

SDVB Series

■ General Purpose LVDT

The new generation LVDT SDVB has been designed to sensor displacement, oscillation, thickness variation of workpiece. It is intended for widely application in aerospace, machinery, construction, textile, railway, coal mine, metallurgy, plastic, chemical industry and academic research.

The spring-loaded DC-LVDT performs excellently with a maximum measuring range of 50mm maximum resilience of 200 gram. It operates from a single-ended 9-28 DC power supply, output standard signal of 0-5 DC or 4-20 mA to be identified by computer or PLC. The sensor probe shaft is constructed entirely of anti-friction chromium tool steel, and electrical circuit is rugged hermetically sealed in SUS 304 stainless steel sleeve to resist hostile environment of damp and dust, etc.

■ Features

- Diameter Φ 20mm, SUS 304, Spring-loaded.
- Operated from single-ended, 9-28 VDC supply, built-in excellent signal demodulator
- Output voltage 0-5V or 0-10V(3 wire), output current 4-20 mA (2 wire)
- Standard range from 1mm-50mm, high resolution, excellent repeatability
- Contactless operation, long life.

■ Applications

- Axial/Radial pulsation measurement
- Valve Position Sensing
- Gap controlling in rolling mill
- Fabricated Metal Products Gaging



Spring-loaded DC-LVDT Displacement Sensors

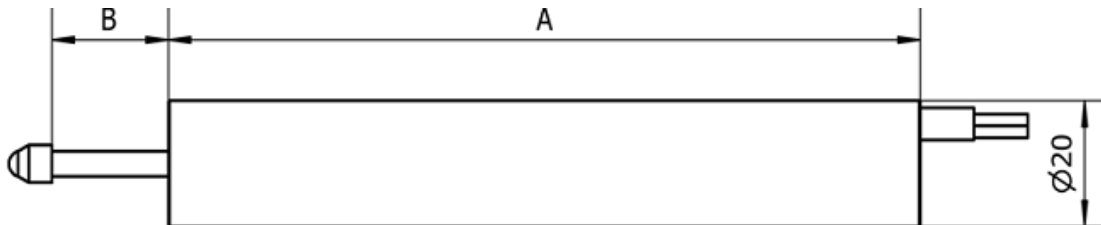
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■ Specifications

Input Voltage	DC 9V-28V, AC 5V
Input Current	input current $\leq 10\text{mA}$ (Voltage output typ e) input current 4-20mA (2 wire, Current output typ e)
Measuring stroke	0~2.5mm to 0~500mm Wide Selection of Measurement Ranges
Output signal	0.5-4.5VDC(5V DC input voltage)
	0-5VDC(9V-28V DC input voltage)
	0-10VDC(15V-28V DC input voltage)
	4-20 mA(2 wire, 15V-28V DC input voltage)
Ripple	Less than 15mV rms or 25 μArms
linearity	$\pm 0.25\%$, $\pm 0.5\%$ optional
Repeatability	$< 0.01\%$ of FS
Operating temperature	$-25\text{ }^\circ\text{C} \sim +85\text{ }^\circ\text{C}$
Thermal coefficient of Scale Factor	Null point $\leq 0.01\%/^\circ\text{C}$
	Sensitivity $\leq 0.025\%/^\circ\text{C}$

■ Mechanical Specifications

Separate Core DC- LVDT SDVB20 series mechanical specification:



Specifications	SDVB DC spring-loaded LVDT					
Measuring range (e mm)	2.5	5	10	15	25	50
Body A (mm)	80	90	110	130	170	210
Exposed length of guided core B(mm)	5	8	15	22	34	60

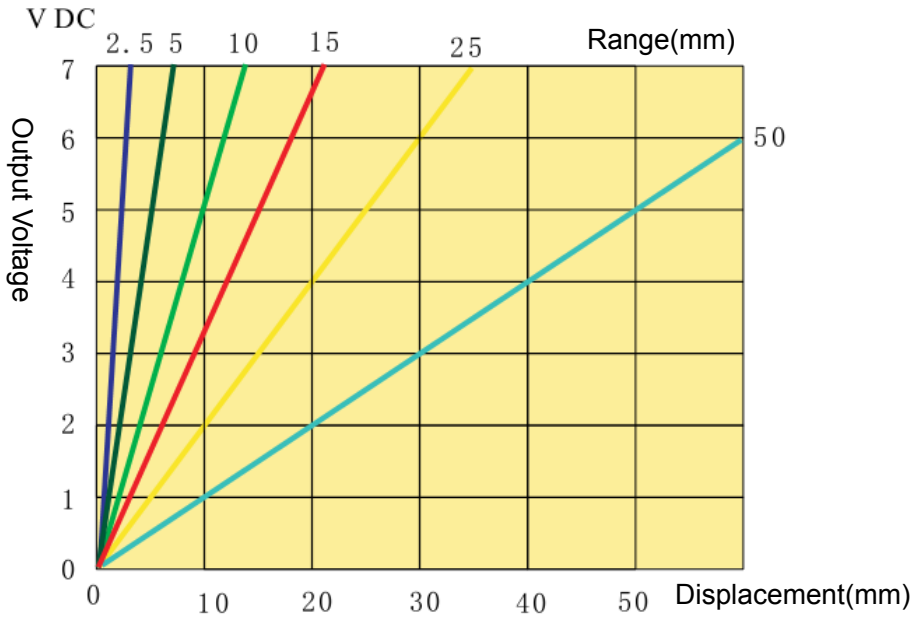
Note: The factory default setting is that output signal increases when the guided core is compressed

