

LANBAO SENSOR complete solution for the sensors

Established in 1998, Shanghai Lanbao Sensing Technology Co., Ltd. is a leading industrial automation products supplier in China. Our main businesses are industrial sensors R&D, production, sales and application, providing customers with standard and individual products and systems. Lanbao industrial sensors covers over 30 series, 3000 specifications, main products are inductive sensors, photoelectric sensors, capacitive sensors and pressure sensors. Lanbao has been making continuous breakthrough in new technology and new material application, which laid the foundation of its leading position in sensing technology.

Lanbao is an ISO9001:2008 quality management system and EU RoHS environmental directives implemented enterprise. Our series products are with CE, UL and CCC certification. The strict test in function, quality, reliability and production feasibility at the design stage of each product and the strict quality management in production ensure excellent quality products.

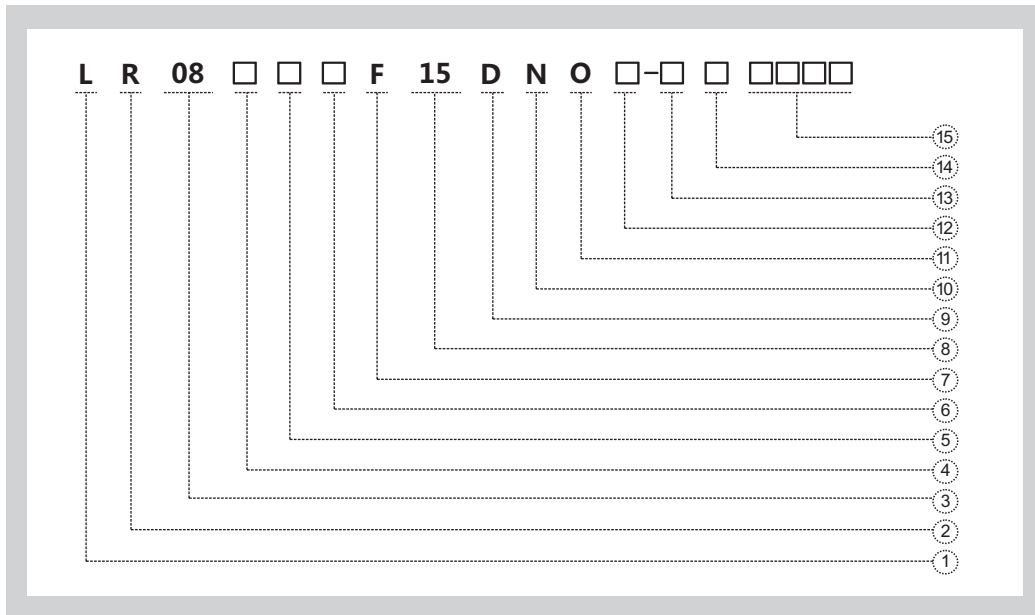
Focus on innovation, quality, service and global market, Lanbao insists on creating maximal value for customers.

Standard function inductive sensors

- Non-contact detecting way effectively avoids abrasion, safe and reliable.
- Built-in ASIC ensures quick response, high frequency, stable performance.
- Complete range of specification:
 - Smooth cylinder series: $\phi 4$ to $\phi 34$ mm;
 - threaded cylinder series :M5 to M30mm;
 - rectangular series: 7*7mm to 80*80mm.



Naming rules



1. Type Code

L:Inductive

2. Shape Code

R:Cylindrical
E:Rectangular

3. Size Code

Number:Housing diameter
e.g. 08:M8

4. Shape Code

Q:Smooth Cylindrical
V:Angle Column
Z:Combination
H:Ring-shaped
U:U-shaped
X:Semi-thread

5. Housing Material

N/A:Copper
S:Plastic
G:Stainless Steel
V:Aluminium

6. Housing Length

A:Short
B:Standard
C:Long

7. Mounting

N:Non-flush(nf)
F:Flush(f)

8. Sensing Distance

02:2mm
04:4mm
10:10mm

9. Supply Voltage

A:20...250VAC
B:90...250VAC
C:380VAC
D:10...30VDC
E:10...60VDC
F:8.2VDC
G:5...60VDC
L:15...30VDC
H:20...30VDC
I:10...40VDC
J:5VDC
S:20...250VAC/DC
T:12...24VDC

