DISTANCE TRANSDUCER

101-V0070 Series

Parameters/Range	5mm	10mm	15mm	20mm	25mm	40mm	50mm	100mm

DISTANCE TRANSDUCER High performance

Differential transformer type displacement transducer offers excellent performance for high accuracy , High repeat-ability measurements in quality control and metrology applications.

The sensor is powered by a convenient single +12 to 24V DC power supply,

The electronic circuitry is sealed in a 304 stainless steel metal tube, and can work in harsh environments such as humidity and dust.

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A silicon nitride ceramic ball for the probe for good abrasion resistance , nonslip contacts for long service life, The DC power supply, a built-in high-performance signal demodulator, and a two-wire system to provide high accuracy and high repeatability. Power supply, built-in high-performance signal demodulator, 0-5V voltage output

Outputs available

Type	Outputs	
A	4-20mA	Current
V1	0-5V	Voltage
V2	0-10V	Voltage
V3	+/-5V	Voltage
V4	+/-10V	Voltage
R	RS485	Digital
S	2mV/V	Strain Gauge

Specification	
Dynamic property	tie rod type 50HZ, rebound type 20HZ
Linearity error	≤0.1%FS: range 5mm; ≤0.15%FS: range 10,15,20,25,30,40,50mm; ≤0.25%FS: range 100mm
Repeatability	up to 1μm~10μm
Sensitivity	≤0.025%/□
Impact resistance	250g/11 ms
Operating temperature	-25□~+85□
Power supply	+12~24V DC
Excitation frequency	5KHZ
Excitation voltage	3Vrms
Vibration tolerance	10g/2KHZ
Temperature coefficient zero ≤ 0.01%/°C	≤ 0.01%/°C

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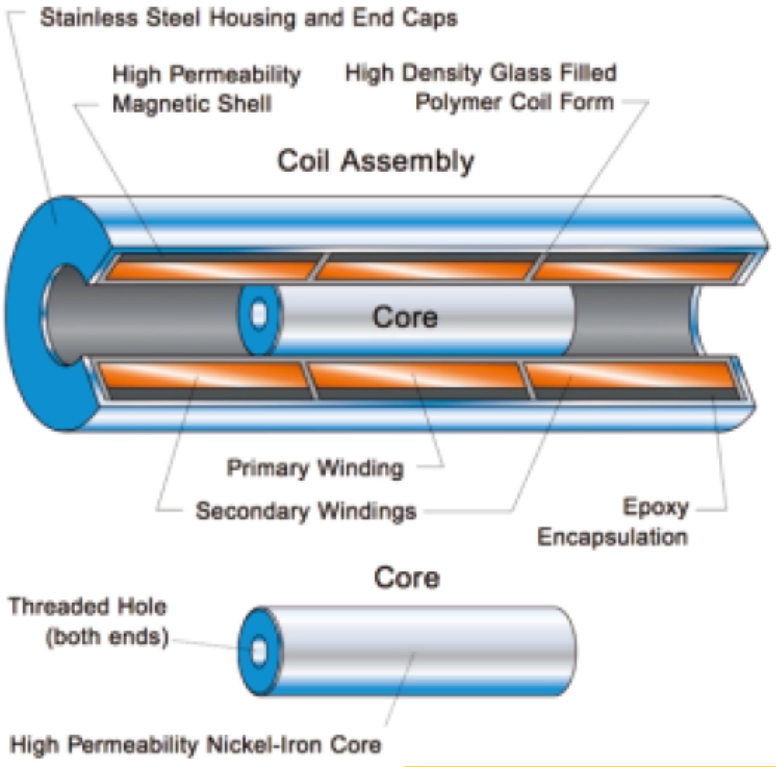
Working Principle Drawing

The working principle of LVDT displacement sensor is simply an iron core movable transformer, which consists of a primary coil, two secondary coils, iron core, coil skeleton, housing and other components. The primary and secondary coils are distributed on the coil skeleton, and inside the coil there is a freely movable. The coil has a freely movable rod-shaped iron core inside. When the core is in the middle position, the two secondary coils produce equal induced electromotive force, so that the output voltage is zero; when the core moves inside the coil and deviates from the center position, the two coils produce unequal induced electromotive force, and there is voltage output, and the size of its voltage depends on the size of the displacement.

