

INSTRUCTION BOOK

INSTRUCTION MANUAL
PROXIMITY SWITCH

For example:LM18-3005NA

The above indicates inductance type proximity switch. M18 indicates cylinder type whose diameter is 18mm.30 indicates DC6-36V 05 indicates that the detecting distance is 5mm and N indicates NPN negative logic.Ais NO output.

■ Setting operating distance(S_n)

- Please set the operating distance of the switch within 80% of standard operating distance to protect the switch from being affected by temperature and voltage.
- When detecting other metals, the switch has different operating distances(Diagram1).
- When the switch is used for measuring operating frequency or used in other high-speed places, please set the operating distance of the switch within 1/2 of standard operating distance. At this position, the switch can reach max operating frequency.
- please refer to the instruction manual of capacitive proximity switch for setting its operating distance.

Ratio of inducing different materials

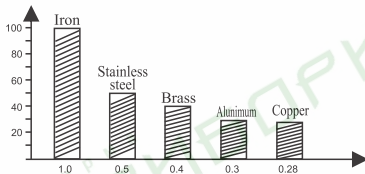


Diagram1

Effect that the size of the detecting object to the detecting distance

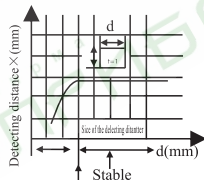


Diagram2

■ Points for attention when using the switch

- DC power supply must use insulated transformer. Please do not use autotransformer..
- It is strictly forbidden to connect on live line. Wire must be connected strictly according to the color code on the connection diagram.
- If there is an electric line of force, and when the power line passes near the switch lead, the metal pipe should be covered on the switch lead and grounded to protect the switch from misoperation and damaging.

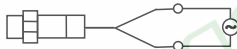


Error connection



Correct connection

- AC proximity switch generally is not suitable for connecting in parallel and series. We suggest you to use relay in parallel and series.
- AC switch, DC two-line system switch must pass load to connect switch power supply. If directly connect the switch with power supply, the switch will be damaged.



Error connection

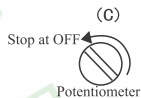
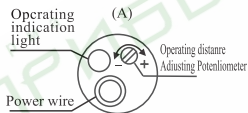


Correct connection

- The length of the leading wire of the proximity switch should be below 200m for fear that voltage drop is too big.
- Instruction for capacitance proximity switch.

The capacitance proximity switch can be used to check metal, as well as plastics, glass, water, oil and so on substances. Because the conductivity, water absorption and volume of all kinds of detecting objects are different, the corresponding detecting distances are different, too. The max detecting distance is available to the ground metal.

- Different detecting objects and detecting distances
- In order to avoid misoperation, the capacitance proximity switch is not suitable for installing near high frequency electric field, such as near high frequency welder, supersonic generator and so on. The operating distance of the capacitance proximity switch generally can be adjusted to adapt different detecting objects. Therefore, when installing, it should be adjusted. please refer to the following steps for the adjustment method:



A. When the supersonic generator is rotated to the right, the detecting distance will enlarge and when it is rotated to the left, it will lessen. The adjustment revolution is 10 circles

B. Under without detecting object the potentiometer should be rotated slowly to the right do not stop until in the position of ON of the proximity switch.

C. When closing to the detecting object, the potentiometer should be rotated to the left; do not stop until in the position of OFF of the proximity switch.

D. Adjust the potentiometer between ON and OFF. At this time, the adjustment of operating distance is end.

■ Installation demand

When installing the proximity switch, please install it larger than the diameter in the diagram if there is metal around of when the switch is placed opposite of parallel,so that the reliable operation will not be affected.

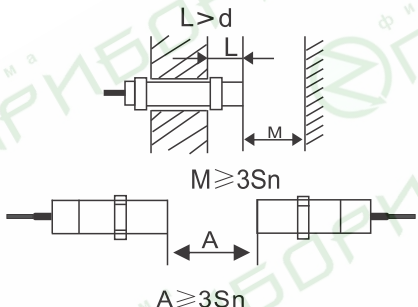
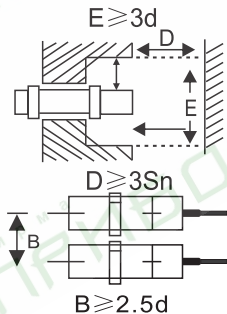


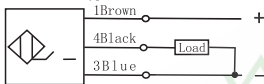
Diagram:Rated operating distance



d:Diameter of induction surface

■ Digram of connection mode

1、PNP NO type



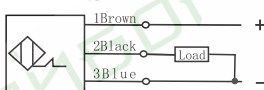
5、NPN NC type



9、AC two-wire NO type



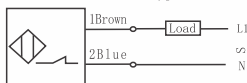
2、PNP NC type



6、NPN NO+NC type



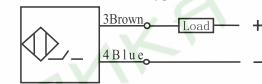
10、DC two-wire NC type



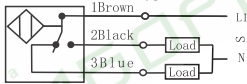
3、PNP NO+NC type



7、DC two-wire NO type



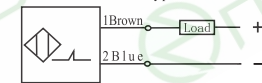
11、AC three-wire type



4、NPN NO type



8、DC two-wire NC type



12、Five-wire relay output type

