



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.

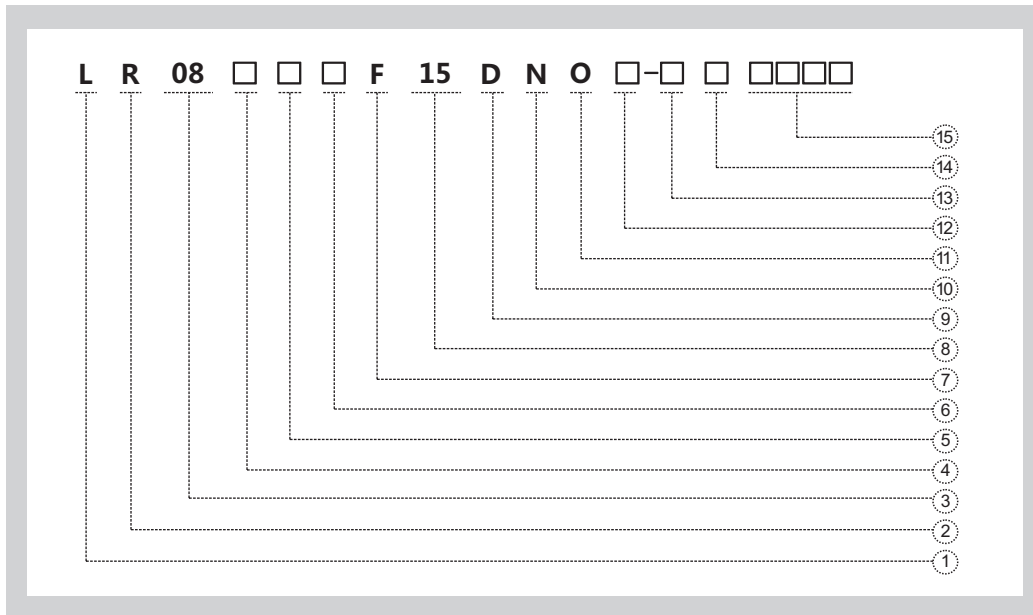
Focus on innovation, quality, service and global market, Lanbao insists on creating maximal value for customers.

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

P.117

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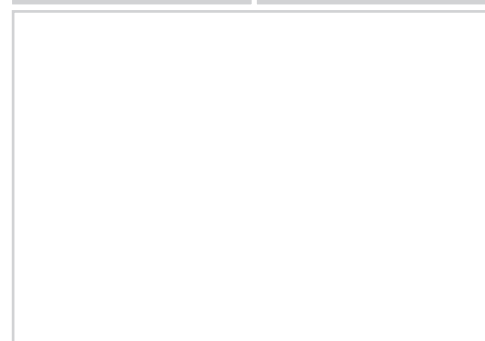
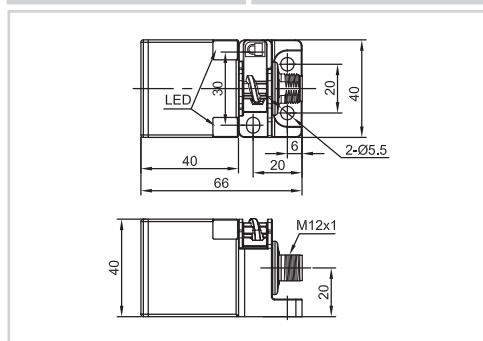
Model	Output	Supply Voltage	Mounting	Sensing Distance	Specifications	Housing Material	Connection
Metal type (-40°C+70°C)							P.123
LR12X	DC 3 Wires	DC10-30V	f/nf	2mm,4mm	M12*1*51	Nickel-copper alloy	Cable
LR12X	DC 3 Wires	DC10-30V	f/nf	2mm,4mm	M12*1*63	Nickel-copper alloy	M12 Connector





Item Code	LE40SZ	
Mounting	● Flush	◐ Non-flush
Sensing distance	2... 10 mm	3... 15 mm



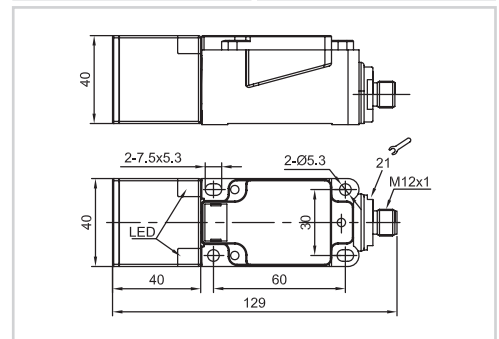
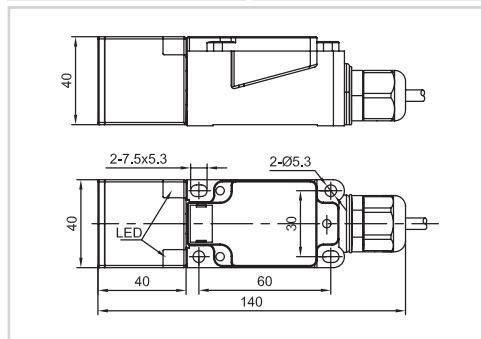
Output	0-10V	LE40SZSF10LUM-E2	LE40SZSN15LUM-E2
	0-20mA	LE40SZSF10LIM-E2	LE40SZSN15LIM-E2
	4-20mA	LE40SZSF10LI4M-E2	LE40SZSN15LI4M-E2
	0-10V+0-20mA	LE40SZSF10LIUM-E2	LE40SZSN15LIUM-E2





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



Item Code	LE40XZ		LE40XZ		
Mounting	● Flush	◐ Non-flush	● Flush	◐ Non-flush	
Sensing distance	2... 10 mm	3... 15 mm	2... 10 mm	3... 15 mm	
					
Output	0-10V	LE40XZSF10LUM-D	LE40XZSN15LUM-D	LE40XZSF10LUM-E2	LE40XZSN15LUM-E2
	0-20mA	LE40XZSF10LIM-D	LE40XZSN15LIM-D	LE40XZSF10LIM-E2	LE40XZSN15LIM-E2
	4-20mA	LE40XZSF10LI4M-D	LE40XZSN15LI4M-D	LE40XZSF10LI4M-E2	LE40XZSN15LI4M-E2
	0-10V+0-20mA	LE40XZSF10LIUM-D	LE40XZSN15LIUM-D	LE40XZSF10LIUM-E2	LE40XZSN15LIUM-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	100Hz	50Hz	100Hz	50Hz
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	PBT	PBT	PBT	PBT
Connection	Terminal connect	Terminal connect	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE



Item Code	LE80XZ		LE80XZ		
Mounting	● Flush	◐ Non-flush	● Flush	◐ Non-flush	
Sensing distance	8... 40 mm	10... 50 mm	8... 40 mm	10... 50 mm	
					
Output	0-10V	LE80XZSF40LUM-D	LE80XZSN50LUM-D	LE80XZSF40LUM-E2	LE80XZSN50LUM-E2
	0-20mA	LE80XZSF40LIM-D	LE80XZSN50LIM-D	LE80XZSF40LIM-E2	LE80XZSN50LIM-E2
	4-20mA	LE80XZSF40LI4M-D	LE80XZSN50LI4M-D	LE80XZSF40LI4M-E2	LE80XZSN50LI4M-E2
	0-10V+0-20mA	LE80XZSF40LIUM-D	LE80XZSN50LIUM-D	LE80XZSF40LIUM-E2	LE80XZSN50LIUM-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	80Hz	40Hz	80Hz	40Hz
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	PBT	PBT	PBT	PBT
Connection	Terminal connect	Terminal connect	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE

