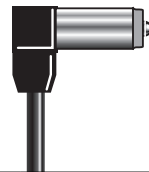
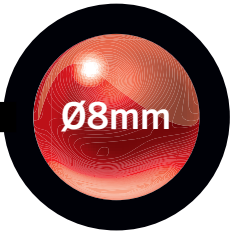




20 Specification Spring push



| Product type | Analogue | | | Digital | Analogue | | | Digital | Analogue | | | Digital |
|---|------------------------------------|----------|----------|--------------------|------------|------------|--------------------|-----------|----------|--------------------|----------|----------|
| | LVDT | H/B | | | LVDT | H/B | | | LVDT | H/B | | |
| Axial cable outlet: Standard Spring | A6G/1/S | A6G/1/SH | D6P/2/S | AX/0.25/S | AX/0.25/SH | DP/0.5/S | AX/0.5/S | AX/0.5/SH | DP/1/S | AX/1/S | AX/1/SH | DP/2/S |
| Feather Touch | - | - | - | - | - | - | - | - | - | AT/1/S | AT/1/SH | DT/2/S |
| Vacuum | - | - | - | - | - | - | - | - | - | AX/1/V | AX/1/VH | - |
| Radial cable outlet: Standard Spring | - | - | - | - | - | - | - | - | - | AXR/1/S | AXR/1/SH | - |
| Feather Touch | - | - | - | - | - | - | - | - | - | ATR/1/S | ATR/1/SH | DTR/2/S |
| Measurement | | | | | | | | | | | | |
| Measurement Range (mm) | ±1 | | 2 | ±0.25 | | 0.5 | ±0.5 | | 1 | ±1 | | 2 |
| Accuracy ¹ (% of reading or µm) | 0.5, 1µm | | 0.1 | 0.5, 0.5µm | | 0.1 | 0.5, 1µm | | 0.1 | 0.5, 1µm | | 0.1 |
| Resolution | Analogue: Dependent on electronics | | | | | | | | | | | |
| Repeatability (µm) | 0.15 | | | 0.1 | | | 0.15 | | | 0.15 | | |
| Pre-travel (mm) | 0.15 | | | 0.03 | | | 0.15 | | | 0.15 | | |
| Post-travel (mm) | 0.35 | | | 0.05 | | | 0.35 | | | 0.35 | | |
| Pre-travel Adjustment range (mm) | None | | | None | | | 0.5 | | None | 1 | | None |
| Tip Force: Standard/Vacuum ±20% (N) | 0.7 @ mid position | | | 0.7 @ mid position | | | 0.7 @ mid position | | | 0.7 @ mid position | | |
| Tip Force: Feather Touch ±20% (N) | 0.3 @ mid position | | | 0.3 @ mid position | | | 0.3 @ mid position | | | 0.3 @ mid position | | |
| Temperature Coefficient %FS/°C | 0.02 | | | 0.03 | | | 0.03 | | | 0.01 | | |
| Mechanical | | | | | | | | | | | | |
| Body Diameter (mm) | 6h6 | | | 8h6 | | | 8h6 | | | 8h6 | | |
| Electrical Interface (Plugged)² | | | | | | | | | | | | |
| Sensitivity (mV/V/mm ±5%) | 200 | 73.5 | - | 200 | 73.5 | - | 200 | 73.5 | - | 200 | 73.5 | - |
| Energising Current (mA/V±5%) | 3 | 1.2 | - | 2.2 | 1.2 | - | 2.2 | 1.2 | - | 1.8 | 1 | - |
| Electrical Interface (Unplugged)² | | | | | | | | | | | | |
| Sensitivity (mV/V/mm ±5%) | 269 | 88 | - | 262 | 82 | - | 262 | 82 | - | 210 | 83 | - |

| Materials | |
|-----------------------|----------------------------|
| Case: | Stainless Steel |
| Tip: | Nylon or Tungsten Carbide* |
| Gaiter ³ : | Viton® |
| Cable ⁴ : | PUR |

