

ECR Series

Encoder

Product Selection Guide



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ECR Series
Encoder



Product Introduction

ELEsenson rotary encoder is a high-precision sensor for measuring mechanical motion. It converts mechanical displacement (rotary or linear movement) into electrical signals. Widely deployed in automatic control systems, it delivers accurate displacement, speed and position feedback for precise machine motion regulation and management.

As a critical component for precision control systems, encoders convert physical displacement into electrical signals to provide real-time, accurate feedback. Incremental encoders are ideal for dynamic measurement such as speed and direction control; absolute encoders are preferred for applications requiring precise position feedback. Encoders are widely used in automation, robotics, machine tools, logistics and many other industries, serving as an indispensable component for modern precision control systems.

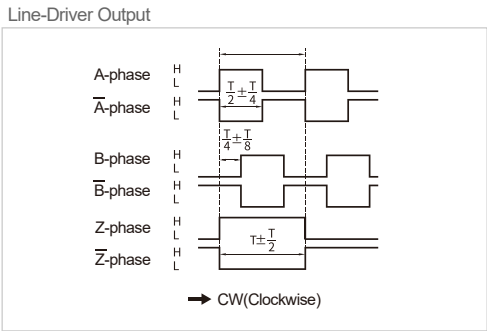
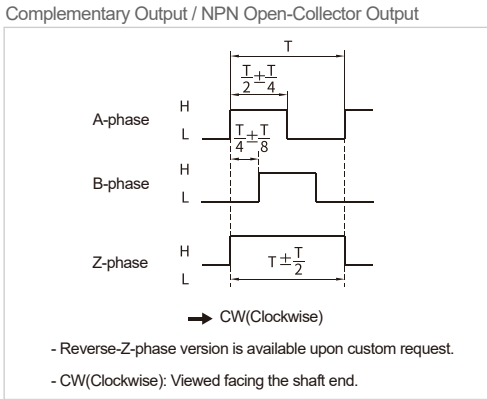
Technical Specifications

Item		Technical Specifications		
Parameter		Series 25	Series 30	Series 38
Product Images				
Outer Diameter		25mm	30mm	38mm
Shaft Diameter		4mm	4mm(default),5mm	6mm
Selectable Resolution(P/R)		1-4096	1-4096	100,200,360,400,600
Output Mode	C: NPN Open-Collector	√	√	√
	F: Complementary Output	√	√	√
	T: Push-Pull Output			
	L: 5 V Line-Driver Output		√	√
	A: 24 V Driver Output			

Series 25



Phase Shift Waveform



Features

- Outer diameter Φ25 mm, shaft diameter Φ4 mm
- Drop-in enhanced replacement for Omron E6A2 series encoders
- Resolution: any pulse count up to 4096 P/R
- Output: 5 V differential line-driver output supported
- Vibration-resistant, suitable for dusty and harsh environments

Wiring Table

Wire Color	C/F Output Signals	Wire Color	L Output Signals
Brown	VCC	Brown	VCC
Blue	GND	Blue	GND
Black	Phase A	Black	Phase A
White	Phase B	White	Phase B
Orange	Phase Z	Orange	Phase Z
White	Phase B	Black-Red	/Phase A
Orange	Phase Z (Index)	White-Red	/Phase B
Shield	F·G (Frame Ground)	Orange-Red	/Phase Z
		Shield	F·G (Frame Ground)

※ Notes:

