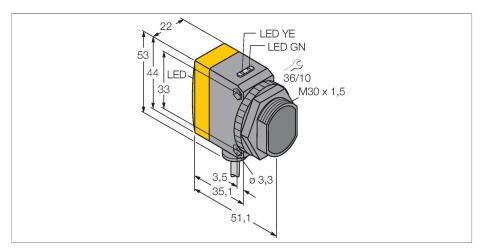
# QS303E W/30' Photoelectric Sensor – Opposed Mode Sensor (Emitter)



#### Technical data

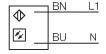
| ID 3073210  Optical data  Function Opposed mode sensor  Operating mode Emitter  Light type IR  Wavelength 875 nm  Range 060000 mm  Electrical data  Operating voltage 12250 VDC  Operating voltage 24250 VAC  No-load current ≤ 70 mA  Readiness delay ≤ 100 ms  Response time typical < 15 ms  Mechanical data  Design Rectangular with thread, QS30  Dimensions Ø 30 x 51.5 x 22 x 44 mm  Housing material Plastic, Thermoplastic material, Yellow Lens plastic, Acrylic  Electrical connection Cable, 9 m, PVC  Number of cores 2  Core cross-section 0.5 mm²  Ambient temperature -20+70 °C  Protection class IP67  Power-on indication LED, Green | Туре                   | QS303E W/30'                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------|
| Function Opposed mode sensor  Operating mode Emitter  Light type IR  Wavelength 875 nm  Range 060000 mm  Electrical data Operating voltage 12250 VDC  Operating voltage 24250 VAC  No-load current ≤ 70 mA  Readiness delay ≤ 100 ms  Response time typical <15 ms  Mechanical data  Design Rectangular with thread, QS30  Dimensions Ø 30 x 51.5 x 22 x 44 mm  Housing material Plastic, Thermoplastic material, Yellow  Lens plastic, Acrylic  Electrical connection Cable, 9 m, PVC  Number of cores 2  Core cross-section 0.5 mm²  Ambient temperature -20+70 °C  Protection class IP67                                                            | ID                     | 3073210                                 |
| Operating mode Emitter  Light type IR  Wavelength 875 nm  Range 060000 mm  Electrical data Operating voltage 12250 VDC Operating voltage 24250 VAC  No-load current ≤ 70 mA  Readiness delay ≤ 100 ms  Response time typical <15 ms  Mechanical data  Design Rectangular with thread, QS30  Dimensions Ø 30 x 51.5 x 22 x 44 mm  Housing material Plastic, Thermoplastic material, Yellow Lens plastic, Acrylic  Electrical connection Cable, 9 m, PVC  Number of cores 2  Core cross-section 0.5 mm²  Ambient temperature -20+70 °C  Protection class IP67                                                                                            | Optical data           |                                         |
| Light type         IR           Wavelength         875 nm           Range         060000 mm           Electrical data         060000 mm           Operating voltage         12250 VDC           Operating voltage         24250 VAC           No-load current         ≤ 70 mA           Readiness delay         ≤ 100 ms           Response time typical         < 15 ms                                                                                                                                                                                                                                                                               | Function               | Opposed mode sensor                     |
| Wavelength875 nmRange060000 mmElectrical data12250 VDCOperating voltage24250 VACNo-load current≤ 70 mAReadiness delay≤ 100 msResponse time typical< 15 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Operating mode         | Emitter                                 |
| Range 060000 mm  Electrical data  Operating voltage 12250 VDC  Operating voltage 24250 VAC  No-load current ≤ 70 mA  Readiness delay ≤ 100 ms  Response time typical <15 ms  Mechanical data  Design Rectangular with thread, QS30  Dimensions Ø 30 x 51.5 x 22 x 44 mm  Housing material Plastic, Thermoplastic material, Yellow  Lens plastic, Acrylic  Electrical connection Cable, 9 m, PVC  Number of cores 2  Core cross-section 0.5 mm²  Ambient temperature -20+70 °C  Protection class IP67                                                                                                                                                   | Light type             | IR                                      |
| Electrical data  Operating voltage  12250 VDC  Operating voltage  24250 VAC  No-load current  ≤ 70 mA  Readiness delay  ≤ 100 ms  Response time typical  ✓ 15 ms  Mechanical data  Design  Rectangular with thread, QS30  Dimensions  Ø 30 x 51.5 x 22 x 44 mm  Housing material  Plastic, Thermoplastic material, Yellow  Lens  Plastic, Acrylic  Electrical connection  Cable, 9 m, PVC  Number of cores  2  Core cross-section  0.5 mm²  Ambient temperature  -20+70 °C  Protection class                                                                                                                                                           | Wavelength             | 875 nm                                  |
| Operating voltage       12250 VDC         Operating voltage       24250 VAC         No-load current       ≤ 70 mA         Readiness delay       ≤ 100 ms         Response time typical       < 15 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Range                  | 060000 mm                               |
| Operating voltage       24250 VAC         No-load current       ≤ 70 mA         Readiness delay       ≤ 100 ms         Response time typical       < 15 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Electrical data        |                                         |
| No-load current       ≤ 70 mA         Readiness delay       ≤ 100 ms         Response time typical       < 15 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Operating voltage      | 12250 VDC                               |
| Readiness delay ≤ 100 ms   Response time typical < 15 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Operating voltage      | 24250 VAC                               |
| Response time typical < 15 ms  Mechanical data  Design Rectangular with thread, QS30  Dimensions Ø 30 x 51.5 x 22 x 44 mm  Housing material Plastic, Thermoplastic material, Yellow  Lens plastic, Acrylic  Electrical connection Cable, 9 m, PVC  Number of cores 2  Core cross-section 0.5 mm²  Ambient temperature -20+70 °C  Protection class IP67                                                                                                                                                                                                                                                                                                 | No-load current        | ≤ 70 mA                                 |
| Mechanical dataDesignRectangular with thread, QS30DimensionsØ 30 x 51.5 x 22 x 44 mmHousing materialPlastic, Thermoplastic material, YellowLensplastic, AcrylicElectrical connectionCable, 9 m, PVCNumber of cores2Core cross-section0.5 mm²Ambient temperature-20+70 °CProtection classIP67                                                                                                                                                                                                                                                                                                                                                           | Readiness delay        | ≤ 100 ms                                |
| DesignRectangular with thread, QS30DimensionsØ 30 x 51.5 x 22 x 44 mmHousing materialPlastic, Thermoplastic material, YellowLensplastic, AcrylicElectrical connectionCable, 9 m, PVCNumber of cores2Core cross-section0.5 mm²Ambient temperature-20+70 °CProtection classIP67                                                                                                                                                                                                                                                                                                                                                                          | Response time typical  | < 15 ms                                 |
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| Housing material Plastic, Thermoplastic material, Yellow Lens plastic, Acrylic  Electrical connection Cable, 9 m, PVC  Number of cores 2  Core cross-section 0.5 mm²  Ambient temperature -20+70 °C  Protection class IP67                                                                                                                                                                                                                                                                                                                                                                                                                             | Design                 | Rectangular with thread, QS30           |
| Lens     plastic, Acrylic       Electrical connection     Cable, 9 m, PVC       Number of cores     2       Core cross-section     0.5 mm²       Ambient temperature     -20+70 °C       Protection class     IP67                                                                                                                                                                                                                                                                                                                                                                                                                                     | Dimensions             | Ø 30 x 51.5 x 22 x 44 mm                |
| Electrical connection  Cable, 9 m, PVC  Number of cores  2  Core cross-section  0.5 mm²  Ambient temperature  -20+70 °C  Protection class  IP67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Housing material       | Plastic, Thermoplastic material, Yellow |
| Number of cores     2       Core cross-section     0.5 mm²       Ambient temperature     -20+70 °C       Protection class     IP67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Lens                   | plastic, Acrylic                        |
| Core cross-section 0.5 mm²  Ambient temperature -20+70 °C  Protection class IP67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Electrical connection  | Cable, 9 m, PVC                         |
| Ambient temperature -20+70 °C  Protection class IP67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Number of cores        | 2                                       |
| Protection class IP67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Core cross-section     | 0.5 mm <sup>2</sup>                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ambient temperature    | -20+70 °C                               |
| Power-on indication LED, Green                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Protection class       | IP67                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Power-on indication    | LED, Green                              |
| Excess gain indication LED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Excess gain indication | LED                                     |



