

## *New Product Recommendation of Absolute Encoder*



ELCO Industrie Automation GmbH  
Benzstrasse 7  
71720 Oberstenfeld  
Deutschland  
E-Mail: [info@elco-automation.de](mailto:info@elco-automation.de)



[www.elco-automation.de](http://www.elco-automation.de)

ELCO (TIANJIN) ELECTRONICS CO., LTD.  
No. 12, 4th XEDA Branch Road  
Xiqing Economic Development Area  
Tianjin 300385, P. R. China  
E-Mail: [info@elco.cn](mailto:info@elco.cn)



[www.elco-holding.com.cn](http://www.elco-holding.com.cn)

Elco (Tianjin) Electronics Co., Ltd. is a leading enterprise in China's industrial automation. It was established in Tianjin in 2003, and its sales and service network covers the whole country. As a provider of local industrial automation products and a supplier of intelligent manufacturing solutions in China, Elco has occupied a leading position in automobiles, auto parts, construction machinery, robots, food and pharmaceutical, printing and packaging, textile machinery, logistics equipment, electronics manufacturing and many other fields.

## Multiturn Design

- >> Mechanical gear revolution detection to provide reliable and stable data output
- >> Modular gear set design, tough gear material, gear module optimization
- >> Photoelectric principle technology, accurate and fast data processing, providing high-speed system response

## Mechanical Design

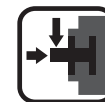
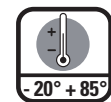
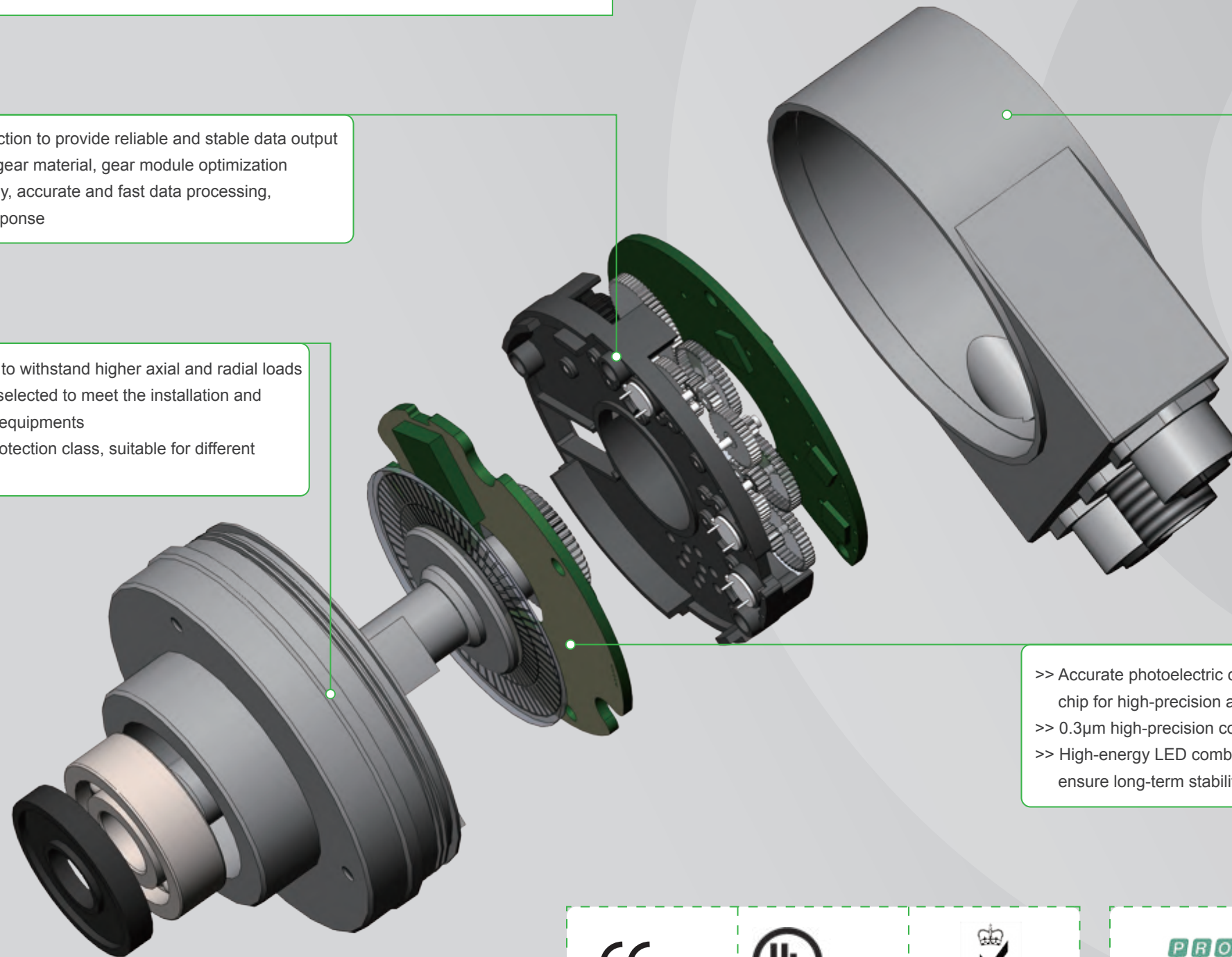
- >> Double bearing structure design to withstand higher axial and radial loads
- >> A variety of flange types can be selected to meet the installation and design requirements of different equipments
- >> Sealed structure design, IP65 protection class, suitable for different working conditions

