

DC Split-body Displacement Sensor — Product Selection Guide



Zhejiang ELEsenson Sensors Co., Ltd.

Add: No. 7 Xingtang Road, Tangxia Industrial Zone, Yueqing, Wenzhou, Zhejiang, China
Tel: +86-577-6283-3666
phone: +86-181-0016-5100
Web: www.elesenson.com
Email: elesenson@gmail.com

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DC Split-body Displacement Sensor (LVDT)



Product Introduction

ELEsenson LVDT (Linear Variable Differential Transformer) displacement sensor is widely used in aerospace, automation equipment, automotive manufacturing, lithium-ion battery production, mobile-phone manufacturing, construction, textile, railway, coal, metallurgy, plastics, chemical industry, scientific research institutes and many other industries of national economy. It is a high-tech product for measuring elongation, vibration, object thickness, flatness, deformation and other physical quantities.

The LVDT delivers excellent performance. It operates from single-supply 9-28 VDC. Electronic circuits are hermetically sealed inside a 304 stainless-steel tube for operation in harsh environments with high humidity and heavy dust. It outputs standard analog or digital signals compatible with computers and PLCs.

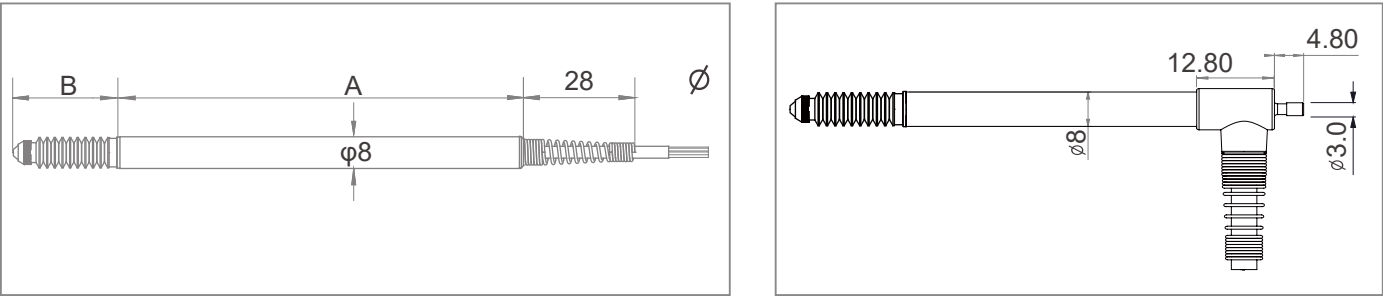
Features

- Outer diameter $\Phi 8$ / $\Phi 20$ mm, 304 stainless-steel housing
- DC single-power supply, built-in high-performance signal demodulator
- 3-wire voltage output: 0-5 V or 0-10 V
- 2-wire current output: 4-20 mA
- 4-wire RS485 digital output
- Measuring range: 0 mm-500 mm, high resolution & good repeatability
- No sliding contacts, long service life