## **Features**

- ■Cable, PVC, 9 m
- ■Protection class IP67
- ■LED all-round visible
- Operating voltage: 12...250 VDC or 24... 250 VAC

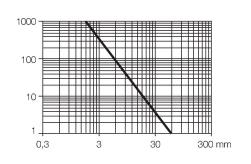
# Wiring diagram



# Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite to each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Large distance operation is possible due to an excellent light/dark contrast and an extremely high excess gain.

Excess gain curve Excess gain in relation to the distance

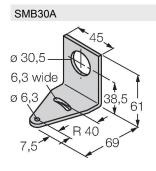




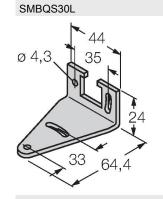
## Technical data

| Tests/approvals |                                           |
|-----------------|-------------------------------------------|
| MTTF            | 402 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals       | CE                                        |

#### Accessories

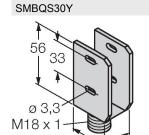


3032723 Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

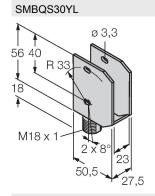


Mounting bracket, stainless steel, for QS30 series

3002809

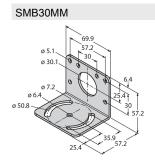


3002811 Protective housing, stainless steel, for QS30 series



Protective housing with safety glas panel, stainless steel, for QS30 series

3072741



3027162 Mounting bracket, rectangular, stainless steel, for sensors with 30 mm thread, wide holes for accurate alignment



Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable

3052521