## Signal Interface

- >> Ethernet bus: Profinet/IO EtherNet/IP EtherCAT
- >> Fieldbus: Profibus-DP DeviceNET CANopen
- >> Other interfaces: SSI analog (4-20mA), customized

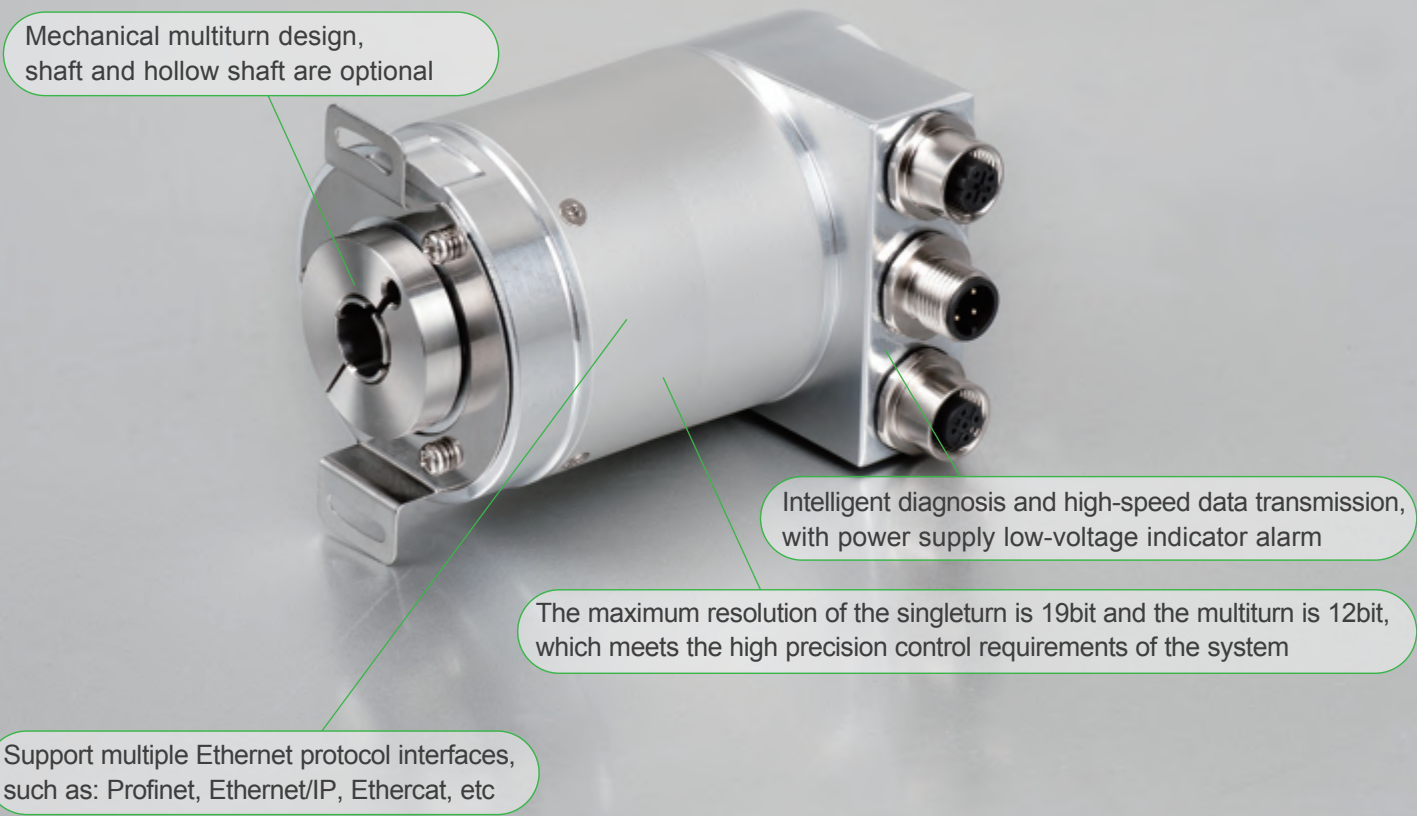
## Singleturn Design

- >> Accurate photoelectric collection technology and advanced integrated processing chip for high-precision angle detection
- >> 0.3μm high-precision code disc to ensure the accuracy and repeatability of the angle signal
- >> High-energy LED combined with advanced photoelectric sensing technology to ensure long-term stability and reliability of signals





# Ethernet protocol absolute photoelectric multiturn encoder



## Mechanical parameters:

Shaft diameter Φmm	Φ6/Φ10g6 (shaft type)	Φ8/Φ10/Φ12/Φ15H7 (hollow shaft type)
