



# QM

## QMR8/0N-0F

Photo.Min, NPN-NO/NC, M8 plug, Diffuse  
MINIATURIZED PHOTOELECTRIC SENSORS WITH HIGH  
PERFORMANCE

## OVERVIEW

- Cubic miniaturized photoelectric high-performance sensors with long sensing distance
- 2 kHz switching frequency, background suppression with mechanical adjustment
- Wide range of models: diffuse reflection with short, medium and long sensing distance, polarized, reflective for transparent objects, through-beam and background suppression
- Available with cable and M8 plug exit or with M8-M12 pig-tail
- Selectable LO/DO output state
- Completely filled with resin (except background suppression models)
- Complete protection against electrical damages



## TECHNICAL FEATURES

### Detection properties

|                          |         |
|--------------------------|---------|
| Nominal sensing distance | 1m      |
| Thermal drift of Sr      | ≤10% Sr |
| Repeat Accuracy          | 5%      |
| Sensitivity adjustment   | Trimmer |

## Application

|                    |  |
|--------------------|--|
| Function Principle | Diffuse reflection (long distance, >600mm) |
| Notes              | white target Kodak 90% 400 x 400mm         |
| Optic position     | Radial 90°                                 |

## Outputs

|                     |                    |
|---------------------|--------------------|
| Output type         | NPN L/D Selectable |
| Output Function     | L/D Selectable     |
| Switching frequency | 1Khz               |
| Response time       | 500μs              |

## Electrical data

|                                |   |
|--------------------------------|---|
| Operating Voltage              | 10...30VDC                                |
| No-Load supply current         | ≤ 30mA                                    |
| Load current                   | ≤100mA                                    |
| Leakage current                | ≤10μA                                     |
| Output voltage drop            | ≤2V@Iload=100mA                           |
| Max ripple content             | ≤10%                                      |
| LED indicators                 | Yellow (status output), green (stability) |
| Time delay before availability | ≤200ms                                    |
| Short-circuit protection       | Yes                                       |

|                                  |  |
|----------------------------------|--|
| Reverse Polarity Protection      | Yes  |
| Emission                         | LED Red (630nm)                                  |
| Interference to external light   | 3000lux (incandescent lamp), 10000lux (sunlight) |
| Impulsive Overvoltage Protection | Yes  |

#### Mechanical data

|                       |                                   |
|-----------------------|-----------------------------------|
| Dimensions            | 40,6x21x13mm                      |
| Housing material      | PA66                              |
| Weight                | 10g                               |
| Connections           | M8 plug 4pin                      |
| Active Head Material  | PMMA                              |
| Tightening torque     | 1Nm                               |
| Operating temperature | - 25°C...+ 70° C (Without freeze) |
| Storage temperature   | - 30°C...+ 80° C (Without freeze) |
| Diameter/Dimension    | Cubic                             |

#### Test/Approvals

|                       |  |
|-----------------------|--|
| Approvals             | CE cULus                                       |
| EMC compatibility     | EN 60947-5-2                                   |
| Shocks and vibrations | Vibration IEC 60068-2-6 / Shock IEC 60068-2-27 |

Degree of protection

IP67

### Generical Data

Dimensions

40,6x21x13mm

Operating Temperature

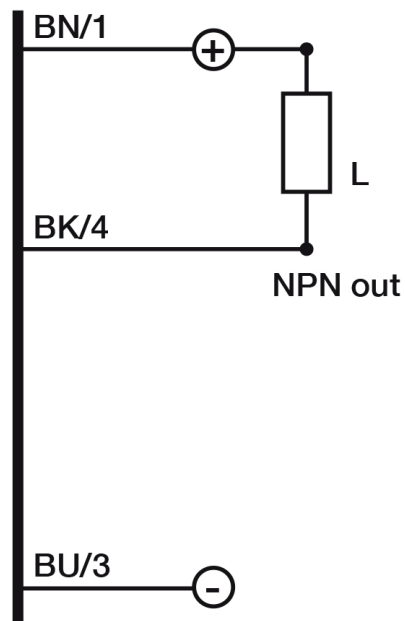
- 25°C...+ 70°C (Without freeze)

Mechanical Protection

IP67

## CONNECTIONS

Electrical diagram

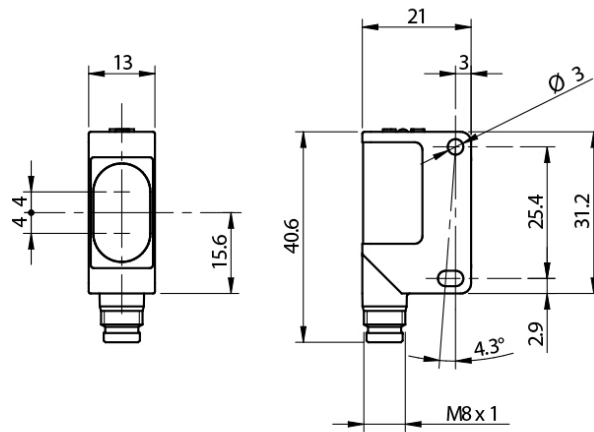


Connector

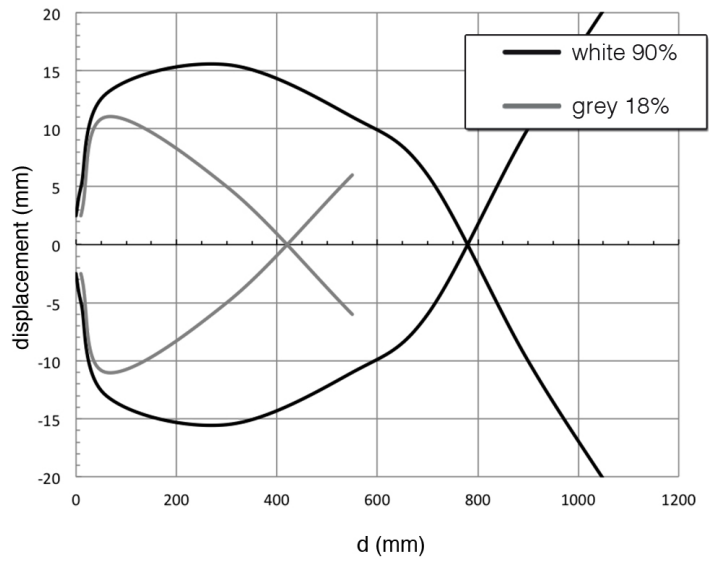


## OTHERS

### Dimensions



### Response curves



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