

## 1. TL Series Inductive Proximity Sensor



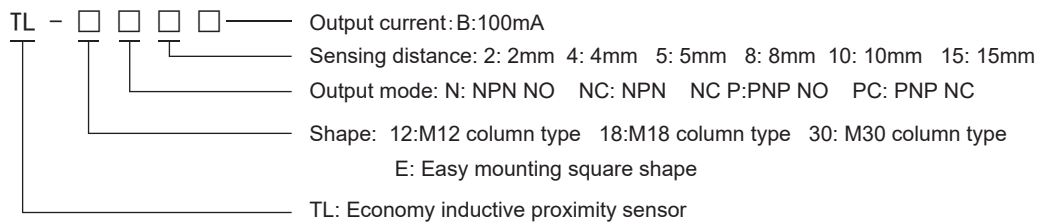
### ■ Photos and Features



#### Features:

- ★ Economical and practical, widely used in machinery and equipment.
- ★ With power supply reverse connection protection design, 10-30V power supply.
- ★ Has excellent anti-interference ability.
- ★ The sensing distance is precisely adjusted.
- ★ Inductive non-contact detection, no wear, long service life

### ■ Model Illustration



### ■ Ordering Information

#### 1. Inductive Column Shape

| Model         | Output type | Mounting type | Sensing distance | Effective distance | Frequency | Load current | Protection level | Code      |
|---------------|-------------|---------------|------------------|--------------------|-----------|--------------|------------------|-----------|
| TL-12N(NC)4B  | NPN NO(NC)  | Non-flush     | 4mm              | 3.2mm              | 400Hz     | 100mA        | IP66(IEC)        | C0021TL01 |
| TL-12P(PC)4B  | PNP NO(NC)  | Non-flush     | 4mm              | 3.2mm              | 400Hz     | 100mA        | IP66(IEC)        | C0021TL01 |
| TL-18N(NC)5B  | NPN NO(NC)  | Flush         | 5mm              | 4mm                | 400Hz     | 100mA        | IP66(IEC)        | C0026TL01 |
| TL-18P(PC)5B  | PNP NO(NC)  | Flush         | 5mm              | 4mm                | 400Hz     | 100mA        | IP66(IEC)        | C0026TL01 |
| TL-18N(NC)8B  | NPN NO(NC)  | Non-flush     | 8mm              | 6.4mm              | 200Hz     | 100mA        | IP66(IEC)        | C0028TL01 |
| TL-18P(PC)8B  | PNP NO(NC)  | Non-flush     | 8mm              | 6.4mm              | 200Hz     | 100mA        | IP66(IEC)        | C0028TL01 |
| TL-30N(NC)10B | NPN NO(NC)  | Flush         | 10mm             | 8mm                | 200Hz     | 100mA        | IP66(IEC)        | C0038TL01 |
| TL-30P(PC)10B | PNP NO(NC)  | Flush         | 10mm             | 8mm                | 200Hz     | 100mA        | IP66(IEC)        | C0038TL01 |
| TL-30N(NC)15B | NPN NO(NC)  | Non-flush     | 15mm             | 12mm               | 100Hz     | 100mA        | IP66(IEC)        | C0040TL01 |
| TL-30P(PC)15B | PNP NO(NC)  | Non-flush     | 15mm             | 12mm               | 100Hz     | 100mA        | IP66(IEC)        | C0040TL01 |

#### 2. Inductive Square Shape

| Model       | Output type | Mounting type | Sensing distance | Effective distance | Frequency | Load current | Protection level | Code      |
|-------------|-------------|---------------|------------------|--------------------|-----------|--------------|------------------|-----------|
| TL-EN(NC)5B | NPN NO(NC)  | Screws        | 5mm              | 4mm                | 500Hz     | 100mA        | IP66 (IEC)       | C0016TL01 |
| TL-EP(PC)5B | PNP NO(NC)  | Screws        | 5mm              | 4mm                | 500Hz     | 100mA        | IP66 (IEC)       | C0016TL01 |

Note: It will be TL-12N2B for NPN NO and TL-12NC2B for NPN NC.

