

Non-attenuation
Capacitive Series
High-pressure Resistant

Encoder

Product Selection Guide



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Non-attenuation Series Proximity Sensor



— Product Introduction

ELEsenson inductive proximity sensor is based on electromagnetic induction principle. It converts the displacement of an approaching metal object into voltage or current signal output. The sensor contains an inductive coil that generates an alternating magnetic field. When a metal object approaches the sensor, it interferes with the magnetic field strength, changing the induced current in the sensor's internal circuit. This change is converted into an output signal to indicate the approach of the target object.

ELEsenson inductive proximity sensor responds very sensitively to metal objects (such as iron, aluminum, copper, etc.) with an attenuation coefficient of 1, making it especially suitable for detecting metal targets.

— Features

- **Non-attenuation Performance**
Through optimized circuit and induction structure, the non-attenuation proximity sensor maintains a relatively consistent sensing distance when detecting different materials.
- **Fast Response**
Responds immediately upon detection trigger, making it suitable for high-speed motion or continuously operating equipment.
- **High Sensitivity**
Extremely high detection sensitivity for target objects, responding immediately when the object approaches the rated distance.
- **Strong Anti-interference Capability**
Adopting advanced anti-interference design, it operates normally in complex industrial environments and maintains high-precision operation under strong magnetic field or strong electromagnetic interference.

EJLC-M1208NA/NB/PA/PB-M



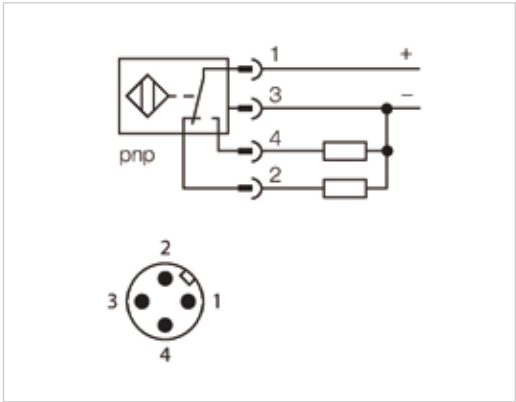
— Specifications

Item	Specifications
Design	Threaded
Thread Size	M12 x 1
Rated Sensing Distance	8 m / 12 m
Mounting	Flush / Non-flush
Operating Voltage	10...30 VDC
Output Type	NO contact, 2-wire
Switching Frequency	0.30 kHz
Electrical Connection	Cable
Cable Length	2.0 m
Housing Material	Stainless steel, 1.4427 SO
Operating Temperature	-25...+70°C
Protection Rating	IP67

— Dimension Drawing



— Wiring Diagram



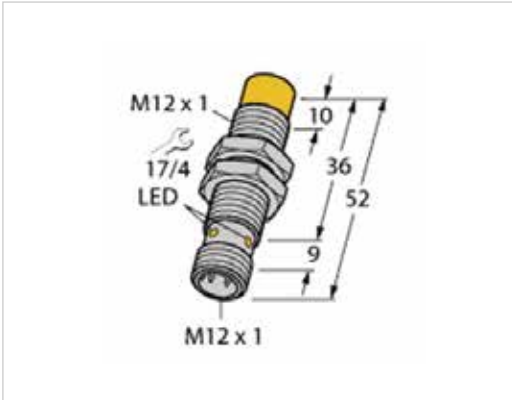
EJLC-M1212NA/NB/PA/PB



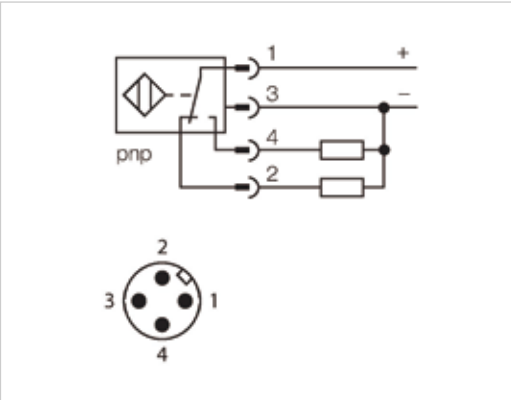
Specifications

Item	Specifications
Design	Threaded
Thread Size	M12 x 1
Rated Sensing Distance	8 m / 12 m
Mounting	Flush / Non-flush
Operating Voltage	10...30 VDC
Output Type	NO contact, 2-wire
Switching Frequency	0.30 kHz
Electrical Connection	Cable
Cable Length	2.0 m
Housing Material	Stainless steel, 1.4427 SO
Operating Temperature	-25...+70°C
Protection Rating	IP67

Dimension Drawing



Wiring Diagram



EJLC-M1808NA/NB/PA/PB-M



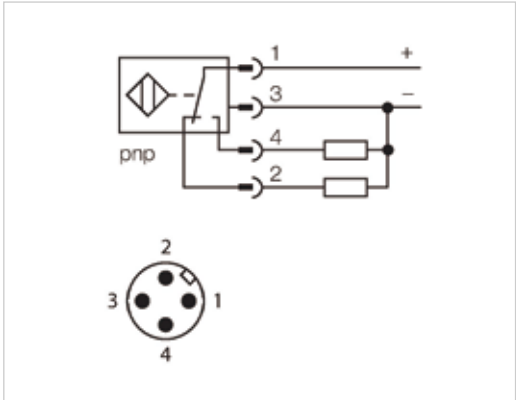
Specifications

Item	Specifications
Design	Threaded
Thread Size	M18 x 1
Rated Sensing Distance	4 m / 8 m
Mounting	Flush / Non-flush
Operating Voltage	10...30 VDC
Output Type	NO contact, 2-wire
Switching Frequency	0.30 kHz
Electrical Connection	Cable
Cable Length	2.0 m
Housing Material	Stainless steel, 1.4427 SO
Operating Temperature	-25...+70°C
Protection Rating	IP67

Dimension Drawing



Wiring Diagram

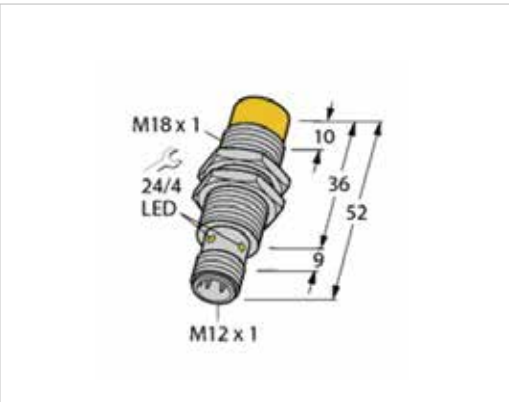


EJLC-M1804NA/NB/PA/PB

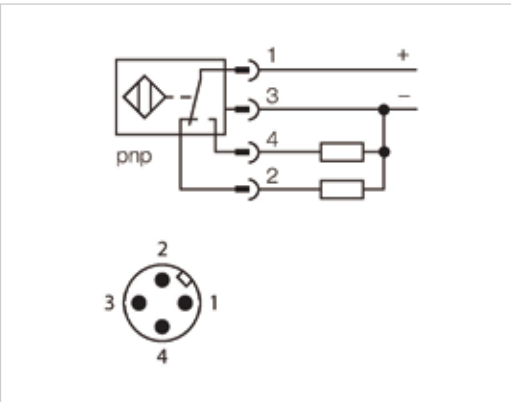


Item	Specifications
Design	Threaded
Thread Size	M18 x 1
Rated Sensing Distance	4 m / 8 m
Mounting	Flush / Non-flush
Operating Voltage	10...30 VDC
Output Type	NO contact, 2-wire
Switching Frequency	0.30 kHz
Electrical Connection	Cable
Cable Length	2.0 m
Housing Material	Stainless steel, 1.4427 SO
Operating Temperature	-25...+70°C
Protection Rating	IP67

