



# Sensor Selection Manual



- Proximity Sensor
- Photoelectric Sensor
- Color Sensor
- Safety Light Curtain
- Laser Sensor
- Conveyor Belt Protection Device
- Fiber Sensor
- Speed Sensor
- Magnetic Sensor
- Ultrasonic Sensor
- Limit Switch
- Pressure Sensor
- Temperature Sensor
- Tilt Angle Sensor
- Wireless Sensor
- Wireless Intelligent Cloud Platform Service



**Nanjing KJT Electric Co., Ltd.** is a high-tech enterprise specializing in the research and development of sensors and electronic appliances. The main products are proximity sensors, photoelectric sensors, speed sensors, load cells, safety light curtains, wireless sensors, conveyor belt protection devices, etc., which have been widely used in machinery manufacturing, metallurgy, textile, electric power, light industry and other industries.



The enterprise spirit of “excellence, pragmatism and efficiency” drives us to continuously make technological progress. The complete quality management system and innovative R&D technology provide perfect supports for our products.

### Main products

1. Displacement sensor, inductive proximity sensor, capacitive proximity sensor, analog sensor, Hall sensor, photoelectric sensor, magnetic sensor, NAMUR (explosion proof) sensor, speed sensor, ultrasonic sensor, safety light curtain sensor, fiber optic sensor, etc.
  2. Special accessories for textile machinery - photoelectric weft detector, angle sensor, weft sensor, yarn break sensor, vector sensor, storage yarn / gripper sensor, etc.
  3. Tape machine protection device accessories - pull rope switch, belt deviation switch, material flow detector, slip detector, cold and hot detector, cam controller and other safety protection devices.
  4. Wireless product development - wireless tilt sensor, wireless limit switch, wireless belt deviation switch system, wireless transmission system, wireless track sensor, etc.;
- We provide you with professional solution customization services.





Wireless track sensor



## Product development

The KJT R&D Center is an important core technology force of KJT Electric. We have been customizing various sensors, wireless sensors, and wireless application solutions for domestic and foreign customers for a long time.

The company offers everything from design to production and installation, and we work closely with our customers to provide tailor-made test engineering and development solutions.

## Customized products



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## Standard proximity sensor

Output: NPN/PNP 2-wire DC / 2-wire AC and DC / Namur

Operating voltage: DC, AC&DC, AC

10-30V(3-wire DC) / 10-60V(2-wire DC) / 10-55V(3-wire DC) /

6-36(3-wire DC) / 6-12V(2-wire DC Namur),

90-250V(2-wire AC), 20-250V(2-wire AC&DC)

Protection degree: IP67/68

Ambient temperature: -25~70°C

Specifications: D6.5, M8, Q8, M12, M18 M30

Sensing distance: (mm)

| D6.5  |           | M8,Q8 |           | M12   |           | M18   |           | M30   |           |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| Flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| 1     | 2         | 1     | 2         | 2     | 4         | 5     | 8         | 10    | 15        |
| 2     | 4         | 2     | 4         | 4     | 8         | 8     | 16        | 16    | 25        |
| 3     | 6         | 3     | 6         | 6     | 10        | 12    | 20        | 22    | 40        |

## High pressure proximity sensor

Output: NPN/PNP Operating voltage: 10-36V DC

Protection degree: IP67/68/IP69K

Ambient temperature: -25~70°C

Pressure range:500BAR



Specifications: M12, M14, M16,M18 Customizable shell

Sensing distance: (mm)

| M12   | M14   | M16   | M18   |
|-------|-------|-------|-------|
| Flush | Flush | Flush | Flush |
| 1.5/2 | 2     | 2     | 3     |





## Namur proximity sensor

Output:NAMUR

Operating voltage:8.2V DC

Protection degree: IP67/68/IP69K

Ambient temperature: -25~70°C

Specifications:  $\varphi 4$ , M5, M8, M12, M18, M30

Sensing distance: (mm)

| $\varphi 4$ | M5    | M8    |           | M12   |           | M18   |           | M30   |           |
|-------------|-------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| Flush       | Flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| 0.8         | 0.8   | 1     | 2         | 2     | 4         | 5     | 8         | 10    | 15        |

## Namur barrier

Two output: relay contact

Operating voltage:20-30V DC

Protection degree: IP20

Ambient temperature: -20~60°C



Specifications:

| Open circuit voltage  | short circuit current | Switch threshold      | Two output                     |
|-----------------------|-----------------------|-----------------------|--------------------------------|
| 8V( $\pm 0.5$ V)      | <8mA                  | 1.2~2.1mA             | Contact switch<br>NAMUR switch |
| Hysteresis            | Housing Material      | Explosion-proof grade |                                |
| 0.2mA (Typical value) | Flame retardant ABS   | [Exia Ga]IIC          |                                |