Dimensions mm	Φ58	
Maximum mechanical speed (rpm)	6000	
Shaft load (radial/axial) [N]	160/80	
Operating temperature (°C)	-40...+80	
Protection class	IP65	
Connection options	M12 connector	
Maximum resolution	Singleturn 19bit	Multiturn 12bit

## Electrical parameters:

Supply voltage (VDC)	10...30
Maximum output frequency	100 Mbits/s
Output mode	PROFINET IO/RT   EtherNet/IP   EtherNet/CAT
Features	Standard industrial Ethernet protocol, metal housing, high resolution, high protection class, M12 connector for fast connection

# Fieldbus protocol absolute photoelectric multiturn encoder



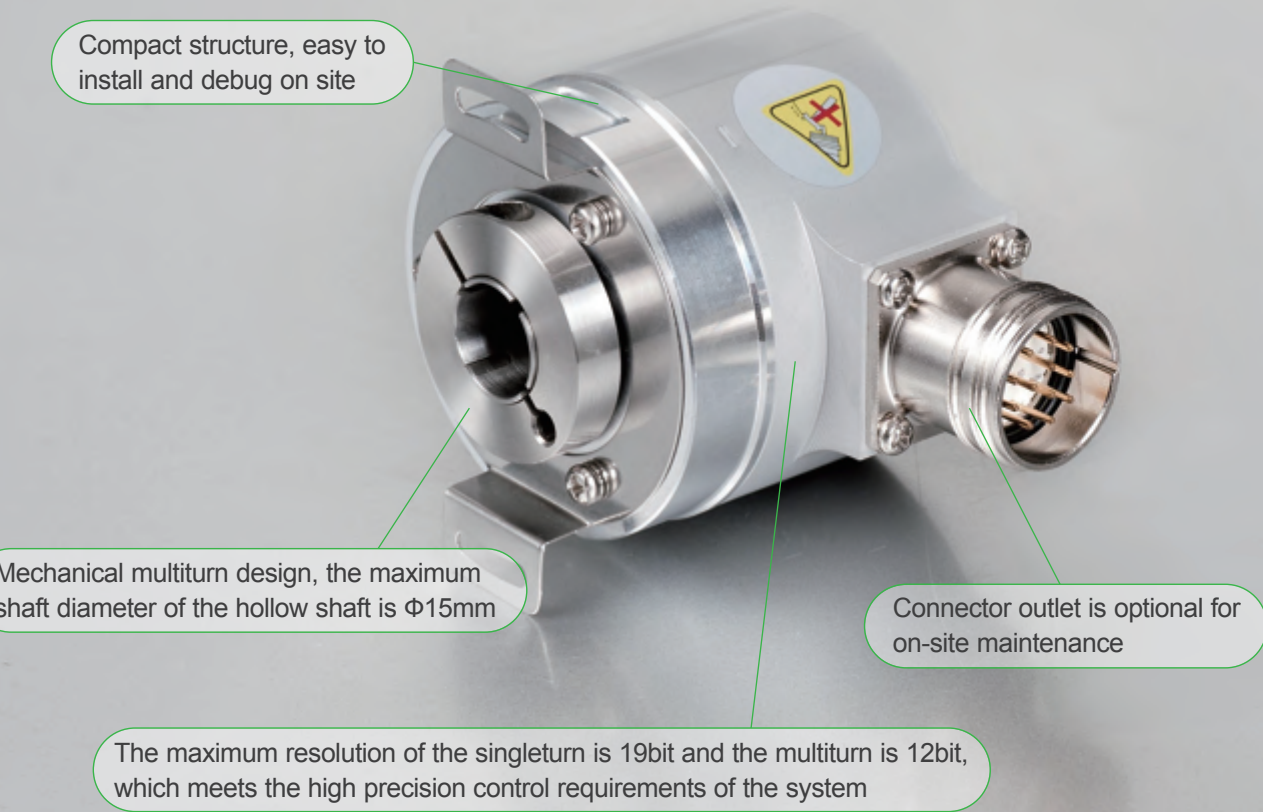
## Mechanical parameters:

Shaft diameter Φmm	Φ6/Φ8/Φ10g6 (shaft type)	Φ8/Φ10/Φ12/Φ15H7 (hollow shaft type)
Dimensions mm	Φ58	
Maximum mechanical speed (rpm)	6000	
Shaft load (radial/axial) [N]	160/80	
Operating temperature (°C)	-40...+80	
Protection class	IP65	
Connection options	PG7 threaded connector / connector	
Maximum resolution	Singleturn 19bit	Multiturn 12bit

## Electrical parameters:

Supply voltage (VDC)	10...30
Maximum output frequency	10MHz
Output mode	Profibus-DP   CANopen   Devicenet
Features	Multiple standard installation flange are optional, metal housing, high resolution, high protection class

# SSI protocol absolute photoelectric multiturn encoder



## Mechanical parameters:

Shaft diameter $\Phi\text{mm}$	$\Phi 8/\Phi 10/\Phi 12/\Phi 15\text{H7}$	
Dimensions mm	$\Phi 58$	
Maximum mechanical speed (rpm)	6000	
Shaft load (radial/axial) [N]	160/80	
Operating temperature ( $^{\circ}\text{C}$ )	$-40\ldots+80$	
Protection class	IP65	
Connection options	Connector/pre-wired cable	
Maximum resolution	Singleturn 19bit	Multiturn 12bit

## Electrical parameters:

Supply voltage (VDC)	5/10...30
Maximum output frequency	1MHz
Output mode	SSI
Features	Through-hole hollow shaft design, maximum hole diameter is $\Phi 15\text{mm}$ , metal housing, high resolution, high protection class

# Profinet protocol absolute magnetoelectric multiturn encoder



## Mechanical parameters:

Shaft diameter $\Phi\text{mm}$	$\Phi 6/\Phi 10\text{g6}$ (shaft type)	$\Phi 8/\Phi 10/\Phi 12\text{H7}$ (hollow shaft type)
Dimensions mm	$\Phi 58$	
Maximum mechanical speed (rpm)	6000	
Shaft load (radial/axial) [N]	80/40	
Operating temperature ( $^{\circ}\text{C}$ )	$-40\ldots+80$	
Protection class	IP65	
Connection options	M12 connector	
Maximum resolution	Singleturn 16bit	Multiturn 40bit

## Electrical parameters:

Supply voltage (VDC)	10...30
Maximum output frequency	100 Mbits/s
Output mode	PROFINET IO/RT
Features	Magnetoelectric multiturn technology, metal housing, high resolution, high protection class, M12 connector for fast connection



