

## DZ Compact Pneumatic Probe



Solartron Metrology introduces the **world's shortest pneumatic gauging probe** with 2 mm of measurement range and just **36 mm in length**.



- More than 50% shorter than standard Pneumatic LVDTs with a 2 mm measurement range
- Digitally calibrated sensors. As low as 0.25 Microns repeatability.
- Optional IP 68 protection. (IP 65 is standard)
- Interchangeable tips (M2 thread)
- Pressure from 0.4 to 1 Bar
- Vacuum version available



*DZ probes can be networked with any other Solartron sensor via the Orbit<sup>®</sup> Network*



*Fit DZ probes into any tight spaces.  
Mount like standard LVDTs*

**Precision. Quality. Reliability**

[www.solartronmetrology.com](http://www.solartronmetrology.com) • [sales.solartronmetrology@ametek.com](mailto:sales.solartronmetrology@ametek.com)

## Specifications

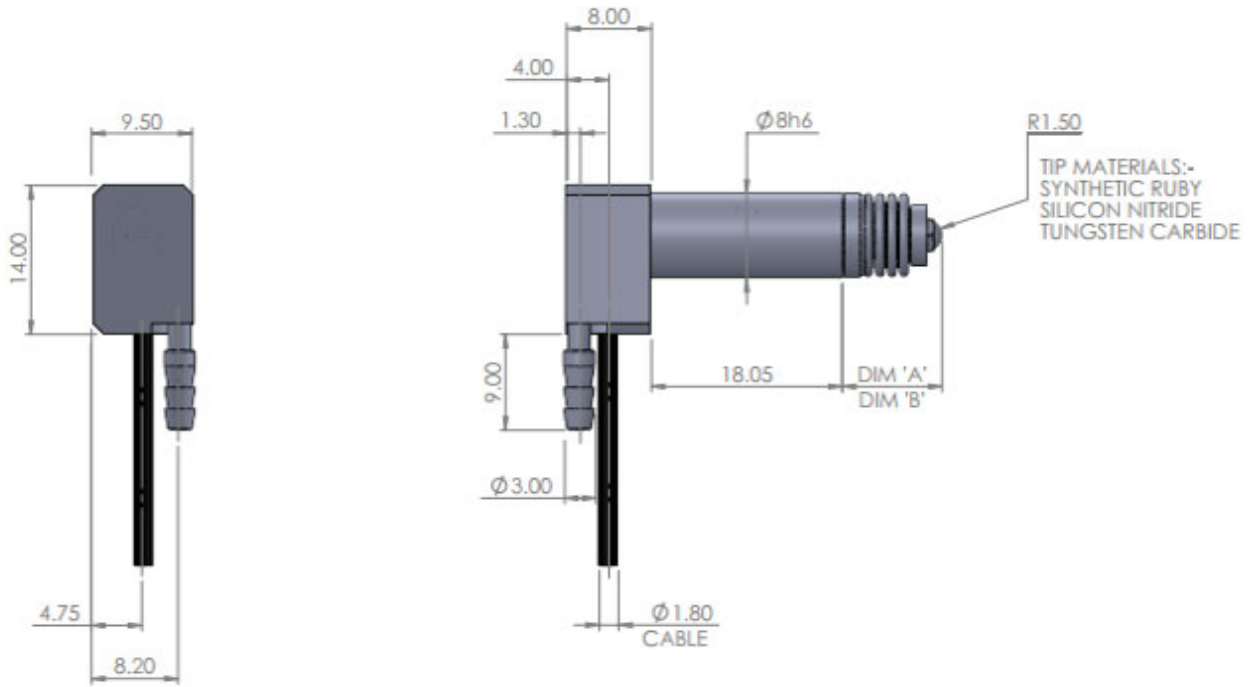
DZR Pneumatic	DZR/2/P
<b>Measurement Performance</b>	
Measurement Range (mm)	2.0
Accuracy (% of Reading) or $\mu\text{m}$ (Note 1)	0.1% or 0.5 $\mu\text{m}$
Repeatability (worst case) $\mu\text{m}$ (Note 2)	0.25
Pre Travel (mm)	0.15
Post Travel (mm)	0.45
Operating Pressure Bar	0.4 - 1.0
Tip Force (N) at Middle of Range $\pm 20\%$ 0.45 Bar	0.7
Tip Force (N) at Middle of Range $\pm 20\%$ 1.0 Bar	2.6
Temperature Coefficient %FS/ $^{\circ}\text{C}$	< 0.03 tba
Probe Life	100 million cycles (no side load), > 10 million cycles in most applications
<b>Environmental</b>	
Sealing for Probe <sup>3</sup>	IP65 (With Gaiter)
Sealing for Probe Interface Electronics	IP43 for module and TCON
Sealing for Probe Interface Electronics	IP43 for module and TCON, (In line connector: IP67)
Sealing for Probe Interface Electronics (SIxxx)	Top and Front: IP41, Rear: IP20, In line connector: IP67
Storage Temperature ( $^{\circ}\text{C}$ )	-20 to +80
Probe Operating Temperature with Gaiter ( $^{\circ}\text{C}$ )	5 to +80
Electronics Operating Temperature ( $^{\circ}\text{C}$ )	0 to 60
EMC Emissions	EN61000-6-3
EMC Immunity	EN61000-6-2
EMC Emissions	EN61000-6-3 and EN61326
EMC Immunity	EN61000-6-2 and EN61326
Power	5 $\pm$ 0.25 VDC @ 0.06A typical
Power	18 to 32 VDC @ 0.07A typical
<b>Material</b>	
Probe Body	Stainless Steel
Diameter	8h6
Probe Tip (options)	Nylon, Ruby, Silicon Nitride, Tungsten Carbide
Cable	PUR
Electronics Module	ABS
<b>Electronics Interface (Orbit<sup>®</sup>3)</b>	
Orbit <sup>®</sup> 3 Interface Options	USB, Ethernet, RS232
Reading Rate	3906 readings per second
Bandwidth of Electronics (Hz) user selectable	460, 230, 115, 58, 29, 14, 7,4
<b>Electronics Interface (Orbit ACS)</b>	
Alarm Outputs - selectable High, OK, Low	3 outputs either NPN, PNP, logic Programmable Active Hi or Lo
Discrete Inputs - user selectable	4 inputs user configurable eg. Print, Zero, Preset
Update Rate for I/O discretes (ms)	5
Bandwidth of Electronics (Hz) - user selectable	460, 230, 115, 58, 29, 14, 7,4
Communications Interface Protocol	MODBUS (RTU or ASCII) or Solartron Serial Formats
Communications Interface Hardware	RS485 or RS232 (User selectable) Up to 115,200 Baud
Update Rate for Serial Data (ms)	25

