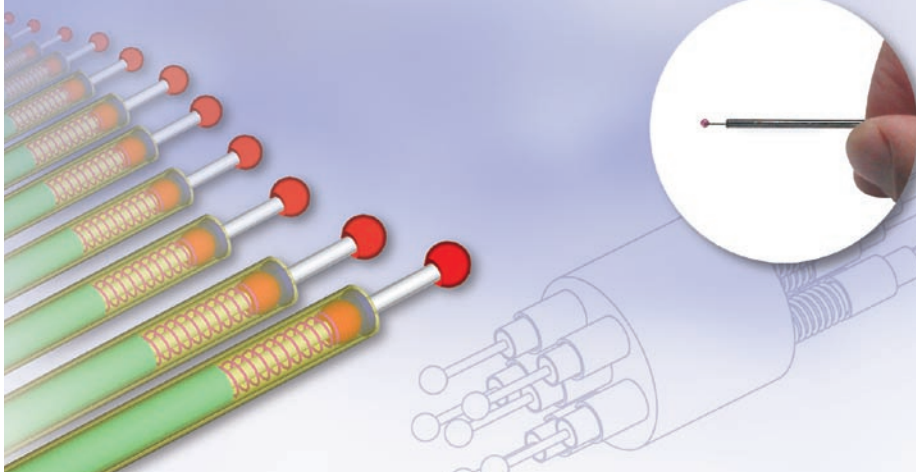


## DVRT Microminiature Displacement Sensors



Amongst the world's smallest linear displacement sensors, ideally suited for tightly spaced sensing arrays.

### Features and Benefits:

- High resolution and accuracy
- Operating temperature to 175°C
- Frequency response up to 20 KHz
- Robust and waterproof
- Suitable for submersion in corrosive media
- Suitable for extreme duty-cycle applications



Patent Pending

Specifications	M-DVRT <sup>®</sup>	MG-DVRT <sup>®</sup>	S-DVRT <sup>®</sup>	SG-DVRT <sup>®</sup>	NC-DVRT <sup>®</sup>
Model	M-DVRT <sup>®</sup>	MG-DVRT <sup>®</sup>	S-DVRT <sup>®</sup>	SG-DVRT <sup>®</sup>	NC-DVRT <sup>®</sup>
Sensor Type	Free-sliding	Gauging	Free-sliding	Gauging	Non-contact
Stroke length/range	3, 6, 9 mm standard 1.5 mm high resolution		4, 8, 24, 38 mm standard 6 mm high resolution 500 µm or less nano resolution		0.5, 1.0, 1.5, 2.5 mm
Accuracy	± 1.0 % with straight line calibration ± 0.1 % with polynomial calibration				± 0.1 to ± 0.5 % with polynomial calibration
Sensitivity	8 volts over stroke length with DEMOD-DVRT, 4.5 volts over stroke length with DEMOD-DC				
Signal to noise (using DEMOD-DVRT)	2000 to 1 (filter 3dB down at 800 Hz standard)	2000 to 1 (filter 3 dB down at 800 Hz, standard); 600 to 1 (unfiltered) peak to peak	4200 to 1 (with filter 3 dB down at 800 Hz, standard resolution), 466 to 1 (unfiltered)		1000 to 1 (with filter 3 dB down at 800 Hz standard)
Resolution	1.5 µm for 3 mm stroke 3.0 µm for 6 mm stroke 4.5 µm for 9 mm stroke 300 nm for high res version		1.0 µm for 4 mm stroke 2.0 µm for 8 mm stroke 6.0 µm for 24 mm stroke 9.5 µm for 38 mm stroke 0.6 µm for high res version 10 nm for nano res version		0.1% minimum
Frequency response	800 Hz standard, up to 20 KHz optional				
Hysteresis*	± 1 micron				± 2 micron
Repeatability*	± 1 micron				± 2 micron
Overall length	11.3 mm for 3 mm stroke 18.7 mm for 6 mm stroke 26.8 mm for 9 mm stroke 11.3 mm for high res version	24 mm for 3 mm stroke 40 mm for 6 mm stroke 50 mm for 9 mm stroke 11.3 mm for high res version	18.5 mm for 4 mm stroke 34.5 mm for 8 mm stroke 81 mm for 24 mm stroke 124 mm for 38 mm stroke	30.5 mm for 4 mm stroke 50.5 mm for 8 mm stroke 127 mm for 24 mm stroke 183 mm for 38 mm stroke	NC-DVRT-0.5 - 8.4 mm NC-DVRT-1.0 - 19.0 mm NC-DVRT-1.5 - 19.0 mm NC-DVRT-2.5 - 19.0 mm
Outside diameter	1.5 mm standard version 1.8 mm high resolution	1.8 mm smooth body	4.76 mm	6.0 mm smooth body	NC-DVRT-0.5: 2.84 mm NC-DVRT-1.0: 4.83 mm NC-DVRT-1.5: 6.35 mm NC-DVRT-2.5: 12.7 mm
Housing material	316 stainless steel smooth body, or 4-40, 6-32 & 8-32 400 series stainless steel threaded body	316 stainless steel smooth body, or 8-32/10-32 400 series stainless steel threaded body	316 stainless steel smooth body or 5/16 - 24 400 series stainless steel threaded body	400 stainless steel smooth body or 3/8-24 UNF threaded body	300 series stainless steel
Attachment method	stainless steel clamp, screws or barbs	clamping collar or threaded body			threaded body
Leadouts	45 cm, multi stranded, shielded, stainless steel reinforced, Teflon insulated				
Connector	keyed Lemo 4-pin with polyolefin strain relief				
Operating temperature	-55 to 175 °C	-55 to 175 °C	-55 to 175 °C	-55 to 175 °C	-55 to 175 °C

\*at constant temperature

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