## High temperature proximity sensor (Inductive/Capacitive)

Output: NPN/PNP

Operating voltage: DC, AC&DC, AC

Protection degree: IP67

Ambient temperature: -25~230°C

Specifications: M8, M12, M18, M30

Sensing distance: (mm)

| M8    |           | M12   |           | M18   |           | M30   |           |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| Flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| 1     | 2         | 2     | 4         | 5     | 8         | 10    | 15        |
| 2     | 4         | 4     | 8         | 8     | 16        | 16    | 25        |

## Low temperature proximity sensor (Inductive/Capacitive)

Output: NPN/PNP

Operating voltage: DC, AC&DC, AC

Protection degree: IP67

Ambient temperature: -50~70°C



Specifications: M8, M12, M18, M30

Sensing distance: (mm)

| M8    |           | M12   |           | M18   |           | M30   |           |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| Flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| 1     | 2         | 2     | 4         | 5     | 8         | 10    | 15        |
| 2     | 4         | 4     | 8         | 8     | 16        | 16    | 25        |





## Corrosion resistance proximity sensor

Output: NPN/PNP

Operating voltage: 10-30V(2-wire DC), 20-250V(2-wire AC)

Protection degree: IP67

Ambient temperature: -25-70°C

Specifications: M8, M12, M18, M30

Sensing distance: (mm)

| M8    |           | M12   |           | M18   |           | M30   |           |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| Flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| 1     | 2         | 2     | 4         | 5     | 8         | 10    | 15        |
| 2     | 4         | 4     | 8         | 8     | 16        | 16    | 25        |

## Analog output proximity sensor

Output: 4-20mA 0-10V

Operating voltage: 15-30V DC

Protection degree: IP67

Ambient temperature: -25-70°C



Specifications: WJ8, WJ12, WJ18, WJ30, Q40

Sensing distance: (mm)

| M8      |           | M12     |           | M18   |           | M30   |           | Q40   |           |
|---------|-----------|---------|-----------|-------|-----------|-------|-----------|-------|-----------|
| Flush   | Non-flush | Flush   | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| 0.1-1.5 | 0.1-2.5   | 0.1-3.0 | 0.1-4.0   | 1-4   | 1-7       | 5-10  | 7-14      | 1-15  | 1-20      |



## Square proximity sensor

Output: NPN/PNP

Operating voltage: 10-30V DC

Protection degree: IP67

Ambient temperature: -25-70°C

Specifications: Y8X, Y8S, Y9, Y17, Y17A, Y17W, Y18A, Y18B

Sensing distance: (mm)

| Y8X       | Y8S       | Y9        | Y17       | Y17A      | Y17W      | Y18A      | Y18B      |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Non-flush | Non-flush | Non-flush | Non-flush | Non-flush | Non-flush | Non-flush | Non-flush |
| 2.5 4     | 2.5 4     | 2.5 4     | 5         | 5         | 5         | 5         | 5         |

## Ring proximity sensor

Output: NPN/PNP

Operating voltage: 10-30V DC

Protection degree: IP67

Ambient temperature: -25-70°C



Specifications: T6, T10, T15, T21

Sensing distance: (mm)

| T6        | T10       | T15       | T21       |
|-----------|-----------|-----------|-----------|
| Non-flush | Non-flush | Non-flush | Non-flush |
| 6         | 10        | 15        | 21        |





## Ultra long distance proximity sensor (Inductive, Capacitive)

Output: NPN/PNP NO/NC

Operating voltage: DC, AC&DC, AC

Protection degree: IP67

Ambient temperature: -25-70°C

Specifications:, M5T, M6.5T, J8T, J12T, J18T, J30T

Sensing distance: (mm)

| M5T       |       | M6.5T     |           | J8T   |           | J12T  |           | J18T   |           | J30T     |           |
|-----------|-------|-----------|-----------|-------|-----------|-------|-----------|--------|-----------|----------|-----------|
| Flush     | Flush | Non-flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush  | Non-flush | Flush    | Non-flush |
| 1/1.2/1.5 | 1/2/3 | 2/4/6     | 2/4/6     | 1/2/3 | 2/4/6     | 2/4/6 | 4/8/10    | 5/8/12 | 8/16/20   | 10/16/22 | 15/25/40  |

## Capacitive proximity sensor

Output: NPN/PNP NO/NC

Operating voltage: DC, AC&DC, AC

Protection degree: IP67

Ambient temperature: -25-70°C



Specifications:, QJ8, QJ12, QJ18, QJ30

Sensing distance: (mm)

| QJ8   |           | QJ12  |           | QJ18  |           | QJ30  |           |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| Flush | Non-flush | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| 1     | 2         | 2     | 4         | 5     | 8         | 10    | 15        |
| 2     | 4         | 4     | 8         | 8     | 16        | 16    | 25        |



## Cylindrical photoelectric sensor

Output: NPN/PNP

Operating voltage: 10-30V DC/0-250V AC

Protection degree: IP67

Ambient temperature: -25-55°C

Specifications: FJ8, FJ12, FJ18, FJ30

Sensing distance: (m)

| Type | Diffuse reflection | Retro reflection | Through beam |
|------|--------------------|------------------|--------------|
| FJ8  | 0.02               | 0.5              | 1            |
| FJ12 | 0.1                | 1                | 4            |
| FJ18 | 0.1-0.7            | 2                | 5            |
| FJ30 | 0.1-1.5            | 3                | 5-10         |