# BISS-C protocol absolute singleturn encoder



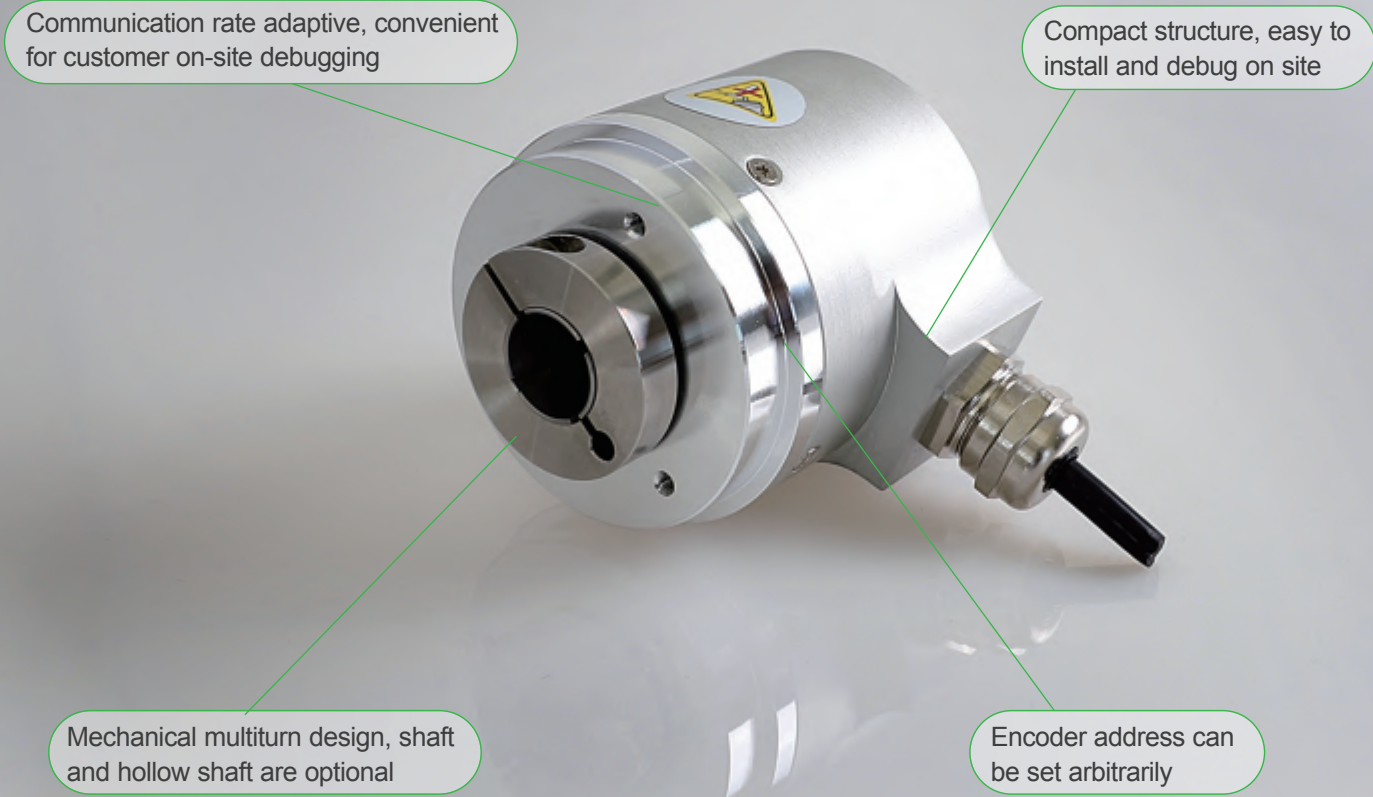
## Mechanical parameters:

Shaft diameter Φmm	Φ 13.4    --1:10 cone
Dimensions mm	Φ50
Maximum mechanical speed (rpm)	12000
Shaft load (radial/axial) [N]	80/40
Operating temperature (°C)	-40...+80
Protection class	IP65
Connection options	Pre-wired cable
Maximum resolution	Singleturn 23bit

## Electrical parameters:

Supply voltage (VDC)	5/10...30
Maximum output frequency	10MHz
Output mode	BiSS-C
Features	Open high-speed serial protocol, high resolution, high protection class, excellent mechanical structure performance

