

## **General Features**

- » Conversion of Morehouse analog proving rings (Series 100, 200, and 1000) to digital system available
- » Remarkable reliability, repeatability, and accuracy
- » Digital counter display reduces operator error
- » Highly accurate 0.1-micron resolution sensor for measuring ring deflection
- » Ring manufactured from Special alloy steel forging for perfect elasticity
- » Calibration conforming to ASTM E74, ISO 376, ISO/IEC 17025, and ISO 7500 protocols for universal testing machines and load cells

Morehouse Instrument Company, Inc 1742 Sixth Ave., York, PA, 17403 - 2675 USA



## **Technical Specifications**

Specifications	Digital Conversion of Proving Rings		
	Model: Series 100	Model: Series 200	Model: Series 1000
Accuracy			
Uncertainty, % FS	±0.05	±0.025	±0.0125
Divisions at Capacity	10,000	20,000	40,000
Readability, Div.	1	1	1
Sensitivity, Div. (% F.S.)	1 (0.008)	1 (0.005)	1 (0.0025)
Capacities*, lbf	25,000 to 1,000,000	10,000 to 1,000,000	5,000 to 500,000
Temperature Effect, % Rdg /°C	0.027	0.027	0.027

\*Note: Digital Proving Rings could be made at lower capacities per the customer's request.

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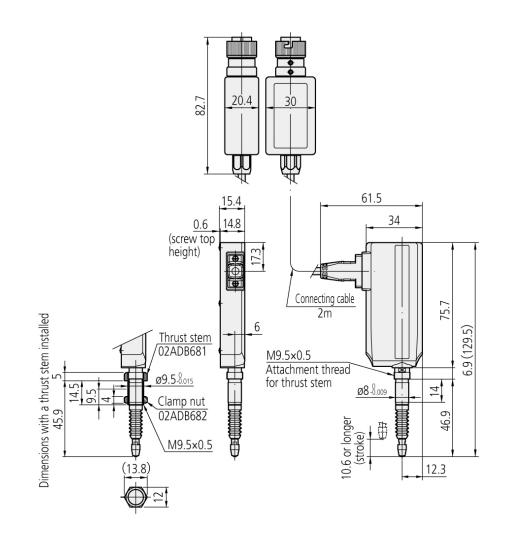
Specifications	Digital Deflection Transducer			
Specifications	Model: 542-181			
Accuracy				
Accuracy at 20°C	( 0.8+L/50 ) μm (L=mm)			
Resolution, mm	0.0001 mm			
Measuring Range	10 mm			
Measuring Force (Spindle Down)	< 1.2 N			
Electrical				
Max Response Speed	400 mm/sec.			
Output Signal	90° phase diff., differential square wave			
Signal Pitch	0.5 μm			
Connecting Cable Length	2 m (6 ft)			
Connector	RM12BPE-6PH (Hirose)			
Environmental				
Operating Temperature Range	0 to 40 °C (32 to 104 °F)			
Operating Humidity	20 % to 80 % RH (no condensation)			
Mechanical				
Contact Point	Φ 3 mm carbide			
Stem Size	Φ 8 mm			
Bearing Type	Linear ball bearing			
Weight	310 g (11 oz)			

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Digital Proving Rings Datasheet (PD-2110)

## **Dimensions**



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