Specification

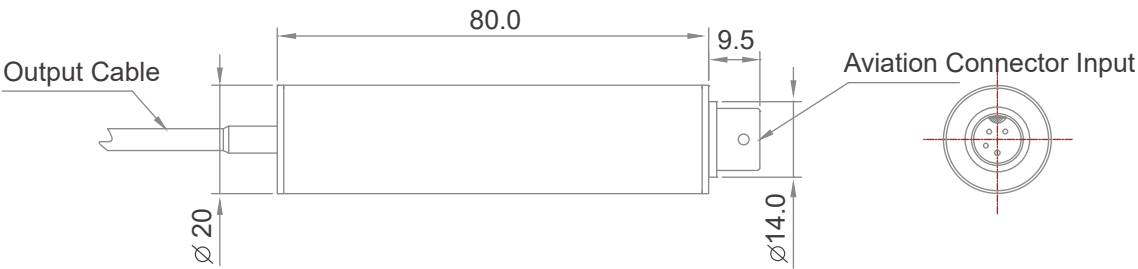
Item		Specification		
		EH8 Pen-type Series	EH20 Spring-return Series	BG Split Series
Displacement Range		0-10mm	0-200mm	0-500mm
Operating Current	Voltage output type: Supply Current $\leq 12\text{mA}$			
	2-wire 4~20mA LVDT: Supply Current 4~20mA			
Supply Power		9~28V DC		
Output Signal		0~5V (9~28V DC supply)		
		0~10V (15~28V DC supply)		
		4~20mA (2-wire, 15~28V DC supply)		
		Digital RS485 Modbus (9~28V DC supply)		
Linear Error		$\pm 0.1\%FS$, $0.25\%FS$, $0.5\%FS$ optional		
Repeatability Error		1 μm		
Resolution		1 μm (Higher resolution on custom request)		
Dynamic Response		250Hz (Depends on model)		
Operating Temp		-25 $^{\circ}\text{C}$ ~ +85 $^{\circ}\text{C}$		
Temp Coefficient		Zero $\leq 0.01\%/^{\circ}\text{C}$		
		Sensitivity $\leq 0.025\%/^{\circ}\text{C}$		

Dimension Drawing

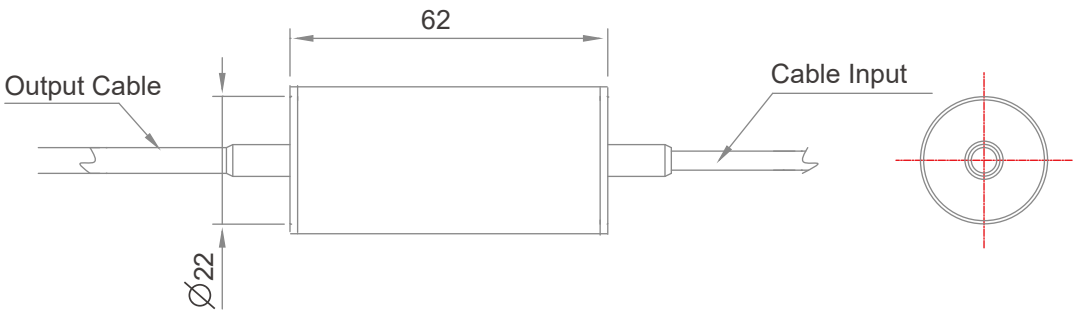


Parameters	EHH8 Series Spring-Return			
Displacement Range (mm)	2	5	8	10
Overall Length A (mm)	65.5	115	96	123
Core Plunger Length B (mm)	26	23.3	28	28