F-output: Complementary Output

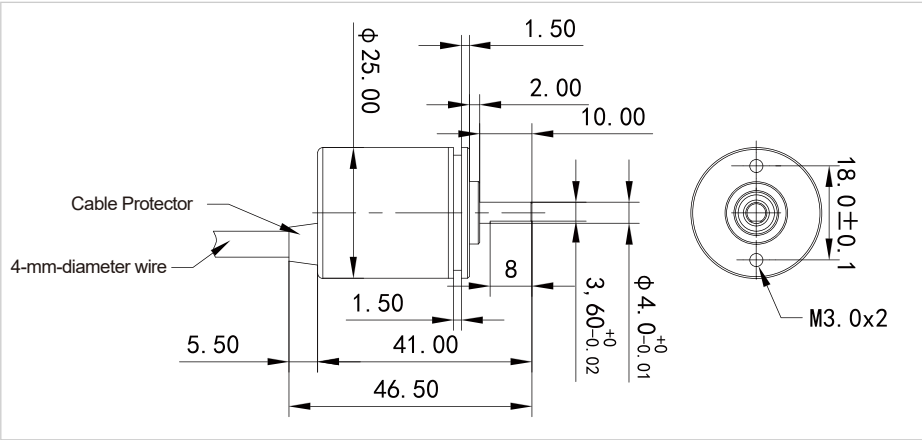
C-output: NPN Open-Collector Output

L-output: Line-Driver Output

E/C/F power supply: DC 10.8-26.4 V

L power supply: DC 5V

Mechanical Drawing

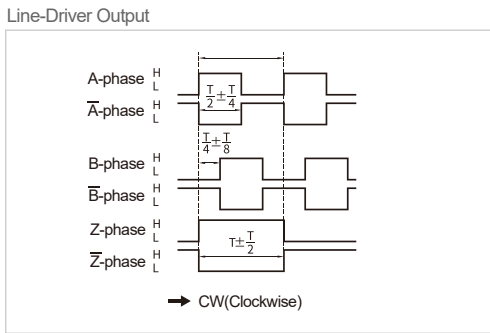
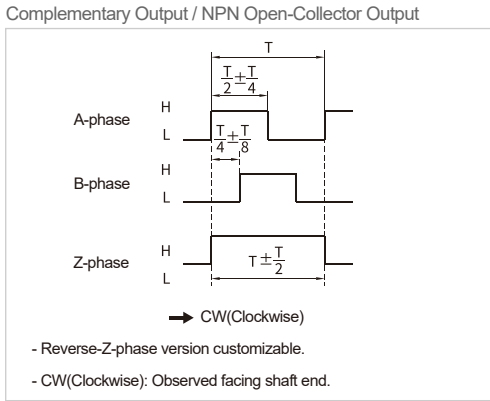


Series 30

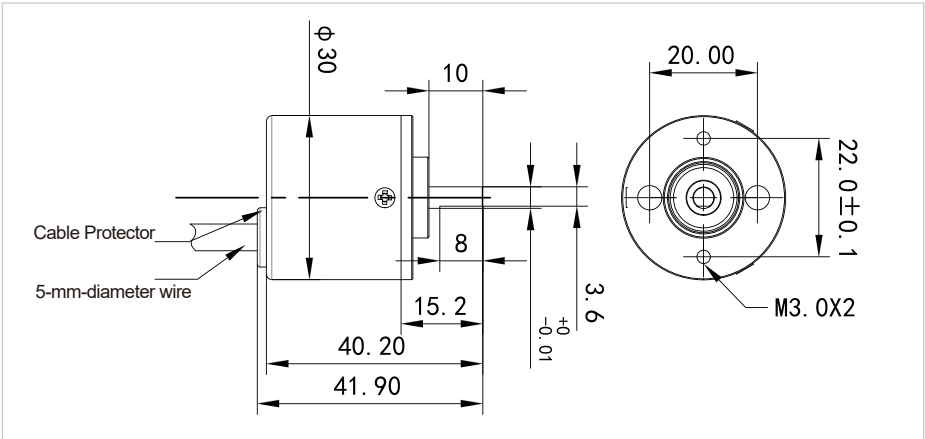
— Features

- Outer diameter Φ30 mm, shaft diameter Φ4 mm / Φ5 mm
- Enhanced drop-in replacement for Nemicon OSS-series encoders
- Resolution: any pulse count up to 4096 P/R
- Supports 5 V differential line-driver output
- Vibration-resistant for dusty and harsh-condition operation

