

SR-W/DR-W Series LVDT

(Waterproof Displacement Transducer)



- Robust construction.
- DC input, DC output
- Spring-loaded or guided cores
- Stainless-Steel body
- Connector, cable or conduit outlet.
- Weatherproof or submersible options

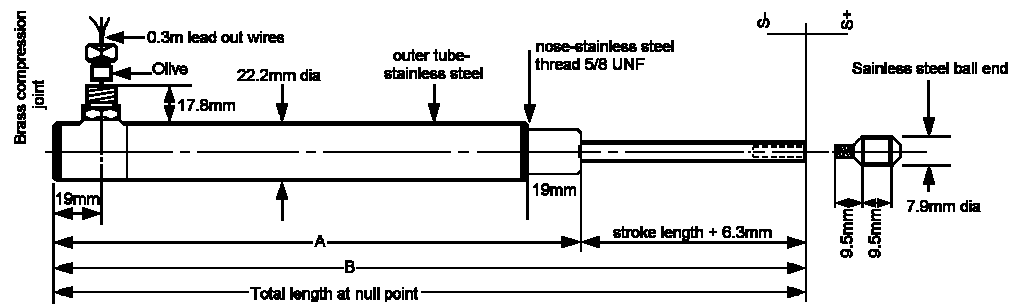
The SR-W and DR-W series waterproof linear variable differential transformers are designed for applications requiring total submersion or for use in situations where high humidity or condensation may be expected.

These waterproof LVDTs are available in two series, the SR-W (AC input AC output) or DR-W (DC input DC output).

The units have a fully sealed body with the connecting cable brought out through a 1/4 BSP compression fitting suitable for use with copper or plastic pipe.

For submersion in liquids up to approximately 20m depth (or equivalent pressure of 30 PSI or 2 atmospheres), a suitable sealing compound should be used within the compression fitting. For higher pressures (or greater depths) the use of araldite AT18 and Hz 18 hardener is recommended and the manufacturer's instructions on cleaning surfaces and mixing should be followed.

The spring - loaded guided core displacement transducers consist of a magnetically shielded linear variable differential transformer contained within an outer stainless steel body which is threaded at the probe end for mounting purposes. Within this threaded end is a bush bearing to support and guide the stainless steel probe shaft.



Specifications

DC

Input voltage 10-24V DC unstabilised, (DR12.5W- 6-24 V Stabilised)
 Output Voltage..... Not less than $\pm 2V$ DC, (DR12.5W - varies with input)
 Response time constant.....0.3m sec
 Frequency Response..... 400Hz
 Thermal zero shift..... Better than 0.02% FRO/ $^{\circ}C$
 Thermal span shift..... Better than 0.05% FRO/ $^{\circ}C$
 Linearity..... $\pm 0.5\%$ standard 0.3 by selection
 Output Ripple.....Less than 0.2% FSD pk-pk
 Temperature range..... 0-90 $^{\circ}C$

DR...	12.5W	25W	50W	75W
Individual specification no. IS...	126	O82	O83	O84
Stroke length \pm mm	12.5	25	50	75
Sensitivity mV/mm	160	80	40	20
Output impedance (Ohms)	3k4			
Output load (Ohms)	50k			
Body length A (mm)	209	289	368	439
Dimension B (mm)	229	323	427	526

AC

Input Voltage..... Up to 10V RMS according to frequency
 Maximum recommended input current..... 20mA
 Temperature range..... 0-150 $^{\circ}C$
 Linearity of output..... $\pm 0.5\%$ full range output

DR...	12.5W	25W	50W	75W
Individual specification no. IS...				
Displacement range \pm mm	12.5	25	50	75
Sensitivity mV/mm	160	120	80	60
Output at full range (\pmmV/V applied) at 3kHz excitation	200	300	400	450
Primary winding inductance mH	59	64	79	97
Primary impedance at 3kHz (K Ohms)	1.1	1.2	1.5	1.9
Primary Resistance (Ohms)	120	130	190	250
Secondary resistance (total, ohms)	170	250	330	440
Body length A (mm)	160	232	317	387
Dimension B (mm)	179	259	375	470

Ordering information/Options

Options: Rod end Bearings, various integral cable/flexible conduit lengths,
 increased displacement ranges (non-spring loaded)

Ordering information: Order unit by Type No. and IS. no. or by specifying options.

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Sensonics Ltd,
 Berkhamsted,
 Hert's, HP4 1EF,
 England
 Tel: +44(0) 1442 876 833.
 Fax: +44(0) 1442 876 477.