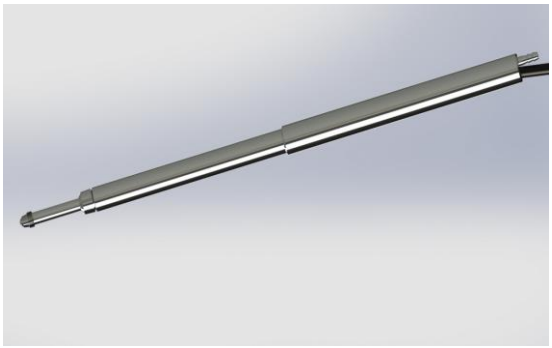
30 mm Digital Measuring Probe

A new Orbit® Digital Probe



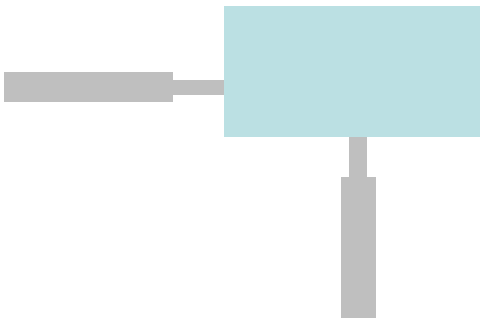
- Full calibration over 30 mm
- Accurate **absolute** sensor an alternative to incremental encoders
- No positon loss or overspeed issues
- Excellent resolution and repeatability
- **Use to check**: Deep holes, mechanical deformation, machined parts.
- **Markets for use:** Automotive, Aerospace Automotive Glass, Machine tools

Example: Use DT/30/P to measure deep blind holes

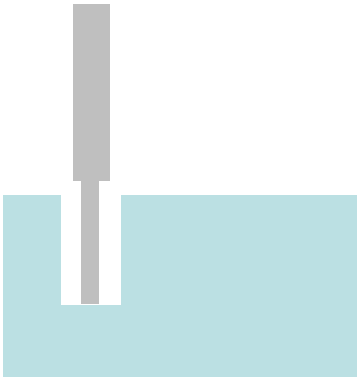
- **Pneumatic Operation Max Operating Pressure 2.0bar**
- **Tested to > 10million Cycles**
- **0.15% Linearity R.E.**
- **Non Repeat 0.25 Microns**
- **Stepped Diameter Body 8mm diameter over Bearing Area, 9.52 at back.**
- **Tip force at Mid Position 0.85N @ 1 bar**

Applications

X-Y positioning

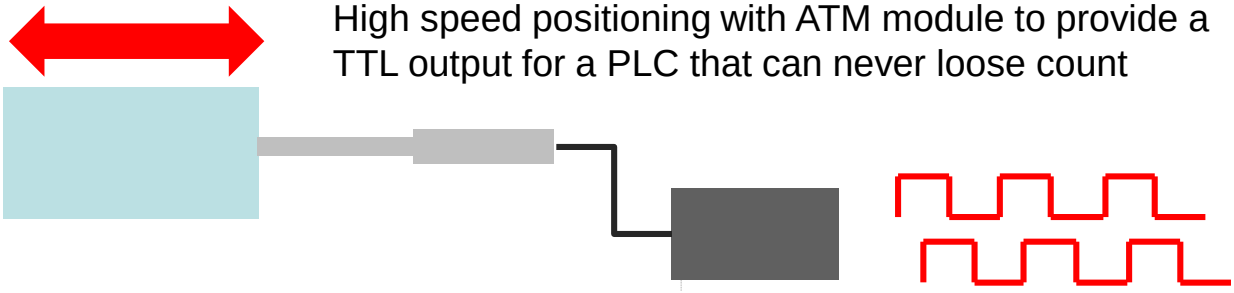


Height of feature checks



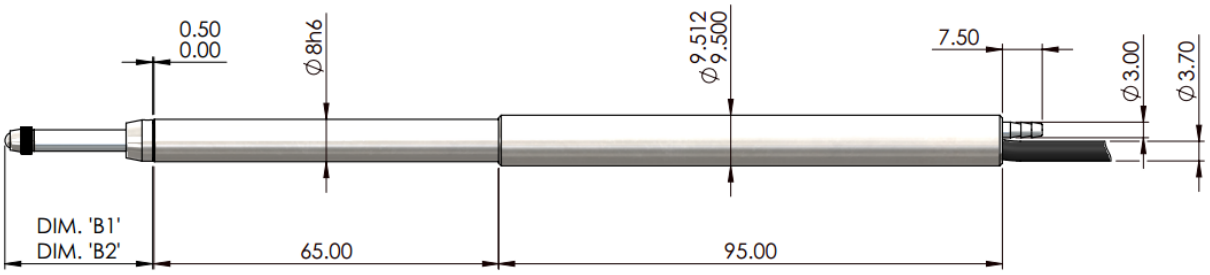
Depth of features

- Higher accuracy replacement for potentiometer based measuring probes with no wearing parts.
- Can replace conventional LVDT type displacement sensors providing higher accuracy



High speed positioning with ATM module to provide a TTL output for a PLC that can never loose count

Dimensions – DT30



MEASUREMENT RANGE	30mm
FULLY EXTENDED DIM 'B1'	43.00
PRE-TRAVEL	0.15
POST-TRAVEL	0.85
FULLY RETRACTED DIM 'B2'	12.00

Solartron advise checking of dimensions prior to use by downloading drawings from website or contact sales office for latest issue

Specification – DT30

Product	
Pneumatic Axial Cable	DT/30/P
Body Width (mm)	8 mm and 9.5 mm
Measurement Performance	
Measurement Range (mm)	30
Accuracy (% of Reading) (Note 1)	0.15
Repeatability (µm) (Note 2)	0.25
Resolution (µm)	0.02
Pre Travel (mm)	0.15
Post Travel (mm)	0.85
Tip Force at Middle of Range (N) Pneumatic ±30% at 1 bar (Note 3)	0.85
Environmental	
Sealing	IP50
Sealing for Probe Interface Electronics	IP43 for Module and TCON
Storage Temperature (ºC)	-20 to +80
Probe Operating Temperature (ºC)	+5 to +80
Electronics Operating Temperature (ºC)	0 to +60
EMC Emissions	EN61000-6-3
EMC Immunity	EN61000-6-2
Shock	Do not subject to excessive shocks or loads
Life (Note 4)	Greater than 10 million cycles depending on application
Material	
Probe Body	Stainless Steel
Tips	Nyon, Ruby, Tungsten Carbide, Sillicon Nitride
Gaiter	N/A
Cable	PUR Standard
Electronics Module	ABS
Electronics Interface	
Orbit®3 Interface Options	USB, RS232, Ethernet, Modbus, Ethernet I/P, Bluetooth
Reading Rate	3906 readings per second
Bandwidth of Electronics (Hz) user selectable	460, 230, 115, 58, 29, 14, 7,4
Power	5±0.25 VDC @ 0.06A typical

Note 1: Accuracy 0.5 µm or % reading (whichever greater)
Note 2: Repeated operation against a carbide target with side load applied to the bearing using max-min
Note 3: Maximum operating pressure 2 bar. To maximise working life ensure that the air supply is clean and dry - see product manaul 503094 Section 4 for further details.
Note 4: See product manual 503094 Section 5 for advice on how to maximise life