— Dimension Drawing



— Wiring Diagram



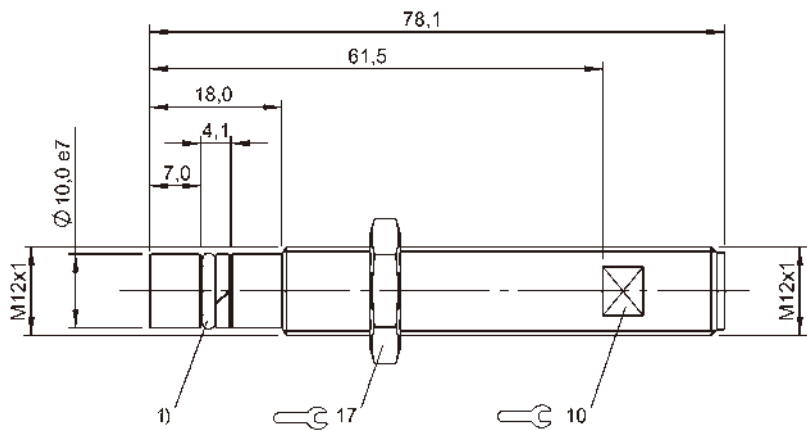
High-pressure Resistant Series Proximity Sensor

— Product Introduction

ELEsenson high-pressure resistant proximity switch is specially designed for high-pressure environments, with pressure-resistant performance for stable operation under extreme conditions. Using non-contact detection technology, it achieves precise object position sensing with fast response and high repeat accuracy. It supports wide temperature and voltage ranges, high protection rating, and built-in intelligent protection mechanisms to ensure safe and reliable equipment operation. Suitable for industrial automation, power systems, petroleum and petrochemical industries, providing efficient solutions for position detection and control in high-pressure environments.

— Features

- **Extreme Pressure Resistance**
High pressure resistance ensures stable and reliable operation in high-pressure environments.
- **Precise Detection**
Small sensing distance and extremely high repeat accuracy meet most precision control requirements.
- **Wide Temperature & Voltage Design**
Supports wide operating temperature range and voltage input, adapting to various complex and changing industrial sites.
- **Safety Protection**
High protection rating ensures stable equipment operation in harsh environments.
- **Fast Response**
Extremely short response time for rapid adaptation to changing working conditions.

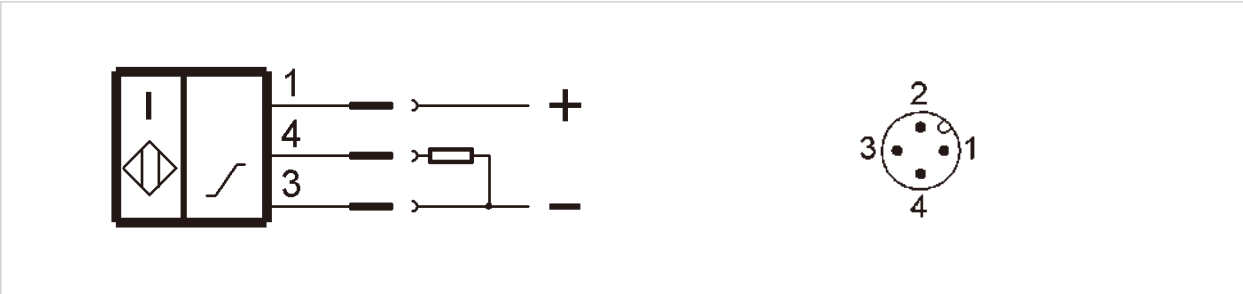


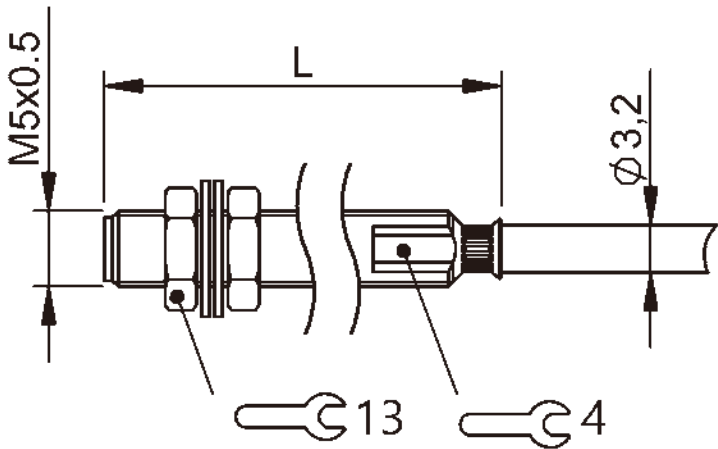
Specifications

Item	Specifications
Functional Safety	
MTTF (40 °C)	150 a
Interface	
Analog Output	Analog, voltage 0~10V
Output Characteristic	Decreases when approached
Output Voltage (at Se)	5 V
Output Voltage (at SI max)	10V
Output Voltage (at SI min)	0 V
Display / Operation	
Function Display	No
Operating Voltage Display	No
Mechanical	
Fixed Length	43.5 mm
Mounting	Flush
Dimensions	Φ12x78 mm
Pressure Rating (indicated)	Oil pressure resistant
Tightening Torque	15Nm±10 %
Max. Pressure Resistance	500 bar
Thread Size	M12x1
Material	
Housing Material	Stainless steel
Sensing Face Material	Ceramic