# CANOPEN absolute encoder



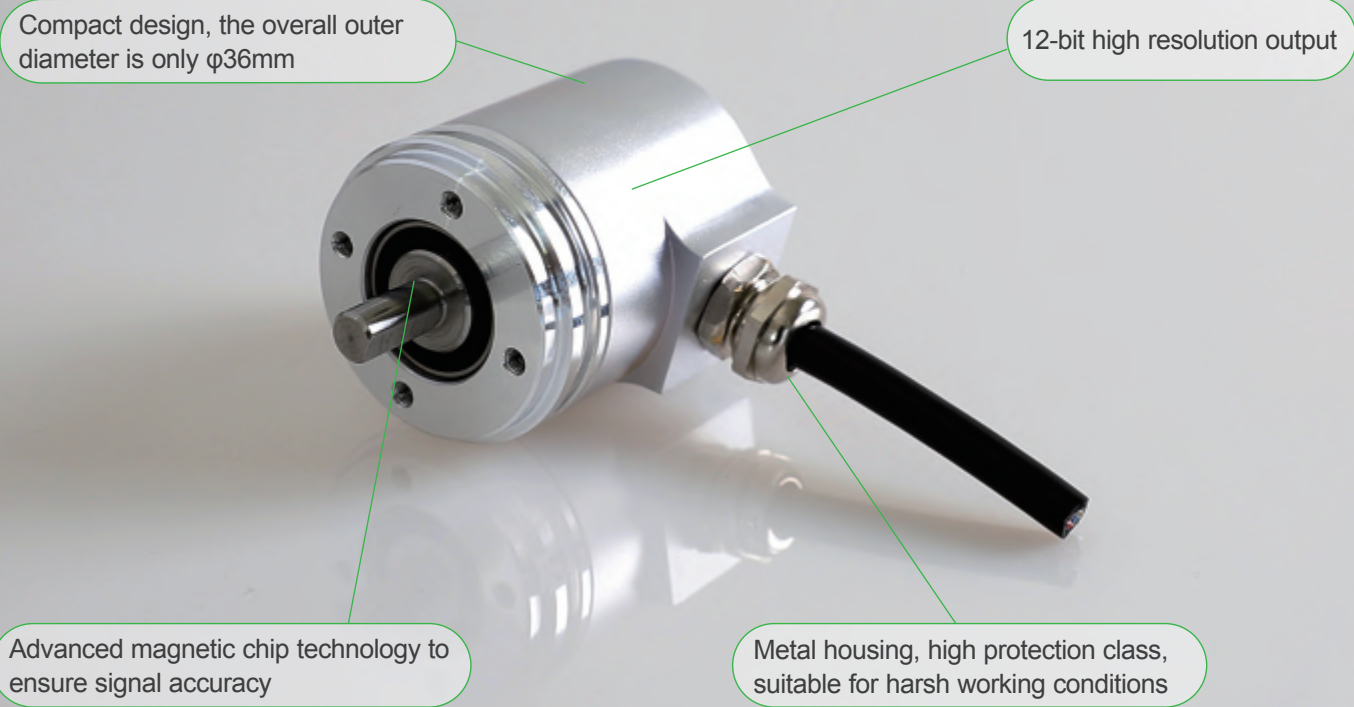
## Mechanical parameters:

Shaft diameter Φmm	Φ6/Φ8/Φ10g6(shaft type)	Φ8/Φ10/Φ12/Φ15H7(hollow shaft type)
Dimensions mm	Φ58	
Maximum mechanical speed (rpm)	3000	
Shaft load (radial/axial) [N]	160/80	
Operating temperature (°C)	-40...+80	
Protection class	IP65	
Connection options	Pre-wired cable/connector	
Maximum resolution	Singleturn 19bit	Multiturn 12bit

## Electrical parameters:

Supply voltage (VDC)	10...30
Maximum output frequency	10MHz
Output mode	CANopen
Features	Multiple standard installation flange are optional, metal housing, high resolution, high protection class