## Square photoelectric sensor

Output: NPN/PNP

Operating voltage: 10-30V DC/0-250V AC

Protection degree: IP67

Ambient temperature: -25-55°C



Specifications: Ultra small type, FS30, FS50, FS100

Sensing distance: (m)

| Type             | Diffuse reflection | Retro reflection | Through beam |
|------------------|--------------------|------------------|--------------|
| Ultra small type | -                  | -                | 0.1/1.5/1/2  |
| FS30             | 0.3                | 1.5              | 5            |
| FS50             | 0.3/0.5/1.5        | 3/5              | 5/10/30      |
| FS100            | 2.5/4              | 8                | 15/20/30     |





## Slot type photoelectric sensor

Output: NPN/PNP

Operating voltage: 10-30V DC/90-250V AC

Protection degree: IP67

Ambient temperature: -25-55°C

Specifications: Optocoupler, FU7, FU15A, FU30

Sensing distance: (mm)

| Optocoupler | FU7 | FU15A | FU30 |
|-------------|-----|-------|------|
| 5           | 15  | 15    | 30   |

## High precision color sensor

Switching frequency: 40Hz

Operating voltage: 10-24V DC

Protection degree: IP67

Housing Material: Plastic



Specifications:

| White light source | Sensing distance               | Response time             | LED intensity                           |
|--------------------|--------------------------------|---------------------------|---|
| Wide spectrum LED  | 28mm                           | 25us                      | level 3                                 |
| Grayscale          | Digital output                 | Data save                 | Short Circuit Protection                |
| 00-50              | Automatic detection<br>NPN/PNP | EEPROM<br>Read only store | Overload/Reverse<br>polarity protection |



## Safety light curtain

Output: NPN/PNP

Operating voltage: 10-30V(2-wire DC)/20-250V(2wire AC)

Protection degree: IP67

Ambient temperature: -25-55°C

| Type | Optical axis pitch | Optical axis number | Protection width(cm) |
|------|--------------------|---------------------|----------------------|
| TB10 | 10mm               | 16                  | 15                   |
|      |                    | 24                  | 23                   |
|      |                    | 32                  | 31                   |
|      |                    | 40                  | 39                   |
|      |                    | 48                  | 47                   |
|      |                    | 56                  | 55                   |
|      |                    | 64                  | 63                   |
|      |                    | 72                  | 71                   |
|      |                    | 80                  | 79                   |
|      |                    | 88                  | 87                   |
|      |                    | 96                  | 95                   |
| TB20 | 20mm               | 8                   | 14                   |
|      |                    | 12                  | 22                   |
|      |                    | 16                  | 30                   |
|      |                    | 20                  | 38                   |
|      |                    | 24                  | 46                   |
|      |                    | 32                  | 62                   |
|      |                    | 40                  | 78                   |
|      |                    | 48                  | 94                   |
| TB40 | 40mm               | 4                   | 12                   |
|      |                    | 6                   | 20                   |
|      |                    | 8                   | 28                   |
|      |                    | 10                  | 36                   |
|      |                    | 12                  | 44                   |
|      |                    | 16                  | 60                   |
|      |                    | 20                  | 76                   |
|      |                    | 24                  | 92                   |





## Cylindrical laser sensor

Output: NPN/PNP

Operating voltage: 10-30V DC

Protection degree: IP67

Ambient temperature: 0-55°C

Specifications: M5, M8, M12, M18

Sensing distance: (m)

| Type | Diffuse reflection | Retro reflection | Through beam |
|------|--------------------|------------------|--------------|
| M5   | 0.2                | 1                | 20/50        |
| M8   | 0.3                | 1.5              | 30/60        |
| M12  | 0.3                | 1.5              | 50/80        |
| M18  | 0.3                | 1.5              | 70/100       |

## Square laser sensor

Output: NPN/PNP

Operating voltage: 10-30V DC

Protection degree: IP67

Ambient temperature: 0-55°C



Specifications: Q30, Q50

Sensing distance: (m)

| Type | Diffuse reflection | Retro reflection | Through beam  |
|------|--------------------|------------------|---------------|
| Q30  | 0.2                | 5                | 100(20/50/70) |
| Q50  | 0.5                | 10               | 100           |



## Fiber sensor(probe)

Through beam, diffuse reflection, L type, Window type, high-temperature type etc. From diameter of  $\phi 1.5\text{mm}$  to over M6 can be customized. High temperature type can be resistant to high temperature of  $350^{\circ}\text{C}$

Specifications:  $\phi 1.5$ ,  $\phi 2$ ,  $\phi 3$ ,  $\phi 5$ , M3, M4, M6

Sensing distance: (mm)

| Through beam       | 20 | 55 | 60 | 80 | 160 | 250 | 400 |
|--------------------|----|----|----|----|-----|-----|-----|
| Diffuse reflection | 8  | 12 | 24 | 48 | 64  | 80  | 100 |

## Fiber sensor(amplifier)

Output: NPN/PNP    Operating voltage: 12-24V DC

Protection degree: IP64

Ambient temperature:  $-50-70^{\circ}\text{C}$

Flexible deployment, accurate detection, economic preference, competitive price with fiber optic cable, realize more extensive measurement application.



