

## Technical Specification Standard Spring Push and Pneumatic, Feather Touch and In Line Connector

### Products (Dia 8h6)

Spring Push Axial Cable	DP/0.5/S	DP/1/S	DP/2/S	DP/5/S	DP/10/S	DP/20/S	DP10/2S
Spring Push Radial Cable			DPR/2/S	DPR/5/S	DPR/10/S	DPR/20/S	DPR10/2/S
Spring Push Axial Cable Feather Touch			DT/2/S	DT/5/S	DT/10/S	DT/20/S	DT10/2/S
Spring Push Radial Cable Feather Touch			DTR/2/S	DTR/5/S	DTR/10/S	DTR/20/S	DTR10/2/S
Pneumatic Axial Cable			DP/2/P	DP/5/P	DP/10/P	DP/20/P	DP10/2S
Pneumatic Radial Cable			DPR/2/P	DPR/5/P	DPR/10/P	DPR/20/P	DPR10/2/P
Pneumatic Axial Cable Feather Touch			DT/2/P	DT/5/P	DT/10/P	DT/20/P	DT10/2/S
Pneumatic Radial Cable Feather Touch			DTR/2/P	DTR/5/P	DTR/10/P	DTR/20/P	DTR10/2/S

### Measurement Performance

Measurement Range (mm)	0.5	1	2	5	10	20	2
Accuracy (% of Reading) (Note 1)	0.05	0.05	0.05	0.05	0.06	0.7	0.05
Accuracy (% of Reading) (Note 1) - with In line Connector	N/A	0.2	0.2	0.15	0.15	0.15	0.2
Repeatability (worst case) $\mu\text{m}$ (Note 2)	0.1	0.15	0.15	0.15	0.15	0.15	0.15
Repeatability (typical) $\mu\text{m}$ (Note 3)	0.05	0.05	0.05	0.05	0.07	0.07	0.05
Resolution ( $\mu\text{m}$ )	0.01	0.01	0.01	0.05	0.05	0.1	0.01
Pre Travel (mm)	0.03	0.15	0.15	0.15	0.15	0.15	0.15
Post Travel (mm)	0.05	0.35	0.85	0.85	0.85	0.85	8.85
Tip Force (N) at Middle of Range $\pm 20\%$							
Spring Push	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Spring Push Feather Touch	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Pneumatic at 0.4 bar	N/A	N/A	0.7	0.7	0.7	0.7	0.7
Pneumatic at 1 bar	N/A	N/A	2.6	2.6	2.6	2.6	2.6
Pneumatic Feather Touch $\pm 30\%$ at 0.3 bar	N/A	N/A	0.18	0.18	0.18	0.18	0.18
Pneumatic Feather Touch $\pm 30\%$ at 1 bar	N/A	N/A	1.1	1.1	1.1	1.1	1.1
Pneumatic Jet	N/A	N/A	0.85	0.85	0.85	0.85	0.85
Temperature Coefficient %FS/ $^{\circ}\text{C}$	0.01	0.01	0.01	0.01	0.01	0.01	0.01

### Environmental

Sealing for Probe	IP65 with gaiter or IP50 without gaiter IP43 for module and TCON
Sealing for Probe Interface Electronics	
Storage Temperature ( $^{\circ}\text{C}$ )	-20 to +80
Probe Operating Temperature with Gaiter ( $^{\circ}\text{C}$ )	+5 to +80
Probe Operating Temperature without Gaiter ( $^{\circ}\text{C}$ )	-10 to +80
Electronics Operating Temperature ( $^{\circ}\text{C}$ )	0 to 60
EMC Emissions	EN61000-6-3
EMC Immunity	EN61000-6-2
Probe Life	100 million cycles (no side load), > 10 million cycles in most applications

### Material

Probe Body	Stainless Steel Nylon, Ruby, Silicon Nitride, Tungsten Carbide Fluoroelastomer or Silicon PUR ABS
Probe Tip (options)	
Gaiter (Note 6)	
Cable	
Electronics Module	

