

QM Series / Through-beam sensor / Diffuse reflection sensor / Retro-reflective sensor  
Products



- Construction type: Cubic
- Measuring range: 0 - 20000 mm
- Connection type: Cable and M8 connector
- Housing material: Plastic (polybutyleneterephthalate)
- IP67 Ingress protection
- Power supply: 10 - 30 V DC

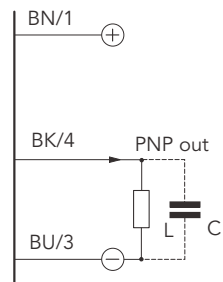
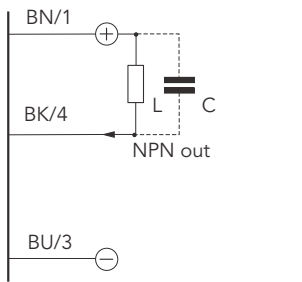
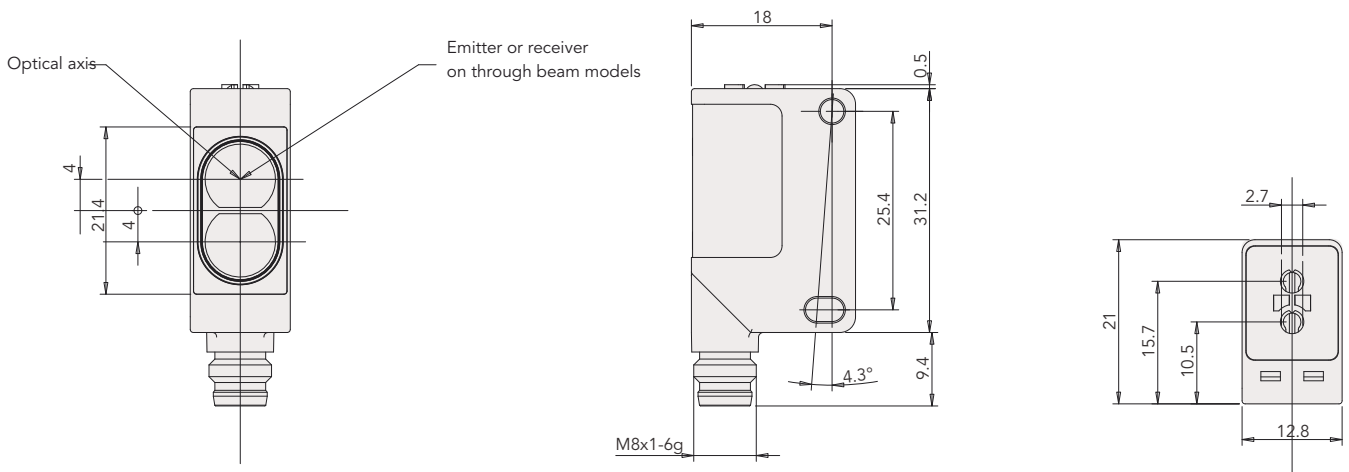
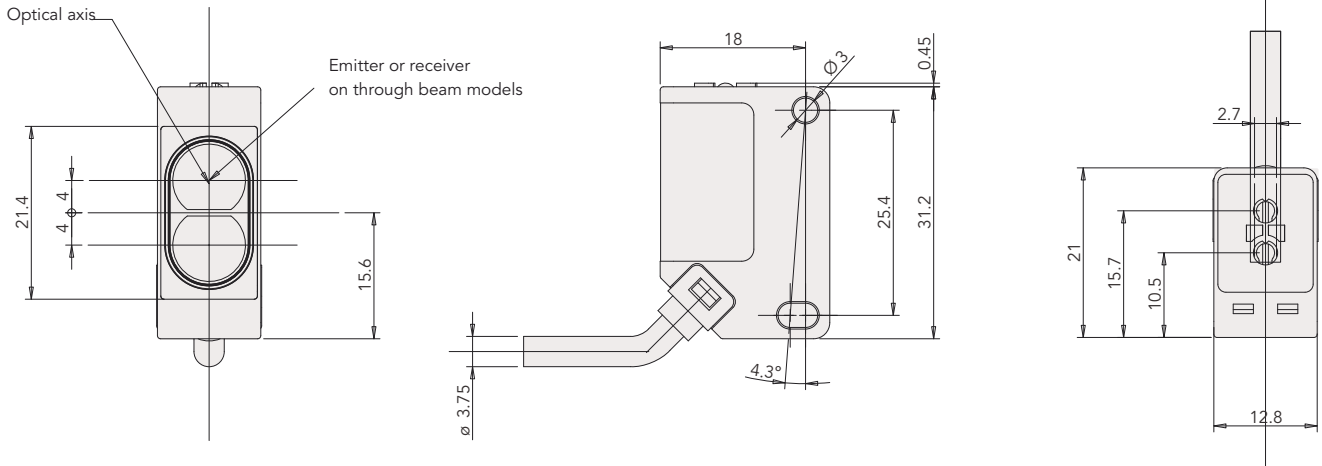
| TYPE  | NOMINAL MEASURING RANGE | SWITCHING FREQUENCY | SENSITIVITY ADJUSTMENT | ANSCHLUSSART       | PNP NO / NC DARK-ON / LIGHT-ON | NPN NO / NC DARK-ON / LIGHT-ON |
|---|-------------------------|---------------------|------------------------|--------------------|--------------------------------|--------------------------------|
| <b>QM SERIE</b>                                       |                         |                     |                        |                    |                                |                                |
| Diffuse reflection sensor                             | 0 - 100 mm              | 1000 Hz             | Yes                    | Cable 4-core       | QMRB/0P-0A                     | QMRB/0N-0A                     |
|   |                         |                     |                        | M8 connector 4-pin | QMRB/0P-0F                     | QMRB/0N-0F                     |
|   | 0 - 400 mm              | 2000 Hz             | Yes                    | Cable 4-core       | QMR7/0P-0A                     | QMR7/0N-0A                     |
|   |                         |                     |                        | M8 connector 4-pin | QMR7/0P-0F                     | QMR7/0N-0F                     |
|   | 0 - 1000 mm             | 1000 Hz             | Yes                    | Cable 4-core       | QMR8/0P-0A                     | QMR8/0N-0A                     |
|   |                         |                     |                        | M8 connector 4-pin | QMR8/0P-0F                     | QMR8/0N-0F                     |
| Retro-reflective sensor with polarised light          | 0 - 5000 mm             | 2000 Hz             | Yes                    | Cable 4-core       | QMRN/0P-0A                     | QMRN/0N-0A                     |
|   |                         |                     |                        | M8 connector 4-pin | QMRN/0P-0F                     | QMRN/0P-0F                     |
| Diffuse reflection sensor with background suppression | 50 - 1500 mm            | 2000 Hz             | Yes                    | Cable 4-core       | QMRG/0P-0A                     | QMRG/0N-0A                     |
|   |                         |                     |                        | M8 connector 4-pin | QMRG/0P-0F                     | QMRG/0N-0F                     |
|   | 400 - 4000 mm           | 2000 Hz             | Yes                    | Cable 4-core       | QMRL/0P-0A                     | QMRL/0N-0A                     |
|   |                         |                     |                        | M8 connector 4-pin | QMRL/0P-0F                     | QMRL/0N-0F                     |
| Through-beam sensor Emitter                           | 0 - 20000 mm            | 2000 Hz             | Yes                    | Cable 4-core       | QMRH/00-0A                     |                                |
|   |                         |                     |                        | M8 connector 4-pin | QMRH/00-0F                     |                                |
| Through-beam sensor Receiver                          | 0 - 20000 mm            | 2000 Hz             | No                     | Cable 4-core       | QMRD/0P-0A                     | QMRD/0N-0A                     |
|   |                         |                     |                        | M8 connector 4-pin | QMRD/0P-0F                     | QMRD/0P-0F                     |

