


REMOTE SENSOR SERIES

Description

- Operation mode and max sensing range:
Thru beam: Dependent on amplifier
Diffuse proximity: Dependent on amplifier
- Optional sensor monitor LED
- Wide variety of housings
- High tolerance to hostile environments
- Cable or plug connections
- Available with optional  ATEX approval



The remote sensor series, which consists of a transmitter LT and receiver LR, is made to operate in conjunction with a Telco photoelectric amplifier from the PA, MPA or PAB programmes.

The remote sensors are available in a wide range of housings, with either cable or plug connection, and may be used in thru beam or diffuse proximity mode.

The series is available with optional power-(LR) and output-(LT) monitor LEDs for use with any Telco photoelectric amplifier which has the sensor LED drive feature incorporated.

Technical Data

| | LT | LR |
|---------------------------|--------------------------|-----------------------------------|
| Transmitter Diode | Ga Al As, (880 nm) | - |
| Photo Transistor | - | Silicon NPN |
| Cable Ø 4mm PVC Sleeves | 2 x 0,25 mm ² | 1 x 0,25 mm ² + shield |
| Min. cable bending radius | 45 mm | |

Environmental Data

| | | |
|---------------------------------|--------------------------------------------|-----------------------------------------------|
| Vibration | 10 – 55 Hz, 0,5 mm | |
| Shock | 30 g | |
| Light immunity, @ 20° incidence | 101 Series 100 Series 110/120 Series | > 50 000 lux > 80 000 lux > 100 000 lux |
| Temperature, operation | – 25 to +65 °C | |
| Temperature, storage | – 40 to +80 °C | |
| Sealing Class | IP 67 | |
| Approvals | CE | |

REMOTE SENSOR SERIES

Available Types

| | Series | Optical Angle | Connection | | 5 m Cable | 15 m Cable | 3 pin, M8 Plug | 4 pin, M12 Plug |
|-------------|--------|---------------|---------------------|----------------------|---------------|----------------|----------------|-----------------|
| | | | Housing Material | Housing Type | | | | |
| Transmitter | 101 | +/- 10° | Polycarbonate | Ø10 | LT 101 AP25 5 | LT 101 AP25 15 | LT 101 AP25 T3 | - |
| | | | | M12 x 1 | LT 101 TP25 5 | LT 101 TP25 15 | LT 101 TP25 T3 | - |
| | | | Nickel Plated Brass | M12 x 1 | LT 101 TB25 5 | LT 101 TB25 15 | LT 101 TB25 T3 | - |
| | | | Stainless Steel | | LT 101 TS25 5 | LT 101 TS25 15 | LT 101 TS25 T3 | - |
| | | | Polyester | □ 9,5 x 11,5 | LT 101 SG 5* | LT 101 SG 15* | LT 101 SG T3 | - |
| | | | ABS | Ø12,7 (Snap Housing) | LT 101 S22 5* | LT 101 S22 15* | - | - |
| Receiver | 101 | +/- 6° | Polycarbonate | Ø10 | LR 101 AP25 5 | LR 101 AP25 15 | LR 101 AP25 T3 | - |
| | | | | M12 x 1 | LR 101 TP25 5 | LR 101 TP25 15 | LR 101 TP25 T3 | - |
| | | | Nickel Plated Brass | M12 x 1 | LR 101 TB25 5 | LR 101 TB25 15 | LR 101 TB25 T3 | - |
| | | | Stainless Steel | | LR 101 TS25 5 | LR 101 TS25 15 | LR 101 TS25 T3 | - |
| | | | Polyester | □ 9,5 x 11,5 | LR 101 SG 5* | LR 101 SG 15* | LR 101 SG T3 | - |
| | | | ABS | Ø12,7 (Snap Housing) | LR 101 S22 5* | LR 101 S22 15* | - | - |


