

Extremely precise control switches . . . combines rugged construction with repeatability to 0.00004" (0.001 mm)

Ultra-Precision Switches provide very accurate control for measuring, gauging, robotics, positioning, and other automated equipment. Operation is by physical contact with the switch's sensing-stylus, which produces a contact or solid-state output. One rectangular and nine cylindrical models accommodate a variety of mounting requirements and space limitations. For severe applications, where dust, dirt, oils, or coolants are a problem, extra-heavy-duty Series 7486 features a special housing with a flexible rubber sealing-boot.

- -0.00004 inch (0.001 mm) repeatability and accuracy
- Mechanical life of 10,000,000 operations
- Models with contact-closure or transistor outputs
- Contact output models switch AC or DC, need no operating power
- Transistor output models with NPN or PNP configuration
- Extra-heavy-duty and water-tight models
- Wide, -4° to +167°F (-20° to +75°C) operating temperature range
- Hardened steel or precious mineral stylus materials
- Captive, sealed-egress cable
- Accessory power supply/relay module available

Precision switches are ideal for use as positioning control stops in drilling, milling, grinding, and turning operations. In addition they can measure slight expansion due to temperature and pressure changes.

For power supply/amplifier, see page 11.13

SPECIFICATIONS

Mechanical Characteristics:

- Repeatability:** ± 0.001 mm
- Hysteresis:** ≤ 0.002 mm
- Mechanical Life:** 10,000,000 operations
- Switching Frequency:** 10 Hz
- Operating Temperature:** -4° to +167°F (-20° to +75°C)
- Cable Length:** 31.5" (80 cm)

Electrical Characteristics:

Contact Closure Output (Normally Closed):

- Maximum Alternating Voltage: 24 VAC
- Maximum AC Load Current: 50 mA
- Maximum DC Voltage: 15 VDC
- Maximum DC Load Current: 2 mA

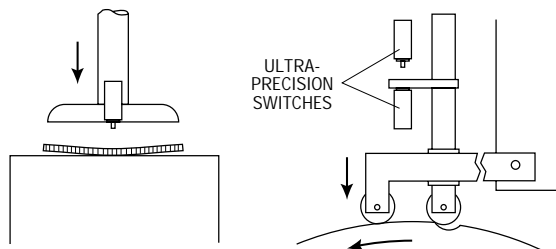
Transistor Output (Normally Open):

- Supply Voltage Range: 5-36 VDC
- Maximum Switching Current @ 24 V: 50 mA
- Minimum Load Resistance: 480Ω

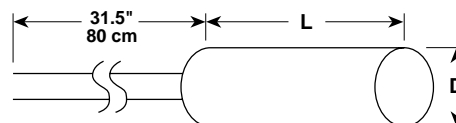
Model Number	Picture	Stylus	Activating Force (gr)	Special Features	Output	Dimensions	
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0748310-005	A	Sapphire	50		Contact	8 mm	20 mm
0748300-003	B	Sapphire	30		Contact	8 mm	20 mm
0748320-007	C	Sapphire	75		Contact	8 mm	27 mm
0748430-010	D	Sapphire	100		Contact	*	*
0748520-007	E	Ruby	75	Watertight	Contact	8 mm	25 mm
0748620-025	F	Hard Steel	250	HD + Water	Contact	16 mm	56 mm
0748321-107	G	Sapphire	75		Transistor NPN	8 mm	27 mm
0748322-107	G	Sapphire	75		Transistor PNP	8 mm	27 mm
0748521-107	H	Ruby	75	Watertight	Transistor NPN	8 mm	34 mm
0748522-107	H	Ruby	75	Watertight	Transistor PNP	8 mm	34 mm

*Rectangular: .79" x .47" x .31" (20 x 12 x 8 mm)

Typical Applications:



Dimensions:



Tubular: See ordering table for dimensions.