* Customer can define diameter and measuring range of LVDT

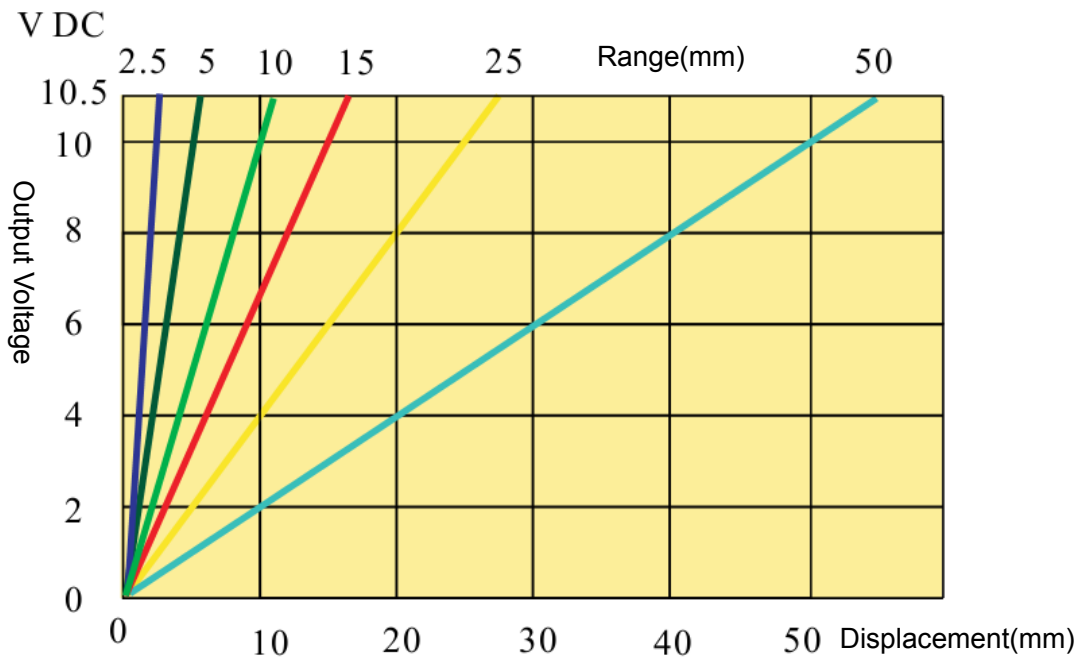
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■ Output Characteristics

Relations of output voltage(0~5V) and displacement for available measuring ranges
(Input voltage 9- 28VDC, 12VDC is recommended)

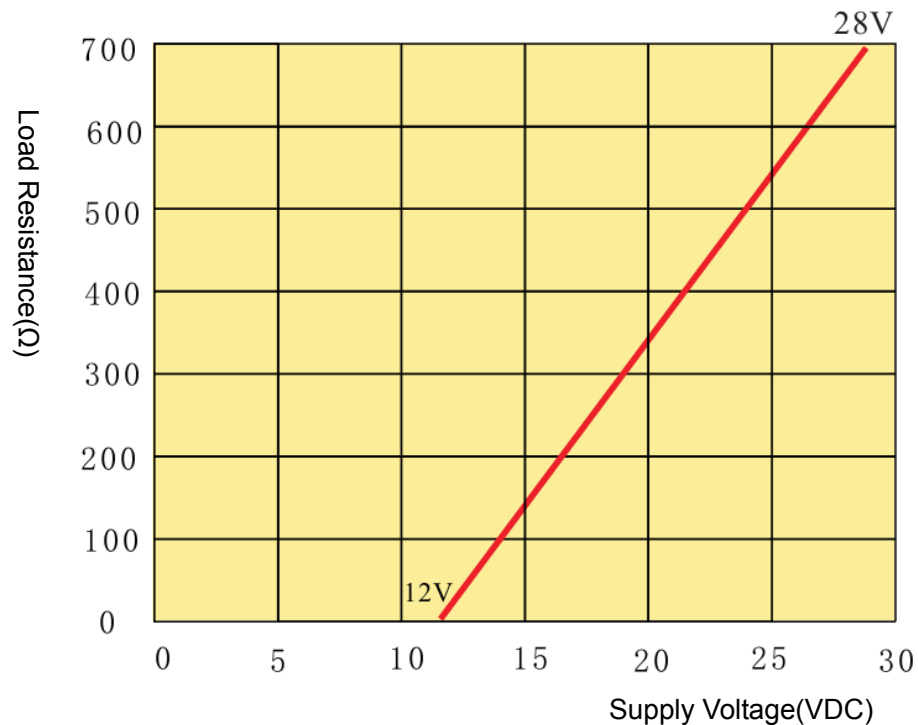


Relations of output voltage 0~10V and displacement for available measuring ranges
(Input voltage 15- 28VDC, 15VDC is recommended)



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Relations between the Max loop impedance and input voltage (Current output Model)
(Input voltage 15~28VDC, 24VDC is recommended, Load impedance 500Ω)



■ Wiring

The input voltage must be within the scope of specifications.

