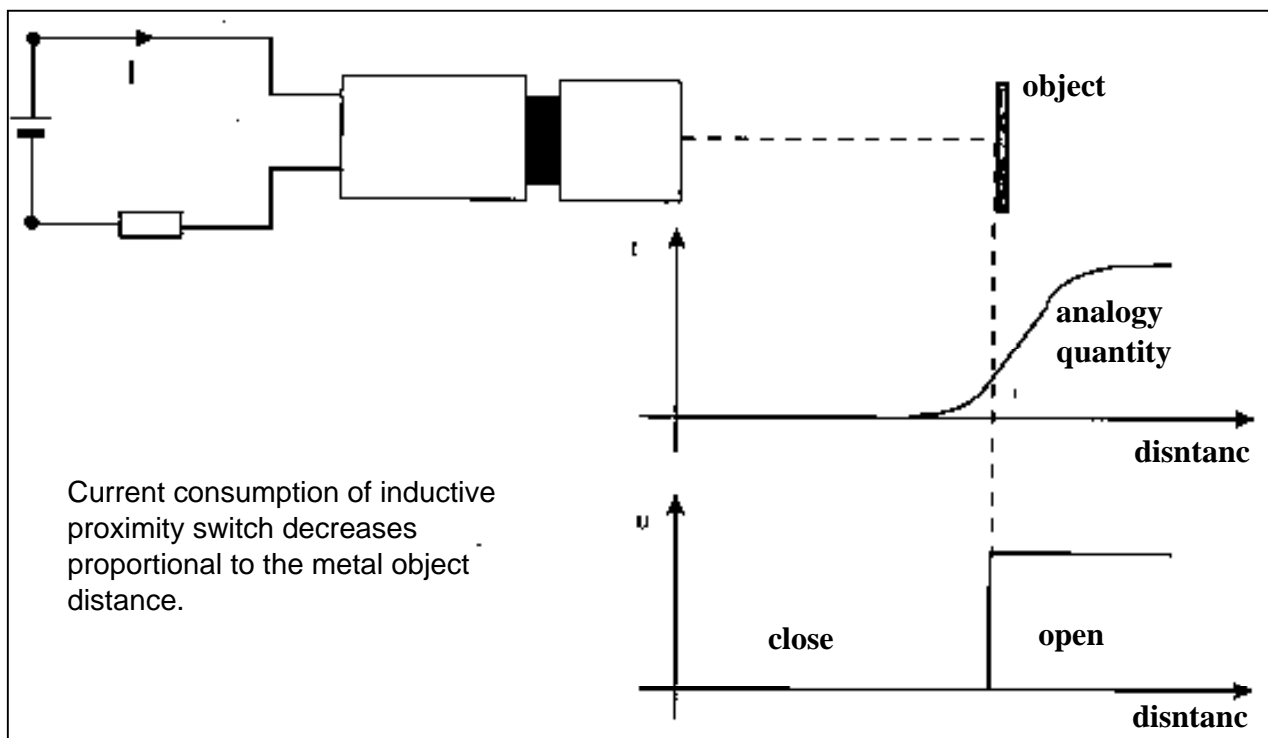
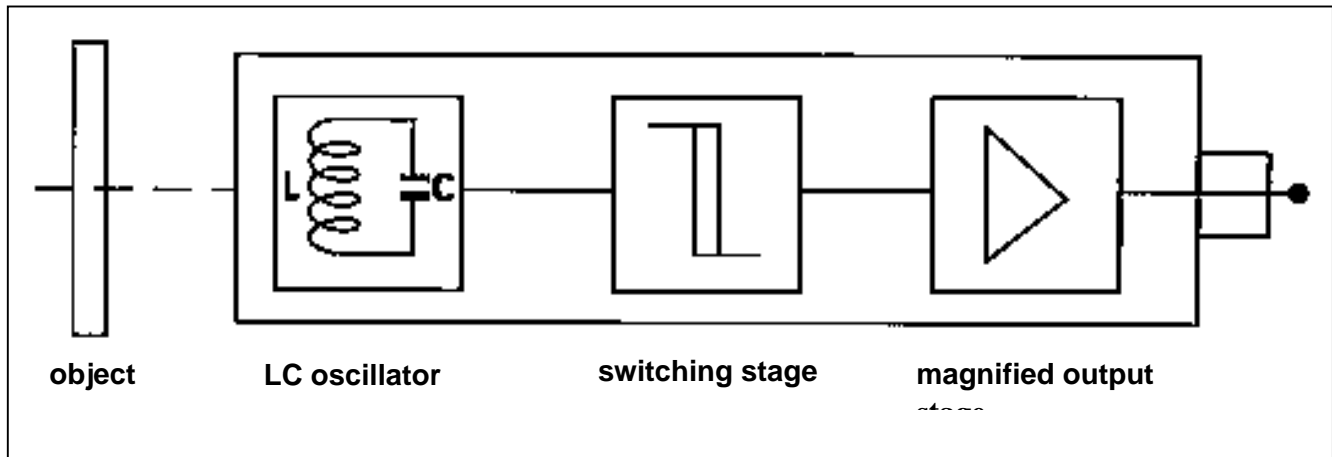


Inductive Proximity Switch

■ Principle of inductive proximity switch

Inductive proximity switch is composed of three parts: oscillator, switch circuit and magnified output circuit. The oscillator will generate an alternating electric field. When the metal object approaches this electric field and reaches the induction distance, whirlpool will generate in metal object, resulting in attenuation of vibration and then stop. The changes of vibration and stop of oscillator is treated by behind stage magnified circuit and converted to switching sign, triggering driving control for non-contact detection.



Inductive Proximity Switch

■ Model Explanation of Proximity Switch

LM F36 - 30 20 N A □
 1 2 3 4 5 6 7

No.	Meaning	Code and Definition
1	Category	LM: inductance type; CM : capacitance type; AM: safety explosion-proof type; XM: mimic linear type; SM: Hall type; HM: reed type
2	Figure Code	Digit: cylinder type; F+digit: angular column type
3	Working Voltage	30: 6~36VDC; 310: 5~24VDC; 320: 12~60VDC; 20: 90~250VAC; 210: 24~250VAC; 220: 380VAC; 40: 12~240VDC/24~240VAC; 50: special voltage
4	Detection Distance	01: 1mm; 05: 5mm; 10: 10mm;
5	Output Form	N: three-wire DC NPN output P: three-wire DC PNP output L: two-wire DC output; □: AC two-wire output; W: AC three-wire output; J: relay contact output; NP: NPN+PNP double output
6	Output State	A: normally open; B: normally close; C: NO+NC; MU: mimic voltage; MI: mimic current
7	Subsidiary functions	T: with aviation connector; Y: water proof、oil proof; I: special requirement; H: high temp. resistance; R: ring type

■ Main Features

- ◆ Compact volume
- ◆ High precision of repeated location
- ◆ Diversified exterior structures
- ◆ Good performance of anti-interference
- ◆ Many output forms
- ◆ High ON-OFF frequency
- ◆ Wide voltage range
- ◆ Dust proof、vibration proof、water proof、oil proof
- ◆ With short-circuit protection and inverted connecting protection
- ◆ Long service life

