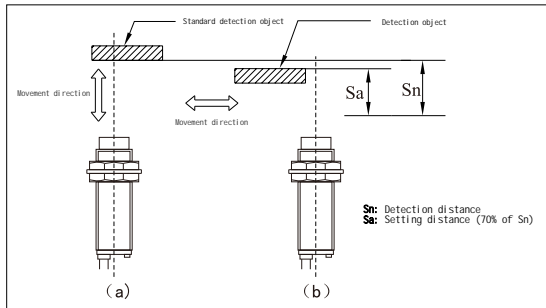


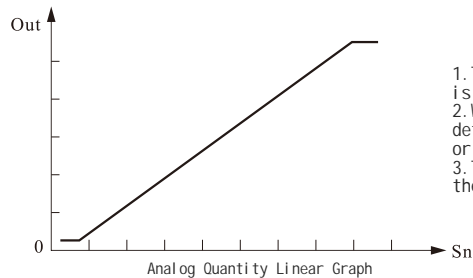
IV. Outline Dimension Diagram (Unit: mm)

Type	Model	Recessed Type			Non-recessed Type			f	g
		a	b	c	d	e			
Recessed Type	CHJ8 Series	41.5±0.5	40±0.5	—	3.5	M8×1	12	(15)	
Non-recessed Type	CHJ8M Series	46.5±0.5		4.5					
Recessed Type	CHJ12 Series	41±0.5	35±0.5	—	4	M12×1	17	(21)	
Non-recessed Type	CHJ12M Series	41±0.5	30±0.5	5					
Recessed Type	CHJ18 Series	46±0.5	40±0.5	—	4	M18×1	24	(30)	
Non-recessed Type	CHJ18M Series	46±0.5	30±0.5	10					
Recessed Type	CHJ30 Series	46±0.5	40±0.5	—	4.7	M30×1.5	36.2	—	
Non-recessed Type	CHJ30M Series	52±0.5	30±0.5	16					

V. Setting Distance and Detection Distance



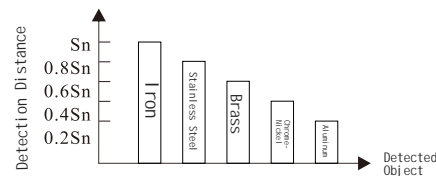
- 1) Please set the operating distance of the switch within 70% of the standard operating distance (S_n) to prevent the switch operation from being affected by temperature, voltage, etc.
- 2) Detection distance: Detect the object according to the specified method; it refers to the distance from the reference position to the measured action position.
- 3) Setting distance (S_a): $S_a = (S_n) \times 70\%$
Example: For CHJ18M - 10N1, $S_a = 10\text{mm} \times 0.7 = 7\text{mm}$
- 4) For the installation method, try to use left - right or up - down movement as much as possible, and do not use near - far movement.



1. The voltage output of the analog proximity switch is DC 0 - 10V, and the current output is 0 - 20mA.
2. Within the rated detection range, the farther the detection body is positioned, the larger the voltage or current output will be.
3. The voltage output load is 4.7K (resistive); the current output load is 470 (resistive).

VI. Relationship between the Material of the Detected Object and the Detection Distance

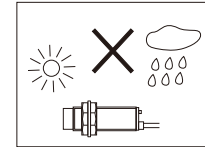
1. When detecting different objects, the switch has different operating distances. Please refer to the correction coefficients for different detected objects of the inductive proximity switch in the right diagram.
2. When the switch is used to measure the operating frequency or in high-speed scenarios, please set the operating distance of the switch to 1/2 of the standard operating distance. At this position, the switch can achieve the maximum operating frequency.



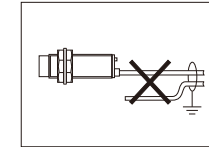
Correction coefficients for different detected objects of Inductive proximity switches

③

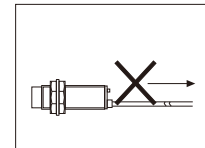
VII. Instructions for Incorrect Usage Conditions



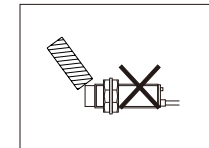
Please try to avoid using it in outdoor environments or places where water splashes.



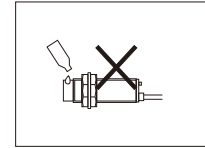
Please do not route wires together with power lines or power cables in the same conduit; separate wiring should be used to reduce interference.



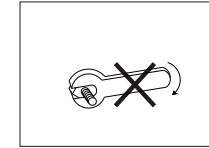
Please do not pull the power cord of the proximity switch with great force.



Please do not strike the detection surface with hard objects.



Please do not use the proximity switch in places with corrosive substances.



Please do not tighten with excessive force; add washers when tightening.