— Phase Shift Waveform



— Mechanical Drawing

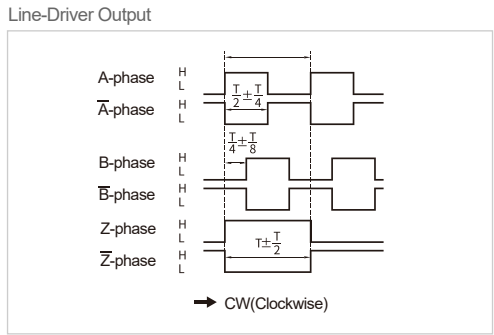
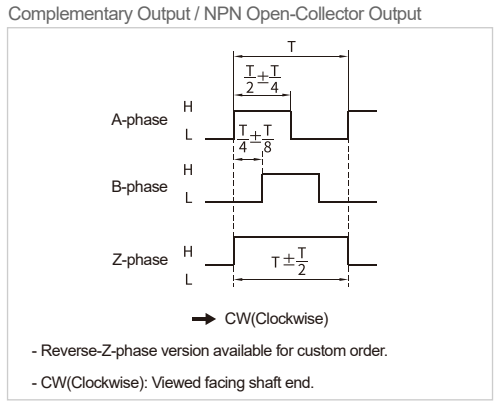


Series 38

— Features

- High cost-performance
- Selectable resolution: 100, 200, 360, 400, 600 P/R
- Customizable cable length
- Dual-channel A/B signal output
- Reverse-connection protection circuit, high vibration resistance

— Phase Shift Waveform

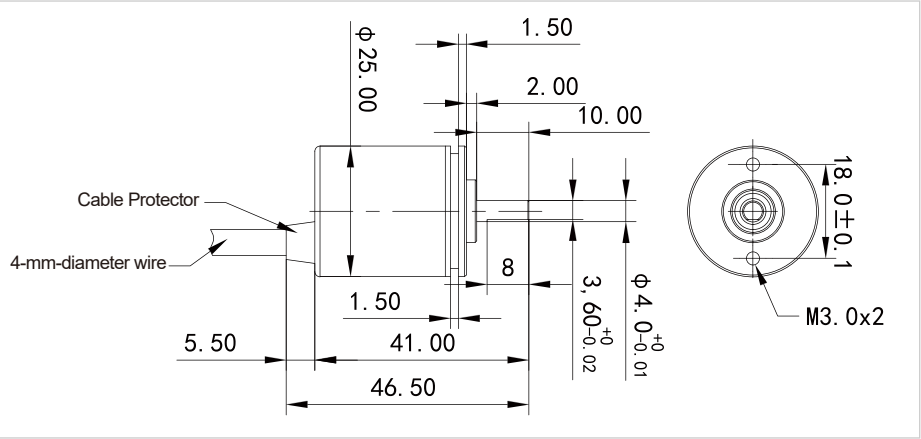


— Wiring Table

Wire Color	C/F Output Signals	Wire Color	L Output Signals
Red	VCC	Red	VCC
Black	GND	Black	GND
Green	Phase A	Green	Phase A
White	Phase B	White	Phase B
Shield	F·G (Frame Ground)	Shield	F·G (Frame Ground)

※ Notes:
F-output: Complementary Output
C-output: NPN Open-Collector Output
L-output: Line-Driver Output
E/C/F supply voltage: DC 10.8-26.4 V
L supply voltage: DC 5 V