■ Application

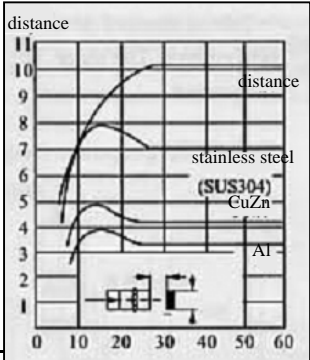
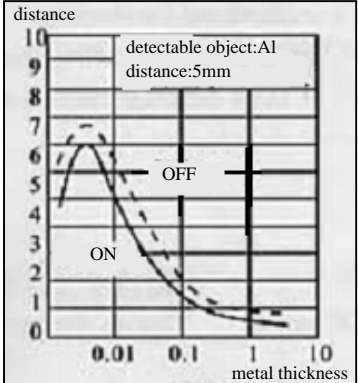
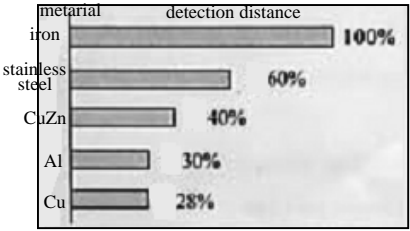
- ◆ Various location detection of machinery process center
- ◆ Stopper detection of grinding machine
- ◆ Arm location detection of robot
- ◆ Bottle lid detection
- ◆ Inspection of the existing of milk inside the paper package
- ◆ Spacing detection

Inductive Proximity Switch

■ Features of inductive proximity switch

◆ Main features:

Take high frequency oscillation type proximity sensor as representative example to briefly explain general features of inductance type proximity switch.

Item	Explanation	Features
the size of detected object and detection distance	<p>If the detected object is square metal sheet with constant thickness($t=1\text{mm}$), detect at detection distance X when change its side length d mm.</p> 	<p>When the detected object is bigger than standard detected object, on the main, the detect distance is constant.</p> <p>According to machine type, sometimes the features will be different with mentioned on the left.</p> <p>To through type, the detect object is like cylinder metal bar.</p>
the thickness of detected object and detection distance	<p>Detect at detection distance X mm (front detector) when change the thickness of the assigned standard detected object 1 mm.</p> 	<p>For more than 1mm magnetic metal like iron, on the main, the detection distance will not change.</p>
the effects resulted from the thickness of detected object and cladding material	<p>Because the detection to standard detected object will be effected by its shape, material, size and various cladding material, confirm through detection distance measurement.</p> 	<p>The effects results from detection distance and cladding material of the metal excluded iron will be different according to different machine type.</p> <p>On the main, the machine type which detects all the metal will not be effected by cladding material.</p>

◆ About detected object

- When the material of detected object is non magnetic metal, the distance of action should descends. When the foil material is thicker than 0.01mm, the detection distance will be the same as that of magnetic object. If the plating is extremely thin or non-conductive detection cannot be conducted.
- The effect of cladding material, when detect object has cladding material, take note of the changing of detection distance.

◆ About ambient weather

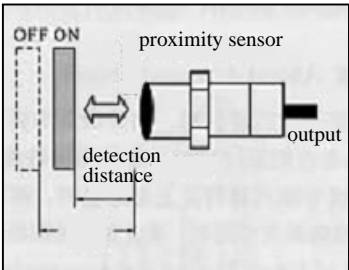
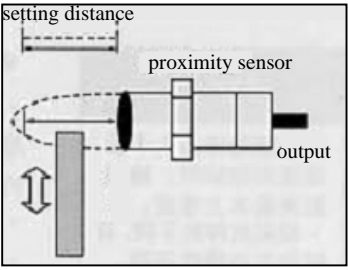
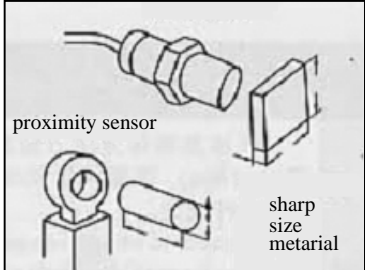
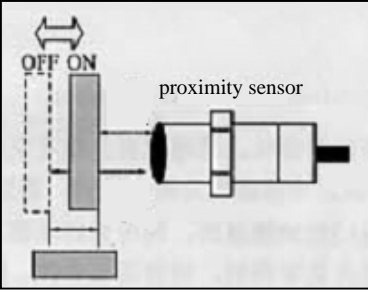
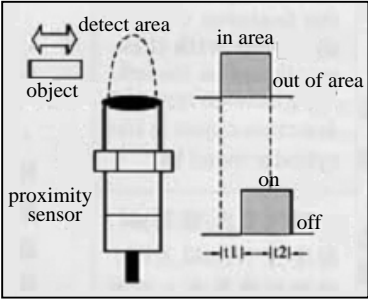
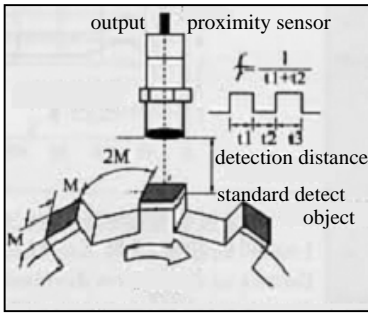
- In order to maintain reliable action and long service life, please avoid the occasion beyond the stipulated ambient temperature. Do not drench it with water or watersoluble cutting lubricant when it is used with cover, although the proximity sensor is waterproof. Do not use in the occasions with chemical agents, sepecially strong base, acid, nitric acid, hot strong sulfuric acid and so on.

◆ About maintenance and overhaul

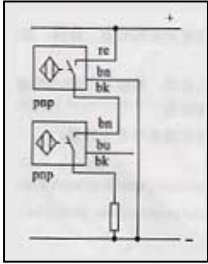
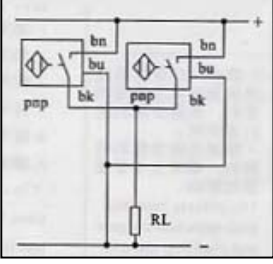
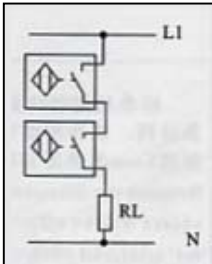
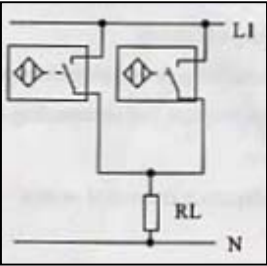
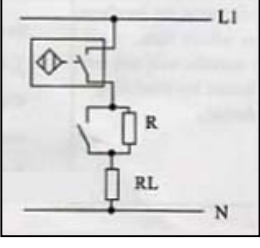
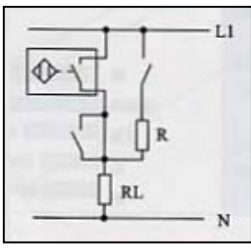
- In order to keep the proximity sensor to work stably for long time, the following regular examination should be performed just like general control.
 1. Check the installation position of detected object and proximity sensor if any deviation, loosening or deformation exists.
 2. Check the attached wires and connecting parts if any loosening, bad contact or wire breaking off exists.
 3. Check if there is any metallic powder accumulation or not
 4. Check if the temperature condition and environment condition are normal or not.
 5. Check if the detection distance is normal.

