

DTH-A

Displacement Transducers

● Large Output • Small Measuring Force ● 5 to 100 mm

(Formerly, DT-5, 50, 100H)



DTH-A-5



DTH-A-50



DTH-A-100

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

Features

- Highly accurate with nonlinearity $\pm 0.1\%$ RO
- Compact and lightweight
- Large output of 5 mV/V (10000 $\mu\text{m/m}$)
- Small measuring force of approx. 1.5 to 4 N (150 to 400 gf)
- Excellent temperature characteristics

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 $\mu\text{m/m}$) $\pm 0.1\%$

Environmental Characteristics

Safe Temperature Range: -10 to 70°C (noncondensing)

Compensated Temperature Range: 0 to 60°C (noncondensing)

Temperature Effect on Zero Balance: Within $\pm 0.01\%$ RO/ $^\circ\text{C}$

Temperature Effect on Output: Within $\pm 0.01\%$ / $^\circ\text{C}$

Electrical Characteristics

Safe Excitation Voltage: 6 VAC or DC

Recommended Excitation Voltage: 1 to 4 VAC or DC

Input Resistance: $350\ \Omega \pm 1\%$

Output Resistance: $350\ \Omega \pm 1\%$

Cable: 4-conductor (0.065 mm²) vinyl shielded cable, 4 mm diameter by 2 m long, terminated with NDIS 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.

Standard Accessories

Mounting band:

1 for DTH-A-5 to 30

2 for DTH-A-50 and 100

Optional Accessories

(For details, refer to P. 2-129.)

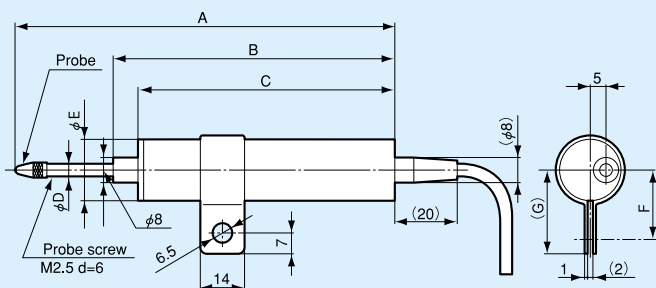
Extension rods EB-50/100/200

Replacement probes X/XS/SH

Magnet base MB-B

Note: Initial unbalance with the rod fully extended is approximately -5000 to $-6000\ \mu\text{m/m}$.

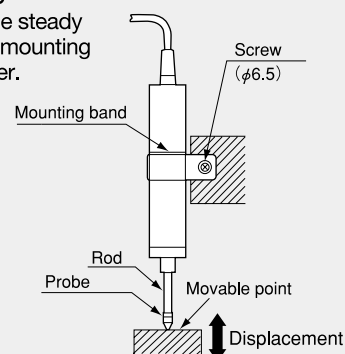
Dimensions



Two mounting bands are provided standard for DTH-A-50 and 100.

To Ensure Safe Usage

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



Model	Rated Capacity	Measuring Force (Reference Value) (Approx.)	A	B	C	ϕD	ϕE	F	(G)	Weight (Approx.)
DTH-A-5	5 mm	1.5 N (150 gf)	Max. 84.4 Min. 78.4	68	60	4	20	21	28	30 g
DTH-A-10	10 mm	2.2 N (220 gf)	Max. 96.4 Min. 85.4	75	67	4	20	21	28	35 g
DTH-A-20	20 mm	2.2 N (220 gf)	Max. 122.4 Min. 101.4	91	83	4	20	21	28	35 g
DTH-A-30	30 mm	2.2 N (220 gf)	Max. 149.4 Min. 118.4	108	100	4	25	23	30	75 g
DTH-A-50	50 mm	3 N (300 gf)	Max. 209.5 Min. 158.5	148	140	4	35	28	35	200 g
DTH-A-100	100 mm	4 N (400 gf)	Max. 359.5 Min. 258.5	248	240	5	35	28	35	200 g