

SDVH8

Ultrahigh Precision LVDT Gauging Probes

Introduction

The linear variable differential transformer (LVDT) has been widely used in applications such as power turbines, hydraulics, automation, aircraft, satellites, nuclear reactors, and many others. These transducers have low hysteresis and excellent repeatability.

SDVH8 series gauging probes, 8 mm diameter pencil-type gaging probes offers ultra-precise measurement of dimensions in a wide variety of Q.C. SPC, and industrial metrology applications. The probe is made of zirconia which is abrasion resistant and super hard. External transmitter supply power in 9~28V DC



SDVH8 LVDT Gauging Probes

Features

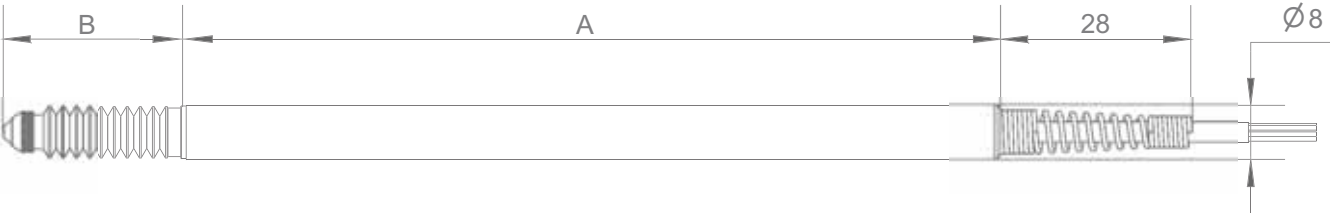
- AC operated, Pencil Type
- High-quality External Signal Conditioner
- Measurement ranging from 0mm to 8mm
- Contactless, Long lifespan

Applications

- Robotic Gauging
- TIR Measurement
- Ultrahigh Precision Displacement Gauging
- Glass Assembly Line Inspection
- Auto parts inspection

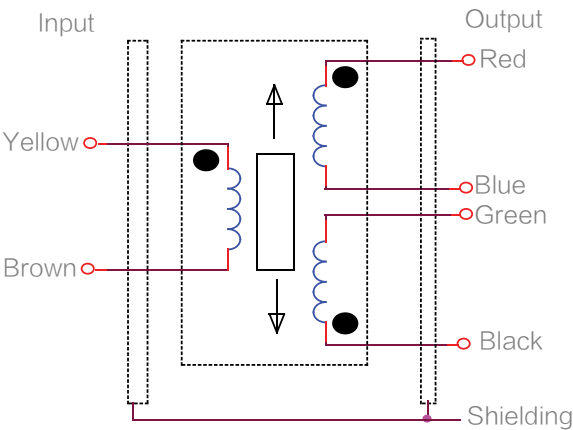
	SDVH8 LVDT Gauging Probes		
	AC Output		
Input Voltage	3Vrms (1~3Vrms)5KHz(1~10KHz)	9 ~28V DC input voltage	15 ~28V DC input voltage
Output Signal	AC	0~5V	0~10V 4~20mA
		Digital output RS485 (RTU)	
Measuring range (mm)	2 ,5 ,8		
Linearity Error	Analog output: ± 0.25%,Digital output RS485(RTU):0.25%,0.1% optional		
Repeatability Error	≤1um		
Resolution	≤0.01um(Max.), 16 bit for digital output		
Dynamic Characteristics	10Hz(Max.)		
Operating Temp.	-77 ℉~185 ℉ (-10℃~ +65℃)		
Temperature coefficient	Null point ≤0.01%/℃		
	Sensitivity ≤0.025%/℃		

Dimension



Parameter	SDVH8 Gauging Probe		
Mearsuring range (mm)	2	5	8
DimensionA (mm)	65.5	115	121
Dimention B (mm)	19.6	23.3	30.3

Cable

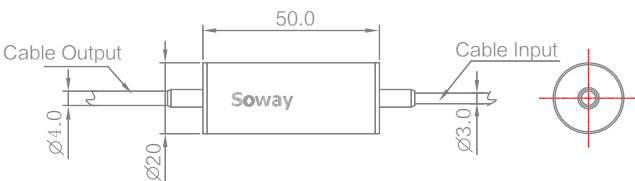


Caution

When yellow is in phase with black, connection of blue and green produce output of differential signal between red and black. When core moves towards end of cables, output is in phase with input.



Dimension of External Transmitter

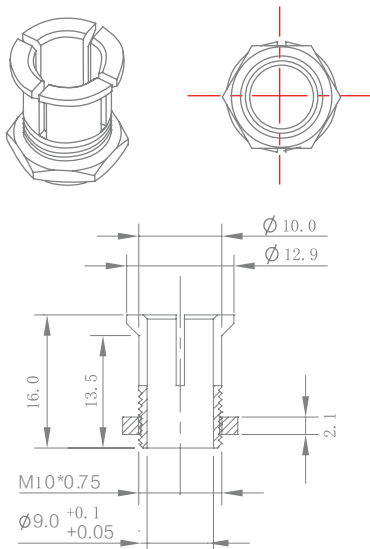


Installation



 Mounting blocks must be low-CTE and non-magnetic. Magnetic mounting blocks such as iron ones are not allowed.