Inductive Proximity Switch

■ Explanation of technical terms

<p style="text-align: center;">Detection distance</p>  <p>Move the detected object according to assigned method, the distance from the reference position to the detecting action.</p>	<p style="text-align: center;">Setting distance</p>  <p>Including the effects like temperature and voltage, without error action, the distance passed through from the practical detection surface to the object.</p>	<p style="text-align: center;">Standard detected object</p>  <p>Take as standard detected object to detect the basic performance. The shape, size and material have been determined.</p>
<p style="text-align: center;">Differential distance</p>  <p>The absolute value of the distance difference between the distance to action and distance to resetting.</p>	<p style="text-align: center;">Response time</p>  <p>T1: When the object enters the action zone, the time from proximity sensor being in action state to output appearance. T2: The time from leaving action zone to output disappearance.</p>	<p style="text-align: center;">Response frequency</p>  <p>Work out the tracking output times per second by repeatedly approaching the detected object. Brief detection method sees the above diag.</p>

■ Series connection and parallel connection





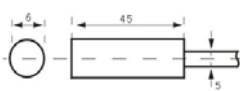
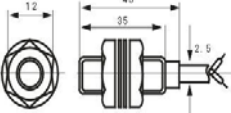
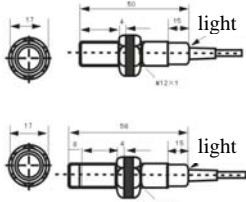
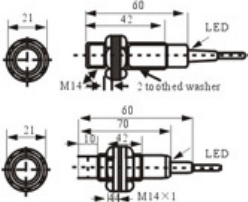
<p>Serial connection of two 3-wire DC sensors:</p> 	<p>Parallel connection of two 3-wire DC sensors:</p> 	<p>Serial connection of two 2-wire AC sensors:</p> 
<p>Parallel connection of two 2-wire AC sensors:</p> 	<p>Serial connection of machinery switch and AC sensor:</p> 	<p>Parallel connection of machinery switch and AC sensor:</p> 

Inductive Proximity Switch





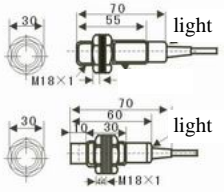
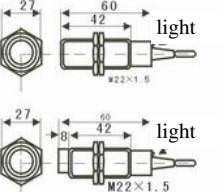
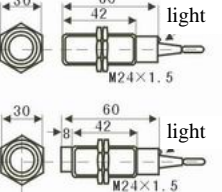
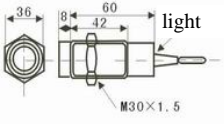
■ Cautions

- ◆DC switch should adopt insulation transformer and ensure stable voltage mains corrugation.
- ◆If any electric power line or dynamic line passes through the surrounding of switch lead-wire, in order to prevent the switch from damage or error action, cover the metal bushing on the switch lead-wire and ground it to the earth.
- ◆Set the switch use distance within the rated distance to avoid the effect from temperature and voltage.
- ◆Wiring while power-on is strictly prohibited. Connecting the wires strictly according to the wiring diagram and output return elementary diagram.
- ◆If there are any special requirements to the switch like water proof, oil proof, acid proof, base proof, high proof or with any other specifications, please give clear indication when placing an order.





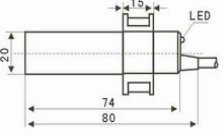
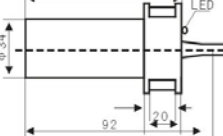
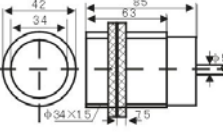
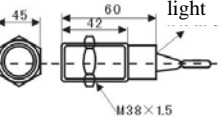
Inductive Proximity Switch

Structural Category		Cylinder type					
Series		LM6	LM8	LM12	LM14		
Outward Appearance							
Overall Dimensions							
Item		Model No.	Model No.	Model No.	Model No.		
Flush Type	DC:6 ~36V DC	NPN	NO	LM6-3001NA	LM8-3001NA	LM12-3002NA	LM14-3003NA
			NC	LM6-3001NB	LM8-3001NB	LM12-3002NB	LM14-3003NB
			NO+NC			LM12-3002NC	LM14-3003NC
		PNP	NO	LM6-3001PA	LM8-3001PA	LM12-3002PA	LM14-3003PA
			NC	LM6-3001PB	LM8-3001PB	LM12-3002PB	LM14-3003PB
			NO+NC			LM12-3002PC	LM14-3003PC
	two-wire	NO	LM6-3001LA	LM8-3001LA	LM12-3002LA	LM14-3003LA	
		NC	LM6-3001LB	LM8-3001LB	LM12-3002LB	LM14-3003LB	
	AC:9 0~25 OVAC	SCR	NO	LM6-2001A	LM8-2001A	LM12-2002A	LM14-2003A
			NC	LM6-2001B	LM8-2001B	LM12-2002B	LM14-2003B
NO+NC							
Relay Output							
Detection Distance		1mm	1mm	2mm	3mm		
Non-flush Type	DC:6 ~36V DC	NPN	NO	LM6-3002NA	LM8-3002NA	LM12-3004NA	LM14-3005NA
			NC	LM6-3002NB	LM8-3002NB	LM12-3004NB	LM14-3005NB
			NO+NC			LM12-3004NC	LM14-3005NC
		PNP	NO	LM6-3002PA	LM8-3002PA	LM12-3004PA	LM14-3005PA
			NC	LM6-3002PB	LM8-3002PB	LM12-3004PB	LM14-3005PB
			NO+NC			LM12-3004PC	LM14-3005PC
	two-wire	NO	LM6-3002LA	LM8-3002LA	LM12-3004LA	LM14-3005LA	
		NC	LM6-3002LB	LM8-3002LB	LM12-3004LB	LM14-3005LB	
	AC:9 0~25 OVAC	SCR	NO	LM6-2002A	LM8-2002A	LM12-2004A	LM14-2005A
			NC	LM6-2002B	LM8-2002B	LM12-2004B	LM14-2005B
NO+NC							
Relay Output							
Detection Distance		1.5mm	1.5mm	4mm	5mm		
Control Output	DC	150mA	150mA	200mA	200mA		
	SCR / Relay			300mA	300mA		
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		6×6×1(A3 iron)	8×8×1(A3 iron)	15×15×1(A3 iron)	15×15×1(A3 iron)		
Repeated Precision		0.01	0.01	0.01	0.02		
DC/AC Response Freq.		500Hz	500Hz / 25Hz	400Hz / 25Hz	300Hz / 25Hz		
Working Environment		-25℃ ~+75℃	-25℃ ~+75℃	-25℃ ~+75℃	-25℃ ~+75℃		
Insulation Resistance		≥30MΩ	≥50MΩ	≥50MΩ	≥50MΩ		
Shell Material		stainless steel	metal	metal	metal		
Protection Grade		IP67	IP67	IP67	IP67		





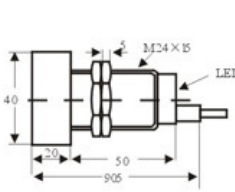
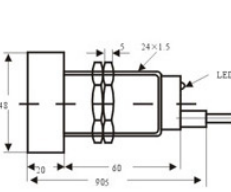
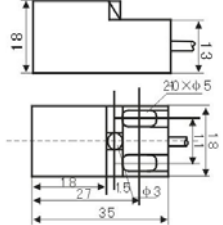
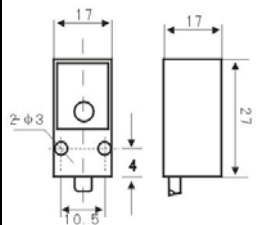
Inductive Proximity Switch

