



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.

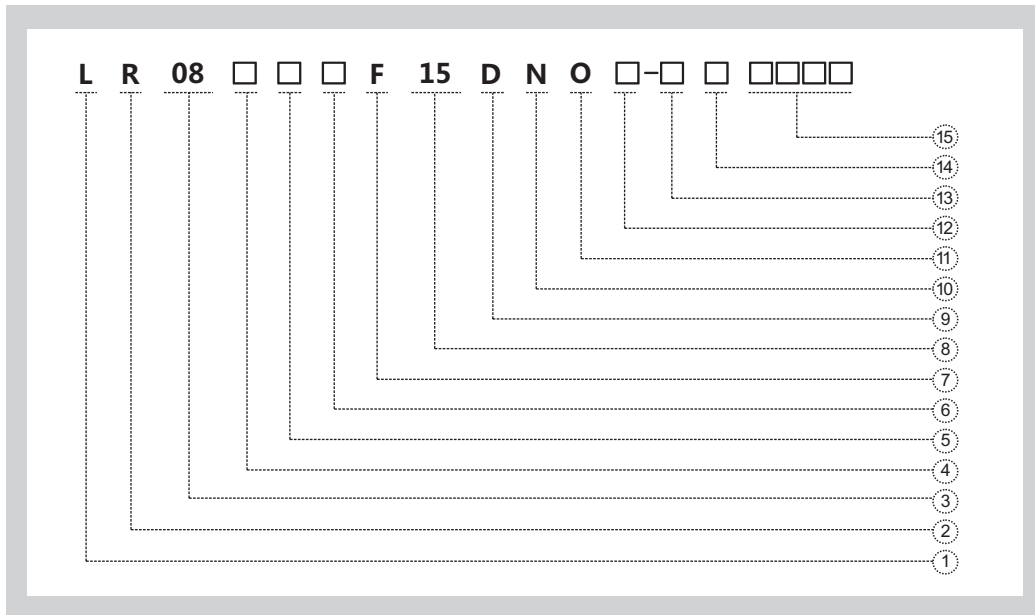
Focus on innovation, quality, service and global market, Lanbao insists on creating maximal value for customers.

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
Metal type (-40°C+70°C)							P.124
LR18X	DC 3 Wires	DC10-30V	f/nf	5mm,8mm	M18*1*43	Nickel-copper alloy	Cable
LR18X	DC 3 Wires	DC10-30V	f/nf	5mm,8mm	M18*1*46	Nickel-copper alloy	M12 Connector
LR30X	DC 3 Wires	DC10-30V	f/nf	10mm,15mm	M30*1.5*43	Nickel-copper alloy	Cable
LR30X	DC 3 Wires	DC10-30V	f/nf	10mm,15mm	M30*1.5*46	Nickel-copper alloy	M12 Connector

Combined type (-40°C+70°C)							P.126
LE40SZ	DC 3/4 Wires	DC10-30V	f/nf	15mm,20mm	40*40*66	PBT	M12 Connector
LE40XZ	DC 3/4 Wires	DC10-30V	f/nf	15mm,20mm	40*40*120	PBT	Terminal connect
LE40XZ	DC 3/4 Wires	DC10-30V	f/nf	15mm,20mm	40*40*120	PBT	M12 Connector
LE80XZ	DC 3/4 Wires	DC10-30V	f/nf	40mm,50mm	80*80*40	PBT	Terminal connect
LE80XZ	DC 3/4 Wires	DC10-30V	f/nf	40mm,50mm	80*80*40	PBT	M12 Connector

Metal type (-25°C+120°C)							P.129
LR12X	DC 3 Wires	DC10-30V	f/nf	2mm,4mm	M12*1*43	Nickel-copper alloy	Cable
LR12X	DC 3 Wires	DC10-30V	f/nf	2mm,4mm	M12*1*46	Nickel-copper alloy	M12 Connector
LR18X	DC 3 Wires	DC10-30V	f/nf	5mm,8mm	M18*1*43	Nickel-copper alloy	Cable
LR18X	DC 3 Wires	DC10-30V	f/nf	5mm,8mm	M18*1*46	Nickel-copper alloy	M12 Connector
LR30X	DC 3 Wires	DC10-30V	f/nf	10mm,15mm	M30*1.5*43	Nickel-copper alloy	Cable
LR30X	DC 3 Wires	DC10-30V	f/nf	10mm,15mm	M30*1.5*46	Nickel-copper alloy	M12 Connector

Combined type (-25°C+100°C)							P.132
LE40XZ	DC 3/4 Wires	DC10-30V	f/nf	15mm,20mm	40*40*120	PBT	M12 Connector
LE80XZ	DC 3/4 Wires	DC10-30V	f/nf	40mm,50mm	80*80*40	PBT	Terminal connect