Environmental	
EN 60068-2-27 Shock	Half-sine, 30gn, 11ms
EN 60068-2-6 Vibration	55 Hz, amplitude 1mm, 3×30 min
Pollution Degree	3
Ambient Temperature	-25...85°C
Protection Rating	IP68
Electrical	
No-load Current at Ue	10 mA
Voltage Rise	6.70 V/mm
Ripple (max % of Ue)	15%
Operating Voltage Ub	15~30 VDC
Limit Frequency -3 dB	1000 HZ
Measuring Operating Voltage Ue DC	24 V
Measuring Insulation Voltage Ui	75 V DC
Load Resistance RL (min)	2000 Ohm
Electrical Connection	
Reverse Polarity Protection	Yes
Connector	M12×1 male, 3-pin, A-coded
Short Circuit Protection	Yes
Anti-mixing Protection	Yes
Range / Distance	
Max. Temperature Drift at Terminal	±10.0 %
Measuring Range	0.5....2 mm
Linearity Deviation (max)	±45 μm
Linearity Region SI	0.5...2 mm
Repeatability (per BWN)	±8 μm
General	
Basic Standard	IEC 60947-5-2
	IEC 60947-5-7

Wiring Diagram



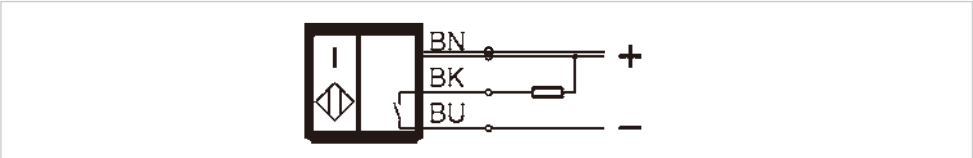


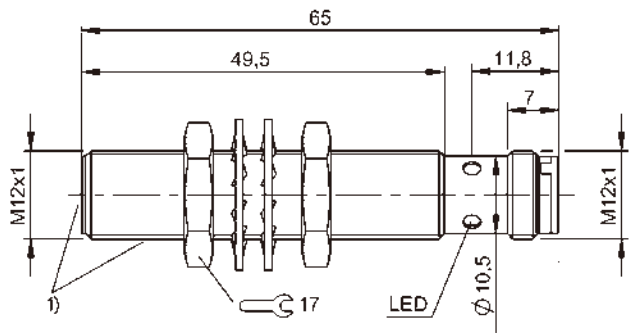
Specifications

Item	Specifications
Functional Safety	
MTTF (40 °C)	2280 a
Interface	
Switching Output	NPN NO
Display / Operation	
Function Display	No
Operating Voltage Display	No
Mechanical	
Mounting	Non-flush
Dimensions	Ø5 x27mm
Pressure Rating (indicated)	Oil pressure resistant
Tightening Torque	1.5 Nm
Max. Pressure Resistance	10 bar
Thread Size	M5x0.5
Material	
Housing Material	Stainless steel (1.4104)
Sensing Face Material	Ceramic
Sleeve Material	Silicone
Environmental	
EN 60068-2-27 Shock	Half-sine, 30gn, 11ms
EN 60068-2-6 Vibration	55 Hz, amp 1mm, 3×30 min; 55 Hz, amp 2mm, 3×30 min
Pollution Degree	3
Ambient Temperature	0...135°C
Protection Rating	IP67
Electrical	
Ripple (max % of Ue)	10 %

Ready Delay tv (max)	50 ms
Operating Voltage Ub	10~30 VDC
Application Category	DC -13
Switching Frequency	1.5 kHz
Max. Residual Current Ir	50 µA
Max. No-load Current Io (non-atten.)	5 mA
Max. No-load Current Io (atten.)	5 mA
Max. Load Capacitance (at Ue)	0.5 µF
Measuring Operating Voltage Ue DC	24 V
Measuring Operating Current Ie	100 mA
Measuring Short Circuit Current	100 A
Measuring Insulation Voltage Ui	75 V DC
Voltage Drop (static, max)	2 V
Output Resistance RA	Open collector electrode
Electrical Connection	
Reverse Polarity Protection	Yes
Wire Cross-section	0.15 mm²
Number of Wires	3
Cable Length L	10 m
Electrical Specification	3-core
Cable Diameter D	3.15 mm
Short Circuit Protection	Yes
Connection Method	Cable, 10 m, silicone
Anti-mixing Protection	Yes
Range / Distance	
Safe Sensing Distance Sa	0.58 mm
Max. Repeat Accuracy (% of Sr)	10 %
Temperature Drift (max % of Sr)	10 %
Real Sensing Distance Sr (tolerance)	±10 %
Hysteresis H (max % of Sr)	15 %
Rated Sensing Distance Sn	0.8 mm
General	
Supply Scope	2× gear rack, D9×0.5, 2× nuts, M5×0.5
Basic Standard	IEC 60947-5-2

Wiring Diagram



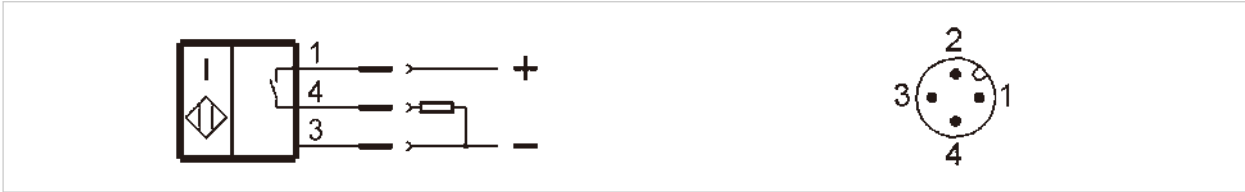


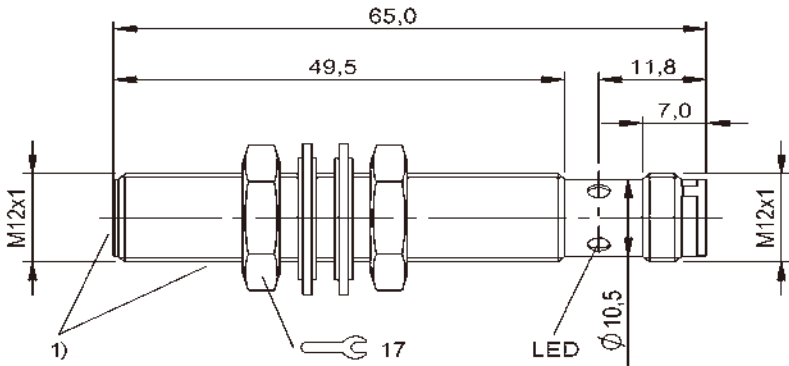
— Specifications

Item		Specifications
Functional Safety		
MTTF (40 °C)		330 a
Interface		
Switching Output		PNP NO
Display / Operation		
Function Display		Yes
Operating Voltage Display		No
Mechanical		
Fixed Length		49.50 mm
Mounting		Flush
Dimensions		Ø12 x65 mm
Pressure Rating (indicated)		Pressure resistant
Tightening Torque		10 Nm
Max. Pressure Resistance		60 bar
Thread Size		M12x1
Material		
Housing Material		Stainless steel, coated, PTFE
Sensing Face Material		Stainless steel / coated / PTFE
Environmental		
EN 60068-2-27 Shock		Half-sine, 30gn, 11ms
EN 60068-2-6 Vibration		55 Hz, amp 1mm, 3×30 min
Pollution Degree		3
Ambient Temperature		-25...70°C
Protection Rating		IP67