Structural Category		Cylinder type							
Series		LM18	LM22	LM24	LM30				
Outward Appearance									
Overall Dimensions									
Item		Model No.		Model No.		Model No.		Model No.	
Flush Type	DC:6 ~36V DC	NPN	NO	LM18-3005NA	LM22-3007NA	LM24-3008NA	LM30-3010NA		
			NC	LM18-3005NB	LM22-3007NB	LM24-3008NB	LM30-3010NB		
			NO+NC	LM18-3005NC	LM22-3007NC	LM24-3008NC	LM30-3010NC		
		PNP	NO	LM18-3005PA	LM22-3007PA	LM24-3008PA	LM30-3010PA		
			NC	LM18-3005PB	LM22-3007PB	LM24-3008PB	LM30-3010PB		
			NO+NC	LM18-3005PC	LM22-3007PC	LM24-3008PC	LM30-3010PC		
	two-wire	NO	LM18-3005LA	LM22-3007LA	LM24-3008LA	LM30-3010LA			
		NC	LM18-3005LB	LM22-3007LB	LM24-3008LB	LM30-3010LB			
	AC:9 0~25 0VAC	SCR	NO	LM18-2005A	LM22-2007A	LM24-2008A	LM30-2010A		
			NC	LM18-2005B	LM22-2007B	LM24-2008B	LM30-2010B		
NO+NC			LM18-2005C	LM22-2007C	LM24-2008C	LM30-2010C			
Relay Output									
Detection Distance		5mm		7mm		8mm		10mm	
Non-flush Type	DC:6 ~36V DC	NPN	NO	LM18-3008NA	LM22-3010NA	LM24-3010NA	LM30-3015NA		
			NC	LM18-3008NB	LM22-3010NB	LM24-3010NB	LM30-3015NB		
			NO+NC	LM18-3008NC	LM22-3010NC	LM24-3010NC	LM30-3015NC		
		PNP	NO	LM18-3008PA	LM22-3010PA	LM24-3010PA	LM30-3015PA		
			NC	LM18-3008PB	LM22-3010PB	LM24-3010PB	LM30-3015PB		
			NO+NC	LM18-3008PC	LM22-3010PC	LM24-3010PC	LM30-3015PC		
	two-wire	NO	LM18-3008LA	LM22-3010LA	LM24-3010LA	LM30-3015LA			
		NC	LM18-3008LB	LM22-3010LB	LM24-3010LB	LM30-3015LB			
	AC:9 0~25 0VAC	SCR	NO	LM18-2008A	LM22-2010A	LM24-2010A	LM30-2015A		
			NC	LM18-2008B	LM22-2010B	LM24-2010B	LM30-2015B		
NO+NC			LM18-2008C	LM22-2010C	LM24-2010C	LM30-2015C			
Relay Output									
Detection Distance		8mm		10mm		10mm		15mm	
Control Output	DC	200mA		200mA		200mA		200mA	
	SCR / Relay	300mA		300mA		300mA		300mA/1A	
Output Voltage Drop		DC < 3V; AC < 10V							
Consumption Current		DC < 15mA; AC < 10mA							
Standard Deteced Obj.		18×18×1(A3 iron)		22×22×1(A3 iron)		24×24×1(A3 iron)		30×30×1(A3 iron)	
Repeated Precision		0.02		0.05		0.05		0.05	
DC/AC Response Freq.		200Hz / 25Hz		200Hz / 25Hz		200Hz / 25Hz		200Hz / 25Hz	
Working Environment		-25℃ ~+75℃		-25℃ ~+75℃		-25℃ ~+75℃		-25℃ ~+75℃	
Insulation Resistance		50M Ω		50M Ω		50M Ω		50M Ω	
Shell Material		metal		metal		metal		metal	
Protection Grade		IP67		IP67		IP67		IP67	





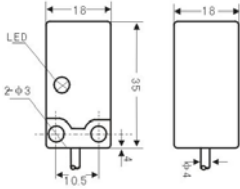
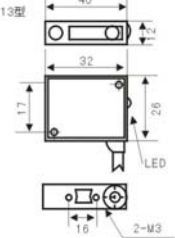
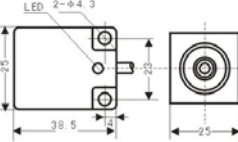
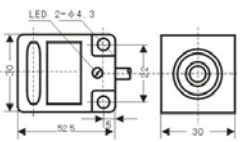
Inductive Proximity Switch

Structural Category		Cylinder type					
Series		LM20	LM34	LM35	LM38		
Outward Appearance							
Overall Dimensions							
Item		Model No.	Model No.	Model No.	Model No.		
Flush Type	DC:6 ~36V DC	NPN	NO				LM38-3012NA
			NC				LM38-3012NB
			NO+NC				LM38-3012NC
		PNP	NO				LM38-3012PA
			NC				LM38-3012PB
			NO+NC				LM38-3012PC
	two-wire	NO				LM38-3012LA	
		NC				LM38-3012LB	
	AC:9 0~25 0VAC	SCR	NO				LM38-2012A
			NC				LM38-2012B
NO+NC						LM38-2012C	
Relay Output							
Detection Distance						12mm	
Non-flush Type	DC:6 ~36V DC	NPN	NO	LM20-3010NA	LM34-3017NA	LM35-3017NA	LM38-3018NA
			NC	LM20-3010NB	LM34-3017NB	LM35-3017NB	LM38-3018NB
			NO+NC	LM20-3010NC	LM34-3017NC	LM35-3017NC	LM38-3018NC
		PNP	NO	LM20-3010PA	LM34-3017PA	LM35-3017PA	LM38-3018PA
			NC	LM20-3010PB	LM34-3017PB	LM35-3017PB	LM38-3018PB
			NO+NC	LM20-3010PC	LM34-3017PC	LM35-3017PC	LM38-3018PC
	two-wire	NO	LM20-3010LA	LM34-3017LA	LM35-3017LA	LM38-3018LA	
		NC	LM20-3010LB	LM34-3017LB	LM35-3017LB	LM38-3018LB	
	AC:9 0~25 0VAC	SCR	NO	LM20-2010A	LM34-2017A	LM35-2017A	LM38-2018A
			NC	LM20-2010B	LM34-2017B	LM35-2017B	LM38-2018B
			NO+NC	LM20-2010C	LM34-2017C	LM35-2017C	LM38-2018C
		Relay Output					
	Detection Distance		10mm	17mm	17mm	18mm	
	Control output	DC	200mA	200mA	200mA	200mA	
SCR / Relay		300mA/1A	300mA/1A	300mA/1A	300mA/1A		
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		20×20×1(A3 iron)	34×34×1(A3 iron)	40×40×1(A3 iron)	40×40×1(A3 iron)		
Repeated Precision		0.05	0.1				
DC/AC Response Freq.		200Hz / 25Hz	100Hz / 15Hz				
Working Environment		-25℃~+75℃	-25℃~+75℃	-25℃~+75℃	-25℃~+75℃		
Insulation Resistance		50MΩ	50MΩ	50MΩ	50MΩ		
Shell Material		ABS resin	ABS resin	ABS resin	ABS resin		
Protection Grade		IP67	IP67	IP67	IP67		