10. Output Way

B:AC/DC 2 wires
L:DC 2 wires
T:AC 2 wires
P:PNP
N:NPN
E:NPN/PNP
F:NPN+PNP
K:Relay

11. Output Status

A:NO/NC Reversible
B:NO/NC Optional
Cable Optional;Potentiometer optional
O:NO
C:NC
R:NO+NC
IU:Voltage+Current
(0...10V,0...20mA)
U:Voltage(0...10V)
I:Current(0...20mA)
I4:Current(4...20mA)

12. By Sensor Function

N/A:Standard function
M:Analogue
N:NAMUR
W:High Temperature Resistant(-25°C...120°C)
W1:Low Temperature Resistant(-40°C...70°C)
W2:High Temperature Resistant(-25°C...100°C)
B:High Pressure Resistant
T:Speed
Z:Self-Diagnosis
Y:Extended Sensing Distance
G:High Frequency
Q:Metal Sensing Face
A:Welding-immune
K:EMI
F:Detect Iron Object
NF:Detect Non-Iron Object
J:Rotation Speed

13. Cable Length

N/A:2m
3M:3m

14. Connection

N/A:2M cable
E1:M8 connector (3 pins)
E2:M12 connector (4 pins)
E3:M8 connector (4 pins)
E4:M12 trapezoid connector (4 pins)
E5:M12 connector (5 pins)
D:Terminal

15. Special Requirement

In 4 Digits

Wiring diagram

DC 2 Wires	Lead wire	M8 Connector	M12 Connector	Terminal connect
NO				
NC				

DC 3 Wires	Lead wire	M8 Connector	M12 Connector	Terminal connect
NPN NO				
NPN NC				
PNP NO				
PNP NC				

DC 4 Wires	Lead wire	M12 Connector	Terminal connect
NPN NO+NC			
PNP NO+NC			

AC 2 Wires	Lead wire	M12 Connector	Terminal connect
SCR NO			
SCR NC			

Inductive sensors

AC/DC 2 Wires	Lead wire	M12 Connector	Terminal connect
NO			
NC			
NO/NC			

NAMUR	Lead wire	M8 Connector	M12 Connector	Terminal connect

Analog output	Lead wire	M12 Connector	Terminal connect
3 Wires Voltage output			
3 Wires Current output			
4 Wires Voltage/current output			

Remarks	M8 Connector	M12 Connector
Connector		

Inductive sensors

Model	Output	Supply Voltage	Mounting	Sensing Distance	Specifications	Housing Material	Connection
AC 2 Wires							P.111
LE40SZ	AC 2 Wires	AC20-250V	f/nf	25mm,40mm	40*40*66	PBT	M12 Connector
LE40XZ	AC 2 Wires	AC20-250V	f/nf	25mm,40mm	40*40*120	PBT	Terminal connect
LE40XZ	AC 2 Wires	AC20-250V	f/nf	25mm,40mm	40*40*120	PBT	M12 Connector
LE80XZ	AC 2 Wires	AC20-250V	f/nf	50mm,70mm	80*80*40	PBT	Terminal connect
LE80XZ	AC 2 Wires	AC20-250V	f/nf	50mm,70mm	80*80*40	PBT	M12 Connector
AC/DC 2 Wires							P.114
LE40SZ	AC/DC 2 Wires	AC/DC 20-250V	f/nf	25mm,40mm	40*40*66	PBT	M12 Connector
LE40XZ	AC/DC 2 Wires	AC/DC 20-250V	f/nf	25mm,40mm	40*40*120	PBT	Terminal connect
LE40XZ	AC/DC 2 Wires	AC/DC 20-250V	f/nf	25mm,40mm	40*40*120	PBT	M12 Connector
LE80XZ	AC/DC 2 Wires	AC/DC 20-250V	f/nf	50mm,70mm	80*80*40	PBT	Terminal connect
LE80XZ	AC/DC 2 Wires	AC/DC 20-250V	f/nf	50mm,70mm	80*80*40	PBT	M12 Connector

