

PCA375 PR-020 Gage Head

Ultra-Compact Design for ± 0.020 " Range Measurement

Features

- Compact design*
- Rugged Polyurethane cable*
- 90° cable exit*
- Calibration certificate supplied with every gage head*
- Compatible with all Schaevitz® signal conditioners*
- 7 connector options and special contact tips available (see page 100)*

Applications

- Bore gages*
- Fixture gages*
- Limited space*
- Small inside diameters*

This ultra-compact device provides accurate measurement in areas with limited space. Designed with a radial cable exit, the gage head easily fits within miniature fixtures and small inside diameters. AC-operated, this ultra-compact gage head is compatible with Schaevitz® signal conditioners (see LVDT Instrumentation section of this catalog, page 111).

A spring-loaded probe with 2.5 oz (70.8 g) of force maintains constant contact with the part under measurement.

The ultra-compact gage head provides excellent stroke-to-size ratio due to its compact packing. A permanently lubricated, bronze bearing and plunger assembly provides long-term transducer repeatability.

With an LVDT as the heart of the sensor, resolution is only limited by the repeatability of the bearing system. An interchangeable 4-48 ADG standard dial gage contact tip is used.



Electrical Specifications

Linearity	Better than $\pm 0.25\%$ FRO
Excitation Voltage	3.5 V rms (maximum)
Excitation Frequency	5 kHz. (2.5 to 10 kHz. OK)
Sensitivity	4.75 mV/V/0.001" at 5 kHz (min)
Phase Shift	+60° (nominal)
Primary Impedance	94.5 ohms (nominal)
Secondary Impedance	214 ohms (nominal)