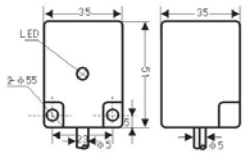
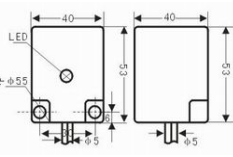
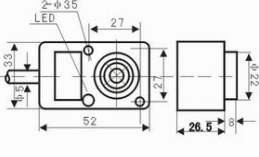
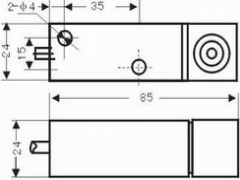
Inductive Proximity Switch

Structural Category	Cylinder type		Angular column type				
Series	LM40	LM480	LMF1	LMF2			
Outward Appearance							
Overall Dimensions							
Item	Model No.	Model No.	Model No.	Model No.			
Flush Type	DC:6 ~36V DC	NPN	NO		LMF1-3005NA	LMF2-3005NA	
			NC		LMF1-3005NB	LMF2-3005NB	
			NO+NC				
		PNP	NO		LMF1-3005PA	LMF2-3005PA	
			NC		LMF1-3005PB	LMF2-3005PB	
			NO+NC				
	two-wire	NO		LMF1-3005LA	LMF2-3005LA		
		NC			LMF2-3005LB		
	AC:9 0~25 0VAC	SCR	NO				
			NC				
NO+NC							
Relay Output							
Detection Distance			5mm	5mm			
Non-flush Type	DC:6 ~36V DC	NPN	NO	LM40-3020NA	LM480-3025NA		
			NC	LM40-3020NB	LM480-3025NB		
			NO+NC	LM40-3020NC	LM480-3025NC		
		PNP	NO	LM40-3020PA	LM480-3025PA		
			NC	LM40-3020PB	LM480-3025PB		
			NO+NC	LM40-3020PC	LM480-3025PC		
	two-wire	NO	LM40-3020LA				
		NC	LM40-3020LB				
	AC:9 0~25 0VAC	SCR	NO	LM40-2020A	LM480-2025A	LMF1-2005A	LMF2-2005A
			NC	LM40-2020B	LM480-2025B		
			NO+NC	LM40-2020C	LM480-2025C		
		Relay Output	LM40-2020C				
	Detection Distance	20mm	25mm				
	Control output	DC	200mA	200mA	200mA	200mA	
SCR / Relay			300mA	300mA	300mA		
Output Voltage Drop	DC < 3V; AC < 10V						
Consumption Current	DC < 15mA; AC < 10mA						
Standard Deteced Obj.	45×45×1(A3 iron)	50×50×1(A3 iron)	20×20×1(A3 iron)	20×20×1(A3 iron)			
Repeated Precision	0.01	0.1	0.02	0.02			
DC/AC Response Freq.	100Hz / 15Hz	100Hz / 25Hz	400Hz / 25Hz	400Hz / 25Hz			
Working Environment	-25℃~+75℃						
Insulation Resistance	≥50MΩ	50MΩ	50MΩ	50MΩ			
Shell Material	metal	metal	ABS resin	ABS resin			
Protection Grade	IP67	IP67	IP67	IP67			





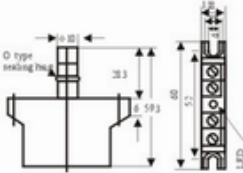
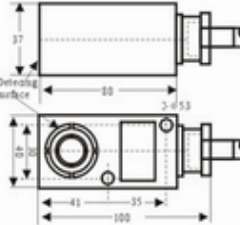
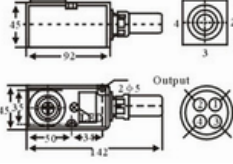
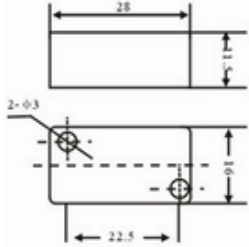
Inductive Proximity Switch

Structural Category		Angular column type					
Series		LMF3	LMF5	LMF6	LMF7		
Outward Appearance							
Overall Dimensions							
Item		Model No.		Model No.		Model No.	
Flush Type	DC:6 ~36V DC	NPN	NO	LMF3-3005NA	LMF5-3002NA	LMF6-3008NA	LMF7-3010NA
			NC	LMF3-3005NB	LMF5-3002NB	LMF6-3008NB	LMF7-3010NB
			NO+NC		LMF5-3002NC	LMF6-3008NC	LMF7-3010NC
		PNP	NO	LMF3-3005PA	LMF5-3002PA	LMF6-3008PA	LMF7-3010PA
			NC	LMF3-3005PB	LMF5-3002PB	LMF6-3008PB	LMF7-3010PB
			NO+NC		LMF5-3002PC	LMF6-3008PC	LMF7-3010PC
	two-wire	NO	LMF3-3005LA	LMF5-3002LA	LMF6-3008LA	LMF7-3010LA	
		NC	LMF3-3005LB	LMF5-3002LB	LMF6-3008LB	LMF7-3010LB	
	AC:9 0~25 0VAC	SCR	NO			LMF6-2008A	LMF7-2010A
			NC			LMF6-2008B	LMF7-2010B
NO+NC							
Relay Output							
Detection Distance		5mm		2mm		8mm	
Non-flush Type	DC:6 ~36V DC	NPN	NO		LMF5-3004NA	LMF6-3010NA	LMF7-3015NA
			NC		LMF5-3004NB	LMF6-3010NB	LMF7-3015NB
			NO+NC		LMF5-3004NC	LMF6-3010NC	LMF7-3015NC
		PNP	NO		LMF5-3004PA	LMF6-3010PA	LMF7-3015PA
			NC		LMF5-3004PB	LMF6-3010PB	LMF7-3015PB
			NO+NC		LMF5-3004PC	LMF6-3010PC	LMF7-3015PC
	two-wire	NO		LMF5-3004LA	LMF6-3010LA	LMF7-3015LA	
		NC		LMF5-3004LB	LMF6-3010LB	LMF7-3015LB	
	AC:9 0~25 0VAC	SCR	NO	LMF3-2005A		LMF6-2010A	LMF7-2015A
			NC	LMF3-2005B		LMF6-2010B	LMF7-2015B
NO+NC							
Relay Output							
Detection Distance				4mm		10mm	
Control Output	DC	200mA		200mA		200mA	
	SCR / Relay	300mA		300mA		300mA	
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		20×20×1(A3 iron)	15×15×1(A3 iron)	30×30×1(A3 iron)	35×35×1(A3 iron)		
Repeated Precision		0.02	0.03	0.05	0.05		
DC/AC Response Freq.		400Hz / 25Hz	400Hz	200Hz / 15Hz	200Hz / 15Hz		
Working Environment		-25℃~+75℃					
Insulation Resistance		50MΩ					
Shell Material		ABS resin					
Protection Grade		IP67					





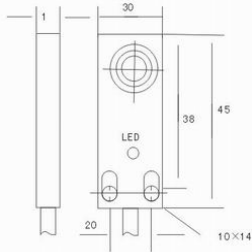
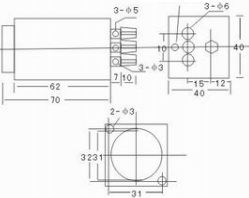
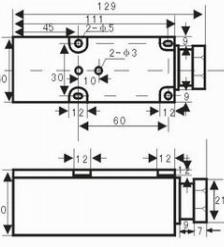
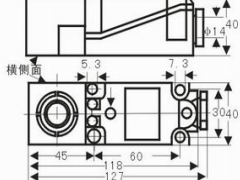
Inductive Proximity Switch