| | | | | | | | | |
|---------------------|---------------|-----------------|---------------------|----------------|-----------------|-----------------|-----------------|----------------|
| Transmitter | 100 | +/- 12° | Polycarbonate | Ø10 | LT 100H AP38 5 | LT 100H AP38 15 | LT 100H AP38 T3 | - |
| | | | | M12 x 1 | LT 100H TP38 5 | LT 100H TP38 15 | LT 100H TP38 T3 | - |
| | | | Nickel Plated Brass | M12 x 1 | LT 100H TB38 5 | LT 100H TB38 15 | LT 100H TB38 T3 | LT 100H TB58 J |
| | | Stainless Steel | LT 100H TS38 5 | | LT 100H TS38 15 | LT 100H TS38 T3 | LT 100H TS58 J | |
| | | +/- 6° | Polycarbonate | Ø10 | LT 100 AP38 5 | LT 100 AP38 15 | LT 100 AP38 T3 | - |
| | | | | M12 x 1 | LT 100 TP38 5 | LT 100 TP38 15 | LT 100 TP38 T3 | - |
| Nickel Plated Brass | M12 x 1 | | LT 100 TB38 5 | LT 100 TB38 15 | LT 100 TB38 T3 | LT 100 TB58 J | | |
| Stainless Steel | | LT 100 TS38 5 | LT 100 TS38 15 | LT 100 TS38 T3 | LT 100 TS58 J | | | |
| Receiver | 100 | +/- 7° | Polycarbonate | Ø10 | LR 100 AP38 5 | LR 100 AP38 15 | LR 100 AP38 T3 | - |
| | | | | M12 x 1 | LR 100 TP38 5 | LR 100 TP38 15 | LR 100 TP38 T3 | - |
| | | | Nickel Plated Brass | M12 x 1 | LR 100 TB38 5 | LR 100 TB38 15 | LR 100 TB38 T3 | LR 100 TB58 J |
| Stainless Steel | LR 100 TS38 5 | LR 100 TS38 15 | LR 100 TS38 T3 | | LR 100 TS58 J | | | |

| | | | | | | | | |
|-----------------|---------------|----------------|---------------------|---------|---------------|----------------|----------------|---------------|
| Transmitter | 110 | +/- 5° | Polycarbonate | Ø10 | LT 110 AP38 5 | LT 110 AP38 15 | LT 110 AP38 T3 | - |
| | | | | M12 x 1 | LT 110 TP38 5 | LT 110 TP38 15 | LT 110 TP38 T3 | - |
| | | | Nickel Plated Brass | M12 x 1 | LT 110 TB38 5 | LT 110 TB38 15 | LT 110 TB38 T3 | LT 110 TB58 J |
| Stainless Steel | LT 110 TS38 5 | LT 110 TS38 15 | LT 110 TS38 T3 | | LT 110 TS58 J | | | |
| Receiver | 110 | +/- 3° | Polycarbonate | Ø10 | LR 110 AP38 5 | LR 110 AP38 15 | LR 110 AP38 T3 | - |
| | | | | M12 x 1 | LR 110 TP38 5 | LR 110 TP38 15 | LR 110 TP38 T3 | - |
| | | | Nickel Plated Brass | M12 x 1 | LR 110 TB38 5 | LR 110 TB38 15 | LR 110 TB38 T3 | LR 110 TB58 J |
| Stainless Steel | LR 110 TS38 5 | LR 110 TS38 15 | LR 110 TS38 T3 | | LR 110 TS58 J | | | |

| | | | | | | | | |
|-------------|-----|----------|---------------------|---------|---------------|----------------|---|---|
| Transmitter | 120 | +/- 4° | Nickel Plated Brass | M18 x 1 | LT 120 TB45 5 | LT 120 TB45 15 | - | - |
| Receiver | | +/- 2,5° | | | LR 120 TB45 5 | LR 120 TB45 15 | - | - |

Note: 1. Photo amplifiers to be ordered separately.

2. Remote sensors are available with optional power (LR) and output (LT) monitor LEDs for use with the applicable Telco photoelectric amplifier, which has the sensor LED drive. Add 'L' after the series number for sensor monitor LED e.g. LT/LR 101L AP 25 5. Sensors marked * are not available with this optional feature.

3. Remote sensors with cable connection are available to comply with  ATEX directive marked Group II, Category 3 for gas and dust, temperature class T6, EEx nA II U non-sparking component. Add "/EX" after the series number, e.g. LT/LR 100/EX TS38 5.