Electrical	
Ripple (max % of Ue)	10 %
Ready Delay tv (max)	100 ms
Operating Voltage Ub	10~30 VDC
Application Category	DC-13
Switching Frequency	500 Hz
Max. Residual Current Ir	10 µA
Max. No-load Current Io (non-atten.)	10 mA
Max. No-load Current Io (atten.)	15 mA
Max. Load Capacitance (at Ue)	1 µF
Measuring Operating Voltage Ue DC	24V
Measuring Operating Current Ie	200 mA
Measuring Short Circuit Current	100 A
Measuring Insulation Voltage Ui	75 V DC
Voltage Drop (static, max)	2.5 V
Output Resistance RA	33.0 kOhm + D
Electrical Connection	
Reverse Polarity Protection	Yes
Connector	M12×1 male, 4-pin, A-coded
Short Circuit Protection	Yes
Anti-mixing Protection	Yes
Range / Distance	
Safe Sensing Distance Sa	3 mm
Sensing Distance Indicator	■ ■
Max. Repeat Accuracy (% of Sr)	5.0 %
Temperature Drift (max % of Sr)	10 %
Real Sensing Distance Sr	4 mm
Real Sensing Distance Sr (tolerance)	±15 %
Hysteresis H (max % of Sr)	15.0 %
Rated Sensing Distance Sn	4mm
General	
Basic Standard	IEC 60947-5-2

— Wiring Diagram



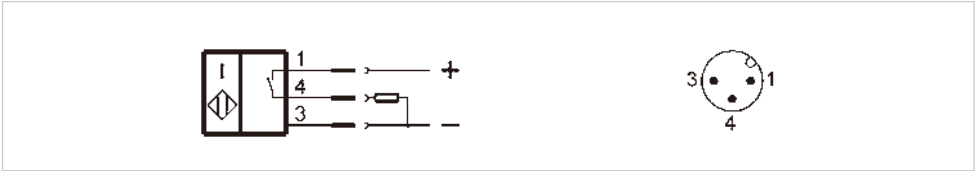


— Specifications

Item		Specifications
Functional Safety		
MTTF (40 °C)		770 a
Interface		
Switching Output		PNP NO
Display / Operation		
Function Display		Yes
Operating Voltage Display		No
Mechanical		
Fixed Length		49.50 mm
Mounting		Flush
Dimensions		Ø12 x65 mm
Pressure Rating (indicated)		Pressure resistant
Tightening Torque		10 Nm ±10 %
Max. Pressure Resistance		60 bar
Thread Size		M12x1
Material		
Housing Material		Stainless steel, coated, PTFE
Sensing Face Material		Stainless steel
Environmental		
EN 60068-2-27 Shock		Half-sine, 30gn, 11ms
EN 60068-2-6 Vibration		55 Hz, amp 1mm, 3×30 min
Pollution Degree		3
Ambient Temperature		-25...70°C
Protection Rating		IP67

Electrical	
Ripple (max % of Ue)	10 %
Ready Delay tv (max)	23 ms
Operating Voltage Ub	10~30 VDC
Application Category	Dc -13
Switching Frequency	500 Hz
Max. Residual Current Ir	10 µA
Max. No-load Current Io (non-atten.)	2 mA
Max. No-load Current Io (atten.)	6 mA
Max. Load Capacitance (at Ue)	1 µF
Measuring Operating Voltage Ue DC	24 V
Measuring Operating Current Ie	200 mA
Measuring Short Circuit Current	100 A
Measuring Insulation Voltage Ui	75 V DC
Voltage Drop (static, max)	2 V
Output Resistance RA	100.0 kOhm
Electrical Connection	
Reverse Polarity Protection	Yes
Connector	M12×1 male, 4-pin, A-coded
Short Circuit Protection	Yes
Anti-mixing Protection	Yes
Range / Distance	
Safe Sensing Distance Sa	3.2 mm
Sensing Distance Indicator	■■■
Max. Repeat Accuracy (% of Sr)	5.0 %
Temperature Drift (max % of Sr)	10 %
Real Sensing Distance Sr	4 mm
Real Sensing Distance Sr (tolerance)	±10 %
Hysteresis H (max % of Sr)	15.0 %
Rated Sensing Distance Sn	4 mm
General	
Basic Standard	IEC 60947-5-2

— Wiring Diagram



Capacitive Series Proximity Sensor

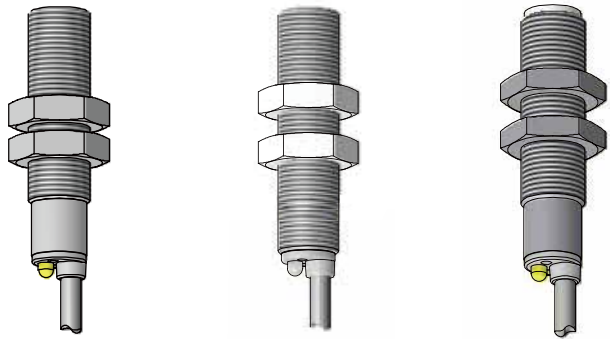
— Product Introduction

ELEsenson capacitive proximity switch adopts advanced capacitive sensing technology, featuring high sensitivity and non-contact detection. This product can stably detect metal and non-metal objects, suitable for various harsh industrial environments. Its compact design, easy installation, excellent anti-interference capability and long service life make it widely used in automation control systems. It is the ideal choice for object position detection, counting and positioning control, ensuring efficient and reliable production processes.

— Features

- **High-precision Sensing**
Adopts advanced capacitive sensing technology for precise detection of tiny objects.
- **Wide Applicability**
Detects not only metals but also non-metal objects such as plastics, paper, etc.
- **Strong Environmental Adaptability**
Stable operation in harsh industrial environments such as high temperature, humidity and dust.
- **Easy Installation**
Compact design makes installation simpler and faster, saving space.
- **High Reliability**
Excellent anti-interference capability and long service life ensure long-term stable operation.