Structural Category		Angular column type							
Series		LMF8	LMF10	LMF12	LMF13				
Outward Appearance									
Overall Dimensions									
Item		Model No.		Model No.		Model No.		Model No.	
Flush Type	DC:6 ~36V DC	NPN	NO	LMF8-3010NA	LMF10-3015NA				
			NC	LMF8-3010NB	LMF10-3015NB				
			NO+NC	LMF8-3010NC	LMF10-3015NC				
		PNP	NO	LMF8-3010PA	LMF10-3015PA				
			NC	LMF8-3010PB	LMF10-3015PB				
			NO+NC	LMF8-3010PC	LMF10-3015PC				
	two-wire	NO	LMF8-3010LA	LMF10-3015LA					
		NC	LMF8-3010LB	LMF10-3015LB					
	AC:9 0~25 0VAC	SCR	NO	LMF8-2010A	LMF10-2015A				
			NC	LMF8-2010B	LMF10-2015B				
NO+NC				LMF10-2015C					
Relay Output									
Detection Distance		10mm		15mm					
Non-flush Type	DC:6 ~36V DC	NPN	NO	LMF8-3015NA	LMF10-3020NA	LMF12-3008NA	LMF13-3008NA		
			NC	LMF8-3015NB	LMF10-3020NB	LMF12-3008NB	LMF13-3008NB		
			NO+NC	LMF8-3015NC	LMF10-3020NC	LMF12-3008NC	LMF13-3008NC		
		PNP	NO	LMF8-3015PA	LMF10-3020PA	LMF12-3008PA	LMF13-3008PA		
			NC	LMF8-3015PB	LMF10-3020PB	LMF12-3008PB	LMF13-3008PB		
			NO+NC	LMF8-3015PC	LMF10-3020PC	LMF12-3008PC	LMF13-3008PC		
	two-wire	NO	LMF8-3015LA	LMF10-3020LA	LMF12-3008LA	LMF13-3008LA			
		NC	LMF8-3015LB	LMF10-3020LB	LMF12-3008LB	LMF13-3008LB			
	AC:9 0~25 0VAC	SCR	NO	LMF8-2015A	LMF10-2020A	LMF12-2008A	LMF13-2008A		
			NC	LMF8-2015B	LMF10-2020B	LMF12-2008B	LMF13-2008B		
NO+NC				LMF10-2020C	LMF12-2008C	LMF13-2008C			
Relay Output									
Detection Distance		15mm		20mm		8mm		8mm	
Control Output	DC	200mA		300mA		300mA		300mA	
	SCR / Relay			500mA		500mA		500mA	
Output Voltage Drop		DC < 3V; AC < 10V							
Consumption Current		DC < 15mA; AC < 10mA							
Standard Deteced Obj.		40×40×1(A3 iron)		45×45×1(A3 iron)		25×25×1(A3 iron)		25×25×1(A3 iron)	
Repeated Precision		0.05		0.05		0.04		0.04	
DC/AC Response Freq.		200Hz / 15Hz		100Hz / 15Hz		200Hz / 15Hz		200Hz / 15Hz	
Working Environment		-25℃~+75℃		-25℃~+75℃		-25℃~+75℃		-25℃~+75℃	
Insulation Resistance		50MΩ		50MΩ		50MΩ		50MΩ	
Shell Material		ABS resin		ABS resin		ABS resin		ABS resin	
Protection Grade		IP67		IP67		IP67		IP67	





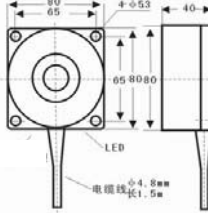
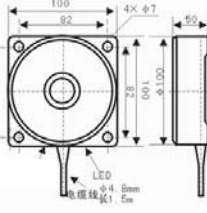
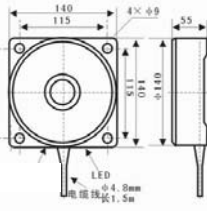
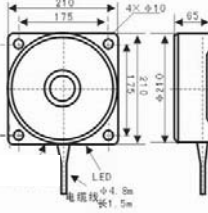
Inductive Proximity Switch

Structural Category		Angular column type					
Series		LMF15	LMF16	LMF17	LMF22		
Outward Appearance							
Overall Dimensions							
Item		Model No.	Model No.	Model No.	Model No.		
Flush Type	DC:6 ~36V DC	NPN	NO	LMF15-3002NA		LMF22-3002NA	
			NC	LMF15-3002NB		LMF22-3002NB	
			NO+NC	LMF15-3002NC			
		PNP	NO	LMF15-3002PA		LMF22-3002PA	
			NC	LMF15-3002PB		LMF22-3002PB	
			NO+NC	LMF15-3002PC			
	two-wire	NO	LMF15-3002LA		LMF22-3002LA		
		NC	LMF15-3002LB				
	AC:9 0~25 0VAC	SCR	NO	LMF15-2002A			
			NC	LMF15-2002B			
NO+NC							
Relay Output							
Detection Distance		2mm			2mm		
Non-flush Type	DC:6 ~36V DC	NPN	NO	LMF15-3004NA	LMF16-3015NA	LMF17-3020NA	LMF22-3004NA
			NC	LMF15-3004NB	LMF16-3015NB	LMF17-3020NB	LMF22-3004NB
			NO+NC	LMF15-3004NC	LMF16-3015NC	LMF17-3020NC	
		PNP	NO	LMF15-3004PA	LMF16-3015PA	LMF17-3020PA	LMF22-3004PA
			NC	LMF15-3004PB	LMF16-3015PB	LMF17-3020PB	LMF22-3004PB
			NO+NC	LMF15-3004PC	LMF16-3015PC	LMF17-3020PC	
	two-wire	NO	LMF15-3004LA	LMF16-3015LA	LMF17-3020LA	LMF22-3004LA	
		NC	LMF15-3004LB	LMF16-3015LB	LMF17-3020LB		
	AC:9 0~25 0VAC	SCR	NO	LMF15-2004A	LMF16-2015A	LMF17-2020A	
			NC	LMF15-2004B	LMF16-2015B	LMF17-2020B	
			NO+NC		LMF16-2015C	LMF17-2020C	
		Relay Output		LMF16-2015JC	LMF17-2020JC		
	Detection Distance		4mm	15mm	20mm	4mm	
	Control Output	DC	200mA	300mA	200mA	200mA	
SCR / Relay		300mA / 1A	500mA / 2A	300mA	300mA		
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		15×15×F(A3 iron)	45×45×F(A3 iron)	50×50×1(A3 iron)	15×15×1(A3 iron)		
Repeated Precision		0.02	0.05	0.2	0.05		
DC/AC Response Freq.		200Hz / 15Hz	100Hz / 15Hz	200Hz / 15Hz	300Hz		
Working Environment		-25℃~+75℃	-25℃~+75℃	-25℃~+75℃	-25℃~+75℃		
Insulation Resistance		50M Ω	50M Ω	≥50M Ω	≥50M Ω		
Shell Material		ABS resin	ABS resin	ABS resin	ABS		
Protection Grade		IP67	IP67	IP67	IP67		





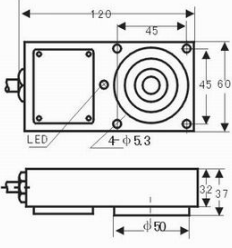
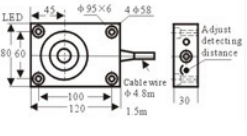
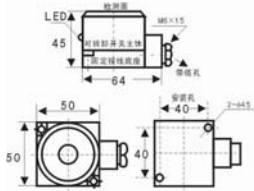
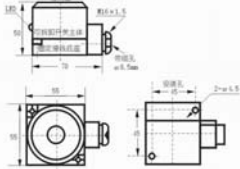
Inductive Proximity Switch

