

Inductive Proximity Sensor **L30 Series**

DC or AC; 10 or 15 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	10 mm	Housing - Body:	Metal
	Non-shielded	15 mm	Package / Case	Cylinder, threaded, M30
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, M12, M18 and M24 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. M30.	
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. 30x30x1 mm.	Iron. 60x60x1 mm.
Correction Factor	Metal Correction Factors	
	Iron	1.00
	Stainless Steel	0.70
	Brass	0.40
	Aluminum	0.30
	Copper	0.25
Sensing Distance	10 mm ±10% at +25 ⁰ C	15 mm ±10% at +25 ⁰ C
Detectable Object	Ferrous metal (The sensing distance decreases with non-ferrous metal)	

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Output Types.	NPN. Open collector	Normally Closed; order code "C"
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(With Sensing Object Approaching)	(order code "N")	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: 500 Hz 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: 140 grams approx. Non-shielded models: 150 grams approx.	

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How to Order:

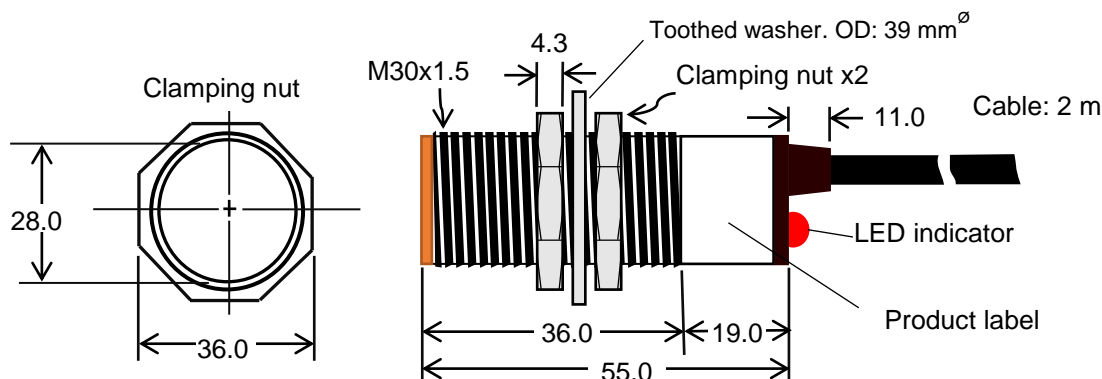
Part Number example: L30S3N-10EC

"L30": Product series	"T": for non-shielded "S": for shielded	"3": for 3-wire "2": for 2-wire	"N": for NPN output; "P": for PNP output " ": blank for 2-wire models
L30	S	3	N
	A	—	10
			E
			C
"A": AC supply " ": Blank. DC supply	"10": 10 mm sensing distance "15": 15 mm sensing distance	"E": normally open "C": normally closed	"C": Cable leads

Available Standard Models:

				Part Number
DC Power Supply	NPN	Normally Open	Shielded	L30S3N-10EC
			Non-Shielded	L30T3N-15EC
		Normally Closed	Shielded	L30S3N-10CC
			Non-Shielded	L30T3N-15CC
	PNP	Normally Open	Shielded	L30S3P-10EC
			Non-Shielded	L30T3P-15EC
		Normally Closed	Shielded	L30S3P-10CC
			Non-Shielded	L30T3P-15CC
	2-Wire	Normally Open	Shielded	L30S2-10EC
			Non-Shielded	L30T2-15EC
		Normally Closed	Shielded	L30S2-10CC
			Non-Shielded	L30T2-15CC
AC Power	2-Wire	Normally Open	Shielded	L30S2A-10EC
			Non-Shielded	L30T2A-15EC
		Normally Closed	Shielded	L30S2A-10CC
			Non-Shielded	L30T2A-15CC

L30 Outline Dimensions; Shielded Models (unit: mm)



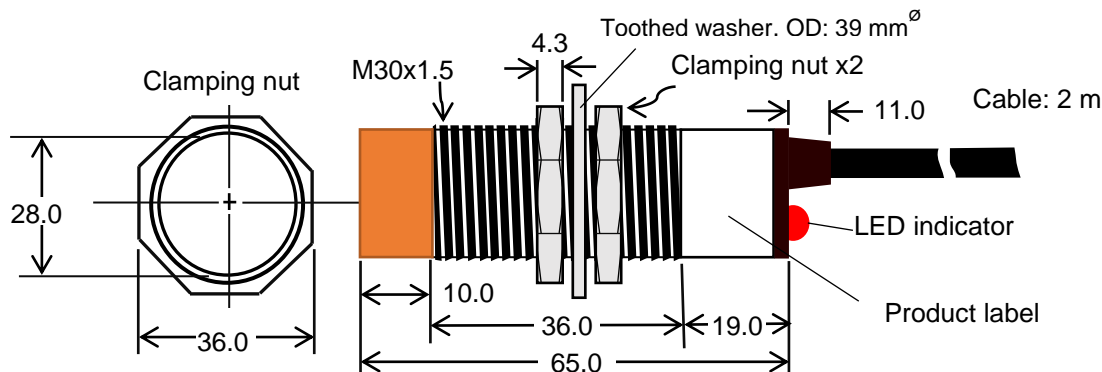
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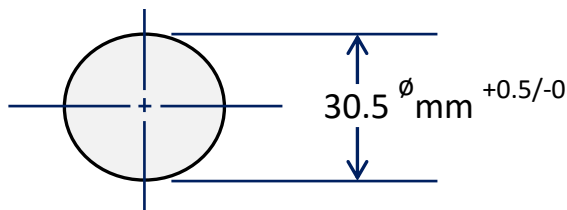
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L30 Outline Dimensions; Non-Shielded Models (unit: mm)

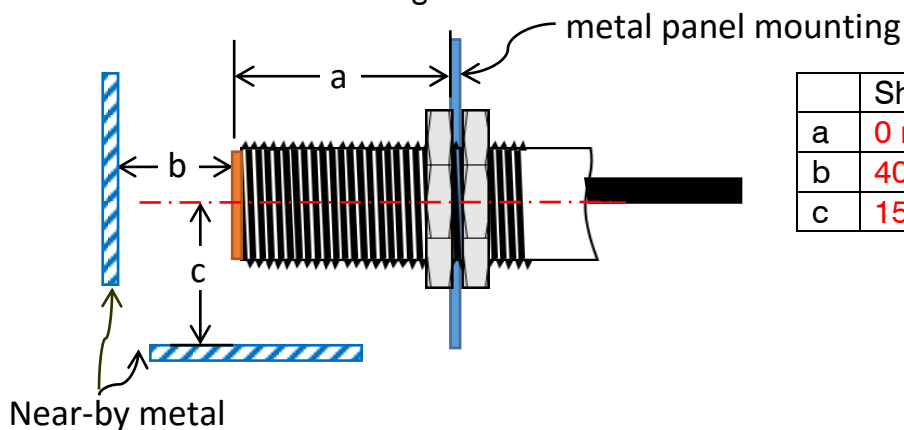


Sensor Mounting and Surrounding Metal Influence

Mounting hole cutout dimensions



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



	Shielded	Non-shielded
a	0 mm	30 mm
b	40 mm	70 mm
c	15 mm	45 mm

Warranty

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