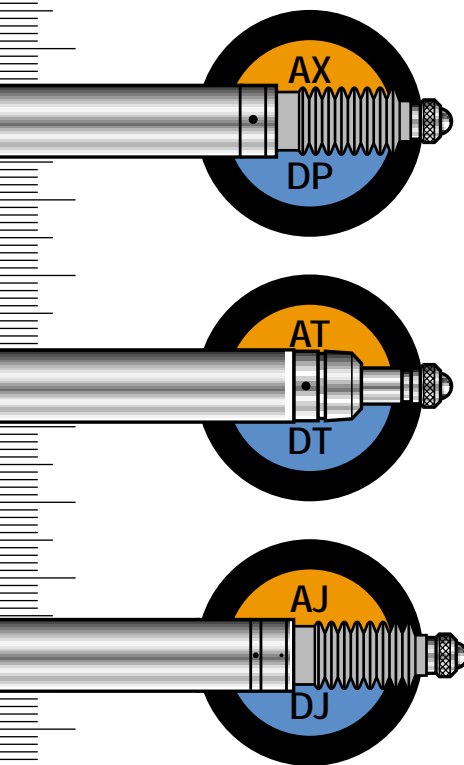


## 24 Specification Pneumatic push



Product type	Analogue			Digital			Analogue			Digital			Analogue			Digital		
	LVDT	H/B	Digital	LVDT	H/B	Digital	LVDT	H/B	Digital	LVDT	H/B	Digital	LVDT	H/B	Digital	LVDT	H/B	Digital
Axial cable outlet:	Standard Pneumatic	Jet Pneumatic	Feather Touch	AX/1/P	AX/1/PH	DP/2/P	AX/5/1/P	AX/5/1/PH	DP10/2/P	AX/2.5/P	AX/2.5/PH	DP/5/P	AX/5/P	AX/5/PH	DP/10/P	AX/10/P	AX/10/PH	DP/20/P
Radial cable outlet:	Feather Touch	ATR/1/P	ATR/1/PH	DTR/2/P	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Measurement																		
Measurement Range (mm)	±1			2			±1			2			±2.5			5		
Accuracy <sup>1</sup> (% of reading or µm)	0.5, 1µm			0.1			0.5, 1µm			0.1			0.5, 2.5µm			0.2		
Resolution	Analogue: Dependent on electronics						Digital: User selectable to <0.1µm											
Repeatability (µm)	0.15			0.15			0.15			0.15			0.15			0.15		
Pre-travel (mm)	0.3			0.15			0.3			0.15			0.3			0.15		
Post-travel (mm)	0.7			0.85			8.7			8.85			0.7			0.85		
Tip Force: Standard Vacuum ±20% (N)	0.8 @ 0.4 Bar, 2.8 @ 1 Bar			0.8 @ 0.4 Bar, 2.8 @ 1 Bar			0.85 @ 0.4 Bar, 2.5 @ 1 Bar			0.70 @ 0.4 Bar, 2.5 @ 1 Bar			0.70 @ 0.4 Bar, 2.5 @ 1 Bar			0.70 @ 0.4 Bar, 2.5 @ 1 Bar		
Tip Force: Feather Touch ±30% (N)*	0.18 @ 0.3 Bar, 1.1 @ 1 Bar			0.18 @ 0.3 Bar, 1.1 @ 1 Bar			0.18 @ 0.3 Bar, 1.1 @ 1 Bar			0.18 @ 0.3 Bar, 1.1 @ 1 Bar			0.18 @ 0.3 Bar, 1.1 @ 1 Bar			0.18 @ 0.3 Bar, 1.1 @ 1 Bar		
Tip Force: Jet ±20% (N)	0.85 @ 1 Bar			0.85 @ 1 Bar			0.85 @ 1 Bar			0.85 @ 1 Bar			0.85 @ 1 Bar			0.85 @ 1 Bar		
Temperature Coefficient %FS/°C*	0.01			0.01			0.01			0.01			0.01			0.01		
Mechanical																		
Body Diameter (mm)	8h6			8h6			8h6			8h6			8h6			8h6		
Electrical Interface (Plugged) <sup>2</sup>																		
Sensitivity (mV/V/mm ±5%)	200	73.5	-	200	73.5	-	80	29.4	-	40	14.5	-	20	7.35	-			
Energising Current (mA/V ±5%)	1.8	1	-	1.8	1	-	2	1	-	1	1.2	-	0.6	1.2	-			
Electrical Interface (Unplugged) <sup>2</sup>																		
Sensitivity (mV/V/mm ±5%)	210	83	-	210	83	-	150	82	-	105	51	-	33	33	-			