Dimension Of Mounting Block



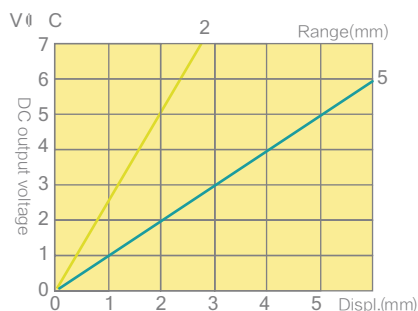
 Mounting blocks can be customized.

Ordering Guide

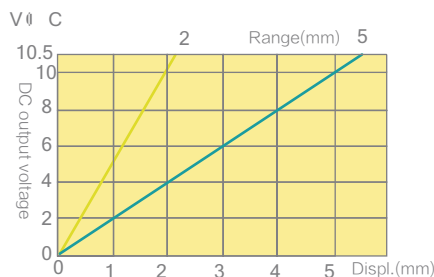
SDVH8	☐	-	☐	☐	☐	-	☐	☐	-	☐	☐	☐	Information in detail
Transmitter and Coil	☒												Nil: Integrated B: External Transmitter
Range(number means ranges)			☒	☒									All ranges are in mm
Non-Linearity				A									0.25%
				S									0.1%(Only for digital output)
Signal Output							☒	☒					See Table 1
Thread Size										C8			
Cables exit												P	

Output

SDVH8 of different ranges(output 0–5V)
Voltage vs Displacement
(DC Input 9–28V (12V DC recommended)



SDVH8 of different ranges(output 0–10V)
Voltage vs Displacement
DC Input 15–28V (15V DC recommended)



LVDT of Current Output
Loop Resistance (Max.) vs Supply Voltage

Input Voltage 15–28V DC
Input Voltage 24V DC(Recommended)
Loop Resistance 500 Ω



Connection

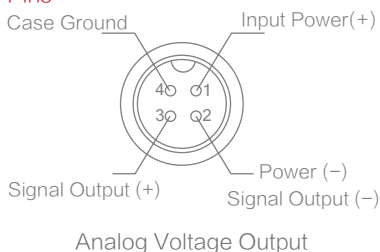


The voltage output of linear power supply needs to be used within range.
Please connect the pins according to the illustrations below, Available for both cable type and plug type.

Colors of the Cables

Red Power (+)
Black Power (–) Signal Output (–)
Blue Signal Output (+)

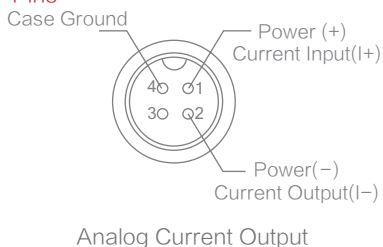
Pins



Colors of the Cables

Red Power (+) Current Input (I+)
Black Power (–) Current Output (I–)

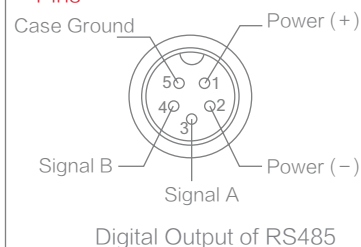
Pins



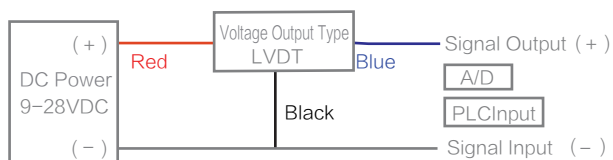
Colors of the Cables

Red Power (+)
Black Power (–)
Blue Signal A
White Signal B

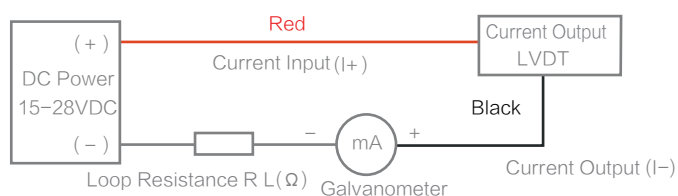
Pins



◆ Circuit Of 2–wire Voltage Output Type



◆ Circuit of 2–wire Current Output Type



◆ Circuit Of 2–wire PLC Type:

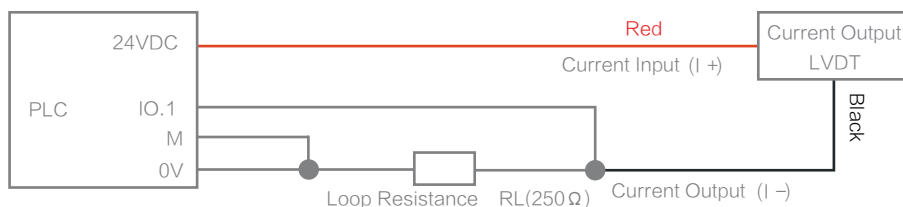


Table1. output information

		
Analog output	Output Type	Output Range
	A: Current Output	1、 4mA~20mA
	V:Voltage Output	1、 0V~10V 4、 -5V~5V 2、 0V~5V 6、 -10V~10V A、 AC output
Digital output	Output Type	Data & Baud Rate
	M:Modbus (Standard baud rate:9600)	RTU
		ASCII
		0: 2400 A: 2400
		1: 4800 B: 4800
		2: 9600 C: 9600
		3: 19200 D: 19200
		4: 38400 E: 38400
		5: 76800 F: 76800
		6: 115200 G: 115200

Example