Analog output

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Model	Output	Supply Voltage	Mounting	Sensing Distance	Specifications	Housing Material	Connection
Metal type							P.117
LR12X	0...10V	DC15-30V	f/nf	2mm,4mm	M12*1*53	Nickel-copper alloy	Cable
LR12X	0...20mA	DC15-30V	f/nf	2mm,4mm	M12*1*53	Nickel-copper alloy	Cable
LR12X	4...20mA	DC15-30V	f/nf	2mm,4mm	M12*1*53	Nickel-copper alloy	Cable
LR12X	0...10V/0...20mA	DC15-30V	f/nf	2mm,4mm	M12*1*53	Nickel-copper alloy	Cable
LR12X	0...10V	DC15-30V	f/nf	2mm,4mm	M12*1*56	Nickel-copper alloy	M12 Connector
LR12X	0...20mA	DC15-30V	f/nf	2mm,4mm	M12*1*56	Nickel-copper alloy	M12 Connector
LR12X	4...20mA	DC15-30V	f/nf	2mm,4mm	M12*1*56	Nickel-copper alloy	M12 Connector
LR12X	0...10V/0...20mA	DC15-30V	f/nf	2mm,4mm	M12*1*56	Nickel-copper alloy	M12 Connector
LR18X	0...10V	DC15-30V	f/nf	5mm,8mm	M18*1*53	Nickel-copper alloy	Cable
LR18X	0...20mA	DC15-30V	f/nf	5mm,8mm	M18*1*53	Nickel-copper alloy	Cable
LR18X	4...20mA	DC15-30V	f/nf	5mm,8mm	M18*1*53	Nickel-copper alloy	Cable
LR18X	0...10V/0...20mA	DC15-30V	f/nf	5mm,8mm	M18*1*53	Nickel-copper alloy	Cable
LR18X	0...10V	DC15-30V	f/nf	5mm,8mm	M18*1*56	Nickel-copper alloy	M12 Connector
LR18X	0...20mA	DC15-30V	f/nf	5mm,8mm	M18*1*56	Nickel-copper alloy	M12 Connector
LR18X	4...20mA	DC15-30V	f/nf	5mm,8mm	M18*1*56	Nickel-copper alloy	M12 Connector
LR18X	0...10V/0...20mA	DC15-30V	f/nf	5mm,8mm	M18*1*56	Nickel-copper alloy	M12 Connector
LR30X	0...10V	DC15-30V	f/nf	10mm,15mm	M30*1.5*53	Nickel-copper alloy	Cable
LR30X	0...20mA	DC15-30V	f/nf	10mm,15mm	M30*1.5*53	Nickel-copper alloy	Cable

Inductive sensors

Model	Output	Supply Voltage	Mounting	Sensing Distance	Specifications	Housing Material	Connection
Metal type							P.118
LR30X	4...20mA	DC15-30V	f/nf	10mm,15mm	M30*1.5*62	Nickel-copper alloy	Cable
LR30X	0...10V/0...20mA	DC15-30V	f/nf	10mm,15mm	M30*1.5*62	Nickel-copper alloy	Cable
LR30X	0...10V	DC15-30V	f/nf	10mm,15mm	M30*1.5*73	Nickel-copper alloy	M12 Connector
LR30X	0...20mA	DC15-30V	f/nf	10mm,15mm	M30*1.5*73	Nickel-copper alloy	M12 Connector
LR30X	4...20mA	DC15-30V	f/nf	10mm,15mm	M30*1.5*73	Nickel-copper alloy	M12 Connector
LR30X	0...10V/0...20mA	DC15-30V	f/nf	10mm,15mm	M30*1.5*73	Nickel-copper alloy	M12 Connector