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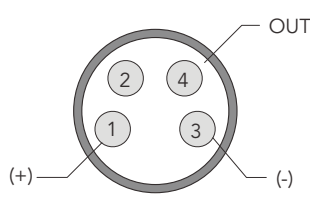
## Technical Details

|                                 | QMRB  | QMR7 | QMR8 | QMRN | QMRG | QMRL | QMRD | QMRH |
|---------------------------------|---|------|------|------|------|------|------|------|
| <b>GENERAL DATA</b>             |   |      |      |      |      |      |      |      |
| Series                          | QM  |      |      |      |      |      |      |      |
| Sensorfunction                  | Switch  |      |      |      |      |      |      | -    |
| Construction type               | Cubic   |      |      |      |      |      |      |      |
| Display elements                | LED – output status   |      |      |      |      |      |      |      |
| Light source                    | Red light, visible  |      |      |      |      |      |      |      |
| <b>MEASUREMENT DATA</b>         |   |      |      |      |      |      |      |      |
| Repeat accuracy                 | 5 %   |      |      |      |      |      |      |      |
| Temperature drift               | ≤ 10 %  |      |      |      |      |      |      |      |
| <b>OUTPUTS</b>                  |   |      |      |      |      |      |      |      |
| Time delay before availability  | ≤ 100 ms  |      |      |      |      |      |      |      |
| Switching hysteresis            | ≤ 10 %  |      |      |      |      |      |      |      |
| <b>POWER SUPPLY</b>             |   |      |      |      |      |      |      |      |
| Power supply V DC               | 10 - 30 V DC  |      |      |      |      |      |      |      |
| Load current max.               | ≤ 100 mA  |      |      |      |      |      |      |      |
| No-load current                 | ≤ 30 mA   |      |      |      |      |      |      |      |
| Short circuit protection        | Yes   |      |      |      |      |      |      | -    |
| Reverse polarity protection     | Yes   |      |      |      |      |      |      |      |
| Ripple                          | ≤ 10 %  |      |      |      |      |      |      |      |
| Voltage drop                    | 2 V at 100 mA   |      |      |      |      |      |      |      |
| Leakage current                 | ≤ 10 µA   |      |      |      |      |      |      |      |
| <b>PHYSICAL CHARACTERISTICS</b> |   |      |      |      |      |      |      |      |
| Housing material                | Plastic (polybutyleneterephthalate)                                       |      |      |      |      |      |      |      |
| Optic material                  | PMMA  |      |      |      |      |      |      |      |
| Ingress protection              | IP67  |      |      |      |      |      |      |      |
| Dimensions (W x H x D)          | 12.8 x 31.65 x 21 mm (cable version) / 12.8 x 41.1 x 21 mm (plug version) |      |      |      |      |      |      |      |
| Cable length                    | 2000 mm (cable version)   |      |      |      |      |      |      |      |
| Weight                          | 52 g (cable version) / 10 g (plug version)                                |      |      |      |      |      |      |      |
| Tightening torque               | 1 Nm  |      |      |      |      |      |      |      |
| <b>ENVIRONMENTAL</b>            |   |      |      |      |      |      |      |      |
| Operating temperature range     | -25 - +70 °C  |      |      |      |      |      |      |      |
| Storage temperature range       | -30 - +80 °C  |      |      |      |      |      |      |      |
| External light                  | max. 10000 lux  |      |      |      |      |      |      |      |
| <b>APPROVALS</b>                |   |      |      |      |      |      |      |      |
| CE                              | EN 60947-5-2  |      |      |      |      |      |      |      |

