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
- 90º 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

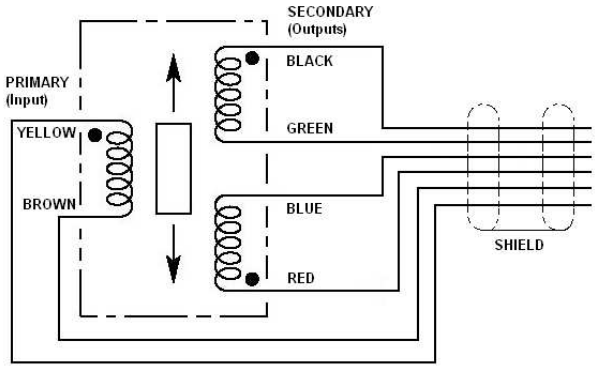
PERFORMANCE SPECIFICATIONS

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 to10kHz
Test input frequency	5kHz
Repeatability	40 micro-inches [1 micron]
Null voltage, maximum	0.75% of FRO

ENVIRONMENTAL SPECIFICATIONS & MATERIALS	
Operating temperature	0ºF to 250ºF(-18ºC to 121ºC)
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=2xS for ±S stroke range
FRO (Full Range Output): Algebraic difference in outputs measured at the ends of the range

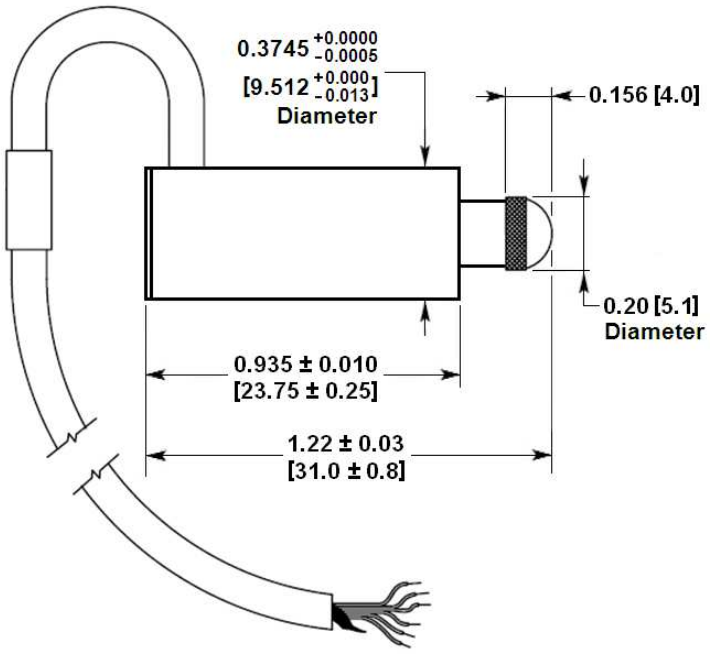
WIRING INFORMATION



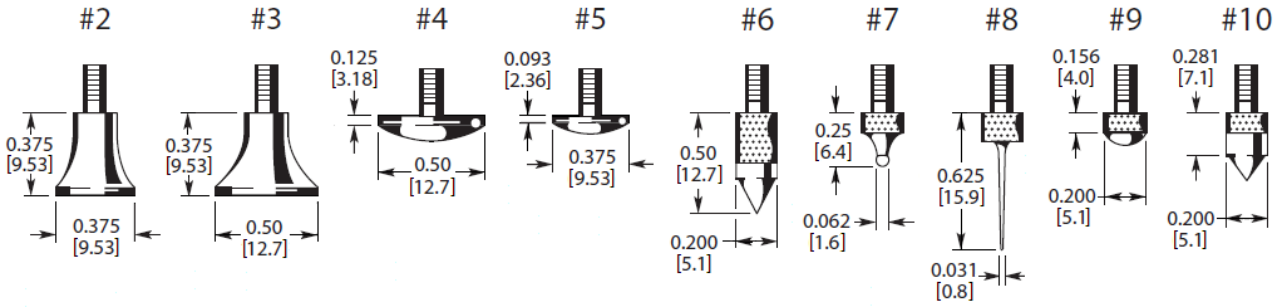
Connect Blue and Green wires together for differential output

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
ACCESSORIES		
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

ASIA

ABOUT MACRO SENSORS

Macro Sensors, founded by Howard A. Schaevitz, has more than three hundred man-years of experience in just one thing: the design and manufacture of LVDTs. We believe that you need solutions, not simply products. When you call us, you get the benefit of our experience and our commitment.

Most products listed are in stock for immediate delivery, and we strive to offer the finest customer service in the industry: technical support from people who understand LVDTs and how to apply them to your benefit, and a commitment to excellent pricing, quality products, and deliveries that you can truly rely on. Macro Sensors also has a comprehensive network of representatives and distributors in the U.S. and around the world to provide you with local support.

We manufacture an enormous array of LVDTs, from modified standards to complete custom designs. Our customers consistently tell us it is Macro Sensors? quality and service that keeps them coming back. Let our experience go to work for you.

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