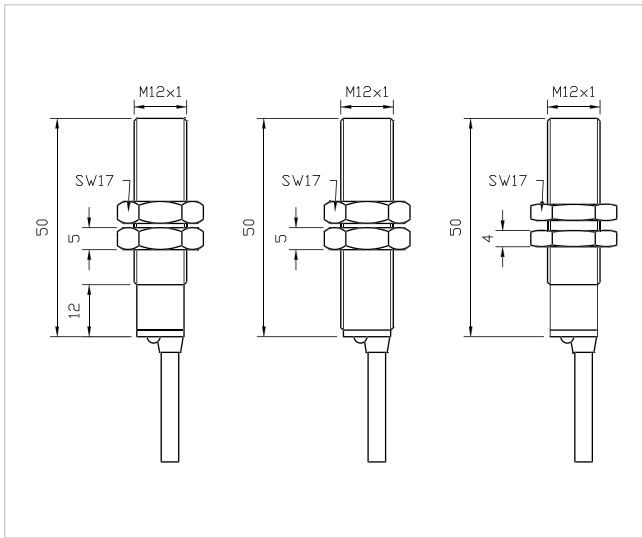
M12 Flush Type



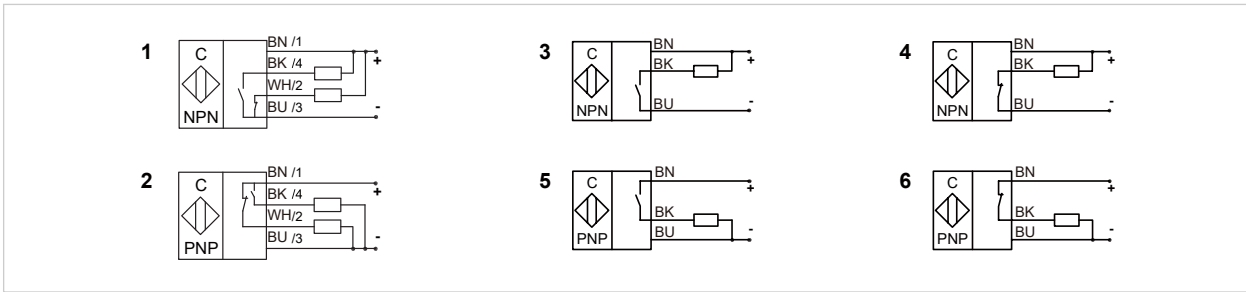
— Specifications

Item	Specifications
Supply Voltage	12 ... 30 VDC
Max. Output Current	2 × 200 mA
Max. Voltage Drop	≤ 2.0 V
No-load Current	< 15 mA
Max. Switching Frequency	300 Hz
Indicator	Yellow
Ambient Temperature Range	-25 ... +70℃
Protection Rating	IP67(EN 60947-5-2)
Cable	4×0.14 mm²/3×0.14 mm²
Protection Circuit	Short circuit, reverse polarity, overload protection

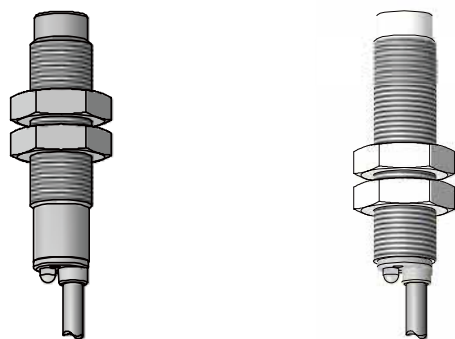
— Dimension Drawing



— Wiring Diagram



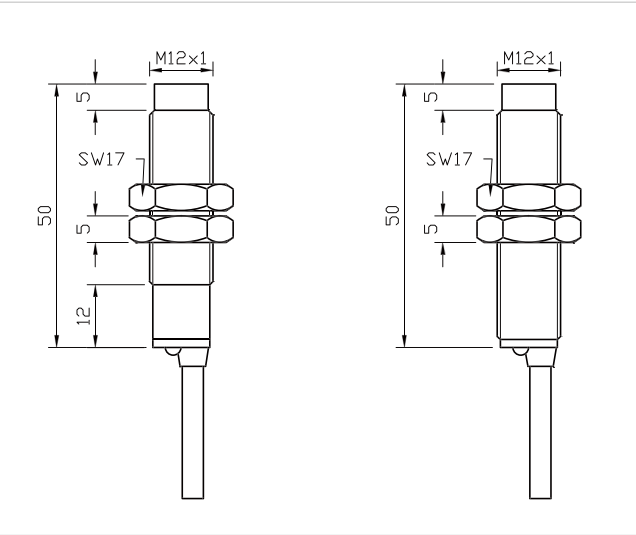
M12 Non-flush Type



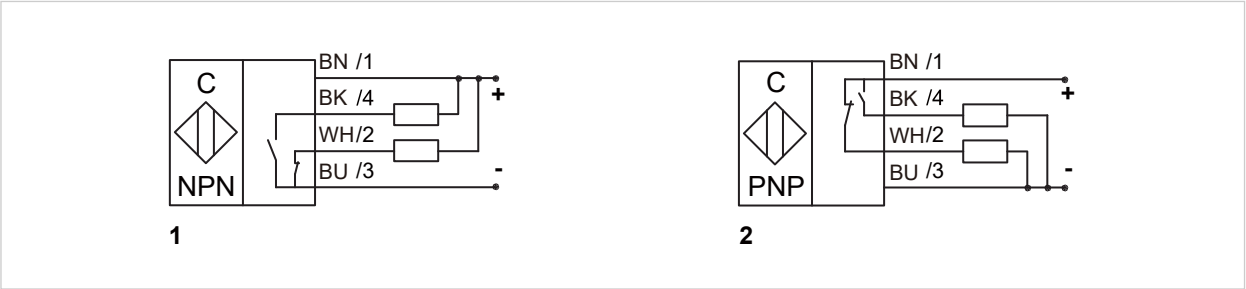
Specifications

Item	Specifications
Supply Voltage	12 ... 30 VDC
Max. Output Current	2x200 mA
Max. Voltage Drop	≤ 2.0 V
No-load Current	<15 mA
Max. Switching Frequency	50 HZ
Indicator	Yellow
Ambient Temperature Range	-25 ...+70°C
Protection Rating	IP67(EN 60947-5-2)
Cable	4x0.14 mm ²
Protection Circuit	Short circuit, reverse polarity, overload protection