Note 1: Accuracy  $\mu\text{m}$  or % reading whichever is the greater

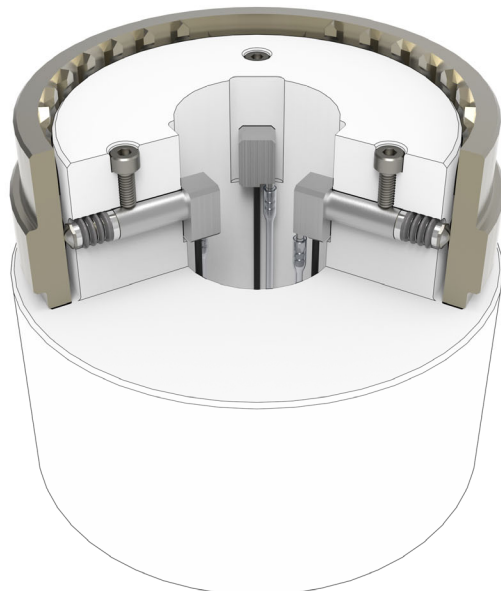
Note 2: Repeated operation against a carbide target standard deviation from average (68%)

Note 3 : IP68 Option Available

## Dimensions



MEASUREMENT RANGE	2.00
FULLY EXTENDED DIM " A " (mm)	12.30
PRE-TRAVEL	0.15
POST-TRAVEL	0.45
FULLY RETRACTED DIM "B" (mm)	9.75





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Solartron Metrology also carries an extensive network of sales agents in all major countries. For a local contact, go to [www.solartronmetrology.com/contact](http://www.solartronmetrology.com/contact) or email at [sales.solartronmetrology@ametek.com](mailto:sales.solartronmetrology@ametek.com)