Structural Category		Angular column type					
Series		LMF29	LMF35	LMF36	LMF37		
Outward Appearance							
Overall Dimensions							
Item		Model No.		Model No.		Model No.	
Flush Type	DC:6 ~36V DC	NPN	NO	LMF29-3005NA			LMF37-3015NA
			NC	LMF29-3005NB			LMF37-3015NB
			NO+NC	LMF29-3005NC			LMF37-3015NC
		PNP	NO	LMF29-3005PA			LMF37-3015PA
			NC	LMF29-3005PB			LMF37-3015PB
			NO+NC	LMF29-3005PC			LMF37-3015PC
	two-wire	NO	LMF29-3005LA			LMF37-3015LA	
		NC				LMF37-3015LB	
	AC:9 0~25 0VAC	SCR	NO	LMF29-2005A			LMF37-2015A
			NC	LMF29-2005B			LMF37-2015B
NO+NC						LMF37-2015C	
Relay Output					LMF37-2015JC		
Detection Distance		5mm				15mm	
Non-flush Type	DC:6 ~36V DC	NPN	NO	LMF29-3008NA	LMF35-3015NA	LMF36-3020NA	LMF37-3020NA
			NC	LMF29-3008NB	LMF35-3015NB	LMF36-3020NB	LMF37-3020NB
			NO+NC	LMF29-3008NC	LMF35-3015NC	LMF36-3020NC	LMF37-3020NC
		PNP	NO	LMF29-3008PA	LMF35-3015PA	LMF36-3020PA	LMF37-3020PA
			NC	LMF29-3008PB	LMF35-3015PB	LMF36-3020PB	LMF37-3020PB
			NO+NC	LMF29-3008PC	LMF35-3015PC	LMF36-3020PC	LMF37-3020PC
	two-wire	NO	LMF29-3008LA		LMF36-3020LA	LMF37-3020LA	
		NC	LMF29-3008LB		LMF36-3020LB	LMF37-3020LB	
	AC:9 0~25 0VAC	SCR	NO	LMF29-2008A	LMF35-2015A	LMF36-2020A	LMF37-2020A
			NC	LMF29-2008B	LMF35-2015B	LMF36-2020B	LMF37-2020B
NO+NC					LMF36-2020C	LMF37-2020C	
Relay Output				LMF36-2020JC	LMF37-2020JC		
Detection Distance		8mm		15mm	1-20mm	20mm	
Control Output	DC	200mA		200mA		200mA	
	SCR / Relay	300mA		300mA		300mA / 2A	
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		25×25×1(A3 Iron)	40×40×1(A3 Iron)	50×50×1(A3 Iron)	50×50×1(A3 Iron)		
Repeated Precision		0.05		0.05		0.2	
DC/AC Response Freq.		300Hz		200Hz / 15Hz		200Hz / 15Hz	
Working Environment		-25℃~+70℃		-25℃~+70℃		-25℃~+70℃	
Insulation Resistance		≥50MΩ		≥50MΩ		≥50MΩ	
Shell Material		ABS resin		ABS resin		ABS resin	
Protection Grade		IP67		IP65		IP67	





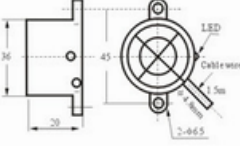
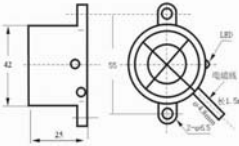
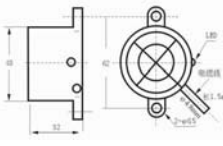
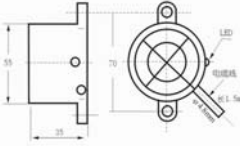
Inductive Proximity Switch

Structural Category		Plane installation type					
Series		LMF38	LMF39	LMF40	LMF41		
Outward appearance illustration							
Overall dimensions							
Item		Model No.	Model No.	Model No.	Model No.		
Flush Type	DC:6 ~36V DC	NPN	NO				
			NC				
			NO+NC				
		PNP	NO				
			NC				
			NO+NC				
	two-wire	NO					
		NC					
	AC:9 0~25 0VAC	SCR	NO				
			NC				
NO+NC							
Relay Output							
Detection Distance							
Non-flush Type	DC:6 ~36V DC	NPN	NO	LMF38-3040NA	LMF39-3050NA	LMF40-3080NA	LMF41-30120NA
			NC	LMF38-3040NB	LMF39-3050NB	LMF40-3080NB	LMF41-30120NB
			NO+NC	LMF38-3040NC	LMF39-3050NC	LMF40-3080NC	LMF41-30120NC
		PNP	NO	LMF38-3040PA	LMF39-3050PA	LMF40-3080PA	LMF41-30120PA
			NC	LMF38-3040PB	LMF39-3050PB	LMF40-3080PB	LMF41-30120PB
			NO+NC	LMF38-3040PC	LMF39-3050PC	LMF40-3080PC	LMF41-30120PC
	two-wire	NO	LMF38-3040LA	LMF39-3050LA	LMF40-3080LA		
		NC	LMF38-3040LB	LMF39-3050LB	LMF40-3080LB		
	AC:9 0~25 0VAC	SCR	NO	LMF38-2040A	LMF39-2050A	LMF40-2080A	LMF41-20120A
			NC	LMF38-2040B	LMF39-2050B	LMF40-2080B	LMF41-20120B
			NO+NC	LMF38-2040C	LMF39-2050C	LMF40-2080C	LMF41-20120C
		Relay Output	LMF38-2040JC	LMF39-2050JC	LMF40-2080JC	LMF41-20120JC	
	Detection Distance		1-40mm	1-50mm	80mm	0-120mm	
	Control Output	DC	200mA	200mA	200mA	200mA	
SCR / Relay		300mA / 2A	300mA / 2A	300mA / 3A	300mA / 5A		
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		100×100×1(A3 iron)	120×120×1(A3 iron)	160×160×1(A3 iron)	250×250×1(A3 iron)		
Repeated Precision		0.5	0.5	0.5	0.5		
DC/AC Response Freq.		50Hz / 10Hz	50Hz / 10Hz	10Hz / 5Hz	10Hz / 5Hz		
Working Environment		-25℃~+75℃	-25℃~+75℃	-25℃~+75℃	-25℃~+75℃		
Insulation Resistance		50MΩ	50MΩ	50MΩ	50MΩ		
Shell Material		ABS · Fiber glass reinforce plastic	ABS · Fiber glass reinforce plastic	ABS · Fiber glass reinforce plastic	Fiber glass reinforce plastic		
Protection Grade		IP65	IP65	IP65	IP65		

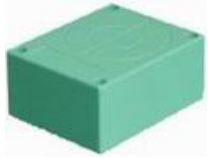

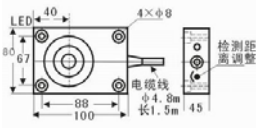
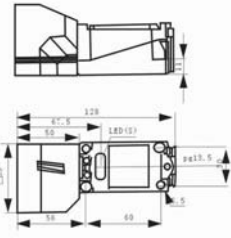
Inductive Proximity Switch