Specifications: A3R, A4R, A5R

Sensing distance: (mm)

| Type            | A3R            | A4R                   | A5R                   |
|-----------------|----------------|-----------------------|-----------------------|
| Regulating mode | Manual control | Automatic calibration | Automatic calibration |
| Display         |                | Singular display      | Dual display          |





### **Gear speed sensor**

Supply voltage:8-30V DC    Frequency range: 5-30KHz  
Earthquake Resistance: 5gn (from 5Hz to 2000Hz)  
Shock resistance:0gn (in 20ms, half sinusoid)  
Protection degree: IP67  
Ambient temperature: -40-120℃

### **Gear speed sensor**

Supply voltage:8-30V DC    Frequency range: 0-30KHz  
Earthquake Resistance: 5gn (from 5Hz to 2000Hz)  
Shock resistance:50gn (in 20ms, half sinusoid)  
Protection degree: IP67  
Ambient temperature: -40-120℃



### **Speed sensor**

Dimensions:M30\*105mm  
Supply voltage:24V DC/ 110V AC/ 220V AC  
Output:NPN/PNP  
Regulating frequency range:  
6-150 Pulse Per minute(the slow type)  
120-3000 Pulse per minute(the fast type)  
Protection degree: IP67  
Ambient temperature: -25-70℃



## Speed sensor

Dimensions:  $\varnothing 38 \times 105 \text{ mm}$

Supply voltage: 24V DC / 110V AC / 220V AC

Output: NPN / PNP

Regulating frequency range:

6-150 Pulse Per minute (the slow type)

120-3000 Pulse per minute (the fast type)

Protection degree: IP67

Ambient temperature:  $-25 \sim 70^{\circ}\text{C}$

## Speed sensor

Dimensions:  $M18 \times 70 \text{ mm}$

Supply voltage: 10-36V DC    Output: PNP DC

Current consumption:  $< 15 \text{ mA}$

Setting range: 3-6000 pulse/min

Protection degree: IP67

Ambient temperature:  $-25 \sim 80^{\circ}\text{C}$



## Intelligent digital display tachometer

Input signal: switching value, electrical level pulse

External sensor: photoelectric sensor, proximity sensor, hall sensor, encoder, optional relay alarm, analog variable output, RS485 communication.

Measurement display range: 0-99999





## Magnetic sensor

Operating voltage:10-36V DC/ 20-250V AC

Output:NO(2-wire), NC(2-wire)

Power:5 W

Housing material:ABS/stainless steel

Rated operational frequency:10 Hz

## Ultrasonic sensor

Operating voltage:15-30V DC

rated operational current:200 mA

Protection degree: IP65

Ambient temperature: -25-70°C



Specifications: M12, M18 ,M30

| Sensing distance            | Voltage drop       | Repeat accuracy               | Switching frequency |
|-----------------------------|--------------------|-------------------------------|---------------------|
| 50-6000mm<br>(customizable) | $\leq 2.5V$        | $\leq 0.5\%$                  | $\leq 30Hz$         |
| Hysteresis range            | Input              | Output                        |                     |
| 1% of the set distance      | One teach-in input | Analog output/Switching value | NPN/PNP             |

### Standard operating mode:Reflective sensor

Objects entering the beam from any direction will cause the output signal to change as they enter the predetermined sensing range.

#### Reflective sensor

If a reflector is fixed in a fixed range of work, the ultrasonic proximity switch will be moved by all objects between the ultrasonic sensor and the reflector, and even the objects that absorb sound.

#### Through beam sensor

The ultrasonic sensor only estimates whether there is an object between the transmitter and the receiver. The layout distance is twice the distance of a single sensor.

**KJTDO®**



## High temperature limit switch

Operating voltage: 0-220V DC (customizable)

Ambient temperature: -20-350°C

Heat resistance can be up to 350°C

Dual loop limit switch for a wide range of applications

Robust, monolithic cast aluminum housing for high mechanical strength

More than 10 models including roller arm, adjustable rod, plunger and roller pressure column.