Combined type							P.120
LE40SZ	0...10V	DC15-30V	f/nf	10mm,15mm	40*40*66	PBT	M12 Connector
LE40SZ	0...20mA	DC15-30V	f/nf	10mm,15mm	40*40*66	PBT	M12 Connector
LE40SZ	4...20mA	DC15-30V	f/nf	10mm,15mm	40*40*66	PBT	M12 Connector
LE40SZ	0...10V/0...20mA	DC15-30V	f/nf	10mm,15mm	40*40*66	PBT	M12 Connector
LE40XZ	0...10V	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	Terminal connect
LE40XZ	0...20mA	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	Terminal connect
LE40XZ	4...20mA	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	Terminal connect
LE40XZ	0...10V/0...20mA	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	Terminal connect
LE40XZ	0...10V	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	M12 Connector
LE40XZ	0...20mA	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	M12 Connector
LE40XZ	4...20mA	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	M12 Connector
LE40XZ	0...10V/0...20mA	DC15-30V	f/nf	10mm,15mm	40*40*120	PBT	M12 Connector
LE80XZ	0...10V	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	Terminal connect
LE80XZ	0...20mA	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	Terminal connect
LE80XZ	4...20mA	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	Terminal connect
LE80XZ	0...10V/0...20mA	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	Terminal connect
LE80XZ	0...10V	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	M12 Connector
LE80XZ	0...20mA	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	M12 Connector
LE80XZ	4...20mA	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	M12 Connector
LE80XZ	0...10V/0...20mA	DC15-30V	f/nf	40mm,50mm	80*80*40	PBT	M12 Connector

Extended temperature

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Model	Output	Supply Voltage	Mounting	Sensing Distance	Specifications	Housing Material	Connection
Metal type (-40°C+70°C)							P.123
LR12X	DC 3 Wires	DC10-30V	f/nf	2mm,4mm	M12*1*51	Nickel-copper alloy	Cable
LR12X	DC 3 Wires	DC10-30V	f/nf	2mm,4mm	M12*1*63	Nickel-copper alloy	M12 Connector

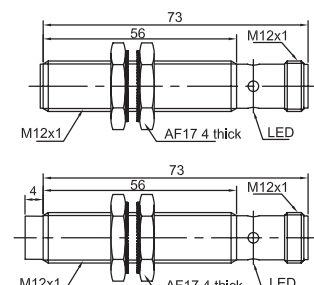
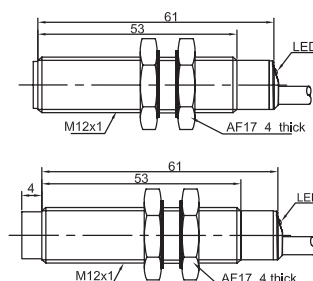
Item Code	LR12X		LR12X	
Mounting	● Flush	◐ Non-flush	● Flush	◐ Non-flush
Sensing distance	0.4... 2 mm	0.8... 4 mm	0.4... 2 mm	0.8... 4 mm



Output	0-10V	LR12XCF02LUM	LR12XCN04LUM	LR12XCF02LUM-E2	LR12XCN04LUM-E2
	0-20mA	LR12XCF02LIM	LR12XCN04LIM	LR12XCF02LIM-E2	LR12XCN04LIM-E2
	4-20mA	LR12XCF02LI4M	LR12XCN04LI4M	LR12XCF02LI4M-E2	LR12XCN04LI4M-E2
	0-10V+0-20mA	LR12XCF02LIUM	LR12XCN04LIUM	LR12XCF02LIUM-E2	LR12XCN04LIUM-E2

Technical Parameter				
Supply voltage	15...30 VDC	15...30 VDC	15...30 VDC	15...30 VDC
Switch point drift	< ±10% Sr	< ±10% Sr	< ±10% Sr	< ±10% Sr
Load current	Voltage output $R_L \geq 4.7K\Omega$, Current output $R_L \leq 470\Omega$		Voltage output $R_L \geq 4.7K\Omega$, Current output $R_L \leq 470\Omega$	
Voltage drop				
Consumption current	<20mA	<20mA	<20mA	<20mA
Hysteresis	< ±5%	< ±5%	< ±5%	< ±5%
Repeat accuracy	< ±3%	< ±3%	< ±3%	< ±3%
Frequency	200Hz	100Hz	200Hz	100Hz
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Dielectric strength	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
Short-circuit protection	...	...	...	...
Ambient temperature	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper alloy	Nickel-copper alloy	Nickel-copper alloy	Nickel-copper alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

