



✓ 25 to 50 % improvement in accuracy compared to analog rings

✓ Ball seat designed for standard Brinell tester size

✓ Highly accurate deflection measurement

✓ Digital readout to reduce operator error by 30 %

✓ Special alloy steel forging for perfect elasticity

## 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 protocol for universal testing machines and load cells



## Technical Specifications

Specifications	Digital Conversion of Proving Rings		
	Model: Series 100	Model: Series 200	Model: Series 1000
<b>Accuracy</b>			
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 customer's request.



## Technical Specifications

Specifications	Digital Deflection Transducer
	Model: 542-181
<b>Accuracy</b>	
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
<b>Electrical</b>	
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)
<b>Environmental</b>	
Operating Temperature Range	0 to 40 °C (32 to 104 °F)
Operating Humidity	20 % to 80 % RH (no condensation)
<b>Mechanical</b>	
Contact Point	Φ 3 mm carbide
Stem Size	Φ 8 mm
Bearing Type	Linear ball bearing
Weight	310 g (11 oz)