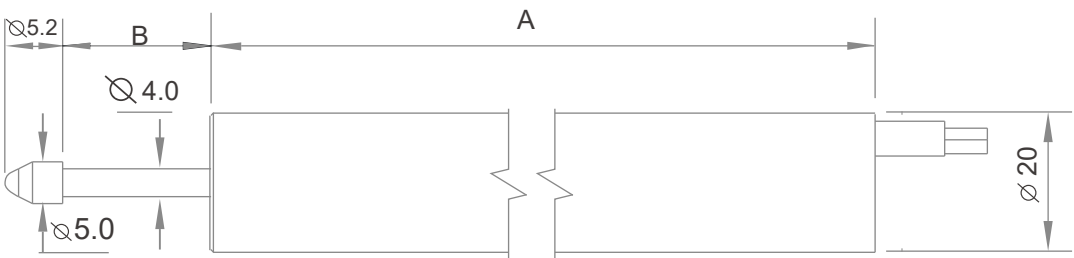
Aviation Connector Transmitter



Direct-Connect Transmitter

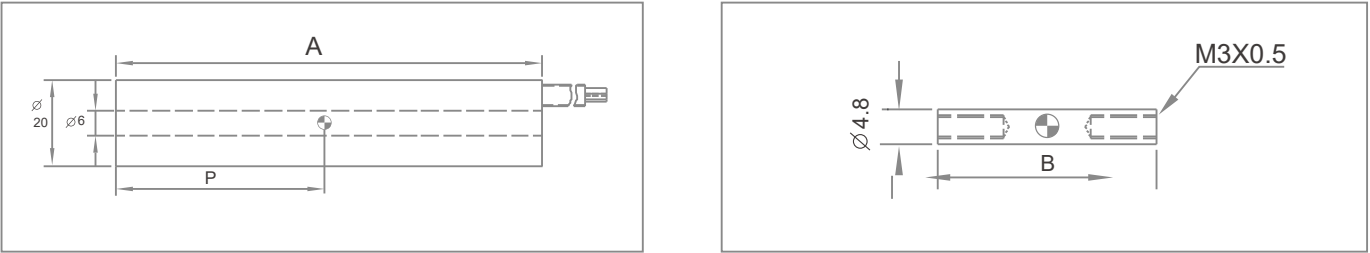


Rebound Sensor

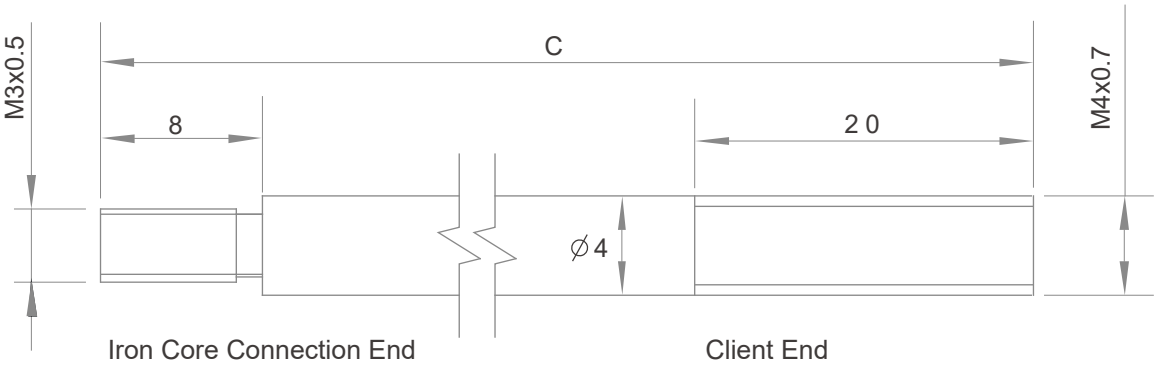


Parameters	EB20 Series Spring-Return							
Displacement Range (mm)	2.5	5	10	15	25	50	100	200
Overall Length A (mm)	106	116	122	152	152	182	255	498
Core Plunger Length B (mm)	5	8	15	22	40	56	120	230

