



## PCA-375-PR 020

### Compact AC Gage Head

#### SPECIFICATIONS

- **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**

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.

#### 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

## 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
IEC 60529 rating	IP-66 (at cable exit), IP-60 (at the plunger)

### Notes:

All values are nominal unless otherwise noted

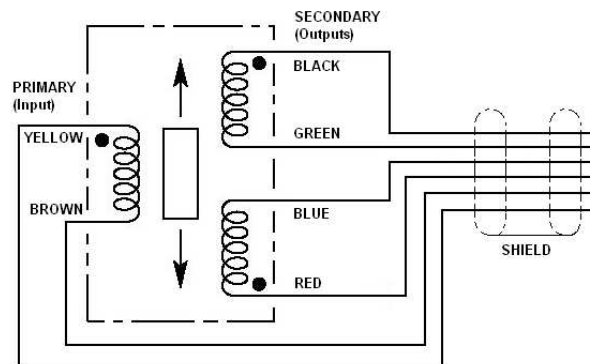
Dimensions are in inch [mm] unless otherwise noted

(\*): 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

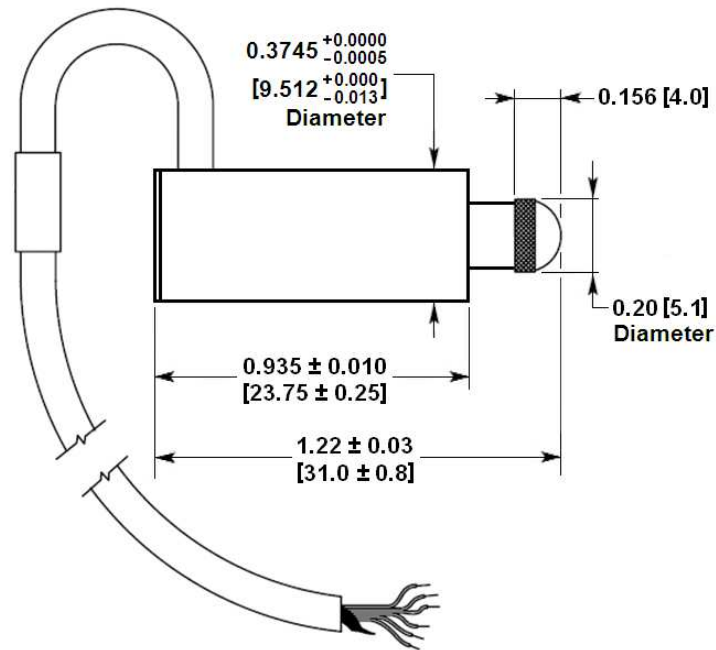
## WIRING INFORMATION



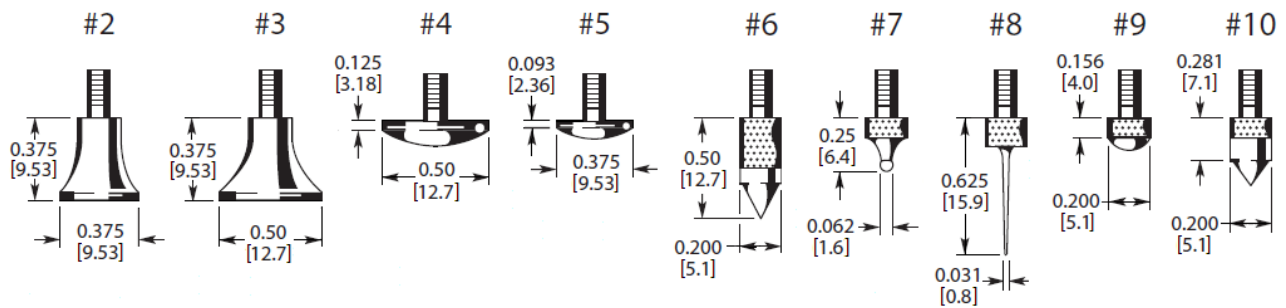
Connect Blue and Green wires together for differential output

## 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]*

## ORDERING INFORMATION

Description	Model	Part Number
±0.020 inch gage head	PCA-375 PR-020	02350729-000
<b>ACCESSORIES</b>		
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

### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
1000 Lucas Way  
Hampton, VA 23666  
United States  
Phone: +1-800-745-8008  
Fax: +1-757-766-4297  
Email: sales@meas-spec.com

### EUROPE

MEAS Deutschland GmbH (Europe)  
a TE Connectivity Company  
Hauert 13  
D-44227 Dortmund  
Germany  
Phone: +49-(0)231-9740-0  
Fax: +49-(0)231-9740-20  
Email: info.de@meas-spec.com

### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
No. 26 Langshan Road  
Shenzhen High-Tech Park (North)  
Nanshan District, Shenzhen 518057  
China  
Phone: +86-755-33305088  
Fax: +86-755-33305099  
Email: info.cn@meas-spec.com

### TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Accustar, American Sensor Technologies, AST, ATEXIS, DEUTSCH, IdentiCal, TruBlue, KPSI, Krystal Bond, Microfused, UltraStable, Measurement Specialties, MEAS, Schaevitz, TE Connectivity, TE, and the TE connectivity (logo) are trademarks of the TE Connectivity Ltd. family of companies. Other logos, product and company names mentioned herein may be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.