VIII. Requirements of Proximity Switches for Power Supply and Load

1. This product must not be used at the moment when the power supply is turned on (within 100ms).
2. Surge protection: When the proximity switch is used near places with severe surge interference (such as welding by electric welders), please add an additional surge absorption device.
3. When the load current is greater than 200mA, please use a small relay for conversion, that is, the proximity switch controls the coil of the small relay, and the contacts of the small relay control the load. AC-type proximity switches cannot be powered by autotransformers; isolation transformers should be used instead.

④

5. The connecting wires of the proximity switch should be kept within 10 meters as much as possible to reduce interference.
6. The power cords of AC and DC two-wire proximity switches cannot be directly connected to the power supply; a load must be connected in series, otherwise the proximity switch will be damaged.

IX. Maintenance and Usage Instructions

To ensure the long-term stable operation of the proximity switch, similar to general controllers, please conduct the following regular inspections:

1. Check whether the installation positions of the detected object and the proximity switch are shifted, loosened, or deformed.
2. Check whether the wiring and connection parts are loose, have poor contact, or are broken.
3. Check whether there are accumulated substances (such as attached metal dust) on the detection surface.
4. Check whether the operating temperature and surrounding environmental conditions are abnormal.

X. Ordering Information

1. CHJ12M-4N1, 2 meters, 100 pieces;
2. CHJ18M-8U1, analog output, 100 pieces.

C-Lin
欣灵电气股份有限公司
XINLING ELECTRICAL CO., LTD.

地址: 浙江省乐清经济开发区纬十九路328号
电话: 0577-62735555 传真: 0577-62722963
Http://www.c-lin.cn E-mail: xl@xinling.com
技术咨询: 0577-62731209



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国家高新技术企业 浙江高新技术企业

C-Lin 欣灵

使用说明书
Products Instructions

CHJ Series

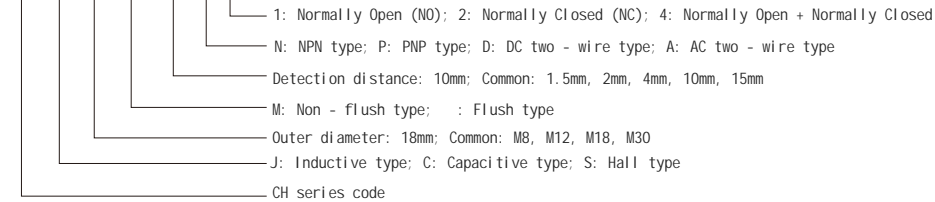
Inductive Proximity Switches

Thank you very much for using C-Lin sensors. Please read the instruction manual before using the product!

16A024E2

I. Model Description

CHJ 18 M- 10 N 1



Note: The suffix -5UI or -10UI is for analog output (0 - 20mA and DC0 - 10V).

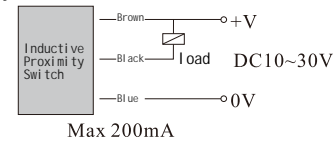
II. Model Types and Technical Data

Type		CHJ8 Series		CHJ12 Series		
Mounting Method		Flush Type	Non - flush Type	Flush Type	Non - flush Type	
DC Type	NPN	NO	CHJ8-1.5N1	CHJ8M-2N1	CHJ12-2N1	CHJ12M-4N1
		NC	CHJ8-1.5N2	CHJ8M-2N2	CHJ12-2N2	CHJ12M-4N2
	PNP	NO	CHJ8-1.5P1	CHJ8M-2P1	CHJ12-2P1	CHJ12M-4P1
		NC	CHJ8-1.5P2	CHJ8M-2P2	CHJ12-2P2	CHJ12M-4P2
	Two - wire	NO	CHJ8-1.5D1	CHJ8M-2D1	CHJ12-2D1	CHJ12M-4D1
		NC	CHJ8-1.5D2	CHJ8M-2D2	CHJ12-2D2	CHJ12M-4D2
AC Type	Two - wire	NO	CHJ8-1.5A1	CHJ8M-2A1	CHJ12-2A1	CHJ12M-4A1
		NC	CHJ8-1.5A2	CHJ8M-2A2	CHJ12-2A2	CHJ12M-4A2
Detection Distance		1.5mm±10%	2mm±10%	2mm±10%	4mm±10%	
Response Frequency	DC	1.5KHz	1KHz	1.5KHz	0.5KHz	
	AC	20Hz		20Hz		
Type		CHJ18 Series		CHJ30 Series		
Mounting Method		Flush Type	Non - flush Type	Flush Type	Non - flush Type	
DC Type	NPN	NO	CHJ18-5N1	CHJ18M-10N1	CHJ30-10N1	CHJ30M-15N1
		NC	CHJ18-5N2	CHJ18M-10N2	CHJ30-10N2	CHJ30M-15N2
		NO+NC	CHJ18-5N4	CHJ18M-10N4	CHJ30-10N4	CHJ30M-15N4
	PNP	NO	CHJ18-5P1	CHJ18M-10P1	CHJ30-10P1	CHJ30M-15P1
		NC	CHJ18-5P2	CHJ18M-10P2	CHJ30-10P2	CHJ30M-15P2
		NO+NC	CHJ18-5P4	CHJ18M-10P4	CHJ30-10P4	CHJ30M-15P4
	Two - wire	NO	CHJ18-5D1	CHJ18M-10D1	CHJ30-10D1	CHJ30M-15D1
		NC	CHJ18-5D2	CHJ18M-10D2	CHJ30-10D2	CHJ30M-15D2
	Analog		CHJ18-5UI	CHJ18M-8UI	CHJ30-10UI	CHJ30M-15UI
	AC Type	Two - wire	NO	CHJ18-5A1	CHJ18M-10A1	CHJ30-10A1
		NC	CHJ18-5A2	CHJ18M-10A2	CHJ30-10A2	CHJ30M-15A2
Detection Distance		5mm±10%	10mm±10%	10mm±10%	15mm±10%	
Response Frequency	DC	0.5KHz	0.35KHz	0.4KHz	0.2KHz	
	AC	20Hz		20Hz		