### Electronics Interface (Orbit@3)

Orbit@3 Interface Options	USB, Ethernet, RS232 3906 readings per second 460, 230, 115, 58, 29, 14, 7, 4 5 $\pm$ 0.25 VDC @ 0.06A typical
Reading Rate	
Bandwidth of Electronics (Hz) user selectable	
Power	

Note 1: Accuracy 0.1  $\mu\text{m}$  or % reading whichever greater

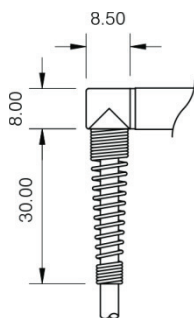
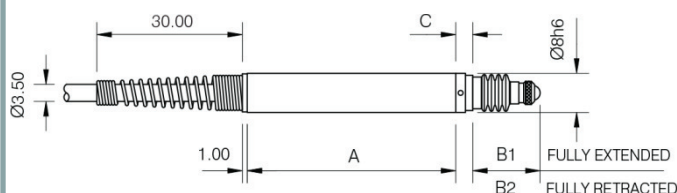
Note 2: Repeated operation against a carbide target with side load applied to the bearing using max-min

Note 3: Repeated operation against a carbide target standard deviation from average (68%)

Note 6: Different gaiter materials available for specific applications - Fluoroelastomer standard option

**Standard Spring Push DP/S**

	DP/2/S	DP10/2/S	DP/5/S	DP/10/S	DP/20/S
A	47.50	75.00	66.40	90.50	127.00
C	2.00	4.00	2.00	2.00	3.00
B1	13.90	24.40	17.40	25.40	44.90
B2	10.90	14.40	11.40	14.40	23.90

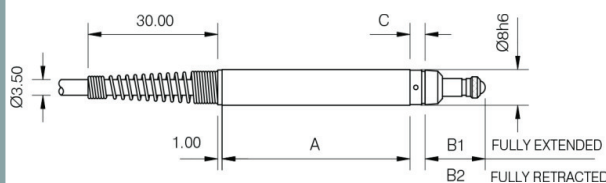


A R/A adapter kit is available for axial probes where space is limited – see website

For R/A version A is -3 mm

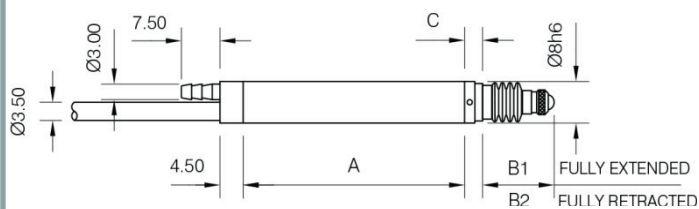
**Feather Touch Spring Push DT/S**

	DT/2/S	DT/5/S	DT/10/S	DT/20/S
A	47.50	66.40	90.50	127.00
C	2.00	2.00	2.00	3.00
B1	13.90	17.40	25.40	33.90
B2	10.90	11.40	14.40	12.90

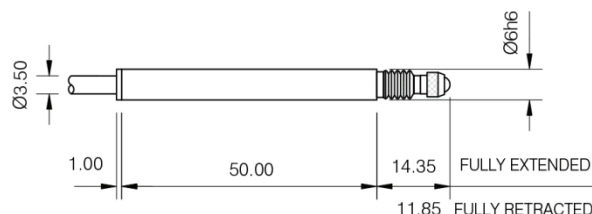


**Vacuum Retract (DP/V)**

	DP/2/V	DP/5/V	DP/10/V	DP/20/V
A	46.00	65.00	96.00	127.00
C	2.00	2.00	2.00	3.00
B1	13.90	17.40	25.40	44.90
B2	10.90	11.40	14.40	23.90



**6mm dia body Spring Push (D6P2)**



**Feather Touch Spring Push DT/S**

	DTR/2/S	DTR/5/S	DTR/10/S	DTR/20/S
A	33.50	52.50	76.50	113.50
C	2.00	2.00	2.00	3.00
B1	13.90	17.40	25.40	33.90
B2	10.90	11.40	14.40	12.90

