



Photoelectric sensors
W27-3, Through-beam photoelectric sensor

WSE27-3P1710



Model Name > [WSE27-3P1710](#)
Part No. > [1028059](#)



Illustration may differ

At a glance

- Long sensing range with a high operating reserve
- Quick alignment with red emitter
- Resistant to environmental noise such as ambient light
- Optional alarm output, front screen heating, test input, time delays, and universal AC/DC voltage
- Operating temperature: -40 °C - +60 °C
- UL approval

Your benefits

- Less contamination due to high operating reserves, reducing downtime
- Optional features, such as time delays, enhance functionality when needed.
- Resistant to vibrations, reducing downtime
- Reliable operation in harsh environments with temperatures as low as -40 °C
- Durable housing with reinforced mounting holes withstands harsh conditions



Features

| | |
|----------------------------------|-----------------------------------|
| Sensor/detection principle: | Through-beam photoelectric sensor |
| Dimensions (W x H x D): | 24.6 mm x 80.6 mm x 54 mm |
| Housing design (light emission): | Rectangular |
| Sensing range max.: | 0 m ... 35 m |
| Sensing range: | 0 m ... 25 m |
| Type of light: | Infrared light |
| Light source: | LED ¹⁾ |
| Wave length: | 880 nm |
| Angle of dispersion: | Ca. 6 ° |
| Light spot size (distance): | Ø 3.7 m (25 m) |

¹⁾ Average service life of 100,000 h at T_A = +25 °C

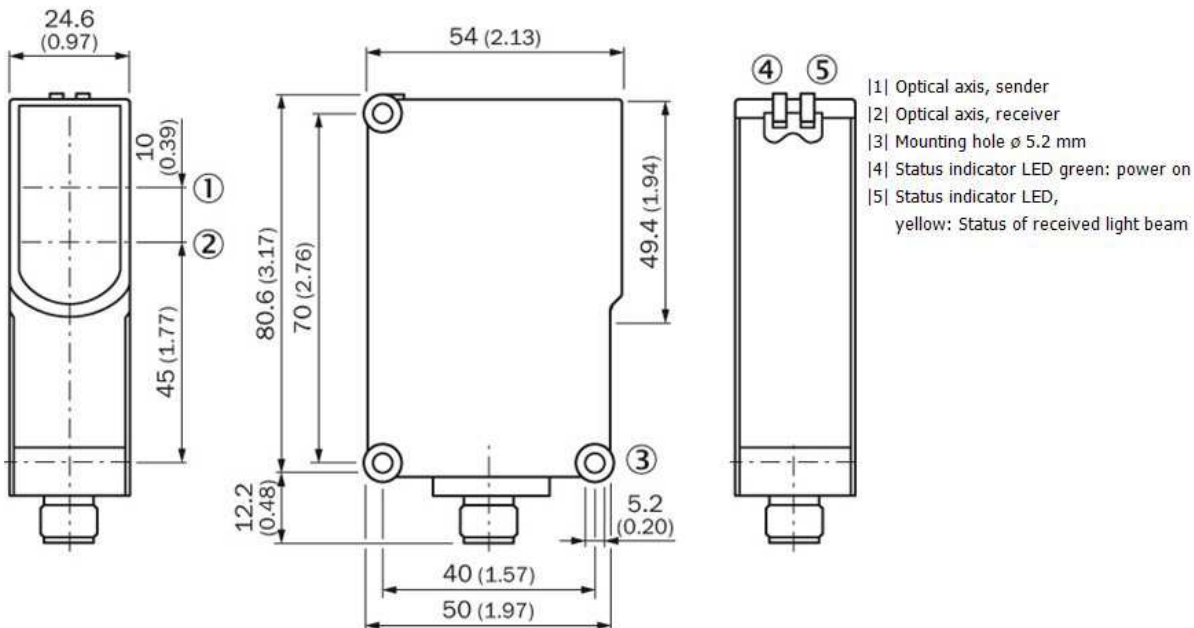
Mechanics/electronics

| | |
|------------------------------|-----------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Power consumption, sender: | 45 mA ²⁾ |
| Power consumption, receiver: | 20 mA ³⁾ |
| Output type: | PNP |
| Output function: | Complementary |
| Switching mode: | Light/dark switching |