REMOTE SENSOR SERIES

Applicable Photoelectric Amplifiers and Maximum Ranges

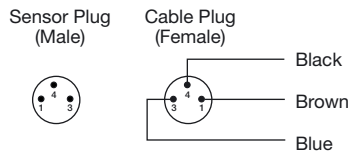
| Series | 101 | | 100 | | 110 | | 120 | | |
|-------------------------------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-------|
| | Thru-beam | Diffuse Proximity | Thru-beam | Diffuse Proximity | Thru-beam | Diffuse Proximity | Thru-beam | Diffuse Proximity | |
| Photoelectric Amplifier Series | | | | | | | | | |
| PA 01 | 8 m | 0,6 m | 10 m | 0,7 m | 23 m | 1,6 m | 45 m | 3,5 m | |
| PA 09 | 5 m | 0,4 m | - | - | - | - | - | - | |
| PA 10 | A | 11 m | 0,9 m | - | - | - | - | - | |
| | B | - | - | 15 m | 1,1 m | 35 m | 2 m | 60 m | 4 m |
| PA 11 | - | - | 18 m | 1,1 m | 40 m | 2 m | 70 m | 5 m | |
| Multiplexed Amplifier Series | | | | | | | | | |
| MPA 21 | - | - | 10 m | 0,7 m | 25 m | 1,6 m | 45 m | 3,5 m | |
| MPA 41 | A/B | - | - | 8 m | 0,6 m | 18 m | 1,3 m | 35 m | 2 m |
| | C/D | - | - | 4 m | 0,4 m | 9 m | 0,7 m | 18 m | 1,3 m |
| MPA 81 | A/B | - | - | 8 m | 0,6 m | 18 m | 1,3 m | 35 m | 2 m |
| | C/D | - | - | 4 m | 0,4 m | 9 m | 0,7 m | 18 m | 1,3 m |
| Photoelectric Amplifier Bus Series | | | | | | | | | |
| PAB 10 | - | - | 18 m | 1,1 m | 40 m | 2 m | 70 m | 4 m | |
| PAB 20 | - | - | 12 m | 0,8 m | 27 m | 1,7 m | 47 m | 2,6 m | |
| PAB 30 | - | - | 12 m | 0,8 m | 27 m | 1,7 m | 47 m | 2,6 m | |

Note: Sensing ranges using fibre optics, please refer to page 131.

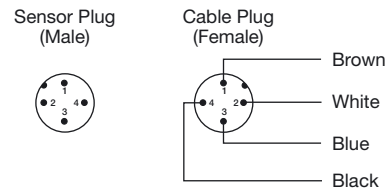
Connections

| | Cable | M8 Plug/Cable | M12 Plug/Cable |
|--------------------|--------|---------------|----------------|
| Transmitter Signal | Red | Pin 1/Brown | Pin 1/Brown |
| Transmitter Ground | Black | Pin 3/Blue | Pin 3/Blue |
| Receiver Signal | Yellow | Pin 4/Black | Pin 4/Black |
| Receiver Ground | Shield | Pin 3/Blue | Pin 3/Blue |