Split-type sensor

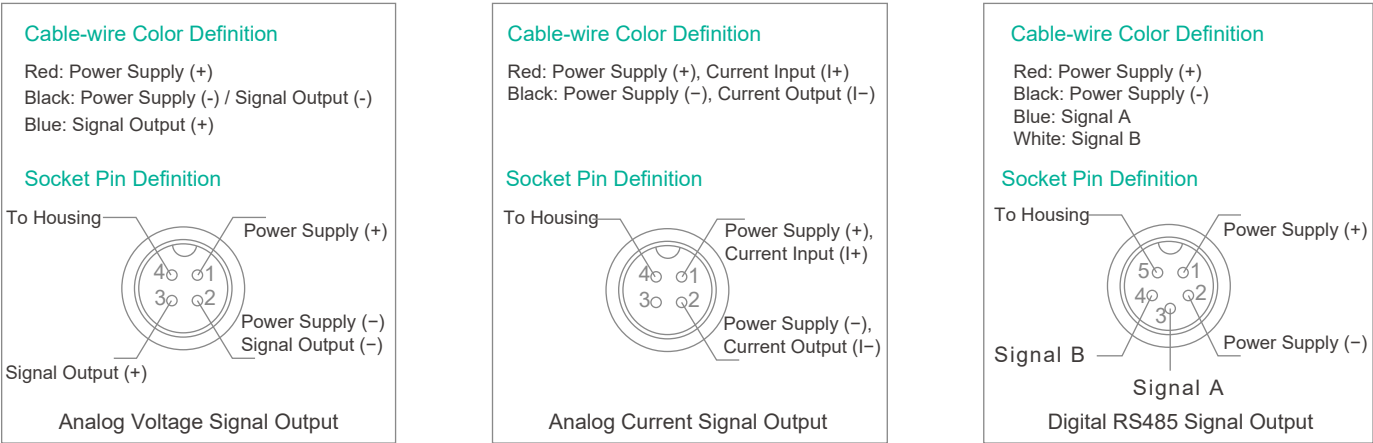


Parameters	EG20 Series Split-Type								
Displacement Range (mm)	2.5	5	10	15	25	50	100	250	500
Overall Length A (mm)	80	90	110	130	130	170	290	498	800
Iron Core Length B (mm)	20	30	40	50	50	50	120	150	180
Electrical Zero Point P (mm)	21	26	36	46	46	66	126	230	381

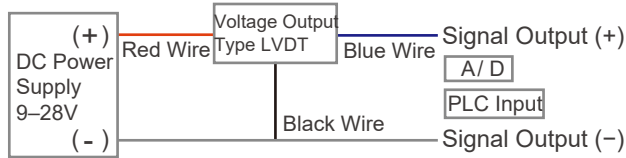


Parameters	EG20 Series Core Connecting Rod Dimensions								
Displacement Range (mm)	2.5	5	10	15	25	50	100	250	500
Length C of the iron core connecting rod (mm)	58	58	68	78	78	98	168	346	618

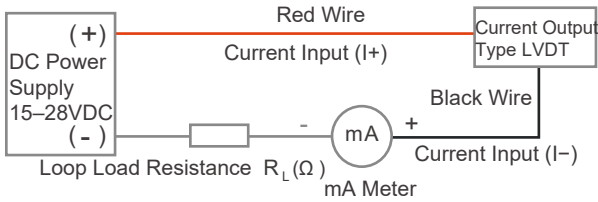
Wiring Diagram



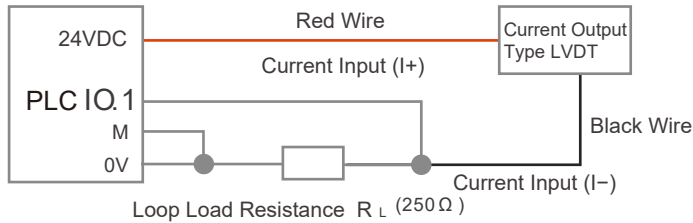
Voltage Output Type Wiring Diagram



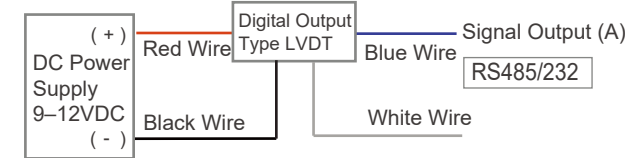
2-Wire Current Output Type Wiring Diagram



2-Wire Current Output PLC Connection Wiring Diagram



Digital Output Type Wiring Diagram



Application Fields

- Automotive-component inspection
- building-structure monitoring
- machine-tool positioning
- crack-deformation testing.
- mobile-phone industry monitoring
- lithium-battery manufacturing monitoring
- subway-tunnel structural protection
- spool-valve position detection

Signal 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 Format & Baud Rate	
	M: Modbus Output (Factory default baud rate:9600)	RTU Format	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