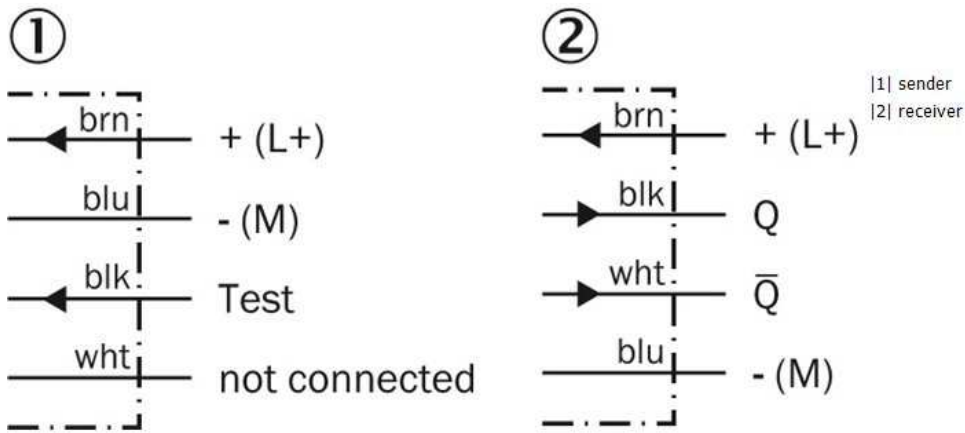
| | |
|---------------------------------------|--|
| Signal voltage PNP HIGH/LOW: | Approx. VS - 2.5 V/0 V |
| Output current I _{max} :: | ≤ 100 mA |
| Response time: | ≤ 500 μs ⁴⁾ |
| Switching frequency: | 1,000 Hz ⁵⁾ |
| Angle of reception: | Ca. 3 ° |
| Connection type: | Cable, 4-wire, 3 m ⁶⁾ |
| Cable material: | PVC |
| Circuit protection::: | A, B, C ^{7) 8) 9)} |
| Protection class: | II ¹⁰⁾ |
| Weight: | 200 g |
| Housing material: | ABS, Plastic |
| Optics material: | PMMA |
| Enclosure rating: | IP 66 IP 67 |
| Test input sender off: | TE to 0 V |
| Ambient operating temperature: | -40 °C ... 60 °C |
| Ambient storage temperature: | -40 °C ... 75 °C |
| Part number of individual components: | Receiver, WE27-3P1710, 2033699, Sender, WS27-3D1710, 2033700 |
| UL File No.: | NRKH.E181493 & NRKH7.E181493 |

1) Limit values, operation in short-circuit protected network max. 8 A 2) 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) Do not bend below 0 °C 7) A = V_S connections reverse-polarity protected 8) B = inputs and output reverse-polarity protected 9) C = interference suppression 10) Reference voltage 50 V DC

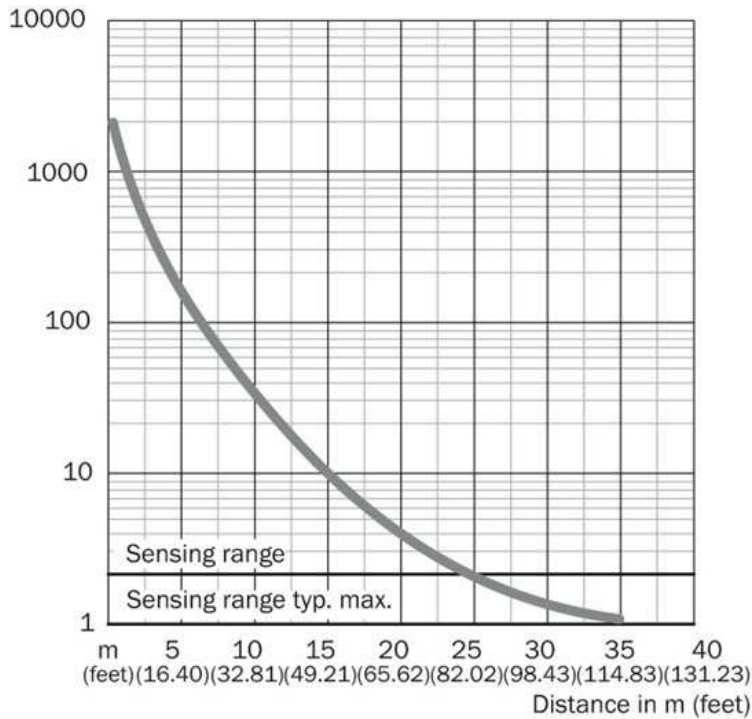
Dimensional drawing



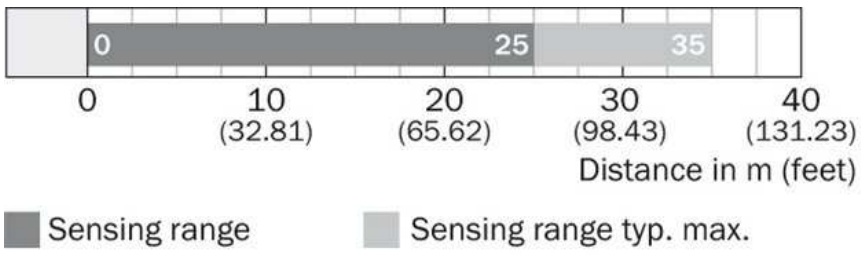
Connection diagram



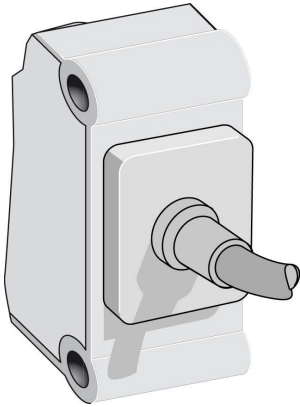
Characteristic curve



Sensing range diagram



Connection type



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