## Waterproof Limit Switch

Rated Voltage: 5A 125V, 3A 250V AC

Protection degree: IP67

Aluminum alloy cast housing, durable and mechanically strong

High-grade protection, waterproof, oil-proof, dust-proof structure, can work underwater

Applicable to outdoor equipment, shield construction equipment, painting equipment, etc. on-site or high-grade waterproof and oil-proof requirements

**KJTDO®**



**KJTDO®**



## Heavy duty switch

Rated insulation voltage: 250V AC

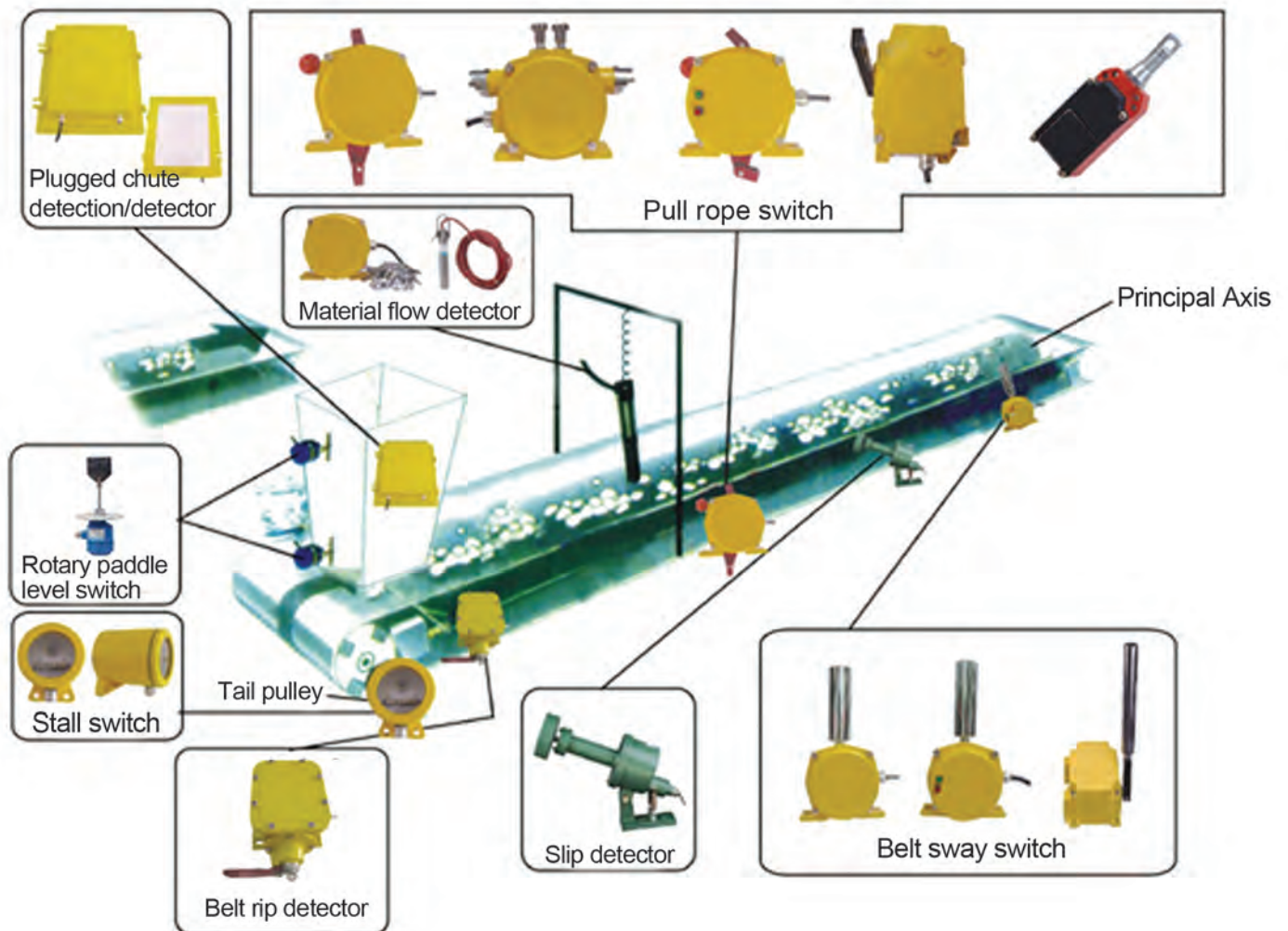
Protection degree: IP67

Widely used in steel equipment, large transportation machinery, loading and unloading machinery.

Could replace SCHMERSAL, SANBU and other brands



## Conveyor belt protection device



### Pull rope switch

Model No.: KJT    Movement angle: 30°  
 Actuating force: 10kg    Limit angle: 60°  
 Output: 1 NO contact, 1 NC contact  
 (available on request 2 NO contacts, 2 NC contacts)  
 Contact rating: AC 380V/5A

**KJTDO**<sup>®</sup>





## Small pressure transmitter

Output: 4-20 mA/ 0-5V/ 0-10V

Operating voltage: 9-24V DC

Protection degree: IP65

Ambient temperature: -25~70°C

Specifications: Hirschmann lead type, Navigational lead type, Lead type

| Measuring range      | Pressure type                      | Precision grade                           | Insulation                                   |
|----------------------|------------------------------------|---|--|
| -100~20Kpa~100Mpa    | Gage pressure<br>Absolute pressure | 0.5%FS(typical), 0.3%FS<br>0.2%FS, 0.1%FS | 100MΩ/250VDC                                 |
| Mechanical vibration | Long-term stability                | Sampling time                             | Pressure overload                            |
| 20g(20-5000HZ)       | ≤0.2%FS/year                       | 1s20times<br>(1s24K customizable)         | 2 times below 10Mpa<br>1.5 times above 25Mpa |