# Singleturn magnetoelectric encoder



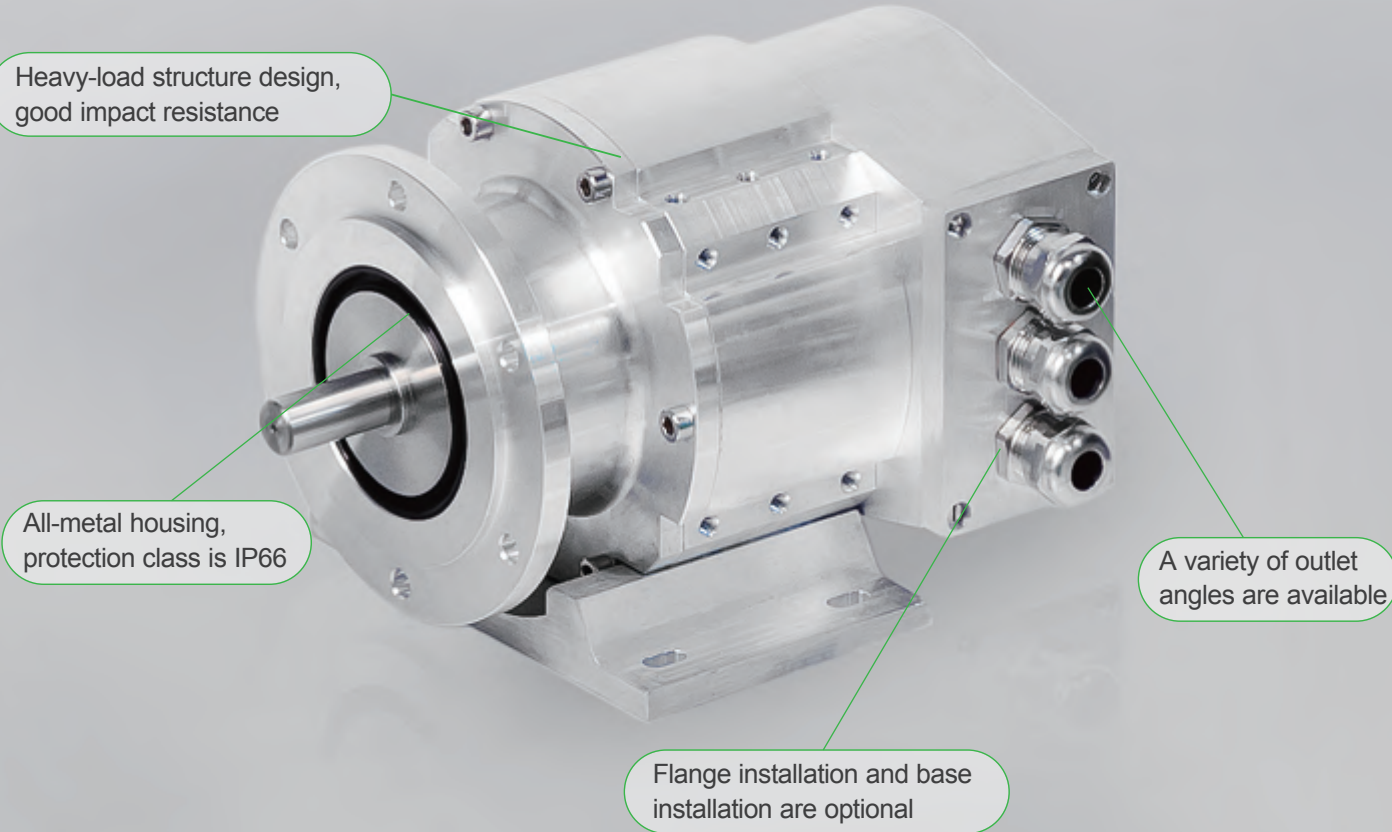
## Mechanical parameters:

Shaft diameter $\Phi\text{mm}$	$\Phi 6\text{g6}$ (shaft type)
Dimensions mm	$\Phi 36$
Maximum mechanical speed (rpm)	6000
Shaft load (radial/axial) [N]	40/20
Operating temperature ( $^{\circ}\text{C}$ )	60
Protection class	IP65
Connection options	Pre-wired cable/connector
Maximum resolution	Singleturn 12bit

## Electrical parameters:

Supply voltage (VDC)	10...30
Measuring range	0... 360 $^{\circ}$
Output mode	4...20mA
Features	Compact design, magnetoelectric technology, metal housing, high resolution

# Heavy-load Profibus-DP absolute multiturn encoder PVM115



## Mechanical parameters:

Shaft diameter $\Phi\text{mm}$	$\Phi 14\text{j6}$ (shaft type)
Dimensions mm	$\Phi 115$
Maximum mechanical speed (rpm)	3600
Shaft load (radial/axial) [N]	200/100
Operating temperature ( $^{\circ}\text{C}$ )	-40...+80
Protection class	IP66
Connection options	PG7 threaded connector
Maximum resolution	Singleturn 13bit    Multiturn 12bit

## Electrical parameters:

Supply voltage (VDC)	10...30
Maximum output frequency	12MHz
Output mode	Profibus-DP
Features	Heavy-load design with good impact resistance, high protection class, high resolution