In order to increase the sensitivity of the sensor, improve the linearity of the sensor, increase the linear range of the sensor, the design of the two coils connected in reverse series, the two secondary coils of the reverse polarity of the voltage, the LVDT output voltage is the difference between the two secondary coils of the voltage, the output of the voltage value and the core of the displacement of the linear relationship between the core of the LVDT process, the core's movement can not be outside the linear range of coils, otherwise it will produce a non-linear value, so all LVDT have a linear range. Otherwise, non-linear values will be generated, so all LVDT have a linear range.



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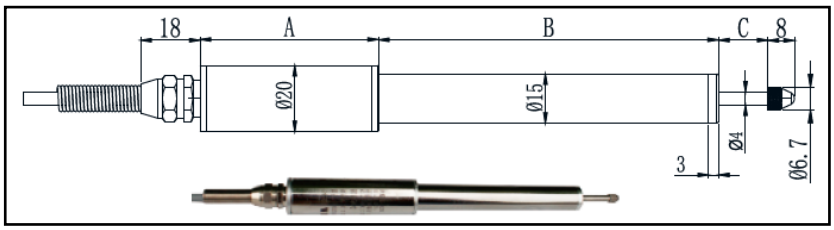
MatCivTest
MATERIAL CIVIL TEST EQUIPMENT

Type A-15mm Dia without dust boot



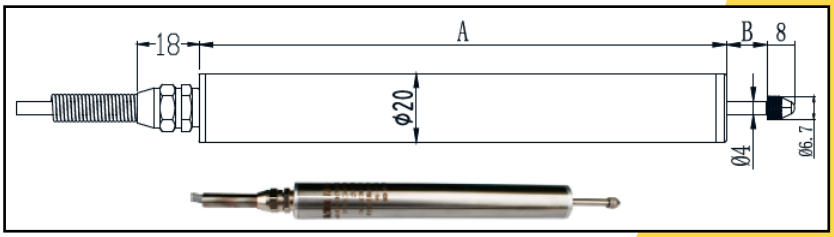
101-V0070-xxxA-15-yy
Spring return-integral Electronics, Type 15mm - without dust boot - analogue signal output Voltage or current. Order code xxx is travel yy Output type

Parameters/Range	5mm	10mm	15mm	20mm	25mm	40mm	50mm	100mm
Length A	69	69	69	69	69	69	69	69
Length B	80	80	100	100	100	193	193	338
Length C	7	12	17	22	27	41	51	105
Front / Read Dead Zones	1	1	1	1	1	0.5	0.5	2.5

101-V0070-xxxA-15-R
Spring return-integral Electronics, Type A-15mm - without dust boot - Digital signal output RS485. Order code xxx is travel yy Output type

Parameters/Range	5mm	10mm	15mm	20mm	25mm	40mm	50mm	100mm
Length A	79	79	79	79	79	79	79	79
Length B	80	80	100	100	100	193	193	338
Length C	7	12	17	22	27	41	51	105
Front / Read Dead Zones	1	1	1	1	1	0.5	0.5	2.5

Type A-20mm Dia without dust boot



101-V0070-xxxA-20-yy
Spring return-integral Electronics, Type A-20mm - without dust boot - analogue signal output Voltage or current
Order code xxx is travel yy Output type

Parameters/Range	5mm	10mm	15mm	20mm	25mm	40mm	50mm	100mm
Length A	140	140	155	155	155	260	260	395
Length B	7	12	17	22	27	41	51	105
Front / Read Dead Zones	1	1	1	1	1	0.5	0.5	2.5