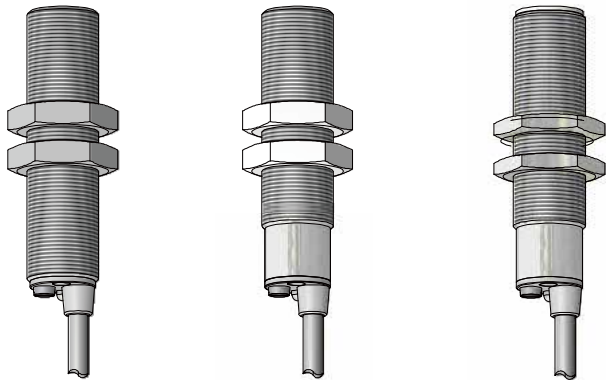
Dimension Drawing



Wiring Diagram



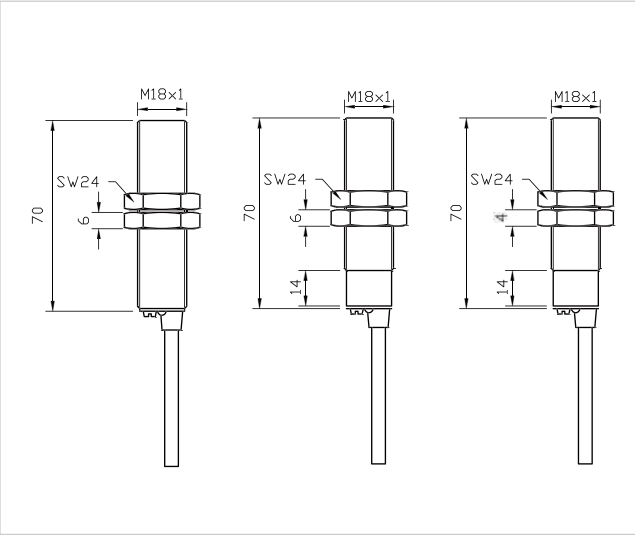
M18 Flush Type



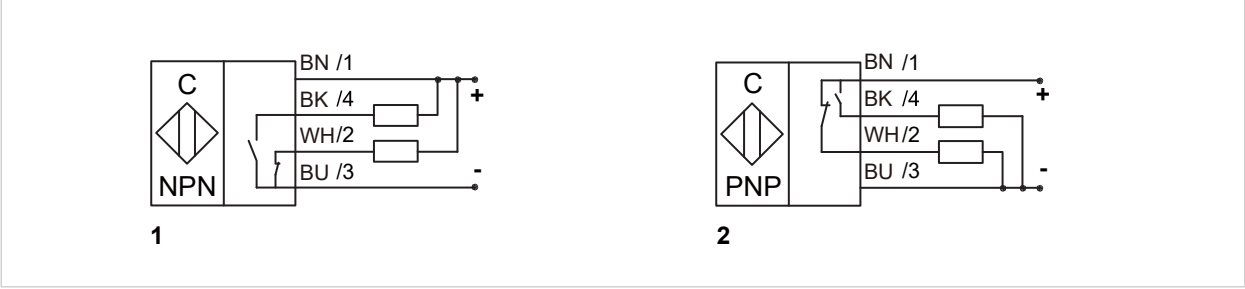
Specifications

Item	Specifications
Supply Voltage	12 ... 30 VDC
Max. Output Current	2x200 mA
Max. Voltage Drop	≤ 2.0 V
No-load Current	<15 mA
Max. Switching Frequency	200 HZ
Indicator	Yellow
Ambient Temperature Range	-25 ...+70°C
Protection Rating	IP67(EN 60947-5-2)
Cable	4x0.34 mm ²
Protection Circuit	Short circuit, reverse polarity, overload protection

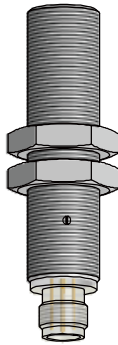
Dimension Drawing



Wiring Diagram



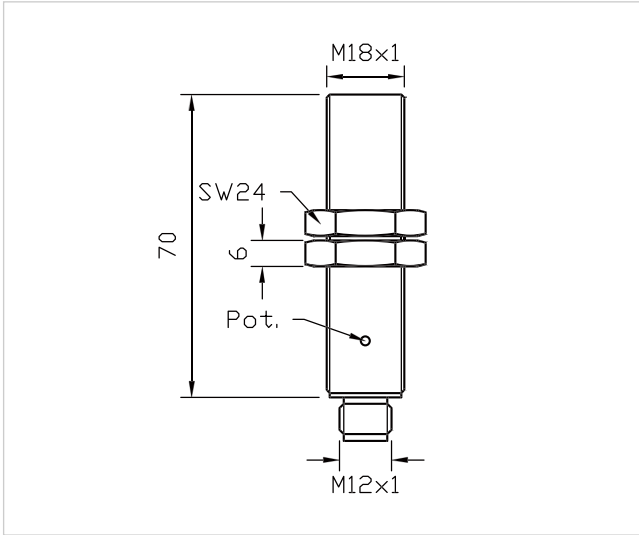
M18 Flush Type



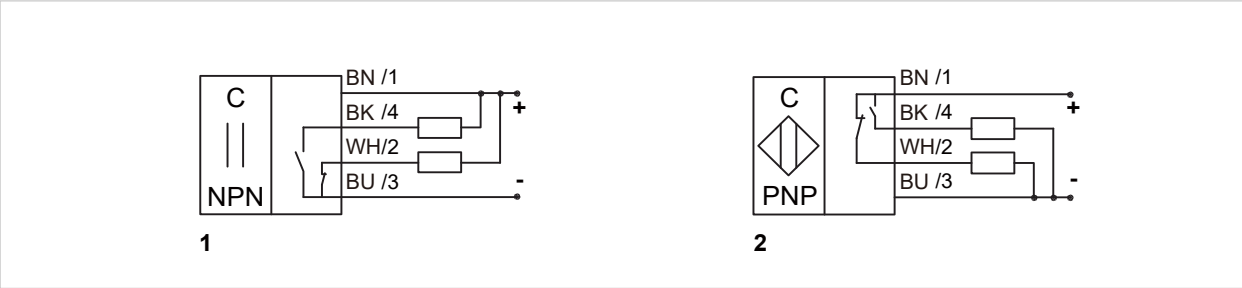
Specifications

Item	Specifications
Supply Voltage	12 ... 30 VDC
Max. Output Current	2x200 mA
Max. Voltage Drop	≤ 2.0 V
No-load Current	<15 mA
Max. Switching Frequency	200 HZ
Indicator	Yellow
Ambient Temperature Range	-25 ...+70°C
Protection Rating	IP67(EN 60947-5-2)
Connector	M12x1,4pin
Protection Circuit	Short circuit, reverse polarity, overload protection

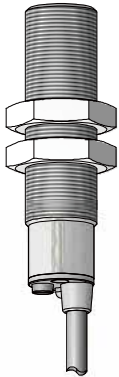
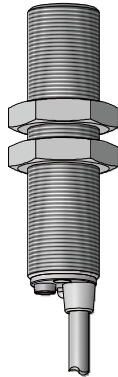
Dimension Drawing