## Explosion-proof pressure transmitter

Output: 4-20 mA/ 1-5V DC

Housing material: stainless steel

Protection degree: IP65

Ambient temperature: -25~70°C



Specifications:

| Measuring range                   | Measurement accuracy             | Stability   | Overload pressure |
|-----------------------------------|----------------------------------|---|-------------------|
| -0.1-0-100MP                      | ±0.2%FS(customizable)<br>±0.5%FS | ≤ ±0.2%FS/year                                      | ≤ 150%FS          |
| Medium temperature                | Temperature drift                | Measuring medium                                    |                   |
| -40-150°C<br>(250°C customizable) | ±0.03%FS/°C                      | Non-corrosive gases and liquids for stainless steel |                   |





## Electronic pressure relay

Output: 20-32V DC

Current consumption: about 100mA

Protection degree: IP65

Ambient temperature: -25~80°C

Specifications: Hirschmann lead type, Navigational lead type, Lead type

| Measuring range       | Burst pressure   | Detection accuracy | Range signal                       |
|-----------------------|------------------|--------------------|------------------------------------|
| 34/100/250/400/600bar | 300%FS           | $< \pm 1\%FS$      | 4~20mA<br>Resistance $< 400\Omega$ |
| Vibration resistance  | Shock resistance | Torsion range      | Display                            |
| about 10g/0~500Hz     | about 50g/1ms    | 17~20Nm            | 3-digit, 7-segment<br>LCD code red |

## Digital display electronic pressure relay



Power supply range: 24V  $\pm 20\%$

Load capacity:  $< 24V$  1.2A

Protection degree: IP65

Ambient temperature: -25~60°C

Specifications:

| Measuring range      | Detection accuracy | Stability                 | Display accuracy    |
|----------------------|--------------------|---------------------------|---------------------|
| 0-100bar             | $\leq 0.5\%FS$     | $\leq 0.2\%/year$         | $\pm 0.1\%FS$       |
| Display method       | Display range      | Maximum power consumption | Switch life         |
| 4-digit digital tube | -1999-9999         | $< 3w$                    | $> 1$ million times |



### Insertion type temperature transmitter

Supply voltage: 9-36V DC

Output: 4-20mA/0-5V DC/1-5V DC/0-10V DC/RS485

(Output signal 0-10VDC needs to supply 15-36V)

Protection degree: IP65

Ambient temperature: -40~85°C

Specifications: Hirschmann lead type, Navigational lead type, Lead type

| Measuring range | Measuring medium  | Detection accuracy   | Pressure rating |
|-----------------|---|--|-----------------|
| -50-200°C       | liquid, gas   | ±5°C   | 10MPa           |
| Stability       | Maximum power   | Load characteristics   |                 |
| ±0.1%FS/year    | Current type ≤ 0.02Us<br>Voltage type ≤ 0.008Us<br>Digital type ≤ 0.015Us | Current type ≤ 0.02Us{(Us-7)/0.02}Ω<br>Voltage load type ≥ 100kΩ |                 |

### Digital insertion temperature transmitter

Supply voltage: 9-36V DC

Output: 4-20mA/0-5V DC/1-5V DC/0-10V DC/RS485

(Output signal 0-10VDC needs to supply 15-36V)

Protection degree: IP65

Ambient temperature: -40~85°C



Specifications:

| Measuring range | Measuring medium  | Detection accuracy   | Pressure rating |
|-----------------|---|--|-----------------|
| -50-200°C       | liquid, gas   | ±5°C   | 10MPa           |
| Stability       | Maximum power   | Load characteristics   |                 |
| ±0.1%FS/year    | Current type ≤ 0.02Us<br>Voltage type ≤ 0.008Us<br>Digital type ≤ 0.015Us | Current type ≤ 0.02Us{(Us-7)/0.02}Ω<br>Voltage load type ≥ 100kΩ |                 |





## Smart temperature sensor

Output: 4-20mA

Protection degree: IP65

Temperature & humidity: -30~60°C, <90%

### Specifications:

| Measure temperature | Insertion depth               | Stability     |
|---------------------|-------------------------------|---------------|
| PT100               | 10mm~2000mm<br>(customizable) | 0.2%FS/0.5%FS |

## Thermocouple

High quality raw material as temperature-sensing elements

The length of temperature probe could be customized

A digital display could be customized

Excellent long-term temperature stability



### Specifications:

| Type | positive electrode | negative electrode |
|------|--------------------|--------------------|
| S    | PtRh10             | Pt                 |
| R    | PtRh13             | Pt                 |
| B    | PtRh30             | PtRh6              |
| K    | NiCr               | NiSi               |
| T    | Cu                 | CuNi               |
| J    | Fe                 | CuNi               |
| N    | NiCrSi             | NiSi               |
| E    | NiCr               | CuNi               |