## ■ Technical Specifications

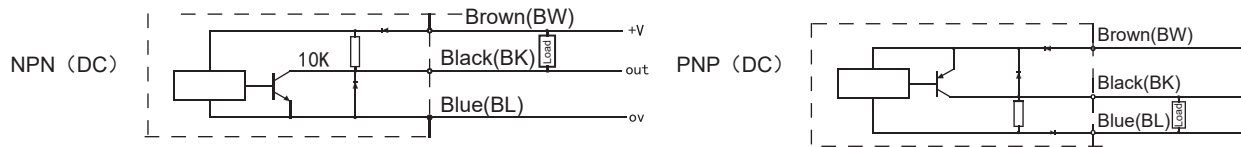
### 1. Column shape

| Type                  | DC 3-wire                                                                  |             |             |             |              |              |
|-----------------------|----------------------------------------------------------------------------|-------------|-------------|-------------|--------------|--------------|
|                       | Flush                                                                      | Non-flush   | Flush       | Non-flush   | Flush        | Non-flush    |
| Model                 | TL-12N(C)2B                                                                | TL-12N(C)4B | TL-18N(C)5B | TL-18N(C)8B | TL-30N(C)10B | TL-30N(C)15B |
|                       | TL-12P(C)2B                                                                | TL-12P(C)4B | TL-18P(C)5B | TL-18P(C)8B | TL-30P(C)10B | TL-30P(C)15B |
| Dimension             | M12×43mm                                                                   |             | M18×48mm    |             | M30×58mm     |              |
| Detected object       | Magnetic metal (detection distance decreases when it's non-magnetic metal) |             |             |             |              |              |
| Stipulate distance    | 2mm                                                                        | 4mm         | 5mm         | 8mm         | 10mm         | 15mm         |
| Sensing distance      | 0~1.6mm                                                                    | 0~3.2mm     | 0~4.0mm     | 0~6.4mm     | 0~8.0mm      | 0~12.0mm     |
| Frequency             | ≤600Hz                                                                     | ≤400Hz      | ≤400Hz      | ≤200Hz      | ≤200Hz       | ≤100Hz       |
| Output current        | ≤100mA                                                                     |             |             |             |              |              |
| Power supply          | DC 10~30V                                                                  |             |             |             |              |              |
| Hysteresis            | Less than 10% of the stipulate distance                                    |             |             |             |              |              |
| Control output        | Pure resistance load≤100mA, induction load≤50mA                            |             |             |             |              |              |
| Voltage drop          | ≤2V (At DC 24V 100mA)                                                      |             |             |             |              |              |
| Leakage current       | ≤0.5mA(At DC 24V)                                                          |             |             |             |              |              |
| Insulation resistance | ≥100MΩ (At DC 500V)                                                        |             |             |             |              |              |
| Dielectric strength   | AC 1000V 1min (At 50/60Hz)                                                 |             |             |             |              |              |
| LED                   | Yellow                                                                     |             |             |             |              |              |
| Protection level      | IP66(IEC)                                                                  |             |             |             |              |              |
| Working environment   | -25℃~70℃                                                                   |             |             |             |              |              |
| Cable length          | Standard 2m                                                                |             |             |             |              |              |