\*(at mid position)

### Materials

Case: Stainless Steel  
Tip: Nylon or Tungsten Carbide\*  
Gaiter<sup>3</sup>: Viton®  
Cable<sup>4</sup>: PUR

\*Other options available

### Environmental (Probe Head Only)

Storage Temp (°C): -40 to +100  
Operating Temp<sup>5</sup> with gaiter (°C): +5 to +80  
Operating Temp<sup>6</sup> without gaiter (°C): -10 to +80  
IP rating: IP65

IP rating not applicable to Feather Touch or Jet

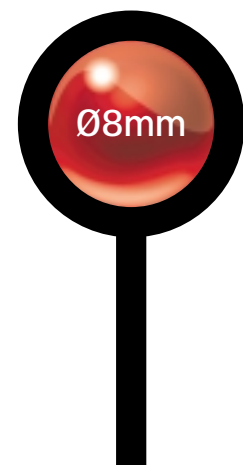
### Operating Pressure Range

Standard: 0.4 to 1 Bar relative  
Feather Touch: 0.3 to 2 Bar relative  
Jet: 0.6 to 2 Bar relative

Pneumatic actuation: For continual reliable operation and to maximise working life, the air supply should be clean and dry, 60% maximum relative humidity, filtered to better than 5µm particle size.

### Digital Probe Interface Electronics<sup>3</sup>

Reading Rate: Up to 3906 readings/second  
Bandwidth: Up to 460Hz dependent on noise performance required  
Output: Serial communication-RS485 signal level (Solartron Orbit Protocol)  
Power: 5 ±0.25 VDC @ 0.06A (includes power for probe)  
Storage Temp (°C): -20 to +70  
Operating Temp (°C): 0 to +60  
IP Rating: IP43



### 1 Probe Accuracy

The accuracy of the LVDT and Half Bridge probes is quoted as % of reading or µm, whichever is greater. The accuracy of the Digital Probe range is quoted as [(resolution) + (accuracy %) x D] where D is the distance from the setting master. (Please refer to the Glossary for definitions)

### 2 LVDT and Half Bridge Probe Performance

Accuracy, sensitivity and energising current are valid for the following calibration conditions: LVDT probes calibrated at 3 V, 5 kHz frequency into a 10 kΩ load or 100 kΩ for the unplugged versions. Half Bridge probes calibrated at 3 V, 10 kHz frequency into a 2 kΩ load or 1 kΩ for the unplugged versions. The probes will operate with energising voltages in the range 1 V to 10 V and with frequencies in the range 2 kHz to 20 kHz but the performance is not specified.

### 3 Viton is a trademark of DuPont Dow Elastomers.

### 4 Cables

All probes are supplied with 2 m of PUR cable as standard. Other lengths and options such as nylon braided, metal braided and armoured are available on request.

### 5 Digital Probe Termination

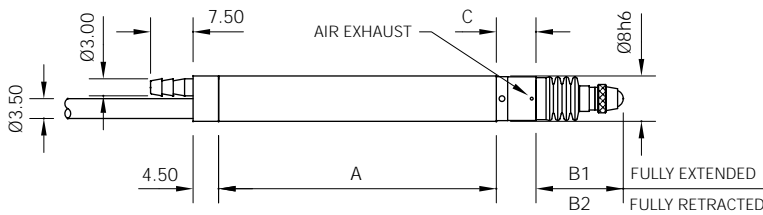
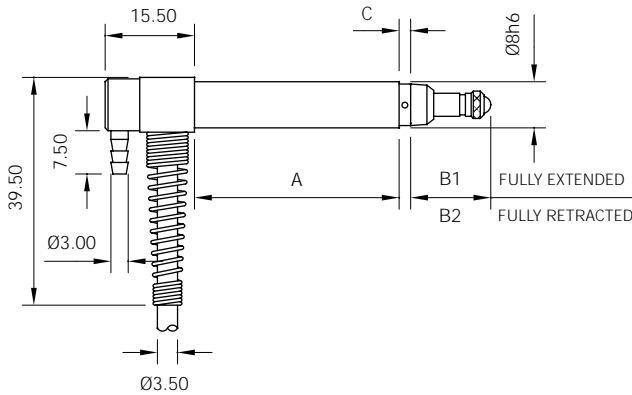
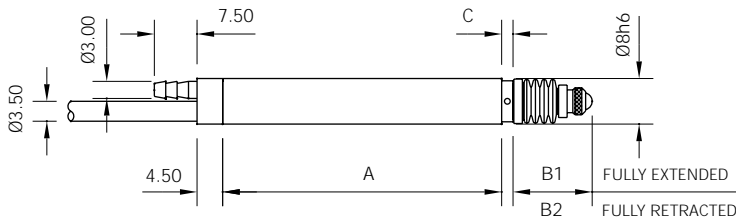
Digital Probes are terminated with Solartron's Probe Interface Electronics (PIE) module. Please refer to the Orbit Network for details on this module and methods of integration for Digital Probes.