— Mechanical Drawing



— Application Fields



Industrial Automation



Transportation



New Energy



Intelligent Manufacturing

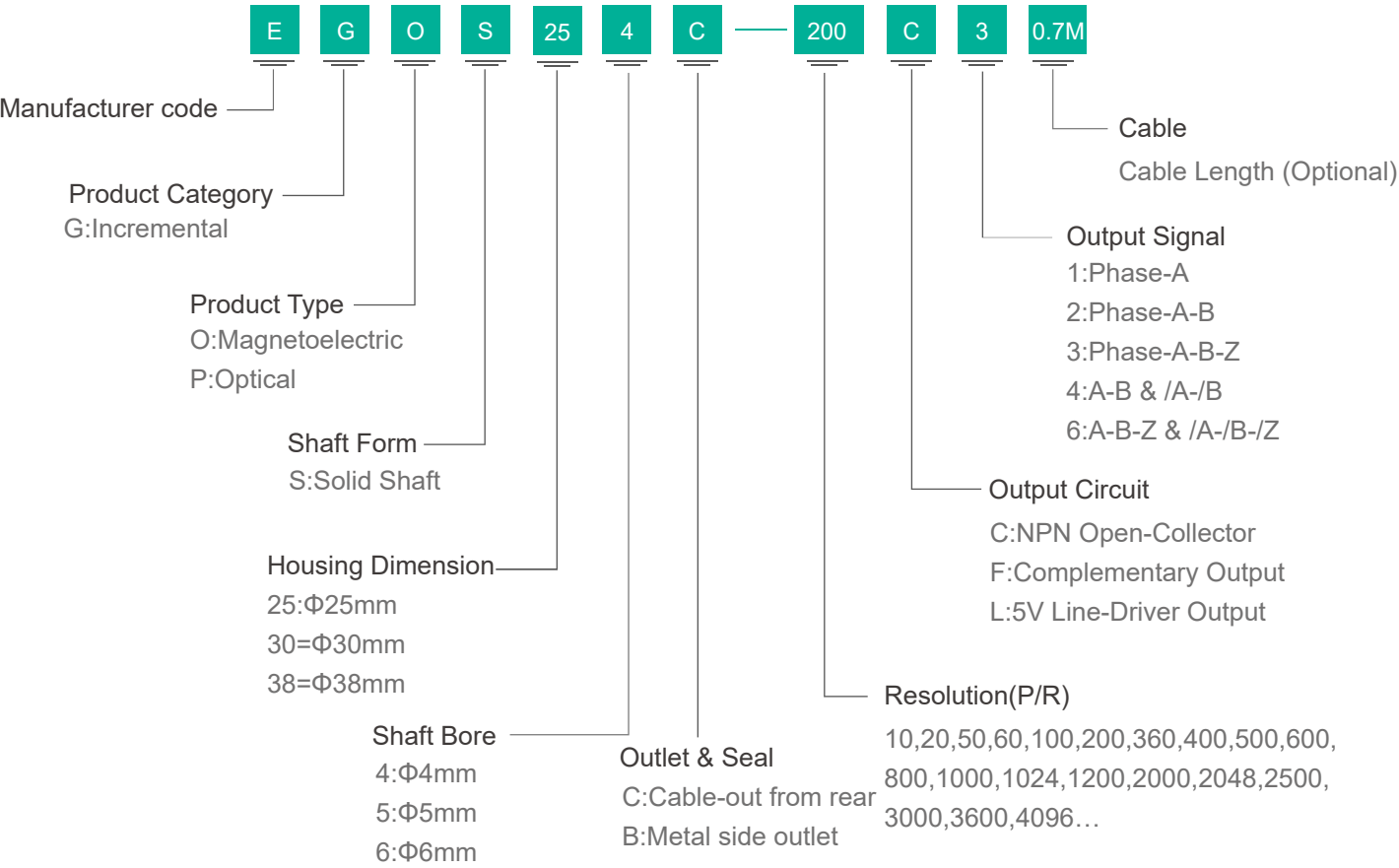


Metrology & Verification



Aerospace

— Model Code Decoding



APPLICATIONS CASES



Rotary Encoder



Rotary Encoder



Rotary Encoder



Rotary Encoder

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.

10+	300+	15+	20+
Product Series	Product Types	Honors & Certifications	Market Layout Regions

■ 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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