— Model Coding Rule

		-				-			-				Description
Sensor Type	H												Spring-return rail-mount
	B												Standard spring-return
	G												Split-body
	N												Pneumatic type
Mechanical Structure (Electronics-housing & Coil)	X												X=Standard(default); A:Dual-tube; B:Separate electronics housing & coil; C:Housing-less electronics module; Z:Custom special
Measuring Range		X	X	X									Value in mm
Accuracy Grade					A								0.25 %FS
					B								0.50 %FS
					C								1%FS
					D								3%FS
					E								5%FS
					S								0.1%FS
Signal Output							X	X					See output-format table above
Mounting Form										X	X		See attachment-2 specification
Cable Outlet												D	Connector output
												P	Direct-out cable (default 1 m)
												M	With local digital display

COMPANY PROFILE



ELEsenson focuses on R&D, manufacturing and sales of sensors. We have a high-caliber, innovative technical team. Pursuing continuous technical improvement, we deliver high-performance, reliable sensor products for customers.

Our broad product portfolio covers multiple industries including industrial automation, smart home and automotive electronics. Our products are well-received for precise measurement, stable performance and outstanding durability.

During production, strict quality-control procedures guarantee premium quality for every unit leaving our factory. We maintain close cooperation with customers, deeply understanding requirements and delivering customized solutions for special-scenario demands.

ELEsenson regards innovation as core driving force. Continuous investment in R&D and product upgrades. With professional teams, premium products and thoughtful service, Zhejiang ELEsenson Sensors has built solid reputation in the industry, contributing technical strength to the advancement of multiple sectors.

■ Corporate Culture

— Vision

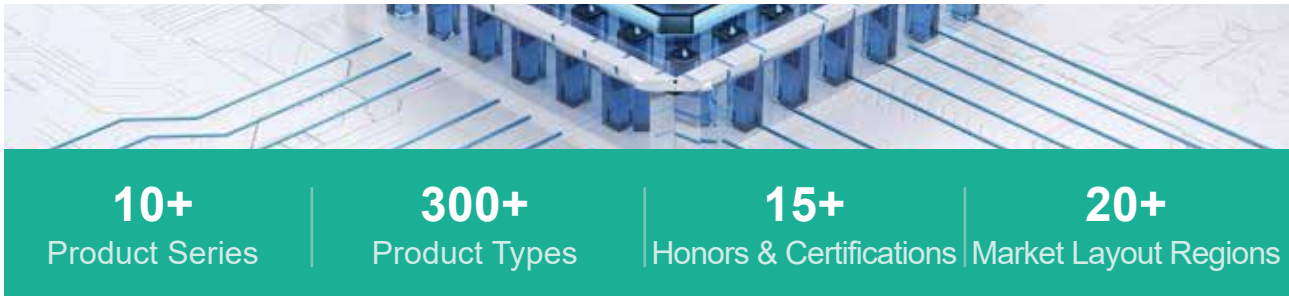
Uphold conviction, reach new heights of sensor-technology development.
Build a globally-leading sensor enterprise and lead industry progress through technological innovation.

— Mission

Drive development through innovation, win trust by quality.
Supply precise,stable,durable and reliable sensor products plus customized solutions for industrial automation, rail transit, automotive electronics and other industries.

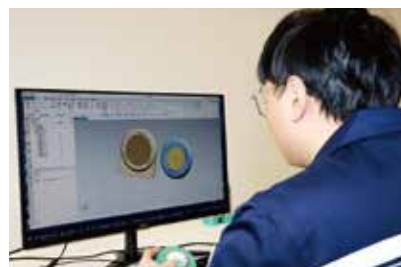
— Core Values

Customer-Oriented, Integrity-Based, Innovation-Driven, Quality-First.
We are customer-demand oriented, operate with integrity, pursue innovation and strive for superior product & service quality.



CORE ADVANTAGES

-  **Professional & Efficient Team** Experienced and skilled personnel providing high-quality service & technical support.
-  **Strong R&D Capability** Advanced R&D equipment & specialist team to develop innovative, competitive products.
-  **Complete After-Sales Support System** Timely response to customer requests, comprehensive technical support & solutions to maximize customer satisfaction.



HONORS AND QUALIFICATIONS



Brief Product Catalog | English Version | Issue 1, 2025

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