz	65	35	30	5	40	33	M5 P=0.8	20	M4 P=0.7 d=7	520	395	125	45	60	1.2 kg
DLT-150AS	DLT-150BS	±150 mm	DC to 10 Hz	75	40	35	7	45	42	M6 P=1	25	M5 P=0.8 d=10	680	500	180	55	70	2.3 kg
DLT-200AS	DLT-200BS	±200 mm	DC to 9 Hz	75	40	35	7	45	42	M6 P=1	25	M5 P=0.8 d=10	830	600	230	55	70	2.6 kg
DLT-300AS	DLT-300BS	±300 mm	DC to 7 Hz	75	40	35	7	45	42	M6 P=1	25	M5 P=0.8 d=10	1130	800	330	55	70	3.3 kg
DLT-500AS	DLT-500BS	±500 mm	DC to 5 Hz	75	40	35	7	45	42	M6 P=1	25	M5 P=0.8 d=10	1730	1200	530	55	70	5 kg

●Dynamic measurement

DLT-AS/BS Recommended products for combination


Strain Amplifier DPM-900 Series
→3-5


Strain Amplifier DPM-951A
→3-7