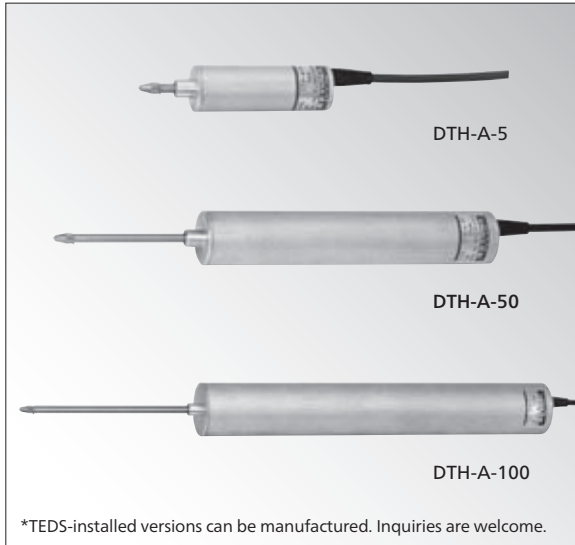


DTH-A

- Large Output-Small Measuring Force
- 5 to 100 mm

Displacement Transducer



Compact & Lightweight Excellent Temperature Characteristics Highly Accurate with Nonlinearity $\pm 0.1\%$ RO

- Large output of 5 mV/V (10000 $\mu\text{m}/\text{m}$)
- Small measuring force of approx. 1.5 to 4 N

DTH-A series displacement transducers adopt a strain gages for the sensing elements to ensure long-term stable measurement. They can widely be used for measurement of structural relative displacement or absolute displacement from a steady point.

Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.1\%$ RO
Hysteresis	Within $\pm 0.1\%$ RO
Repeatability	0.1% RO or less
Rated Output	5 mV/V (10000 $\mu\text{m}/\text{m}$) $\pm 0.1\%$ $\pm 0.15\%$ (DTH-A-5)

Environmental Characteristics

Safe Temperature Range	-10 to 70°C (Non-condensing)
Compensated Temperature Range	0 to 60°C (Non-condensing)
Temperature Effect on Zero Balance	Within $\pm 0.01\%$ RO/°C
Temperature Effect on Output	Within $\pm 0.01\%$ /°C

Electrical Characteristics

Safe Excitation Voltage	6 V AC or DC
Recommended Excitation Voltage	1 to 4 V AC or DC
Input Resistance	350 $\Omega \pm 1\%$
Output Resistance	350 $\Omega \pm 1\%$
Cable	4-conductor (0.065 mm ²) vinyl shielded cable, 4 mm diameter by 2 m long, terminated with connector plug (Shield wire is not connected to mainframe.)

Mechanical Properties

Frequency Response Range	DC to approx. 2 Hz
Measuring Force	See table below.
Weight	See table below (Excluding cable).

Standard Accessories Mounting band: 1 for DTH-A-5 to 30
2 for DTH-A-50 and 100

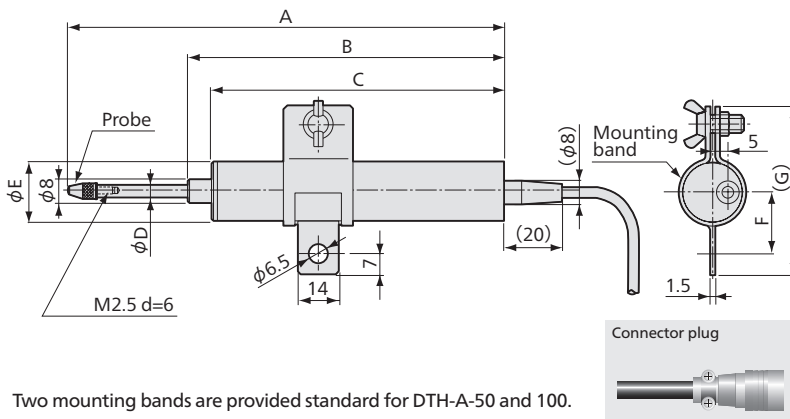
Optional Accessories (For details, refer to page 2-159.)

Extension rods EB-50/100/200
Replacement probes X/XS/SH
Magnet base MB-B

Notes:

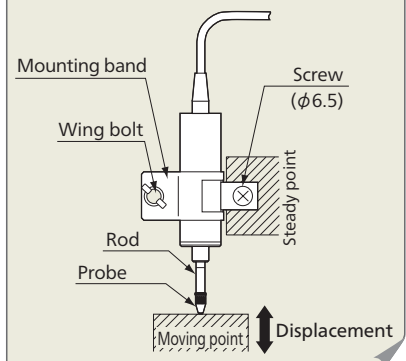
1. Initial unbalance with the rod fully extended is approximately -5000 to -6000 $\mu\text{m}/\text{m}$.
2. Do not apply any displacement in other than expansion/contraction direction of the rod.

Dimensions



To Ensure Safe Usage

Fix the transducer to the steady point, using accessory mounting band, screw and washer.



Models	Rated Capacity	Measuring Force (Approx.)	A		B	C	ϕD	ϕE	F	(G)	Weight (Approx.)
			MAX	MIN							
DTH-A-5	5 mm	1.5 N	84.4	78.4	68	60	4	20	21	57	30 g
DTH-A-10	10 mm	2.2 N	96.4	85.4	75	67					35 g
DTH-A-20	20 mm	2.2 N	122.4	101.4	91	83					40 g
DTH-A-30	30 mm	2.2 N	149.4	118.4	108	100	4	25	23.5	62	75 g
DTH-A-50	50 mm	3 N	209.5	158.5	148	140					200 g
DTH-A-100	100 mm	4 N	359.5	258.5	248	240					

- Physical quantity indication
- Static measurement
- Dynamic measurement

DTH-A Recommended products for combination

Instrumentation Amplifier WGA-680A
→ 3-97

Data Logger UCAM-60B
→ 3-25

Medium Speed Network Terminal Box NTB-500A
→ 3-35

Universal Recorder EDX-200A
→ 3-55

Sensor Interface PCD-400A
→ 3-77