High pressure resistant

P.135

Model	Output	Supply Voltage	Mounting	Sensing Distance	Specifications	Housing Material	Connection
LR12X	DC 3 Wires	DC10-30V	f	1.5mm	M12*1*40	Stainless steel	Cable
LR12X	DC 3 Wires	DC10-30V	f	1.5mm	M12*1*40	Stainless steel	M12 Connector
LR18X	DC 3 Wires	DC10-30V	f	2mm	M18*1*46	Stainless steel	Cable
LR18X	DC 3 Wires	DC10-30V	f	2mm	M18*1*46	Stainless steel	M12 Connector
LR16X	DC 3 Wires	DC10-30V	f	2mm	M16*1*44	Stainless steel	Cable
LR16X	DC 3 Wires	DC10-30V	f	2mm	M16*1*44	Stainless steel	M12 Connector
LR14X	DC 3 Wires	DC10-30V	f	2mm	9/16-18UNF*8	Stainless steel	Cable
LR14X	DC 3 Wires	DC10-30V	f	2mm	9/16-18UNF*8	Stainless steel	M12 Connector

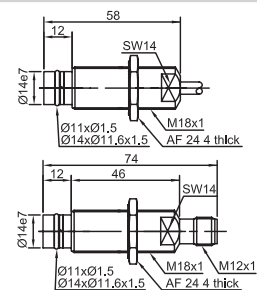
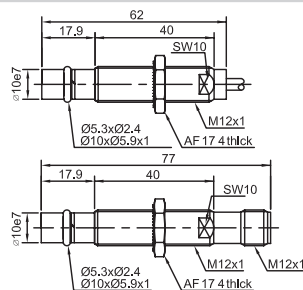
Item Code	LR12X		LR18X	
Mounting	● Flush	● Flush	● Flush	● Flush
Sensing distance	1.5mm	1.5mm	2mm	2mm



Output	NPN NO	LR12XBF15DNOB	LR12XBF15DNOB-E2	LR18XBF02DNOB	LR18XBF02DNOB-E2
	NPN NC	LR12XBF15DNCB	LR12XBF15DNCB-E2	LR18XBF02DNCB	LR18XBF02DNCB-E2
Output	PNP NO	LR12XBF15DPOB	LR12XBF15DPOB-E2	LR18XBF02DPOB	LR18XBF02DPOB-E2
	PNP NC	LR12XBF15DPCB	LR12XBF15DPCB-E2	LR18XBF02DPCB	LR18XBF02DPCB-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Switch point drift	<±15% Sr	<±15% Sr	<±15% Sr	<±15% Sr
Load current	<100mA	<100mA	<100mA	<100mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<15mA	<15mA	<15mA	<15mA
Hysteresis	1...20%	1...20%	1...20%	1...20%
Repeat accuracy	<5%	<5%	<5%	<5%
Frequency	600Hz	600Hz	200Hz	200Hz
Output indicator
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	yes	yes	yes	yes
Withstand	500bar	500bar	500bar	500bar
Ambient temperature	-25...+80°C	-25...+80°C	-25...+80°C	-25...+80°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP68	IP68	IP68	IP68
Housing material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Connection	2m PUR Cable	M12 Connector	2m PUR Cable	M12 Connector
Certification	CE U	CE U	CE U	CE U

* Cable material and length can be customized



Item Code	LR16X		LR14X	
Mounting	● Flush	● Flush	● Flush	● Flush
Sensing distance	2mm	2mm	1.5mm	1.5mm



Output	NPN NO	LR16XBFO2DNOB	LR16XBFO2DNOB-E2	LR14XBF15DNOB	LR14XBF15DNOB-E2
	NPN NC	LR16XBFO2DNCB	LR16XBFO2DNCB-E2	LR14XBF15DNCB	LR14XBF15DNCB-E2
Output	PNP NO	LR16XBFO2DPOB	LR16XBFO2DPOB-E2	LR14XBF15DPOB	LR14XBF15DPOB-E2
	PNP NC	LR16XBFO2DPCB	LR16XBFO2DPCB-E2	LR14XBF15DPCB	LR14XBF15DPCB-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Switch point drift	<±15% Sr	<±15% Sr	<±15% Sr	<±15% Sr
Load current	<100mA	<100mA	<100mA	<100mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<15mA	<15mA	<15mA	<15mA
Hysteresis	1...20%	1...20%	1...20%	1...20%
Repeat accuracy	<5%	<5%	<5%	<5%
Frequency	600Hz	600Hz	600Hz	600Hz
Output indicator
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	yes	yes	yes	yes
Withstand	500bar	500bar	500bar	500bar
Ambient temperature	-25...+80°C	-25...+80°C	-25...+80°C	-25...+80°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP68	IP68	IP68	IP68
Housing material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Connection	2m PUR Cable	M12 Connector	2m PUR Cable	M12 Connector
Certification	CE U	CE U	CE	CE

* Cable material and length can be customized