Wiring Diagram



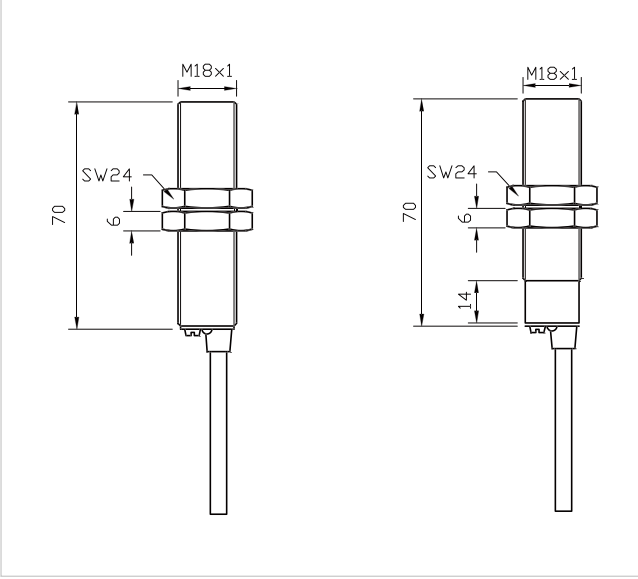
M18 Flush Type



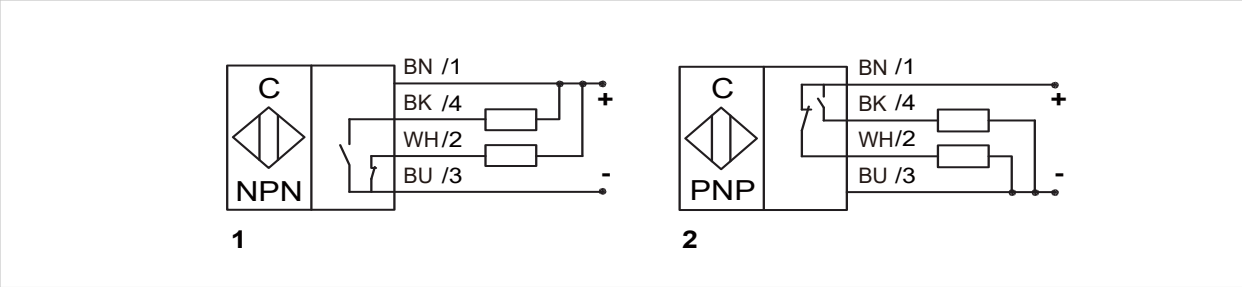
Specifications

Item	Specifications
Supply Voltage	12 ... 30 VDC
Max. Output Current	2x200 mA
Max. Voltage Drop	≤ 2.0 V
No-load Current	<15 mA
Max. Switching Frequency	200 HZ
Indicator	Yellow
Ambient Temperature Range	-25 ...+70°C
Protection Rating	IP67(EN 60947-5-2)
Cable	4x0.34 mm²
Protection Circuit	Short circuit, reverse polarity, overload protection
Adjustment Method	Adjustment button

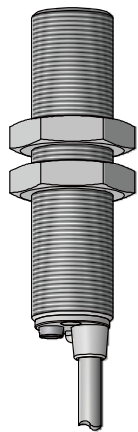
Dimension Drawing



Wiring Diagram



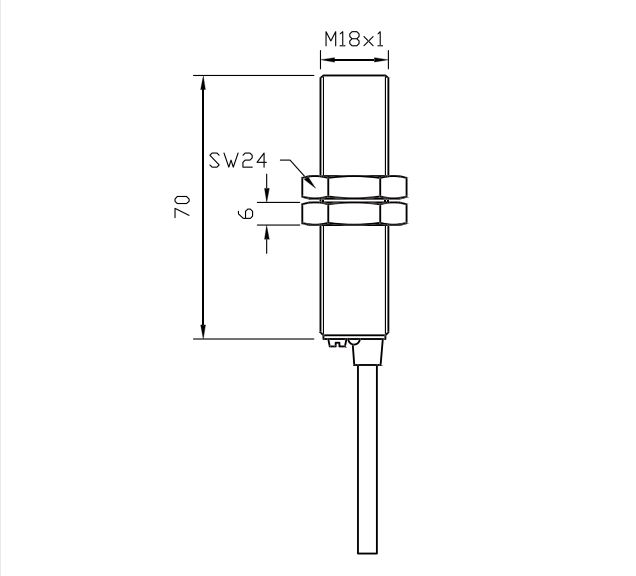
M18 Flush Type



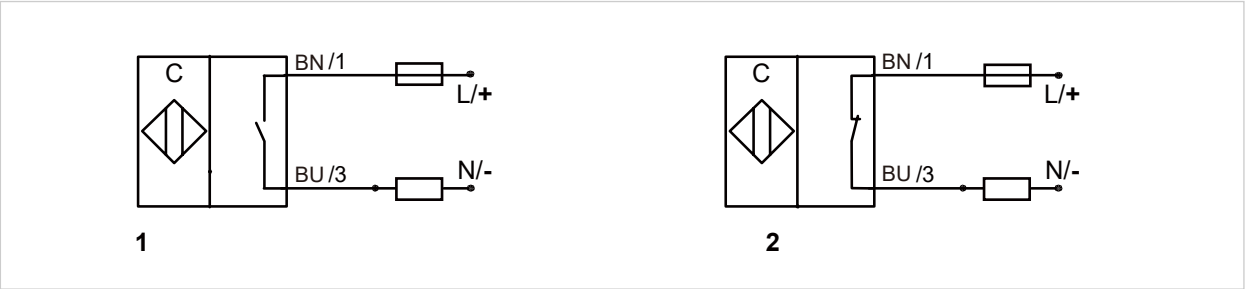
Specifications

Item	Specifications
Supply Voltage	20250 V AC/DC
Max. Output Current	250 mA
Min. Load Current	5 mA
Max. Voltage Drop	≤ 6.0 V
No-load Current	<2.5 mA
Max. Switching Frequency	25 Hz
Indicator	Yellow
Ambient Temperature Range	-25 ...+70℃
Protection Rating	IP67(EN 60947-5-2)
Cable/Connector	2x0.34 mm²
Protection Circuit	Short circuit, reverse polarity, overload protection

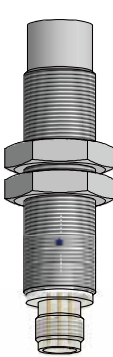
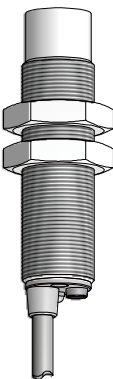
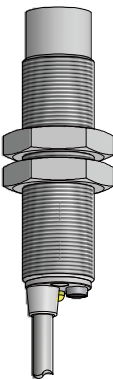
Dimension Drawing



Wiring Diagram



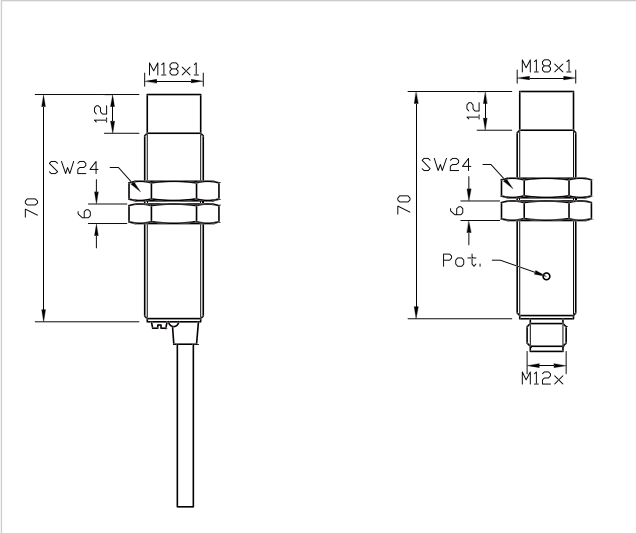
M18 Non-flush Type



Specifications

Item	Specifications
Supply Voltage	12 ... 30 VDC
Max. Output Current	2 x200 mA
Max. Voltage Drop	≤2.0 V
No-load Current	< 15 mA
Max. Switching Frequency	50 HZ
Indicator	Yellow
Ambient Temperature Range	-25 ...+70℃
Protection Rating	IP67(EN 60947-5-2)
Cable/Connector	4x0.34 mm²/M12x1,4pin
Protection Circuit	Short circuit, reverse polarity, overload protection