* Cable material and length can be customized



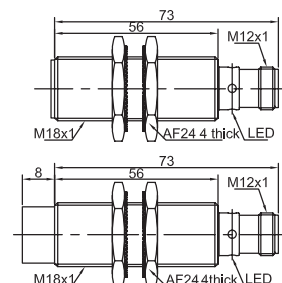
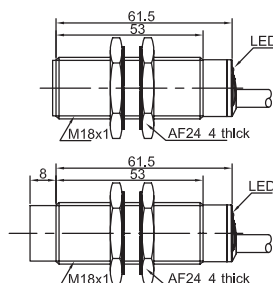
Item Code	LR18X		LR18X	
Mounting	● Flush	◐ Non-flush	● Flush	◐ Non-flush
Sensing distance	1... 5 mm	1.6... 8 mm	1... 5 mm	1.6... 8 mm



Output	0-10V	LR18XCF05LUM	LR18XCN08LUM	LR18XCF05LUM-E2	LR18XCN08LUM-E2
	0-20mA	LR18XCF05LIM	LR18XCN08LIM	LR18XCF05LIM-E2	LR18XCN08LIM-E2
	4-20mA	LR18XCF05LI4M	LR18XCN08LI4M	LR18XCF05LI4M-E2	LR18XCN08LI4M-E2
	0-10V+0-20mA	LR18XCF05LIUM	LR18XCN08LIUM	LR18XCF05LIUM-E2	LR18XCN08LIUM-E2

Technical Parameter				
Supply voltage	15...30 VDC	15...30 VDC	15...30 VDC	15...30 VDC
Switch point drift	< ±10% Sr	< ±10% Sr	< ±10% Sr	< ±10% Sr
Load current	Voltage output $R_L \geq 4.7K\Omega$, Current output $R_L \leq 470\Omega$		Voltage output $R_L \geq 4.7K\Omega$, Current output $R_L \leq 470\Omega$	
Voltage drop				
Consumption current	<20mA	<20mA	<20mA	<20mA
Hysteresis	< ±5%	< ±5%	< ±5%	< ±5%
Repeat accuracy	< ±3%	< ±3%	< ±3%	< ±3%
Frequency	200Hz	100Hz	200Hz	100Hz
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Dielectric strength	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
Short-circuit protection	...	...	...	...
Ambient temperature	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper alloy	Nickel-copper alloy	Nickel-copper alloy	Nickel-copper alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

* Cable material and length can be customized



Item Code	LR30X		LR30X	
Mounting	● Flush	◐ Non-flush	● Flush	◐ Non-flush
Sensing distance	2... 10 mm	3... 15 mm	2... 10 mm	3... 15 mm



Output	0-10V	LR30XCF10LUM	LR30XCN15LUM	LR30XCF10LUM-E2	LR30XCN15LUM-E2
	0-20mA	LR30XCF10LIM	LR30XCN15LIM	LR30XCF10LIM-E2	LR30XCN15LIM-E2
	4-20mA	LR30XCF10LI4M	LR30XCN15LI4M	LR30XCF10LI4M-E2	LR30XCN15LI4M-E2
	0-10V+0-20mA	LR30XCF10LIUM	LR30XCN15LIUM	LR30XCF10LIUM-E2	LR30XCN15LIUM-E2

Technical Parameter				
Supply voltage	15...30 VDC	15...30 VDC	15...30 VDC	15...30 VDC
Switch point drift	< ±10% Sr	< ±10% Sr	< ±10% Sr	< ±10% Sr
Load current	Voltage output $R_L \geq 4.7K\Omega$, Current output $R_L \leq 470\Omega$		Voltage output $R_L \geq 4.7K\Omega$, Current output $R_L \leq 470\Omega$	
Voltage drop				
Consumption current	<20mA	<20mA	<20mA	<20mA
Hysteresis	< ±5%	< ±5%	< ±5%	< ±5%
Repeat accuracy	< ±3%	< ±3%	< ±3%	< ±3%
Frequency	200Hz	100Hz	200Hz	100Hz
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Dielectric strength	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
Short-circuit protection	...	...	...	...
Ambient temperature	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper alloy	Nickel-copper alloy	Nickel-copper alloy	Nickel-copper alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

* Cable material and length can be customized

