

PCA-375-PR 020 – Compact AC Gage Head



- Ultra compact design for limited spaces
- Slim 0.375 inch [9.5mm] diameter
- Radial cable exit
- Rugged polyurethane cable
- ±0.02 inch (±0.51mm) stroke
- 40 µ-inch [1 µm] repeatability
- 4-48 AGD interchangeable contact tips

DESCRIPTION

The **PCA-375 PR-020** gage head is an ultra-compact device that provides accurate measurement in areas with limited space. Utilizing a radial cable exit, the slim, low profile of the PCA-375 PR-020 easily fits within miniature fixtures and small inside diameters. With the time proven reliability of its LVDT (Linear Variable Differential Transformer) and measuring just 0.375 inch [9.5mm] in diameter the PCA-375 PR-020 affords non-intrusive, slim profile measurements, making it the perfect choice for high density fixtures as well as numerous other industrial applications.

Externally, the PCA-375 PR-020 is constructed of 300 Series stainless steel, with a field replaceable chrome plated hardened tool steel contact tip. Internally, the LVDT, along with a permanently lubricated bronze bearing and plunger assembly, provide long term repeatability and reliability. Electrical termination is via a 2 meter long, 6 conductor, shielded polyurethane jacketed cable.

Like in most of our LVDTs, the PCA-375 PR-020 windings are vacuum impregnated with a specially formulated, high temperature, flexible resin, and the coil assembly is potted inside its housing with a two-component epoxy. This provides excellent protection against hostile environments such as high humidity, vibration and shock.

Designed to service applications with limited space availability, the PCA-375 PR-020 is ideal for bore gages, or in practically any location where space is at a premium. Available with optional pre-wired connectors, and a variety of replaceable contact tips, it can be installed directly into standard AGD dial indicator mounting hardware without modification, affording maximum versatility.

Measurement Specialties, Inc. (NASDAQ MEAS) offers many other types of sensors and signal conditioners. Data sheets can be downloaded from our web site at: <http://www.meas-spec.com/datasheets.aspx>

MEAS acquired Schaevitz Sensors and the **Schaevitz™** trademark in 2000.

FEATURES

- Compact, slim profile
- 90° cable exit
- 2.6oz [73 Grams] spring force
- Stainless Steel construction
- Excellent stroke to length ratio
- Connector Options Available (*Consult Factory*)
- Calibration certificate supplied with each unit

APPLICATIONS

- High density gaging fixtures
- Bore gages
- Gaging of intricate parts
- Space restricted areas
- Short stroke measurements
- Pressing Applications

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PERFORMANCE SPECIFICATIONS

ELECTRICAL SPECIFICATIONS	
Parameter	PCA-375-PR 020
Stroke/gaging range	±0.020 [0.51]
Sensitivity, V/V/inch [mV/V/mm]	5.0 [197]
Output at stroke ends (*)	100 mV/V
Non-linearity, maximum	±0.50% of FR
Phase shift	+60°
Input impedance (Primary)	94.5 Ω
Output impedance (Secondary)	214 Ω
Input voltage, maximum	3.5 VRMS sine wave
Input frequency range	2.5kHz to 10kHz
Test input frequency	5kHz
Repeatability	40 micro-inches [1 micron]
Null voltage, maximum	0.75% of FRO

ENVIRONMENTAL SPECIFICATIONS & MATERIALS	
Operating temperature	0°F to 250°F (-18°C to 121°C)
Housing material	AISI 300 Series stainless steel
Electrical connection	Six AWG 32 conductor, shielded polyurethane jacket cable, 6.5 foot [2 meter] long
NEMA IEC 60529 rating	IP-66 (at cable exit), IP-60 (at the plunger)

Notes:

All values are nominal unless otherwise noted

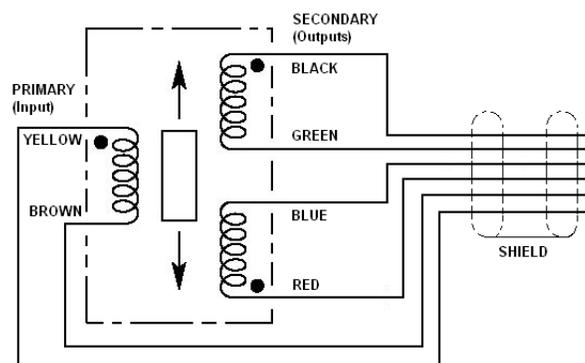
Dimensions are in inch [mm] unless otherwise noted