Structural Category		Angular column type			Plane installation type		
Series		LMF42	LMF43	LMF50	LMF55		
Outward Appearance							
Overall Dimensions							
Item		Model No.	Model No.	Model No.	Model No.		
Flush Type	DC:6 ~36V DC	NPN	NO				
			NC				
			NO+NC				
		PNP	NO				
			NC				
			NO+NC				
	two-wire	NO					
		NC					
	AC:9 0~25 0VAC	SCR	NO				
			NC				
NO+NC							
Relay Output							
Detection Distance							
Non-flush Type	DC:6 ~36V DC	NPN	NO	LMF42-3025NA	LMF43-3040NA	LMF50-3020NA	LMF55-3025NA
			NC	LMF42-3025NB	LMF43-3040NB	LMF50-3020NB	LMF55-3025NB
			NO+NC	LMF42-3025NC	LMF43-3040NC	LMF50-3020NC	LMF55-3025NC
		PNP	NO	LMF42-3025PA	LMF43-3040PA	LMF50-3020PA	LMF55-3025PA
			NC	LMF42-3025PB	LMF43-3040PB	LMF50-3020PB	LMF55-3025PB
			NO+NC	LMF42-3025PC	LMF43-3040PC	LMF50-3020PC	LMF55-3025PC
	two-wire	NO					
		NC					
	AC:9 0~25 0VAC	SCR	NO	LMF42-2025A	LMF43-2040A	LMF50-2020A	LMF55-2025A
			NC	LMF42-2025B	LMF43-2040B	LMF50-2020B	LMF55-2025B
			NO+NC	LMF42-2025C	LMF43-2040C	LMF50-2020C	LMF55-2025C
		Relay Output	LMF42-2025JC	LMF43-2040JC	LMF50-2020JC	LMF55-2025JC	
	Detection Distance		0-25mm	40mm	20mm	25mm	
	Control Output	DC	200mA	200mA	200mA	300mA	
SCR / Relay		300mA / 2A	300mA / 2A	300mA/2A	500mA/2A		
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		80×80×1(A3 iron)	100×100×1(A3 iron)	60×60×1(A3 iron)	70×70×1(A3 iron)		
Repeated Precision		0.05	0.05	0.05	0.05		
DC/AC Response Freq.		50Hz / 10Hz	30Hz / 10Hz	200Hz/25Hz	200Hz/25Hz		
Working Environment		-25℃~+75℃	-25℃~+75℃	-25℃ ~+75℃	-25℃ ~+75℃		
Insulation Resistance		50M Ω	50M Ω	50M Ω	50M Ω		
Shell Material		ABS Resin	ABS Resin	ABS	ABS		
Protection Grade		IP65	IP65	IP65	IP67		

Inductive Proximity Switch

Structural Category		Plane installation type					
Series		LM36	LM42	LM48	LM55		
Outward Appearance							
Overall Dimensions							
Item		Model No.	Model No.	Model No.	Model No.		
Flush Type	DC:6 ~36V DC	NPN	NO				
			NC				
			NO+NC				
		PNP	NO				
			NC				
			NO+NC				
	two-wire	NO					
		NC					
	AC:9 0~25 0VAC	SCR	NO				
			NC				
NO+NC							
Relay Output							
Detection Distance							
Non-flush Type	DC:6 ~36V DC	NPN	NO	LM36-3015NA	LM42-3020NA	LM48-3020NA	LM55-3025NA
			NC	LM36-3015NB	LM42-3020NB	LM48-3020NB	LM55-3025NB
			NO+NC	LM36-3015NC	LM42-3020NC	LM48-3020NC	LM55-3025NC
		PNP	NO	LM36-3015PA	LM42-3020PA	LM48-3020PA	LM55-3025PA
			NC	LM36-3015PB	LM42-3020PB	LM48-3020PB	LM55-3025PB
			NO+NC	LM36-3015PC	LM42-3020PC	LM48-3020PC	LM55-3025PC
	two-wire	NO	LM36-3015LA	LM42-3020LA	LM48-3020LA	LM55-3025LA	
		NC	LM36-2015LB	LM42-3020LB	LM48-3020LB	LM55-3025LB	
	AC:9 0~25 0VAC	SCR	NO	LM36-2015A	LM42-2020A	LM48-2020A	LM55-2025A
			NC	LM36-2015B	LM42-2020B	LM48-2020B	LM55-2025B
			NO+NC			LM48-2020C	LM55-2025C
		Relay Output					
	Detection Distance		15mm	20mm	20mm	25mm	
	Control Output	DC	300mA	300mA	300mA	300mA	
SCR / Relay		300mA	300mA	300mA	300mA		
Output Voltage Drop		DC < 3V; AC < 10V					
Consumption Current		DC < 15mA; AC < 10mA					
Standard Deteced Obj.		45×45×1(A3 iron)	25×25×1(A3 iron)	60×60×1(A3 iron)	55×55×1(A3 iron)		
Repeated Precision		0.05	0.01	0.2	0.2		
DC/AC Response Freq.		200Hz / 10Hz	200Hz / 10Hz	200Hz / 10Hz	200Hz / 10Hz		
Working Environment		-25℃~+75℃	-25℃~+75℃	-25℃~+75℃	-25℃~+75℃		
Insulation Resistance		50MΩ	50MΩ	50MΩ	50MΩ		
Shell Material		ABS resin	ABS resin	ABS resin	ABS resin		
Protection Grade		IP67	IP67	IP67	IP67		

Inductive Proximity Switch

Structural Category	Plane installation type	Angular column type		
Series	LMF45	LM370		
Outward Appearance				
Overall Dimensions				

Item			Model No.	Model No.	Model No.	Model No.
Flush Type	DC:6 ~36V DC	NPN	NO			
			NC			
			NO+NC			
		PNP	NO			
			NC			
			NO+NC			
	two-wire	NO				
		NC				
	AC:9 0~25 0VAC	SCR	NO			
			NC			
NO+NC						
Relay Output						
Detection Distance						
Non-flush Type	DC:6 ~36V DC	NPN	NO	LMF45-3050NA	LMF370-3040NA	
			NC	LMF45-3050NB	LMF370-3040NB	
			NO+NC	LMF45-3050NC	LMF370-3040NC	
		PNP	NO	LMF45-3050PA	LMF370-3040PA	
			NC	LMF45-3050PB	LMF370-3040PB	
			NO+NC	LMF45-3050PC	LMF370-3040PC	
	two-wire	NO	LMF45-3050LA	LMF370-3040LA		
		NC	LMF45-3050LB	LMF370-3040LB		
	AC:9 0~25 0VAC	SCR	NO	LMF45-2050A	LMF370-2040A	
			NC	LMF45-2050B	LMF370-2040B	
NO+NC						
Relay Output						
Detection Distance			0-50mm	40mm		
Control Output	DC		200mA	200mA		
	SCR / Relay		500mA	500mA		
Output Voltage Drop			DC < 3V; AC < 10V			
Consumption Current			DC < 15mA; AC < 10mA			
Standard Deteced Obj.			80×80×1(A3 iron)	55×55×1(A3 iron)		
Repeated Precision			0.5	0.5		
DC/AC Response Freq.			200Hz / 5Hz	200Hz / 10Hz		
Working Environment			-25℃~+70℃	-25℃~+70℃		
Insulation Resistance			50MΩ	50MΩ		
Shell Material			Plastic	Plastic		
Protection Grade			IP67	IP67		