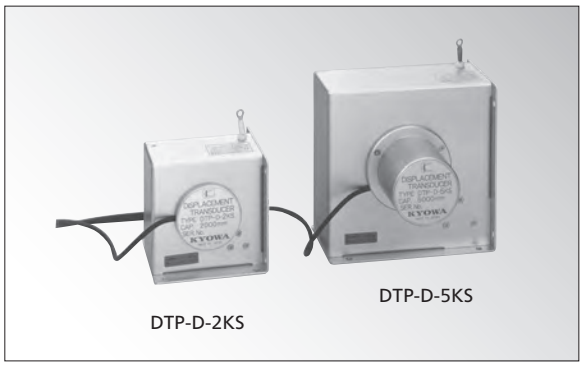
DTP-D-S

Potentiometer-type Displacement Transducer

●For large displacement measurement
●2000 & 5000 mm

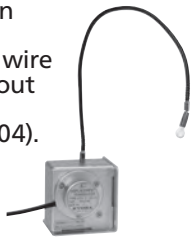


Large displacement measurement and high-level output in each capacity

DTP-D-S displacement transducers are designed to measure displacement by converting expansion/contraction of a sensing wire to electric signal by potentiometer. Two models are available with rated capacity 2000 and 5000 mm, all providing a high rated output of 5 mV/V. In addition, measuring force of the wire is constant, thereby making these transducers easy to use.

●Compact, lightweight, and easy to install
●Measurement possible with strain amplifier
●Constant measuring force of the wire (With differences between pull-out and pull-in)
●Stainless steel wire is used (SUS 304).

*When it is impossible to mount the transducer's case to steady points after a tube is attached to the wire port, models that the tube tip connecting to the steady points are available.



Free Steady Point Type

Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within ±0.3% RO
Hysteresis	Within ±0.3% RO
Rated Output	5 mV/V (10000 ×10^{-6} strain) ±0.3%
Resolution	1/1850

Environmental Characteristics

Safe Temperature & Humidity	-10 to 60°C, 90% RH or less (Non-condensing)
Compensated Temperature & Humidity	-10 to 55°C, 90% RH or less (Non-condensing)
Temperature Effect on Zero	±0.1% RO/°C

Electrical Characteristics

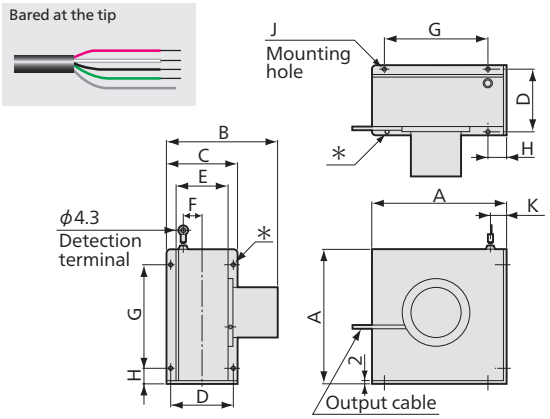
Detection Method	Potentiometer
Safe Excitation	10 V AC or DC
Recommended Excitation	1 to 5 V AC or DC
Input Resistance	350 Ω±1%
Output Resistance	350 Ω±1%
Cable	4-conductor (0.08 mm²) chloroprene shielded cable, 4 mm diameter by 3 m long, bared at the tip (Shield wire is not connected to the case.)

Mechanical Properties

Safe Overloads	120%
Measuring Force	See table below.
Max. Response Speed	See table below.
Service Life	10000 times
Wire	0.45 mm diameter, material SUS304
Weight	See table below. (Excluding cable)

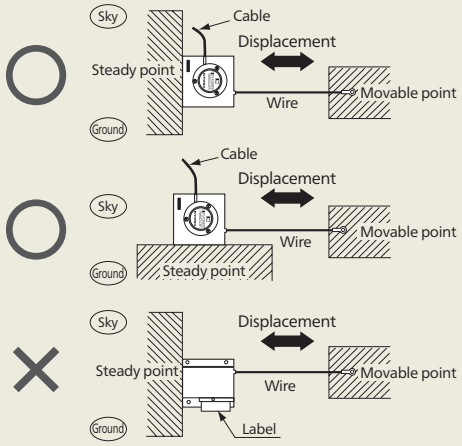
Notes:
1. Don't use the DTP-D-S in repetitive tests for fatigue life evaluation
2. Measurement is impossible when speeds of wire extraction/rewind are lower than follows;
   DTP-D-2KS/5KS 20 mm/s or less

Dimensions



To Ensure Safe Usage

*Install the transducer with the label coming vertically to the ground. (See figures below.)



●Fix a transducer to a steady point where a wire should be pulled out at right angle. It is required to pull out 5 mm or more at least in measurement.
●Don't use the DTP-D-S for dynamic measurement or measurement of rapidly moving or vibration-accompanied objects.

Models	Rated Capacity	Measuring Force		Max. Response Speed	A	B	C	D	E	F	G	H	J	K	Weight
		Pull-out Direction	Pull-in Direction												
DTP-D-2KS	2000 mm	≈ 1.6 N	≈ 1.0 N	300 mm/s	100	—	90	80	59	14	80	10	8×ϕ5.5	12	≈ 550 g
DTP-D-5KS	5000 mm	≈ 1.7 N	≈ 1.1 N	400 mm/s	153	127	80	70	60	20	120	15	8×ϕ5.5	15	≈ 1.4 kg

●Static measurement ●Dynamic measurement

DTP-D-S Recommended products for combination

- Data Logger UCAM-60 series → 3-27
- Fast Data Logger UCAM-550A → 3-33
- Universal Recorder EDX-200A → 3-57
- Universal Recorder EDX-100A → 3-65
- Memory Recorder/Analyzer EDX-5000A → 3-70