

Inductive Proximity Sensor **L12 Series**

DC or AC; 2 or 4 mm Sensing; NPN or PNP; 2 or 3-Wire



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Mercury Sensor Products Quick Selection Guide

Technology:	Inductive. Responsive to metal proximity.		Output Options:	Normally Closed or Normally Open
Output Type:	NPN or PNP		Connection:	Cable leads. 2 or 3-Wire
Sensing Distance:	Shielded	2 mm	Housing - Body:	Metal
	Non-shielded	4 mm	Package / Case	Cylinder, threaded, M12
Supply Voltage: / Current	+10V to +30V DC: 8 mA		Interface:	None
	90 ~ 250V AC: 2.5 mA		Indicator:	LED

Features:

- ◆ Wide range of operating temperature, hot side to +85°C
- ◆ IP67 environmental rating with durability, versatility and reliability
- ◆ Non-contact object detection with 2 or 3 pre-wired cable leads
- ◆ NPN or PNP open collector output
- ◆ Also available in M8, M18, M24 and M30 cylinder sizes and various sensing distances for application flexibility.



Specifications: Ta = +25°C unless otherwise specified

	Shielded (order code "S")	Non-shielded (order code "T")
Package / Case	Metal Cylinder. Threaded. M12.	
Power Supply Voltage (Operating Voltage Range)	+10 ~ +30 V DC. Ripple (p-p): 10% max. 90 ~ 250 V AC.	
Standard Sensing Object Metal and Size	Iron. 12x12x1 mm.	Iron. 15x15x1 mm.
Correction Factor	Metal Correction Factors	
	Iron	1.00
	Stainless Steel	0.70
	Brass	0.40
	Aluminum	0.30
	Copper	0.25
Sensing Distance	2 mm ±10% at +25°C	4 mm ±10% at +25°C
Detectable Object	Ferrous metal (The sensing distance decreases with non-ferrous metal)	

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Output Types. (With Sensing Object Approaching)	NPN. Open collector (order code "N")	Normally Closed; order code "C"
		Normally Open; order code "E"
	PNP. Open collector (order code "P")	Normally Closed; order code "C"
		Normally Open; order code "E"
Load Current	300 mA max. (30 VDC max.)	
Power Supply Current Consumption	DC: 8 mA max.	
	AC: 2.5 mA max.	
Leakage Current	0.8 mA max.	
Residual Voltage	2V max. (Under load current of 300 mA and 2 m cable length)	
Response Frequency	DC: 1.5 KHz typical. An averaged value.	
	AC: 20 Hz	
Ambient Temperature Range	Operating	-25 °C to +85 °C
	Storage	-40 °C to 85 °C (with no icing or condensation)
Ambient Humidity	35%~95% (with condensation). Operating and storage.	
Temperature Influence	±15% max. of sensing distance at 23°C within operating temperature range.	
Voltage Influence	±1% max. of sensing distance at 24 VDC ±15%.	
Insulation Resistance	50 MΩ min. At 500 VDC between current carrying parts and case.	
Degree of Protection	IP67. IEC 60529.	
Protection Circuit	Surge suppressor.	
Connecting Method	Pre-wired. Cable leads. 2 meters. 26 AWG. 4 mm diameter. Conductor strand: 7/34. Insulator: PVC.	
Indicator	Operation indicator. Red LED.	
Materials	Case: Chrome plated brass Sensing surface: PBT. Orange color. Clamping nuts: Chrome plated brass Toothed washer: Zinc plated iron	
Unit Weight	Shielded models: 48 grams approx. Non-shielded models: 51 grams approx..	

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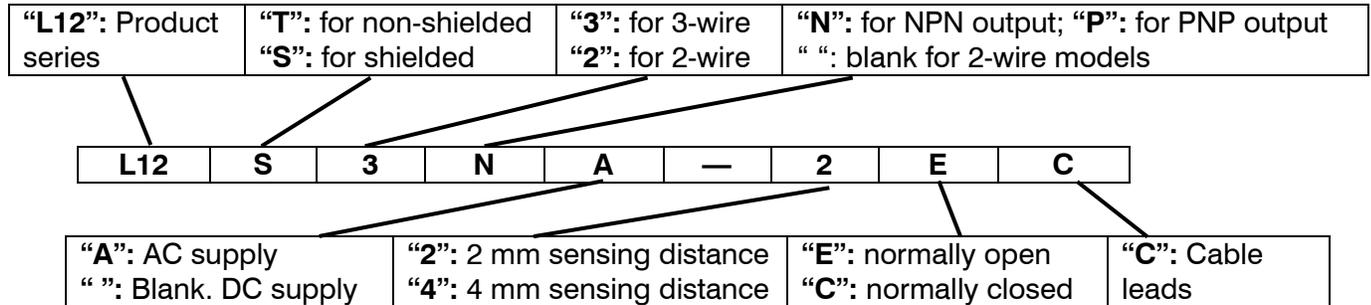
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How to Order:

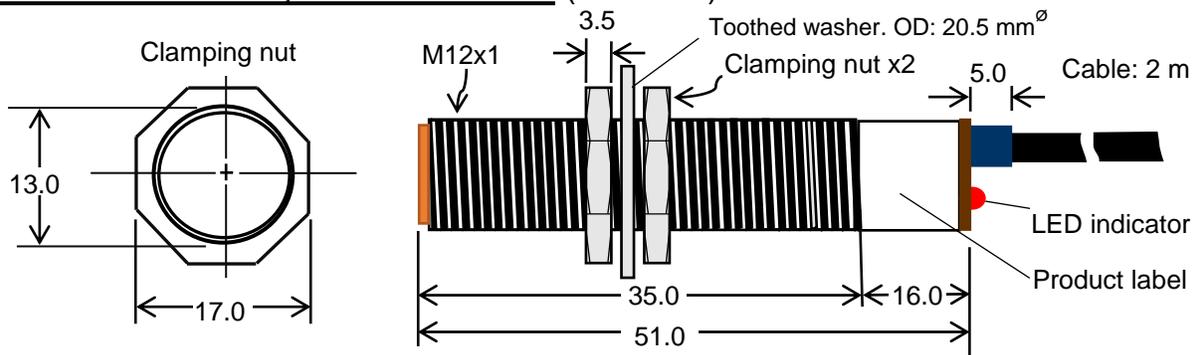
Part Number example: L12S3N-2EC



Available Standard Models:

Power Supply	Output	Normally	Shielded	
			Shielded	Non-Shielded
DC	NPN	Open	Shielded	L12S3N-2EC
			Non-Shielded	L12T3N-4EC
		Closed	Shielded	L12S3N-2CC
			Non-Shielded	L12T3N-4CC
	PNP	Open	Shielded	L12S3P-2EC
			Non-Shielded	L12T3P-4EC
		Closed	Shielded	L12S3P-2CC
			Non-Shielded	L12T3P-4CC
	2-Wire	Open	Shielded	L12S2-2EC
			Non-Shielded	L12T2-4EC
		Closed	Shielded	L12S2-2CC
			Non-Shielded	L12T2-4CC
AC	2-Wire	Open	Shielded	L12S2A-2EC
			Non-Shielded	L12T2A-4EC
		Closed	Shielded	L12S2A-2CC
			Non-Shielded	L12T2A-4CC

L12 Outline Dimensions; Shielded Models (unit: mm)



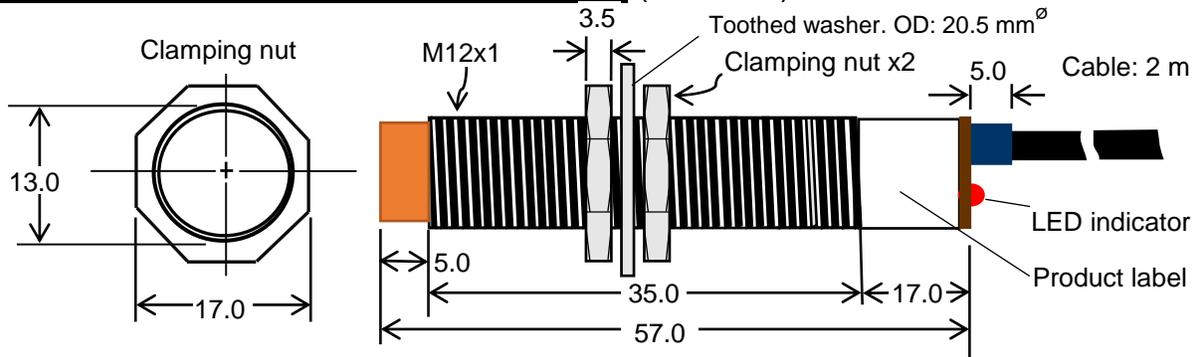
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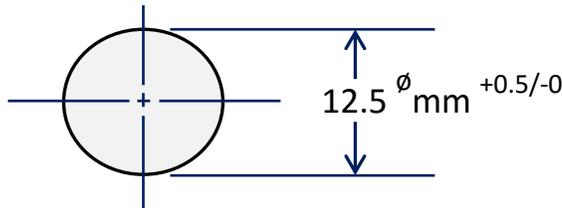
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L12 Outline Dimensions; Non-Shielded Models (unit: mm)

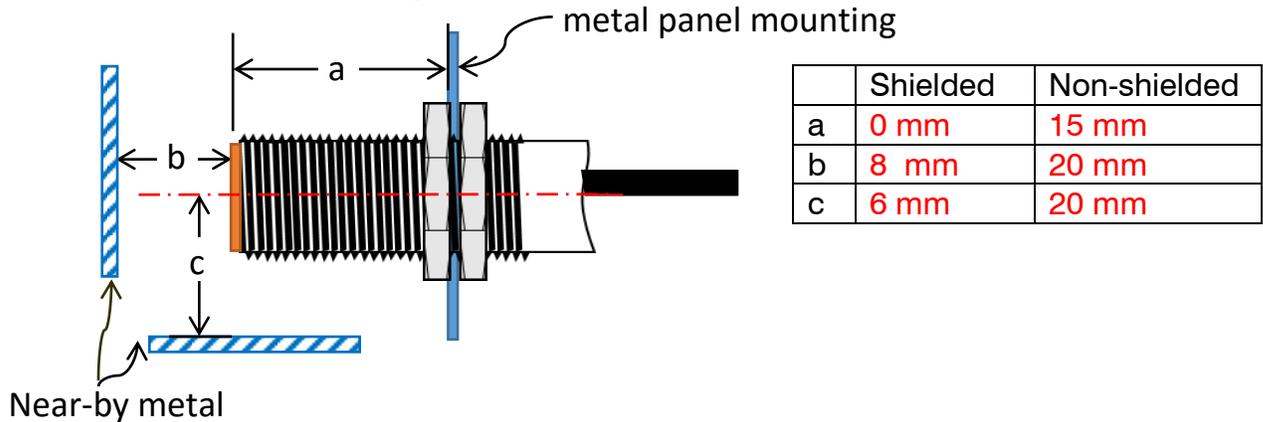


Sensor Mounting and Surrounding Metal Influence

Mounting hole cutout dimensions



Surrounding metal interference: Following minimum clearance requirement must be followed to minimize the surrounding metal interference.



Warranty

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