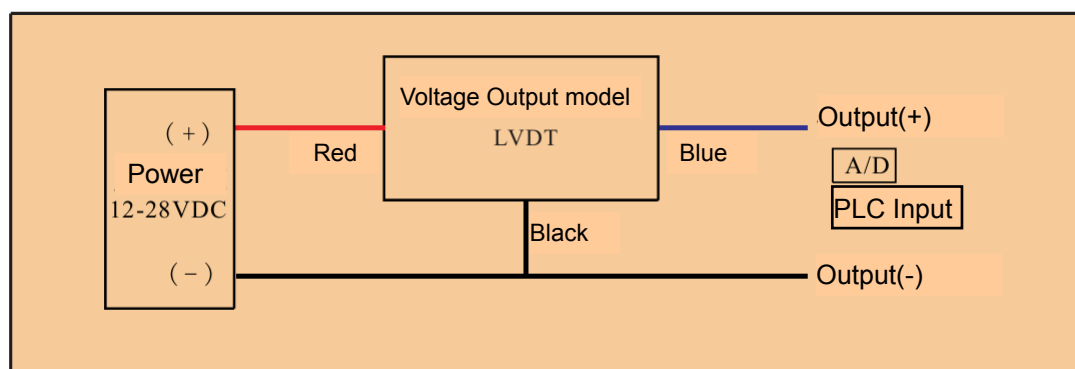
The wiring diagram as below;

Red wire —Power (+)

Black wire —Power (-)、 Output of signal (-)

Blue wire —Signal output

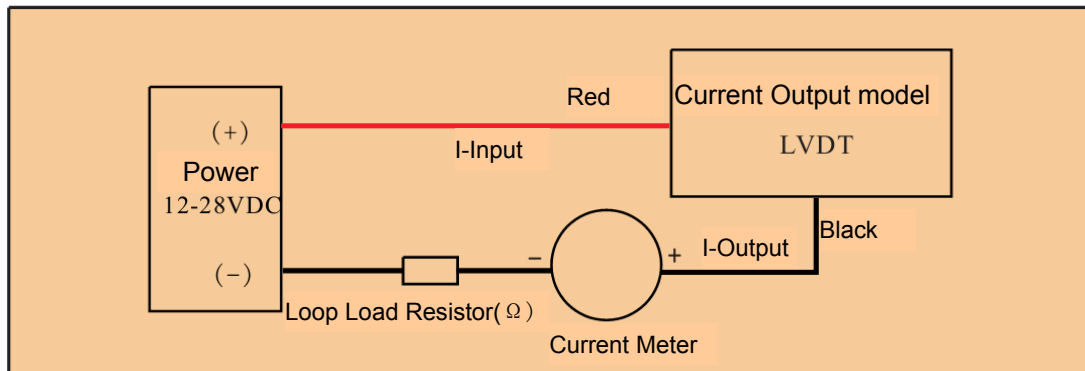
Diagram for Voltage Output Model:



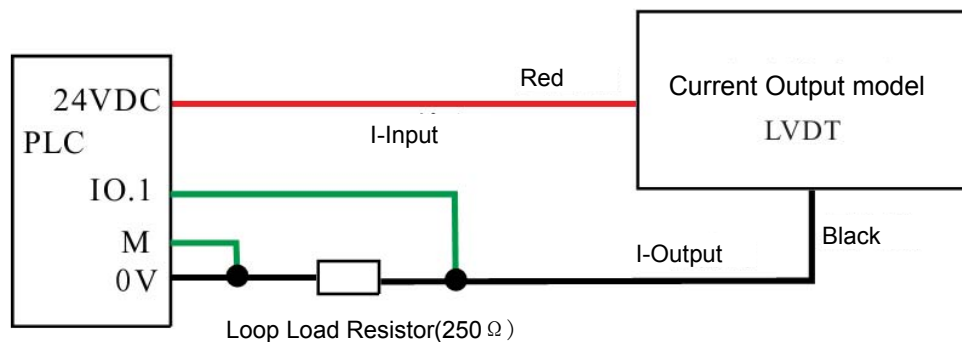
Spring-loaded DC-LVDT Displacement Sensors

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Two Wires Current Output Wiring:



PLC Wiring (Two Wires Current Output):



■ Mounting Blocks

LVDT Installations require a convenient method to mount the units, Constructed of reinforced phenolic and other nonconductive materials with a low- temperature coefficient of expansion. Ready- made mounting blocks are available for all LVDT Series in our catalog; mounting blocks are convenient inexpensive and fast solution for LVDT Installation.



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■ Dimensions of mounting block