3 pin, M8

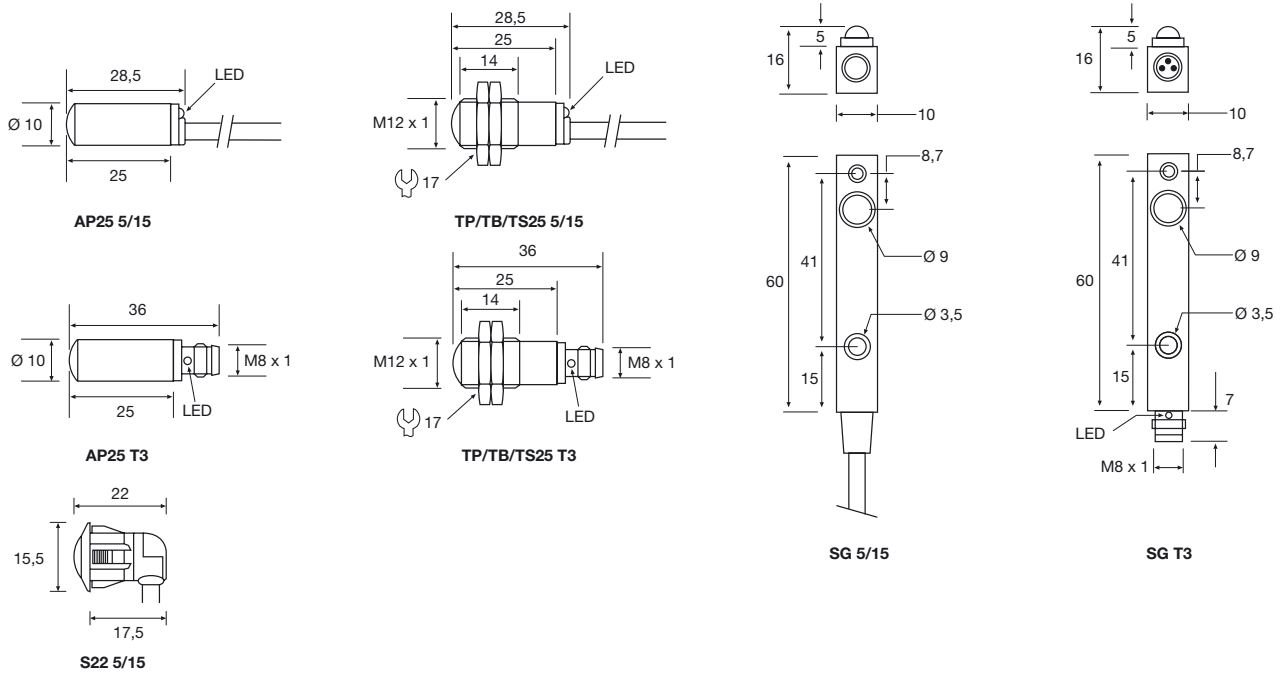


4 pin, M12



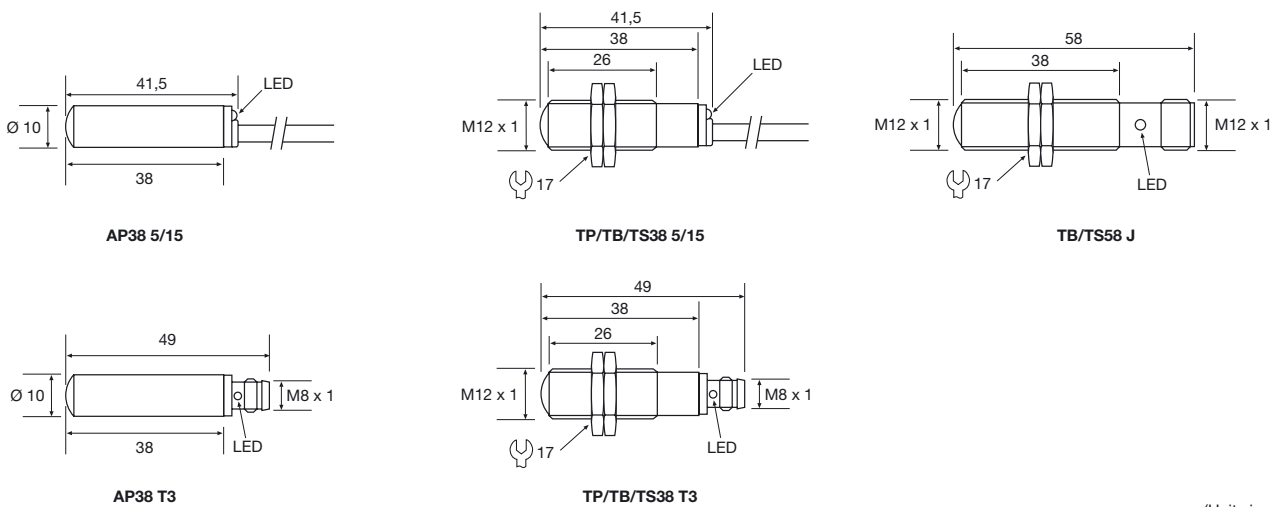
Dimensions and Descriptions

Series 101



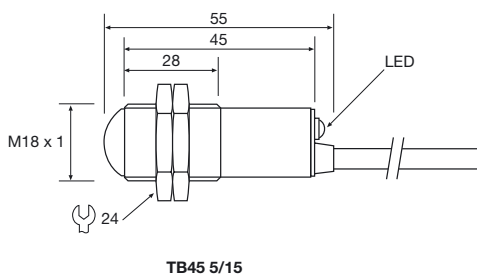
(Units in mm)

Series 100/110



(Units in mm)

Series 120

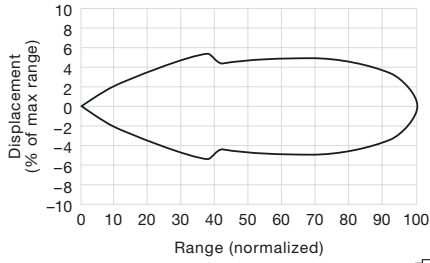


(Units in mm)

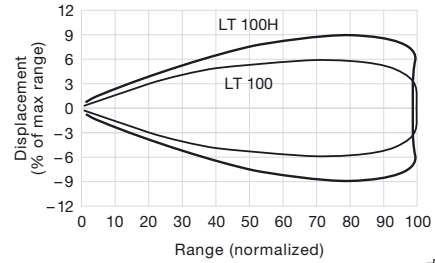
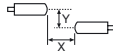
REMOTE SENSOR SERIES