101-V0070-xxxA-20-R
Spring return-integral Electronics, Type A-20mm - without dust boot - Digital signal output RS485
Order code xxx is travel yy Output type

Parameters/Range	5mm	10mm	15mm	20mm	25mm	40mm	50mm	100mm
Length A	150	150	165	165	165	270	270	405
Length B	7	12	17	22	27	41	51	105
Front / Read Dead Zones	1	1	1	1	1	0.5	0.5	2.5

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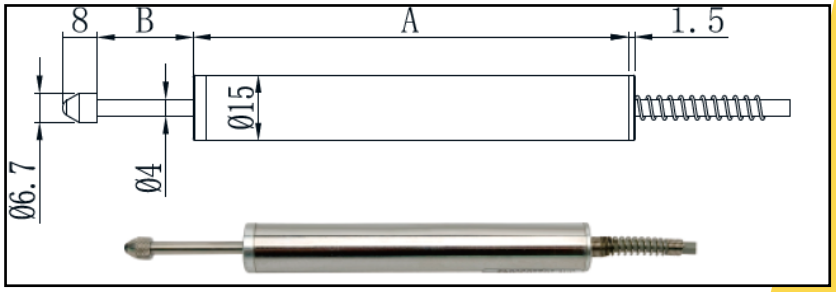
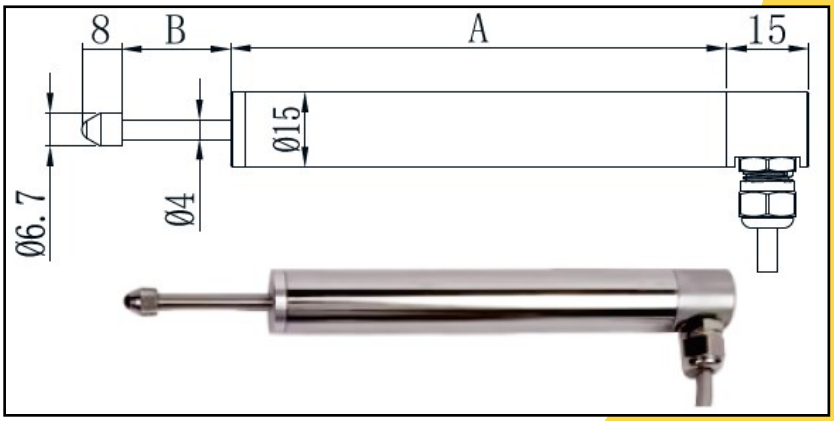
Type B and Type C
Spring return– with in line electronic module allowing for a shorter Transducer housing

Shown here with a round electronic housing.
The default housing we supply is a screw mount

101-V0070-xxxB-15-yy
Spring return-External Electronics, Type C-15mm - without dust boot-bottom cable entry



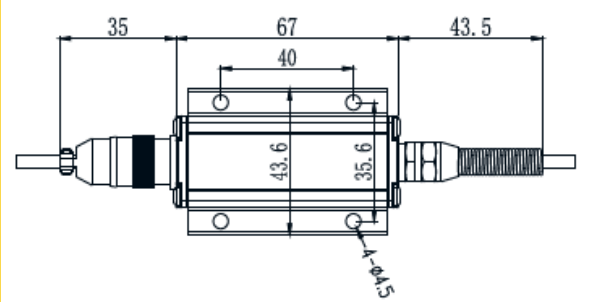
101-V0070-xxxC-15-yy
Spring return-External Electronics, Type C-15mm - without dust boot-Side cable entry
Order code xxx is travel yy Output type



Parameters/Range	5mm	10mm	15mm	20mm	25mm	40mm	50mm	100mm
Length A	80	80	100	100	100	193	193	338
Length B	7	12	17	22	27	41	51	105
Front / Read Dead Zones	1	1	1	1	1	0.5	0.5	2.5

Electronic Enclosure can be supplied in various type housings

By default we supply the screw mounted version



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