### 6 Below 0°C environment must be dry

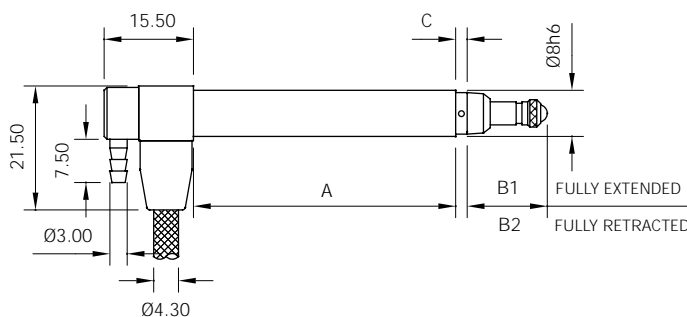
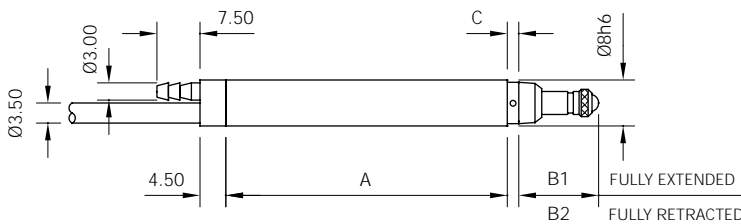
# Dimensions (mm) Pneumatic push



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During mounting, care must be taken not to clamp over the air exhaust



## Pneumatic Push (AX/P and DP/P)

	AX/1/P	AX5/1/P	DP/2/P	AX/2.5/P	AX/5/P	AX/10/P
		DP/2/PE		DP/5/S	DP/10/P	DP/20/P
<b>A</b>	49.00	84.00	52.00	71.00	96.00	127.00
<b>C</b>	2.00	2.00	2.00	2.00	2.00	3.00
<b>B1</b>	13.90	25.40	13.90	17.40	25.40	44.90
<b>B2</b>	10.90	14.40	10.90	11.40	14.40	23.90

## Right Angled Pneumatic Push with 90° output and non braided cable (ATR/P and DTR/P)

	ATR/1/P	DTR/2/P	ATR/2.5/P	ATR/5/P	ATR/10/P
			DTR/5/P	DTR/10/P	DTR/20/P
<b>A</b>	35.50	38.50	57.50	82.50	113.50
<b>C</b>	2.00	2.00	2.00	2.00	3.00
<b>B1</b>	13.90	13.90	17.40	25.40	33.90
<b>B2</b>	10.90	10.90	17.40	14.40	12.90

## Gaiter Independent Pneumatic Push (AJ/P and DJ/P)

	AJ/1/P	DJ/2/P	AJ5/1/P	AJ/2.5/P	AJ/5/P
			DJ10/2/P	DJ/5/P	DJ/10/P
<b>A</b>	49.0	52.0	84.0	71.0	96.0
<b>B1</b>	15.4	15.4	26.9	18.9	26.9
<b>B2</b>	12.4	12.4	15.9	12.9	15.9
<b>C</b>	7.0	7.0	7.0	7.0	7.0

## Feather Touch Pneumatic Push (AT/P and DT/P)

	AT/1/P	DT/2/P	AT/2.5/P	AT/5/P	DT/10/P	AT/10/P
			DT/5/P			DT/20/P
<b>A</b>	49.00	52.00	71.00	96.00	96.00	127.00
<b>C</b>	2.00	2.00	2.00	2.00	2.00	3.00
<b>B1</b>	13.90	13.90	17.40	25.40	25.40	33.90
<b>B2</b>	10.90	10.90	11.40	11.40	14.40	12.90

## Right Angle Feather Touch Pneumatic Push with 90° output and braided cable (ATR/P and DTR/P)

	ATR/1/P	DTR/2/P	ATR/2.5/P	ATR/5/P	ATR/10/P
			DTR/5/P	DTR/10/P	DTR/20/P
<b>A</b>	35.50	38.50	57.50	82.50	113.50
<b>C</b>	2.00	2.00	2.00	2.00	3.00
<b>B1</b>	13.90	13.90	17.40	25.40	33.90
<b>B2</b>	10.90	10.90	11.40	14.40	12.90