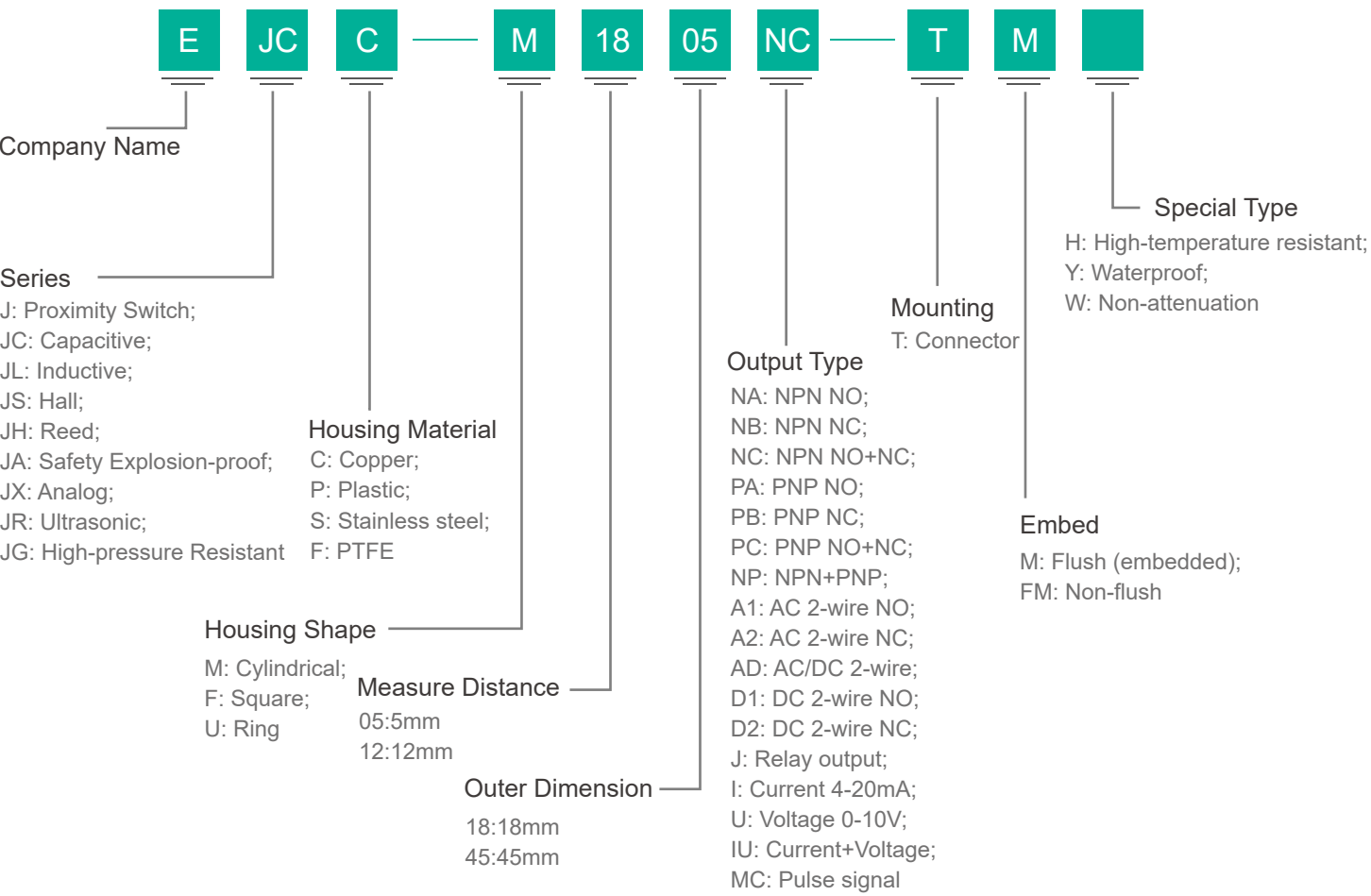
Dimension Drawing



Wiring Diagram



— Product Model Coding Rule



01
No-Attenuation Series

Inductive sensors are highly sensitive and exhibit no attenuation in their response to metal.

02
High-Voltage Series

Designed specifically for high-voltage environments, stable and reliable

03
Capacitive Series

It can detect both metals and non-metals, and features high sensitivity and a long service life.

APPLICATIONS CASES



COMPANY PROFILE

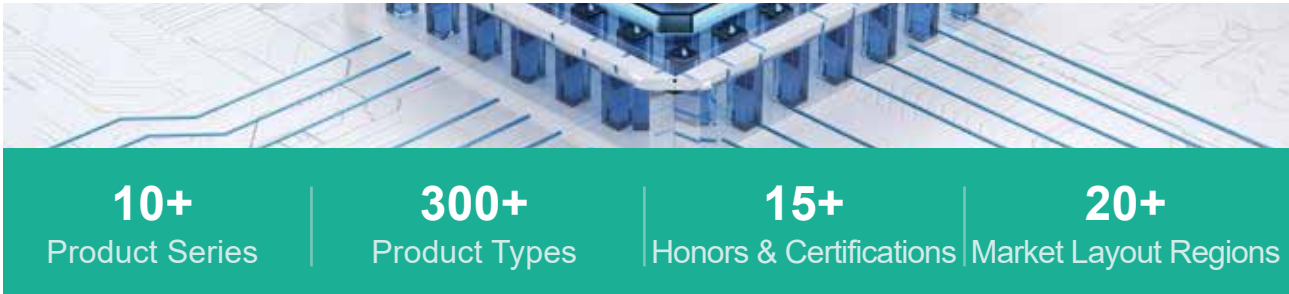


ELEsenson focuses on R&D, manufacturing and sales of sensors. We have a high-caliber, innovative technical team. Pursuing continuous technical improvement, we deliver high-performance, reliable sensor products for customers.

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

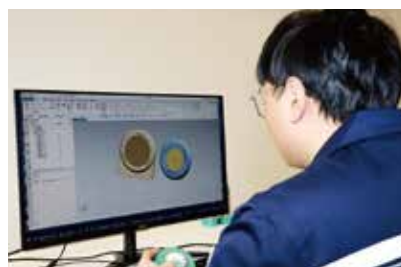
Drive development through innovation, win trust by quality.
Supply precise,stable,durable and reliable sensor products plus customized solutions for industrial automation, rail transit, automotive electronics and other industries.

— 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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<https://www.elesenson.net>