

# Long Distance

## Pre-wired

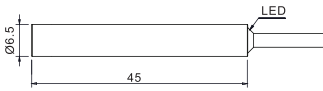
|                          |                         |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
|--------------------------|-------------------------|----------------------------------|------------------------|------------------------------------|------------------------|----------------------------------|-------------------------|------------------------------------|------------------------|------------------------|------------------------|
| Appearance               |                         |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Mounting                 | Shielded                |                                  | Shielded               |                                    |                        | Unshielded                       |                         | Unshielded                         |                        |                        |                        |
| Housing size             | φ 6.5                   | M8                               | M12                    | M18                                | M30                    | φ 6.5                            | M8                      | M12                                | M18                    | M30                    |                        |
| Sensing distance         | 3mm ± 10%               | 3mm ± 10%                        | 6mm ± 10%              | 12mm ± 10%                         | 22mm ± 10%             | 6mm ± 10%                        | 6mm ± 10%               | 10mm ± 10%                         | 20mm ± 10%             | 40mm ± 10%             |                        |
| Housing material         | Stainless steel         |                                  | Nickel copper alloy    |                                    |                        | Stainless steel                  |                         | Nickel copper alloy                |                        |                        |                        |
| Operating voltage        | 10~30V DC(Ripple < 10%) |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Voltage drop             | < 1.5V                  |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Load Current, Max        | 150mA                   |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Current consumption      | < 10mA                  |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Leakage current          | < 0.01mA                |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Switch frequency         | 1KHz                    |                                  | 800Hz                  | 300Hz                              | 150Hz                  | 500Hz                            |                         | 400Hz                              | 100Hz                  |                        |                        |
| Repeat accuracy          | < 5.0% (Sr)             |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Hysteresis               | < 15% (Sr)              |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Sensing surface material | PBT                     |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Operating Temperature    | -25°C~+75°C             |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Protective circuit       | Short circuit           |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Degree of protection     | IP67                    |                                  |                        |                                    |                        |                                  |                         |                                    |                        |                        |                        |
| Model No.                | NPN Normally open       | TYF6.5-03 <sup>NO</sup>          | TYF08-03 <sup>NO</sup> | TYF12-06 <sup>NO</sup>             | TYF18-12 <sup>NO</sup> | TYF30-22 <sup>NO</sup>           | TYN6.5-06 <sup>NO</sup> | TYN08-06 <sup>NO</sup>             | TYN12-10 <sup>NO</sup> | TYN18-20 <sup>NO</sup> | TYN30-40 <sup>NO</sup> |
|                          | Others                  | <sup>NO</sup> :NPN Normally open |                        | <sup>NC</sup> :NPN Normally closed |                        | <sup>PO</sup> :PNP Normally open |                         | <sup>PC</sup> :PNP Normally closed |                        |                        |                        |

## Connector Type

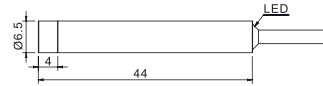
|                          |                         |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
|--------------------------|-------------------------|----------------------------------|----------------------------|------------------------------------|----------------------------|----------------------------------|----------------------------|------------------------------------|----------------------------|
| Appearance               |                         |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Mounting                 | Shielded                |                                  |                            |                                    | Unshielded                 |                                  |                            |                                    |                            |
| Housing size             | M8                      | M12                              | M18                        | M30                                | M8                         | M12                              | M18                        | M30                                |                            |
| Sensing distance         | 3mm ± 10%               | 6mm ± 10%                        | 12mm ± 10%                 | 22mm ± 10%                         | 6mm ± 10%                  | 10mm ± 10%                       | 20mm ± 10%                 | 40mm ± 10%                         |                            |
| Housing material         | Stainless steel         | Nickel copper alloy              |                            |                                    | Stainless steel            | Nickel copper alloy              |                            |                                    |                            |
| Operating voltage        | 10~30V DC(Ripple < 10%) |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Voltage drop             | < 1.5V                  |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Load Current, Max        | 150mA                   |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Current consumption      | < 10mA                  |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Leakage current          | < 0.01mA                |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Switch frequency         | 1KHz                    | 800Hz                            | 300Hz                      | 150Hz                              | 500Hz                      | 400Hz                            | 100Hz                      |                                    |                            |
| Repeat accuracy          | < 5.0% (Sr)             |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Hysteresis               | < 15% (Sr)              |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Sensing surface material | PBT                     |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Operating Temperature    | -25°C~+75°C             |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Protective circuit       | Short circuit           |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Degree of protection     | IP67                    |                                  |                            |                                    |                            |                                  |                            |                                    |                            |
| Model No.                | NPN Normally open       | TYF08-03 <sup>NO</sup> -E1       | TYF12-06 <sup>NO</sup> -E2 | TYF18-12 <sup>NO</sup> -E2         | TYF30-22 <sup>NO</sup> -E2 | TYN08-06 <sup>NO</sup> -E1       | TYN12-10 <sup>NO</sup> -E2 | TYN18-20 <sup>NO</sup> -E2         | TYN30-40 <sup>NO</sup> -E2 |
|                          | Others                  | <sup>NO</sup> :NPN Normally open |                            | <sup>NC</sup> :NPN Normally closed |                            | <sup>PO</sup> :PNP Normally open |                            | <sup>PC</sup> :PNP Normally closed |                            |