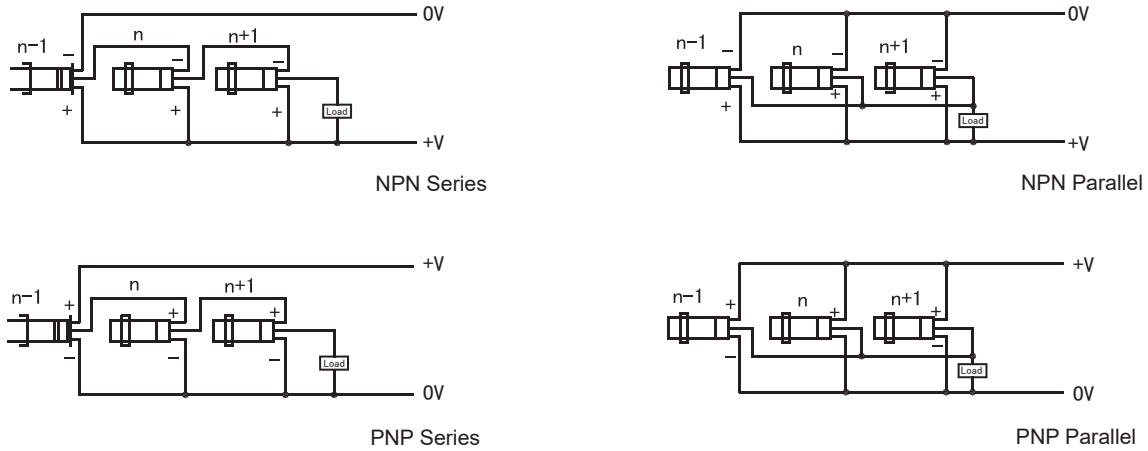
### 2. Square shape/Little square shape/Easy mounting square shape

| Type                     | DC 3-wire                                                                  |
|--------------------------|----------------------------------------------------------------------------|
| Model                    | TL-EN(NC)5B/TL-EP(PC)5B                                                    |
| Dimension                | 18Wx18Hx36Dmm                                                              |
| Detected object          | Magnetic metal (detection distance decreases when it's non-magnetic metal) |
| Standard detected object | Iron 18×18×1mm                                                             |
| Stipulate distance       | 5mm                                                                        |
| Sensing distance         | 0~4mm                                                                      |
| Frequency                | ≤400Hz                                                                     |
| Output current           | ≤100mA                                                                     |
| Power supply             | DC 10~30V                                                                  |
| Hysteresis               | Less than 10% of the stipulate distance                                    |
| Control output           | Pure resistance load≤100mA, induction load≤50mA                            |
| Voltage drop             | ≤2V (At DC 24V 100mA)                                                      |
| Leakage current          | ≤0.5mA (At DC 24V)                                                         |
| Insulation resistance    | ≥100MΩ (At DC 500V)                                                        |
| Dielectric strength      | AC 1000V 1min (At 50/60Hz)                                                 |
| LED                      | Yellow                                                                     |
| Protection level         | IP66(IEC)                                                                  |
| Working environment      | -25℃~70℃                                                                   |
| Cable length             | Standard 2m                                                                |