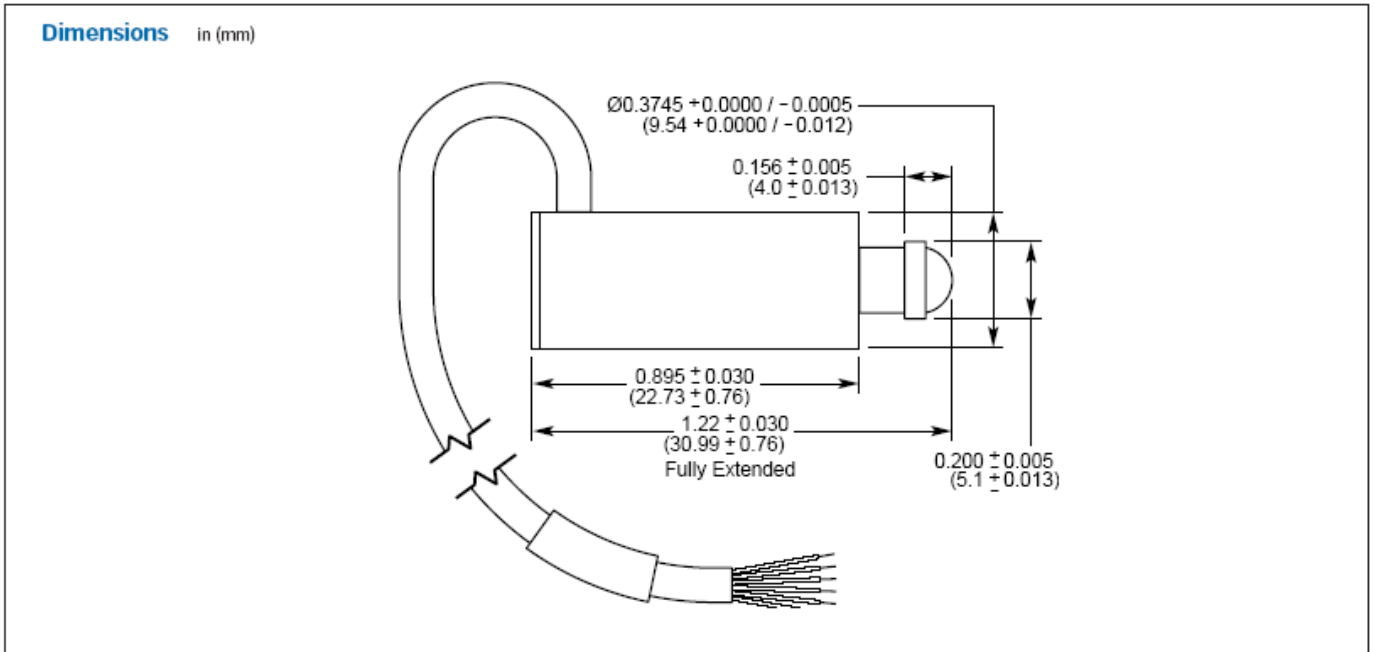
Mechanical Specifications

Linear Range	± 0.020 " (± 0.51 mm)
Pre-travel	0.002" to 0.005" (0.05 to 0.13 mm)
Total Mechanical	
Stroke	0.060" nom (1.52 mm)
Operating	
Temperature Range	0°F to 250°F (-18°C to 121°C)
Repeatability	0.00004" (0.01 mm)
Cable Length	6.5 ft (2 m)
Housing Material	304 stainless steel
Probe Force	2.57 oz (72.8 g) at 50% probe extend
Contact Tip	4-48 ADG

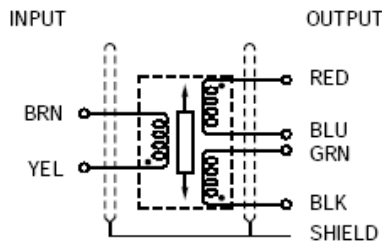
How to Order

Specify the model number PCA375PR-020 followed by the desired connector number (see page 100).

Ultra Compact PCA375 Series
 Precision Performance
 ±0.010" or ±0.020" Range
 AC-operated



Wiring



Note:
 BLU and GRN tied for differential output with YEL and BLK common.
 The output is in phase, with core displaced toward cable end. (Retract)

Options and Accessories

See individual gage head model specification pages for compatibility

Connectors

Seven different connectors are available to simplify installation of LBB and PCA Series gaging probes, including the PCA Series Bi-directional Lever Probe. To select the proper connector, simply add the appropriate number to the end of the gage head part number. For example, by adding a 2 to a model number such as LBB375PA-020-2 allows the user to specify a standard sensitivity gage head with an Amphenol-type 126-195 connector.

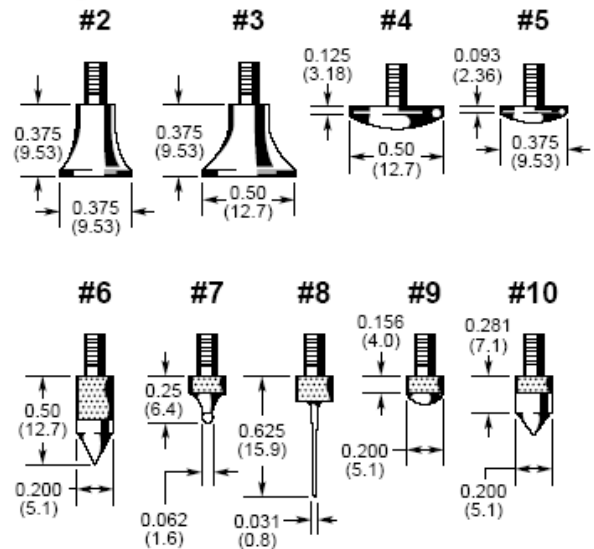


Connector Part Number

Suffix	Description
1	Bendix-type PTO6A-10-6P (SR)
2	Amphenol-type 126-195
3	Amphenol-type 165-13
4	DE-9 compatible with Schaevitz® ATA2001
5	Switchcraft-type 12CL5-M compatible with Schaevitz® SYS-96 Dimensional Data Acquisition System
6	LEMO-type CONN. FGG-OB-305-CNAD52
7	Switchcraft-type 05BL5-M compatible with Schaevitz® MP series LVDT readout/controller

Special Contact Tips

Nine different Schaevitz® contact tips are available for special applications and as replacements for standard tips supplied with most gage heads. All Schaevitz® contact points are 4-48 AGD threaded. To order, select the proper contact tip number.



MS-Type Connector Cables

Consult factory for price and availability of adaptor cables for LVDTs and signal conditioners.