(*): Unit for output at stroke ends is millivolt per volt of excitation (Input voltage)

FR: Full Range is the stroke range, end to end; $FR=2 \times S$ for $\pm S$ stroke range

FRO (Full Range Output): Algebraic difference in outputs measured at the ends of the range

WIRING INFORMATION

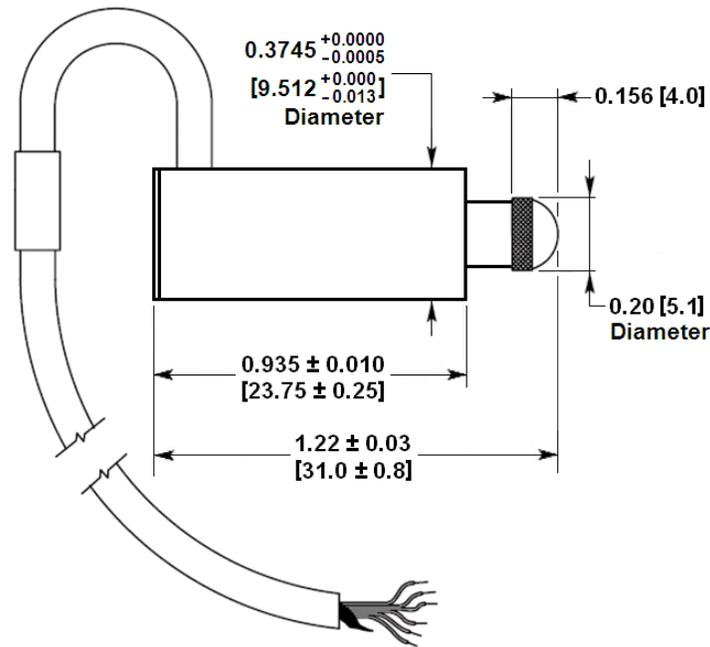


Connect Blue and Green wires together for differential output

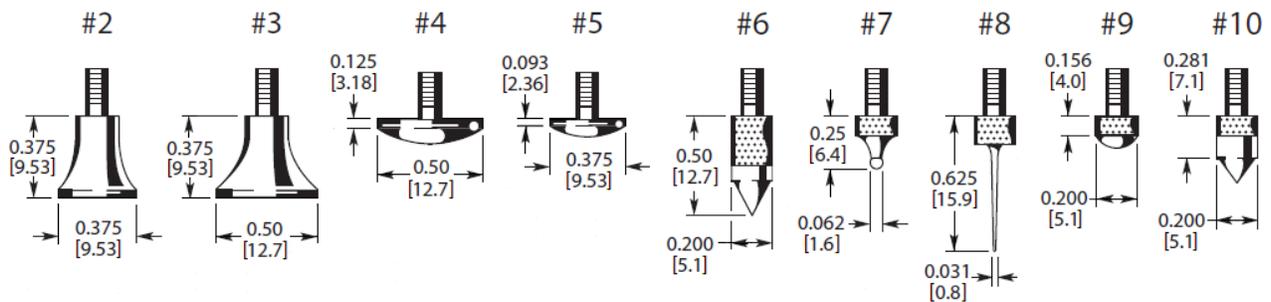
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MECHANICAL SPECIFICATIONS

Parameter	PCA-375-PR 020
Pre-travel, minimum	0.002 [0.05]
Total stroke	0.060 [1.52]
Spring force	2.6 oz [73 Grams) @ null position



REPLACEMENT/OPTIONAL CONTACT TIPS



Dimensions are in inch [mm]

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ORDERING INFORMATION

Description	Model	Part Number
±0.020 inch gage head	PCA-375 PR-020	02350729-000

ACCESSORIES		
Description	Model	Part Number
Replacement contact tips	Contact Tip 2	67010005-000
	Contact Tip 3	67010006-000
	Contact Tip 4	67010002-000
	Contact Tip 5	67010007-000
	Contact Tip 6	67010008-000
	Contact Tip 7	67010009-000
	Contact Tip 8	67010010-000
	Contact Tip 9	67010001-000
	Contact Tip 10	67010011-000

Also refer to our "[Options and Accessories for Gage Heads](#)" brochure

TECHNICAL CONTACT INFORMATION

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