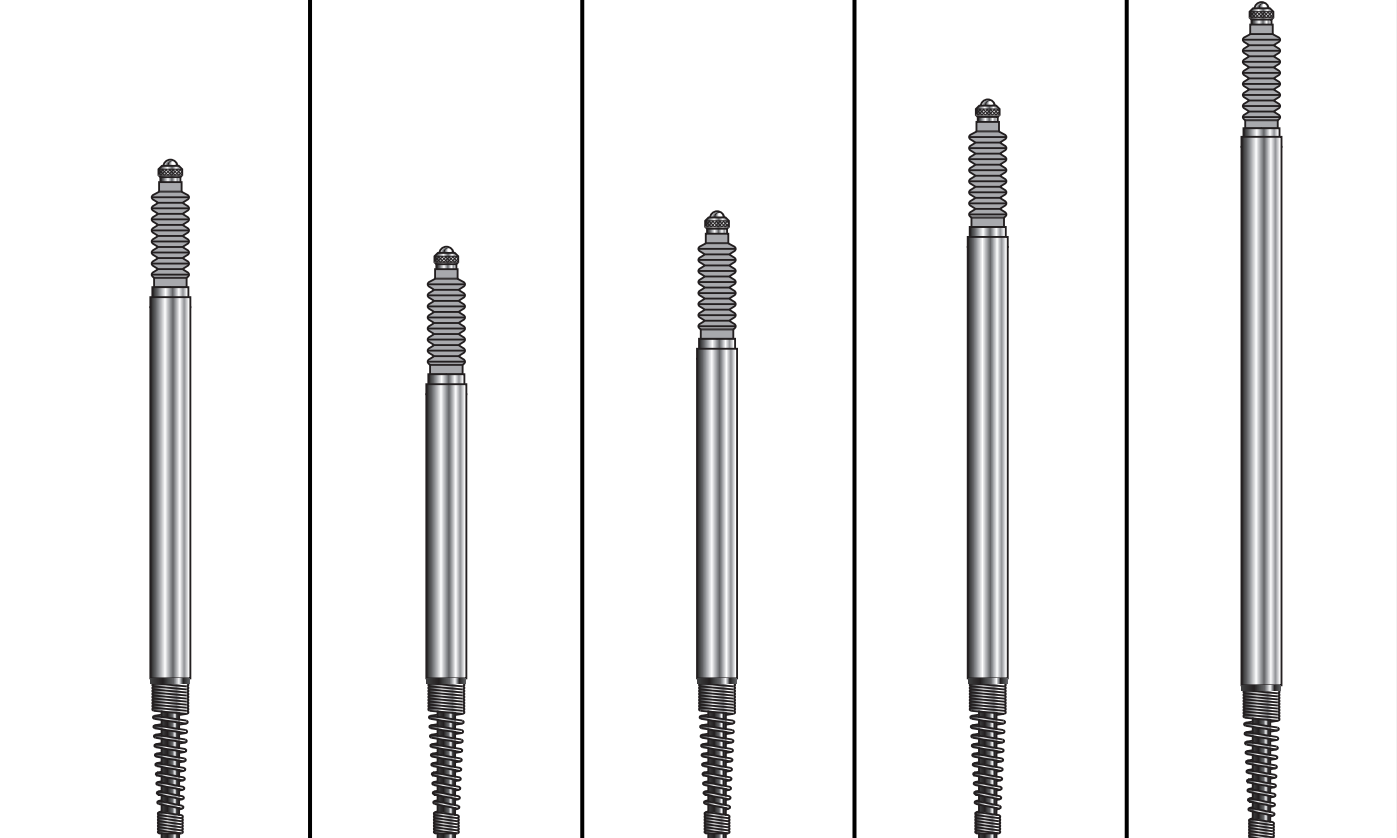
*Other options available

| Environmental (Probe Head Only) | |
|--|-------------|
| Storage Temp (°C): | -40 to +100 |
| Operating Temp ⁶ with gaiter (°C): | +5 to +80 |
| Operating Temp ⁶ without gaiter (°C): | -10 to +80 |
| IP rating: | IP65 |

IP rating not applicable to Feather Touch

| Operating Pressure Range | |
|--------------------------|------------------------|
| Vacuum operation: | 0 to 0.27 Bar absolute |

| Digital Probe Interface Electronics ⁵ | |
|--|--|
| 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 |