### **Wireless temperature acquisition module (wristband type)**

Measuring temperature range:-40°C-125°C  
Measuring temperature resolution:0.0625°C  
Housing material:Silica gel (high temperature resistant, flame retardant),available colors: red, yellow, green  
Communication method:410-510Hz, support multipath communication combination  
Communication distance:200m(no barrier),30m(with wall)  
Power supply mode: lithium battery  
Acquisition cycle: free setting

### **K-type thermocouple wireless collector**

Measuring temperature range:-100°C-1300°C  
(Depends on the type of thermocouple)  
Measuring temperature resolution:0.1°C  
Housing material:ABS  
Communication method:410-510Hz, support multipath communication combination  
Communication distance:500m(no barrier),100m(with wall)  
Power supply mode: lithium battery  
Acquisition cycle: free setting



### **Wireless waterproof temperature collector**

Measuring temperature range:-40°C-125°C  
(Test temperature higher than 80 °C with extended detection)  
Measuring temperature resolution:0.1°C  
Housing material:ABS  
Communication method:410-510Hz, support multipath communication combination  
Communication distance:200m(no barrier),30m(with wall)  
Power supply mode: lithium battery  
Acquisition cycle: free setting



## Wireless temperature acquisition sensor



The wireless temperature acquisition sensor family is available in a variety of types and sizes. With thermocouples, the detection range of  $-100\text{ }^{\circ}\text{C} \sim 1300\text{ }^{\circ}\text{C}$ . There are also temperature resistant, waterproof, long distance and so on. Products can be used for cable temperature measurement, copper row temperature measurement, transformer temperature measurement, switch cabinet temperature measurement, bearing temperature measurement, boiler, oven temperature measurement, refrigerator, refrigerator temperature measurement, heating pipe, heat exchange station temperature measurement, oil temperature monitoring, Cement pouring temperature measurement, etc. At the same time, we provide you with a complete solution to meet your needs.

# Wireless products

Professional customized service

Meet your safety production needs

Bi-directional signal transmission

RS485 communications interface

Collecting switching signal

Collecting analog signal

Mixed signal transmission

Transmission switching signal

Transmission analog signal

Enhanced long distance transmission

## Wired world, wireless transmission



Ultra long-distance stable transmission

Compatible with other wireless systems





## Wireless intelligent cloud platform service

### Intelligent management equipment

### Avoid risk ahead of time

Applicable to all types of production enterprises, equipment manufacturers



ios/android



### What is wireless intelligent cloud platform service?

This is a set of remote integrated management system for industrial equipment such as PLC. It can grasp the running status of the equipment in real time and deal with it in time before the equipment fails, to solve the customer's worries.

### What can this service do?

1. **For production enterprises:** Reduce your operation and maintenance costs and improve production efficiency through real-time remote control.

2. **For equipment manufacturers:** Through real-time remote monitoring to understand the operating status of the sold equipment, you can communicate with the customer in advance, and replace parts in time to avoid failure.

**Remote monitoring:** Remote monitoring of all operating conditions of the device on the computer and mobile phones, assisting on-site personnel to debug equipment and manage equipment information.

**Fault warning:** If the device is running, an exception will occur, and it will automatically send an email or SMS to alert the field operator and office monitor in advance.

**Remote diagnosis:** Quickly diagnose the root cause of the lock problem and automatically fix the problem remotely. Problems that require manual repair, can be repaired with tools according to the diagnostic report.

**Remote operation:** Remotely upgrade the device, if you are on a business trip, you can also use the mobile phone or computer to remotely operate and troubleshoot the equipment in the factory.

**Data statistics:** Record production data, maintenance records, and intelligent integrated forms for recorded data, so that you can control the performance of the scene at all times.



### Why choose KJT?



KJT has a professional R&D and production elite team that not only supplies wireless sensor equipment, but also develops software and builds cloud servers to provide you with customized industrial security solutions that will keep you up to date with Industry 4.0. KJT sensor has CE certificate, RoHS certificate and explosion-proof certification. It is exported to more than 20 countries such as Germany, France and Turkey. The products are tested by military for corrosion resistance and high and low temperature resistance. Wireless sensors are supported by many patents and are widely used in steel, power plants, railways and other harsh environments to ensure your production safety.



# Wireless intelligent cloud platform service

Easily manage devices

Staff management record

Data statistics real-time alarm

## ◆ Compatibility

The hardware module has various communication interfaces, and can adopt various communication modes such as GPRS, 3G, 4G, wifi and Ethernet, and is compatible with RS422/232/485, RJ45 and other interfaces at the same time.

The system is compatible and compatible with Mitsubishi, Siemens, Omron, Hollysys, Schneider, Rockwell and other mainstream PLCs and other core controllers.

## ◆ Real-time

The system can realize online remote monitoring and comprehensive management of equipment, and has PLC online programming and fault warning diagnosis function.

