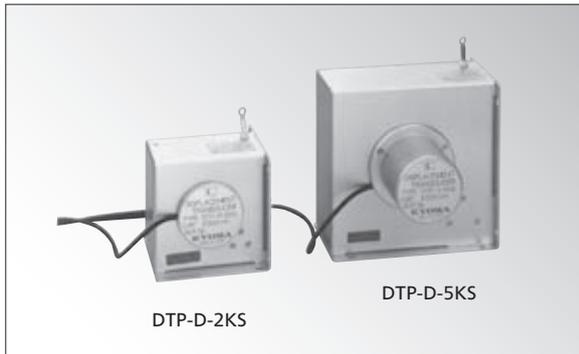


# DTP-D-S

● For Large Displacement Measurement  
● 2000 to 5000 mm

## Potentiometer-type Displacement Transducer

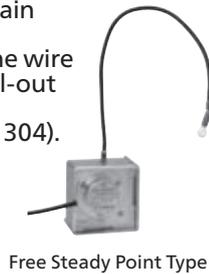


### Large Displacement Measurement and High-level Output in Each Capacity

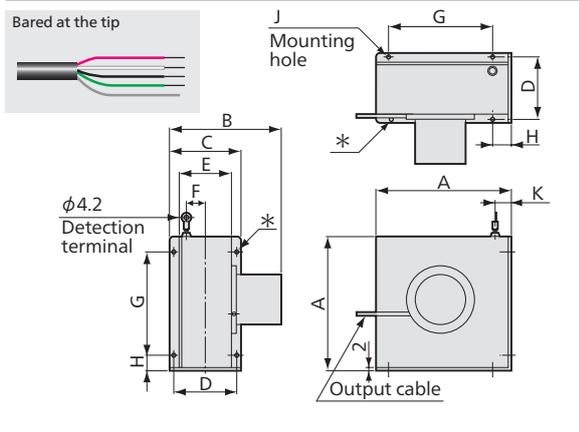
DTP-D-S displacement transducers are designed to measure displacement by converting expansion/contraction of a sensing wire to electric signal by potentiometer. Two models are available with rated capacity 2000 and 5000 mm, all providing a high rated output of 5 mV/V. In addition, measuring force of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

\*For cases where the transducer mainframe cannot be mounted to a steady point by attaching the tube to the wire outlet, Kyowa can offer a type which enables displacement measurement by fixing the tip of the tube to a steady point. (Free steady point type)



#### Dimensions



#### Specifications

##### Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.3\%$ RO
Hysteresis	Within $\pm 0.3\%$ RO
Rated Output	5 mV/V (10000 $\mu\text{m}/\text{m}$ ) $\pm 0.3\%$
Resolution	1/1850

##### Environmental Characteristics

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

##### Electrical Characteristics

Detection Method	Potentiometer
Safe Excitation Voltage	10 V AC or DC
Recommended Excitation Voltage	1 to 5 V AC or DC
Input Resistance	350 $\Omega \pm 1\%$
Output Resistance	350 $\Omega \pm 1\%$
Cable	4-conductor (0.08 mm <sup>2</sup> ) chloroprene shielded cable, 4 mm diameter by 3 m long, bared at the tip (Shield wire is not connected to mainframe.)

##### Mechanical Properties

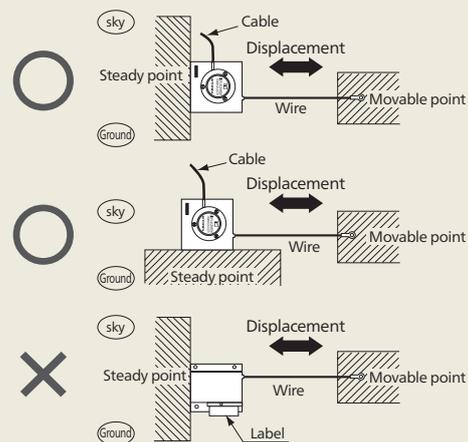
Safe Overload Rating	120%
Measuring Force	See table below.
Maximum Response Speed	See table below.
Service Life	10000 times
Wire	0.5 mm diameter, material SUS304
Weight	See table below.

Notes:

1. DTP-D-A series cannot be used 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

#### 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 can be pulled out at right angle. It is required to pull out 5mm or more at least in measurement.
- DTP-A-S series cannot be used for dynamic measurement or measurement of rapidly moving or vibration-accompanied objects.

Models	Rated Capacity	Measuring Force of Wire (Approx.)		Max. Response Speed	A	B	C	D	E	F	G	H	J	K	Weight (Approx.)
		Pull-Out Direction	Pull-In Direction												
DTP-D-2KS	2000 mm	1.57 N	0.98 N	300 mm/s	100	—	90	80	59	14	80	10	8 $\times$ $\phi$ 5.5	12	550 g
DTP-D-5KS	5000 mm	1.67 N	1.08 N	400 mm/s	153	127	80	70	60	20	120	15	8 $\times$ $\phi$ 5.5	15	1.4 kg

● Static measurement

● Dynamic measurement

DTP-D-S Recommended products for combination

Data Logger UCAM-60B  
→ 3-25

Fast Data Logger UCAM-550A  
→ 3-31

Universal Recorder EDX-200A  
→ 3-55

Universal Recorder EDX-100A  
→ 3-63

Memory Recorder/Analyzer EDX-3000B  
→ 3-69