| Analogue | | Digital | Analogue | | Digital | Analogue | | Digital | Analogue | | Digital | Analogue | | Digital |
|------------------------------------|----------|----------|--------------------|------------|---------|--------------------|------------|----------|--------------------|----------|-----------|--------------------|-----------|-----------|
| LVDT | H/B | | LVDT | H/B | | LVDT | H/B | | LVDT | H/B | | LVDT | H/B | |
| AX5/1/S | AX5/1/SH | DP10/2/S | AX/1.5/S | AX/1.5/SH | - | AX/2.5/S | AX/2.5/SH | DP/5/S | AX/5/S | AX/5/SH | DP/10/S | AX/10/S | AX/10/SH | DP/20/S |
| - | - | - | AT/1.5/S | AT/1.5/SH | - | AT/2.5/S | AT/2.5/SH | DT/5/S | AT/5/S | AT/5/SH | DT/10/S | AT/10/S | AT/10/SH | DT/20/S |
| - | - | - | AX/1.5V | AX/1.5VH | - | AX/2.5V | AX/2.5VH | - | AX/5V | AX/5VH | - | AX/10V | AX/10VH | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | ATR/1.5/S | ATR/1.5/SH | - | ATR/2.5/S | ATR/2.5/SH | DTR/5/S | ATR/5/S | ATR/5/SH | DTR/10/S | ATR/10/S | ATR/10/SH | DTR/20/S |
| ±1 | | 2 | ±1.5 | | - | ±2.5 | | 5 | ±5 | | 10 | ±10 | | 20 |
| 0.5, 1µm | | 0.1 | 0.5, 1.5µm | | - | 0.5, 2.5µm | | 0.2 | 0.5, 5µm | | 0.2 | 0.7, 10µm | | 0.2 |
| Digital: User selectable to <0.1µm | | | | | | | | | | | | | | |
| 0.15 | | | 0.15 | | - | 0.15 | | | 0.15 | | | 0.15 | | |
| 0.15 | | | 0.15 | | - | 0.15 | | | 0.15 | | | 0.15 | | |
| 0.85 | | | 0.85 | | - | 0.85 | | | 0.85 | | | 0.85 | | |
| None | | | 1.5 | | - | 1.5 | | None | 1.5 | | None | None | | |
| 0.7 @ mid position | | | 0.7 @ mid position | | - | 0.7 @ mid position | | | 0.7 @ mid position | | | 0.7 @ mid position | | |
| 0.3 @ mid position | | | 0.3 @ mid position | | - | 0.3 @ mid position | | | 0.3 @ mid position | | | 0.3 @ mid position | | |
| 0.01 | | | 0.01 | | - | 0.01 | | | 0.01 | | | 0.01 | | |
| 8h6 | | | 8h6 | | - | 8h6 | | | 8h6 | | | 8h6 | | |
| 200 | 73.5 | - | 133 | 49 | - | 80 | 29.4 | - | 40 | 14.7 | - | 20 | 7.35 | - |
| 1.8 | 1 | - | 2 | 1 | - | 2 | 1 | - | 2 | 1.2 | - | 1 | 1.2 | - |
| 210 | 83 | - | 150 | 82 | - | 150 | 82 | - | 105 | 51 | - | 33 | 33 | - |

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

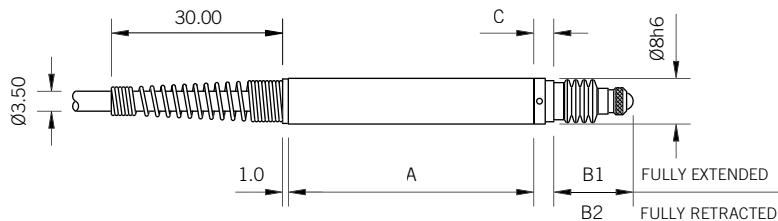
Digital Probes are terminated with Solartron's Probe Interface Electronics (PIE) module. Please refer to the Orbit Network for details on this module and methods of integration for Digital Probes.

6 Below 0°C environment must be dry

Dimensions (mm) Spring push

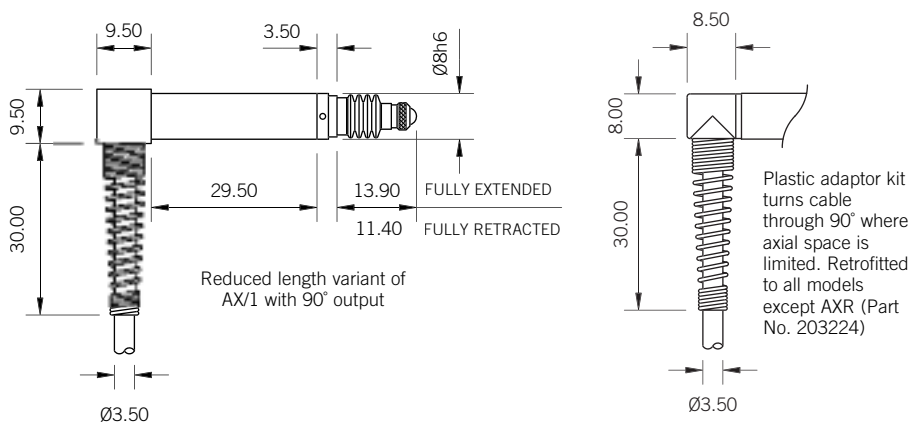
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Standard Spring Push (AX/S and DP/S)



| | AX/1/S | DP/2/S | AX/1.5/S | AX5/1/S | AX/2.5/S | DP/5/S | AX/5/S | DP/10/S | AX/10/S |
|-----------|--------|--------|----------|----------|----------|--------|--------|---------|---------|
| | | | | DP10/2/S | | | | | DP/20/S |
| A | 43.00 | 46.00 | 58.00 | 75.00 | 63.00 | 65.00 | 87.00 | 89.00 | 127.00 |
| C | 3.5 | 2.00 | 4.00 | 4.00 | 4.00 | 2.00 | 4.00 | 2.00 | 3.00 |
| B1 | 13.9 | 13.9 | 15.40 | 25.40 | 17.40 | 17.40 | 25.40 | 25.40 | 44.90 |
| B2 | 11.4 | 10.9 | 11.40 | 14.40 | 11.40 | 11.40 | 14.40 | 14.40 | 23.90 |

Right Angle Spring Push (AXR and DPR)



Special Spring Push Probes