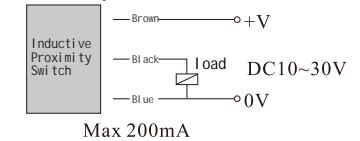
Detected Object	Metal: iron, copper, steel, aluminum, nickel, etc. The standard detected object is A3 iron.
Differential Distance	Within 10% of the detection distance
Power Supply Voltage	DC (NPN, PNP, two-wire) type: DC10-30V; Analog output type: DC15-30VAC type: 100-240V 50/60Hz
Current Consumption	DC (NPN, PNP) type: 2.5mA; AC type: <10mA; DC two-wire type: 1mA
Control Output	Max 200mA
Circuit Protection	DC (NPN, PNP, two-wire) type: Short-circuit protection; AC type: Surge absorption protection
Operating Environment	Temperature: -25 ~ +70 (without freezing); Humidity: 35 ~ 95%RH
Influence of Temperature	When the temperature is -25 and +70, the detection distance is within ±10% of that at 25
Influence of Voltage	When the power supply voltage is within ±15% of the rated power supply voltage, the variation of the detection distance is within ±10%
Residual Voltage	DC (NPN, PNP) type: 1.5V; DC (two-wire) type: 3.5V; AC (two-wire) type: 10V
Insulation Resistance	50M (with DC500V) between live parts and the housing
Withstand Voltage	DC (NPN, PNP, two-wire) type: AC1000V 50/60Hz, 1 minute, between live parts and the housing; AC (two-wire) type: 2000V 50/60Hz, between live parts and the housing
Vibration	Endurance: 10-55Hz, complex amplitude 1.5mm, 2 hours for each of X, Y, Z directions
Impact	Endurance: 500m/s ² (about 50g), 10 times for X, Y, Z directions
Protection Class	IP67
Material	Housing: Brass plated with nickel; Detection surface: Heat-resistant ABS

III. Classification by Output Form

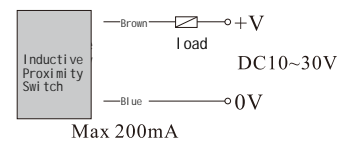
1. DC three - wire NPN type (normally open or normally closed)



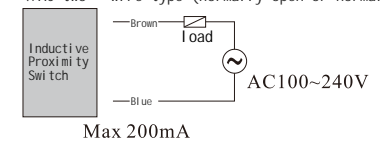
2. DC three - wire PNP type (normally open or normally closed)



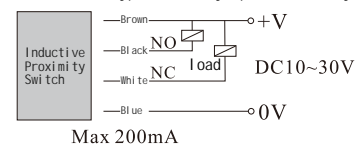
3. DC two - wire type (normally open or normally closed)



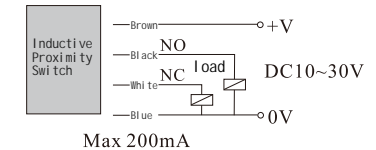
4. AC two - wire type (normally open or normally closed)



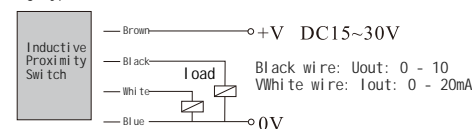
5. DC Four - wire NPN Type (Normally Open + Normally Closed)



6. DC Four - wire PNP Type (Normally Open + Normally Closed)



7. Analog Type



Note: NO means normally open, NC means normally closed; NO + NC means normally open + normally closed;