The system has strong scalability, and can follow the customer's actual situation in stages, and can accommodate up to hundreds of thousands of devices at the same time.

## ◆ Safety

The communication system uses VPN-specific secure channel and PSA encryption algorithm to ensure communication data security. The software platform can be customized according to the industry of the customer.

The platform style and parameters can be set by the customer. The system supports disconnection reconnection, abnormal recovery, system self-monitoring and other functions.

## ◆ Fault warning

The equipment has fault warning and diagnosis functions. When the alarm threshold is reached, the alarm can be given by SMS or email. The warning parameters and alarm thresholds can be set by the customer.

## ◆ Customized service

The system is tailor-made for SMEs, and the system construction cost is low. Without affecting the basic functions of the system, it can be constructed in stages according to the scale of enterprise development. Customers do not need to re-develop the platform, the software platform can be customized according to the customer's industry, and the platform style and parameters can be set by the customer.

## ◆ Simple installation

The module is small in size and can be selected to match the PLC. It can be installed without changing the basic structure of the mechanical equipment. It adopts rail mounting method and is suitable for the installation of internal components of most equipment.

## KJT Intelligent gateway



KJT Intelligent Gateway is a device communication terminal product that integrates various Internet communication technologies and is oriented to the industrial field. It includes various Internet access modes such as 3G, 4G, WIFI, etc., which can adapt to various network application environments and provide secure communication links that are available everywhere. It provides high-speed data channel for information management of equipment, providing a safe and reliable guarantee and a solid foundation for the realization of all functions of the whole system. It can remotely communicate with multiple PLCs or touch screens at the same time and flexibly access the respective device management platforms.





## Product customization service

### KJT R & D Center



KJT R&D Center team has many years of experience in PCBA development and production based on consumer electronics, industrial automation products and electromechanical control products. It has many years of MCU development and industrial control circuit design, MCU programming, hardware circuit, drive circuit design, industrial control board, home appliance control panel and other production experience. Involved in security, financial and electrical, temperature control equipment, mechanical and electrical products. Instruments and other fields. For a long time, we have customized various types of sensors, industrial automation control panels, and unmanned aerial vehicle acceleration control for domestic and foreign customers.



M8 long thread size



M12 corrosion resistant & high temperature resistant



M8 proximity sensor with M12 connector



Dual sensor head proximity sensor



Military special sensor



Wireless limit switch



Wireless belt deviation switch system



Wireless remote control



Wireless transmission system





## Plug connectors and cables

Cable Description: PVC/PUR oil resistant cable, optional high temperature resistant, waterproof  
 Length: 2m/5m/10m/15m/20m  
 Nut material: Brass nickel plated / stainless steel  
 Protection degree: IP68  
 Ambient temperature: -25-80°C (Customizable high temperature cable)

Specifications: M8、M12 female/ male

| Type                                      | M8   |   |  |   |  |   |
|---|--|---|--|---|--|---|
| PICO type M8 insert with self-locking nut | 3-hole/pin straight type 2m die-cast cable | 3-hole/pin elbow type 2m die-cast cable | 4-hole/pin straight type 2m die-cast cable | 4-hole/pin elbow type 2m die-cast cable |  |   |
| Type                                      | M12  |   |  |   |  |   |
| EURO type M8 insert with self-locking nut | 4-hole/pin straight type 2m die-cast cable | 4-hole/pin elbow type 2m die-cast cable | 6-hole/pin straight type 2m die-cast cable | 6-hole/pin elbow type 2m die-cast cable | 8-hole/pin straight type 2m die-cast cable | 6-hole/pin elbow type 2m die-cast cable |

## Single/double axis tilt sensor

Input voltage: 9-30V Input Current: <6mA

Housing material: Aluminum alloy

Ambient temperature: -40-85°C

Impact resistance index: 3500g, 0.5ms, 3 times/axis



Specifications: Analog quantity/Digital

| Output  | Range  | Stability | Interface Type | 0° output |
|---------|--------|-----------|----------------|-----------|
| Digital | ±90    | 0.5       | 4-20MA         | 12MA±0.5  |
| Analog  | ±5~±90 | 0.5       | 0-5V/4-20MA    | 2.5V±0.1  |



## Certificates& Photos

Barrier explosion-proof certification



ISO:9001 certification



Proximity sensor RoHS certification



Photoelectric sensor RoHS certification



Proximity sensor explosion-proof certification

Limit switch explosion-proof certification

Proximity sensor CE certification

Photoelectric sensor CE certification

Wireless temperature sensor patent



High temperature limit switch patent



Wireless proximity sensor patent



Wireless limit switch patent



Wireless pressure sensor patent

Wireless tilt sensor patent

Wireless analog sensor patent

Wireless foot switch patent

▼ Won the national high-tech enterprise certificate



▼ Indian customers visited our company to discuss cooperation



▲ Malaysian customers communicate with sales staff at the exhibition stand--The 20th Shanghai industrial expo



▲ Meet UK customers and sign contracts



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