## ■ Connection

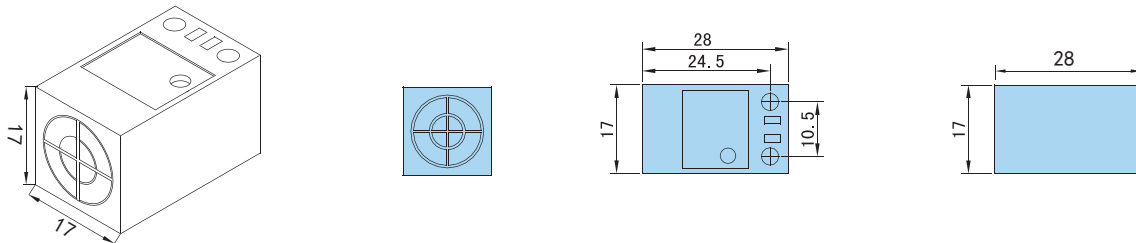


## Series and parallel

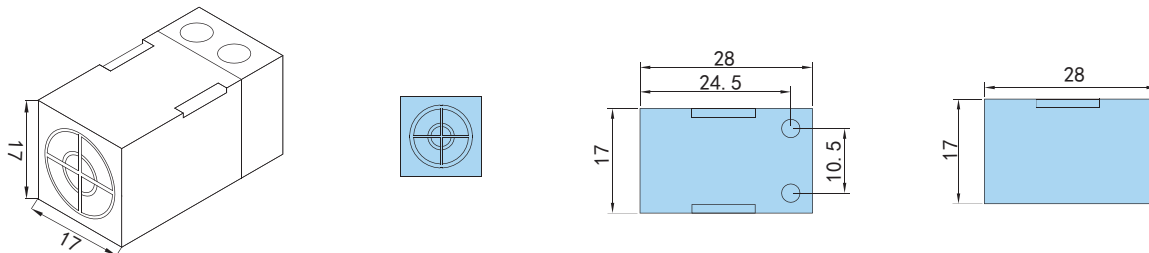


## ■ Dimension (Unit: mm)

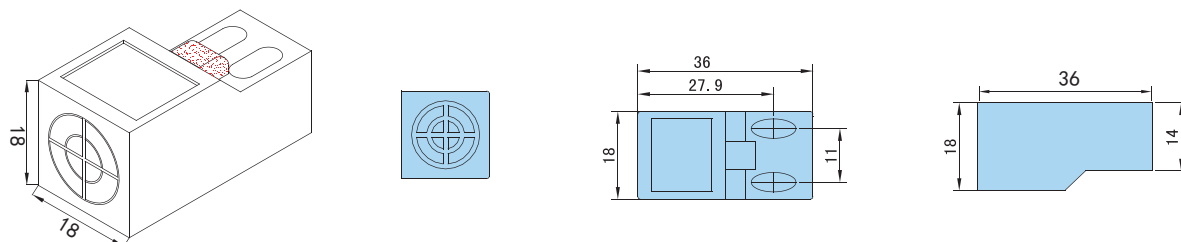
### TL-Q short square shape



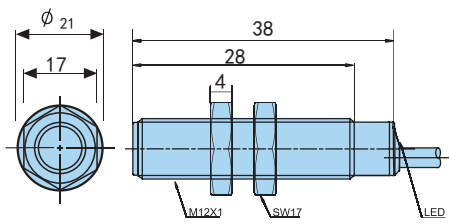
### TL-R short square shape



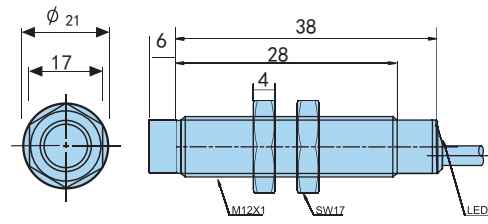
### TL-E Easy-mounting square shape



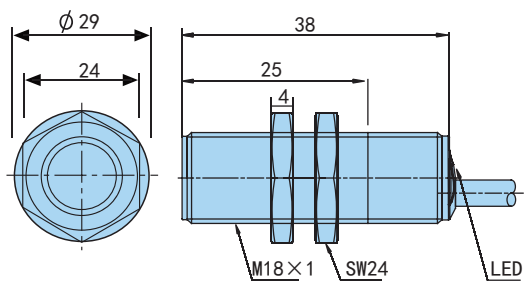
TL-12 Flush



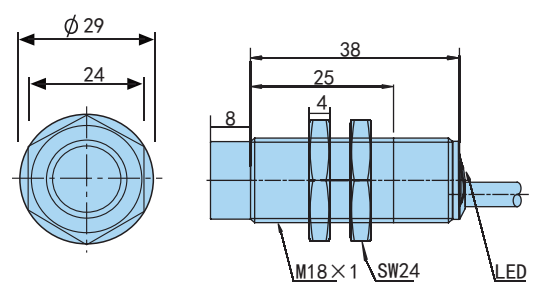
TL-12 Non-flush



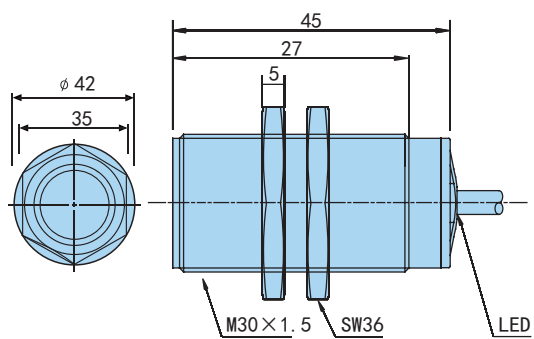
TL-18N Flush



TL-18 Non-flush



TL-30 Flush



TL-30 Non-flush

