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Actuators

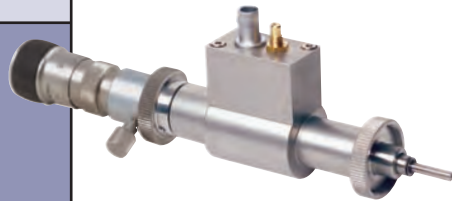
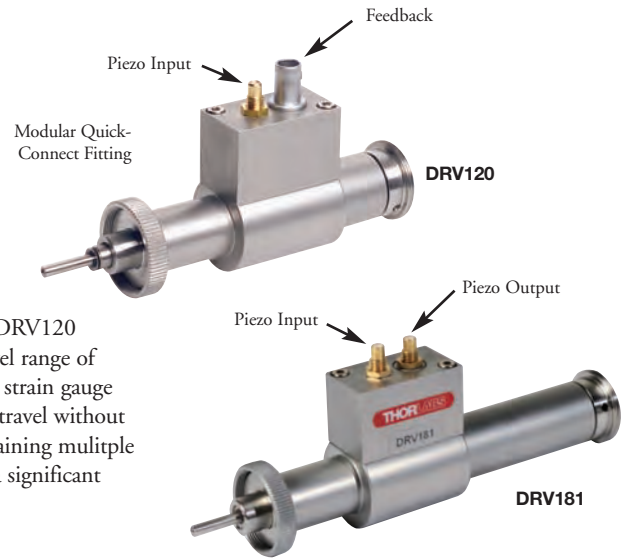
Tutorials

Modular Piezoelectric Actuators

Specifications

- Piezo Voltage (SMC): 0 - 75 VDC
- Travel Range:
 - 20 μm (DRV120)
 - 80 μm (DRV181)
- Resolution:
 - 5 nm (DRV120)
 - 20 nm (DRV181)
- Mounting Connector: Quick-Connect Fitting

These Piezoelectric Actuators are designed to enhance the travel range and control of Thorlabs' NanoMax 300 and NanoMax 600 Series of flexure stages (see pages 558 – 559 and 570 – 571, respectively). The DRV120 actuator, which is directly compatible with these stages, provides a travel range of 20 μm with 5 nm resolution. The positional feedback is provided by a strain gauge mounted directly to the piezo element. The DRV181 offers 80 μm of travel without feedback and provides a convenient electrical feedthrough for daisy chaining multiple piezo extenders together using a single controller, if bandwidth is not a significant factor.



DRV120 Shown with DRV3
(See Page 603)



MCA1

By using our MCA1 or MCA2 Quick-Connect Adapter, these piezoelectric actuators can be fitted to any stages accepting a $\text{Ø}3/8"$ (MCA1) or $\text{Ø}10$ mm (MCA2) mounting barrel.

DAV120 Strain Gauge
Connector Pin Out

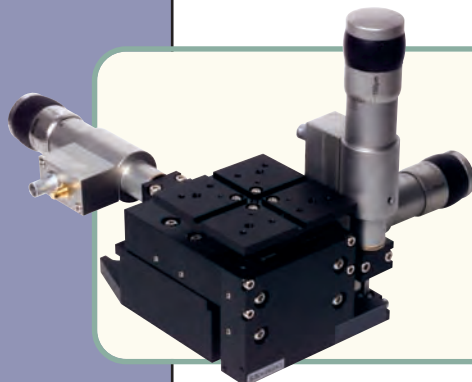
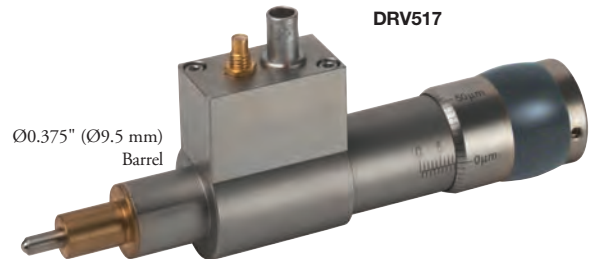
7-Pin LEMO

- 1 +15V
- 2 Oscillator +
- 3 0V
- 4 Sig Out -
- 5 Sig Out +
- 6 -15V
- 7 Travel

ITEM #	\$	£	€	RMB	DESCRIPTION
DRV120	\$ 995.00	£ 716.40	€ 865,65	¥ 7,930.15	Piezoelectric Actuator with Feedback, 20 μm Travel
DRV181	\$ 995.00	£ 716.40	€ 865,65	¥ 7,930.15	Piezoelectric Actuator without Feedback, 80 μm Travel
MCA1	\$ 18.90	£ 13.61	€ 16,44	¥ 150.63	Modular Quick-Connect Adapter for $\text{Ø}3/8"$ Mounting
MCA2	\$ 18.90	£ 13.61	€ 16,44	¥ 150.63	Modular Quick-Connect Adapter for $\text{Ø}10$ mm Mounting

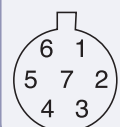
Feedback Piezo Element with Differential Micrometer

- Piezo Voltage: 0 - 75 VDC
- Travel Range:
 - Micrometer: 0.5" (12.7 mm)
 - Piezo: 30 μm
- Resolution:
 - Micrometer: 1 μm (Calculated)
 - Piezo: 10 nm (Calculated)

Application
Idea

RollerBlock™ with
Piezo-Assisted Micrometer
(See Pages 542 - 543)

The DRV517 Combination Actuator provides 0.5" (12.7 mm) of differential adjustment with 1 μm resolution and 30 μm of piezoelectric adjustment with 10 nm resolution (closed-loop). Positional feedback is provided via a 7-pin LEMO connection that can be used in conjunction with our apt™ series of piezo controllers (see pages 636 – 645). The $\text{Ø}0.375"$ ($\text{Ø}9.5$ mm) mounting barrel provides compatibility with standard $\text{Ø}3/8"$ mounting bores.

Strain Gauge
Connector Pin Out

- 1 +15V
- 2 Oscillator +
- 3 0V
- 4 Sig Out -
- 5 Sig Out +
- 6 -15V
- 7 Travel

ITEM #	\$	£	€	RMB	DESCRIPTION
DRV517	\$ 1,195.00	£ 860.40	€ 1,039,65	¥ 9,524.15	Combo Piezoelectric Actuator/Micrometer with Piezo Feedback