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 Dimensions / Electrical diagrams / Connector

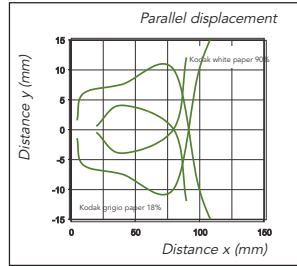
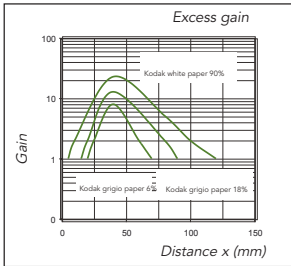


BN: brown  
 BK: black  
 BU: blue

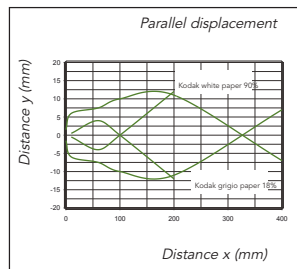
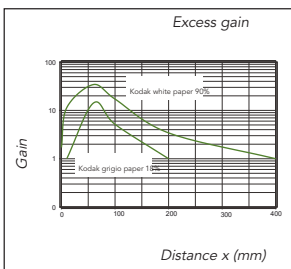


QM Series / Through-beam sensor / Diffuse reflection sensor / Retro-reflective sensor  
Sensing area

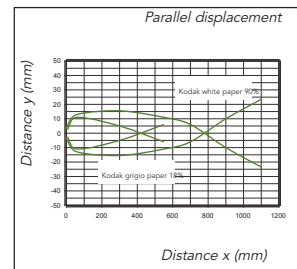
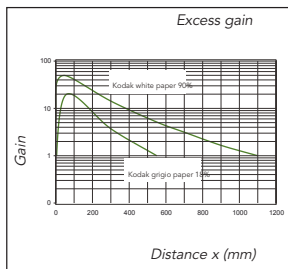
QMRB/0x-0x



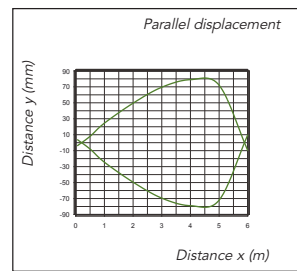
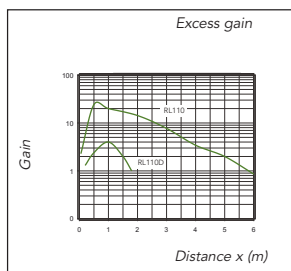
QMR7/0x-0x



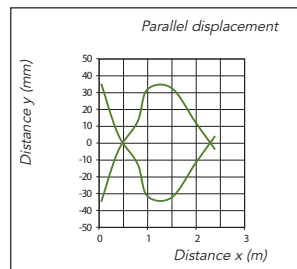
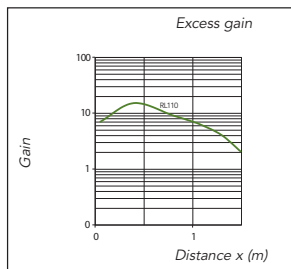
QMR8/0x-0x



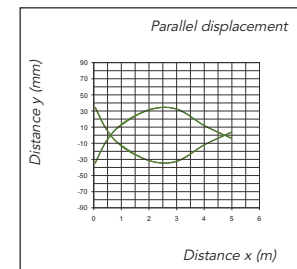
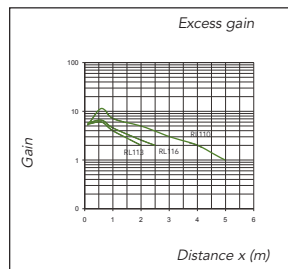
QMRN/0x-0x



QMRG/0x-0x



QMRL/0x-0x



QMRH/0x-0x - QMRD/0x-0x