Sensing Characteristics

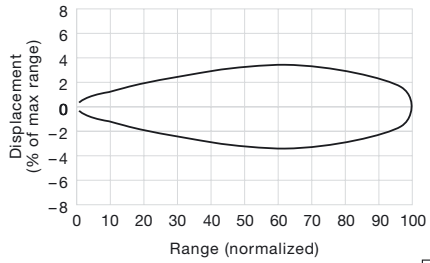
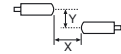
Parallel Displacement (Thru Beam)



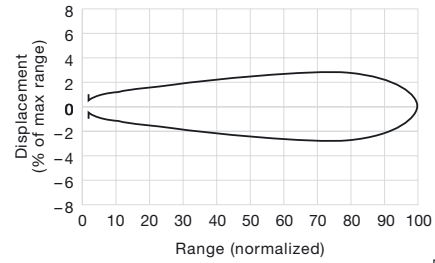
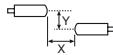
Series 101



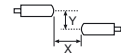
Series 100



Series 110

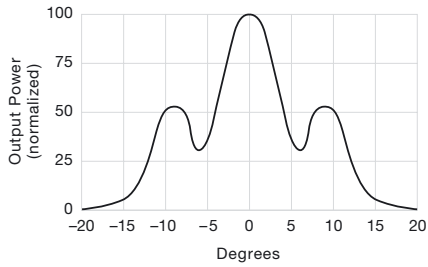


Series 120

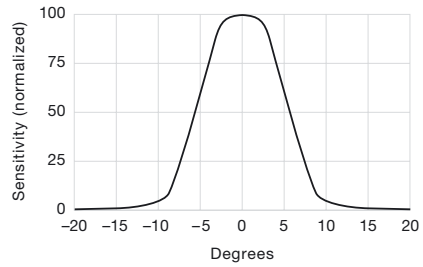


Sensing Characteristics

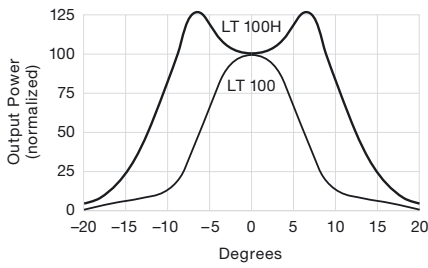
Angular Displacement (Thru Beam)



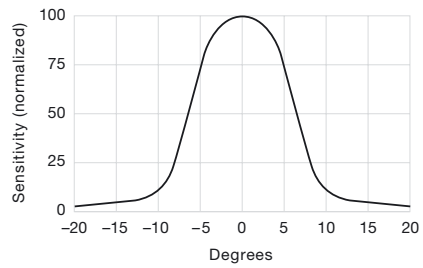
LT 101



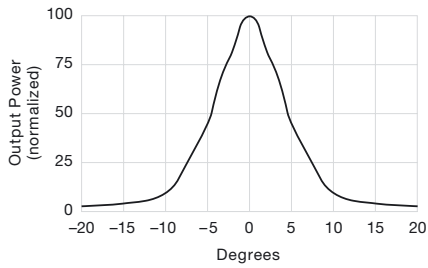
LR 101



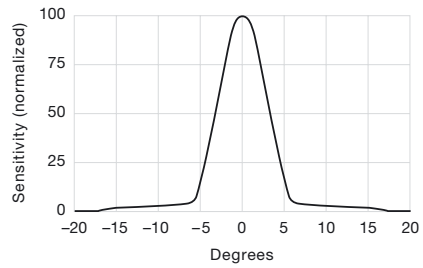
LT 100



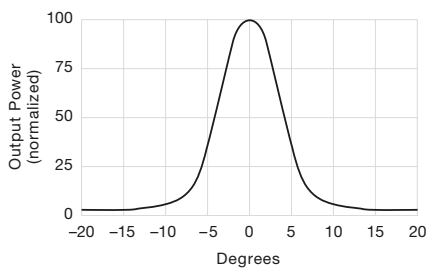
LR 100



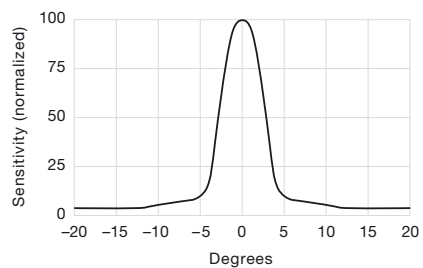
LT 110



LR 110



LT 120



LR 120

Telco reserves the right to change specifications without notice.