### φ6.5

TYF6.5-03□□

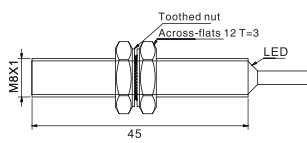


TYN6.5-06□□

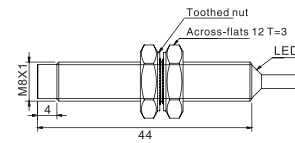


### M8

TYF08-03□□

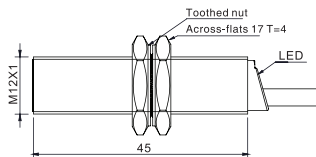


TYN08-06□□

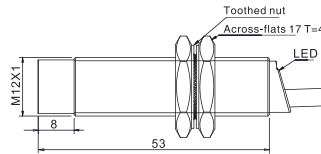


### M12

TYF12-06□□

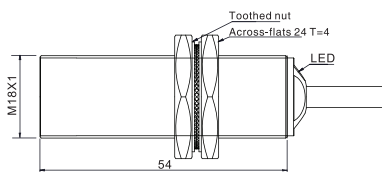


TYN12-10□□

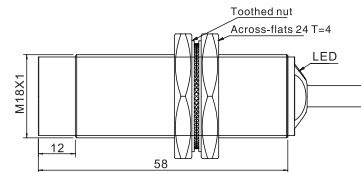


### M18

TYF18-12□□

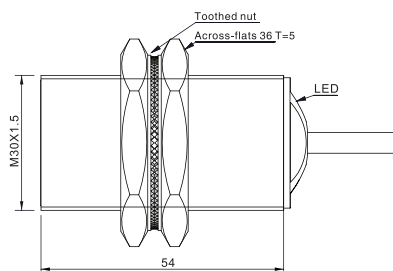


TYN18-20□□

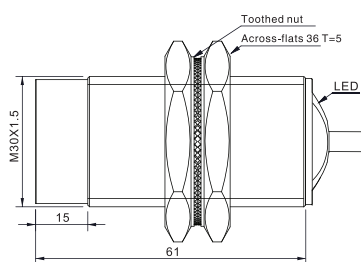


### M30

TYF30-22□□



TYN30-40□□

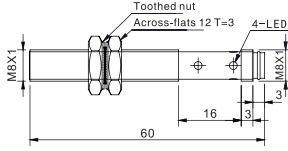


# Long Distance

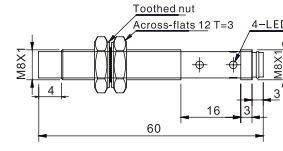
## Dimensions-Connector Type (Unit:mm)

### M8

TYF08-03□□-E1

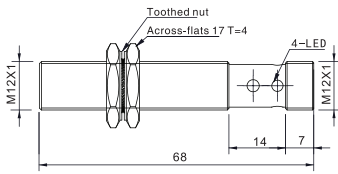


TYN08-06□□-E1

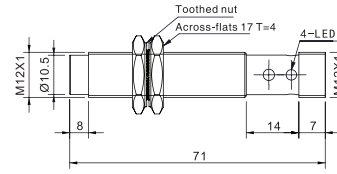


### M12

TYF12-06□□-E2

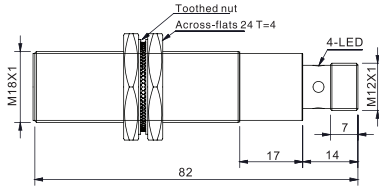


TYN12-10□□-E2

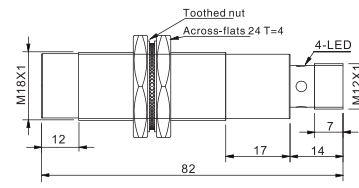


### M18

TYF18-12□□-E2

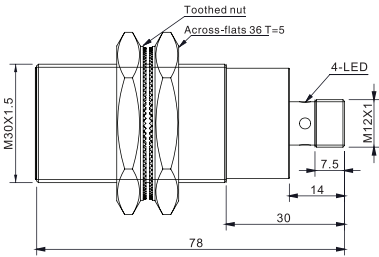


TYN18-20□□-E2



### M30

TYF30-22□□-E2



TYN30-40□□-E2

