



# QM

## QMRB/0P-0F

Photo.Min,PNP-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	100mm
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Thermal drift of Sr	≤10% Sr
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Repeat Accuracy	5%
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Sensitivity adjustment	Trimmer
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## Application

Function Principle	Diffuse reflection (short distance, $\leq 200\text{mm}$ )
Notes	white target Kodak 90% 100 x 100mm
Optic position	Radial 90°

## Outputs

Output type	PNP L/D Selectable
Output Function	L/D Selectable
Switching frequency	1Khz
Response time	500 $\mu\text{s}$

## Electrical data

Operating Voltage	10...30VDC
No-Load supply current	$\leq 30\text{mA}$
Load current	$\leq 100\text{mA}$
Leakage current	$\leq 10\mu\text{A}$
Output voltage drop	$\leq 2\text{V}@I_{\text{load}}=100\text{mA}$
Max ripple content	$\leq 10\%$
LED indicators	Yellow (status output), green (stability)
Time delay before availability	$\leq 200\text{ms}$
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

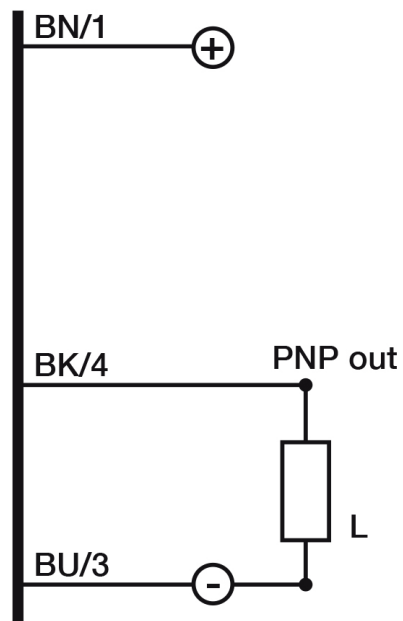
- 25°C...+ 70°C (Without freeze)

Mechanical Protection

IP67

## CONNECTIONS

Electrical diagram

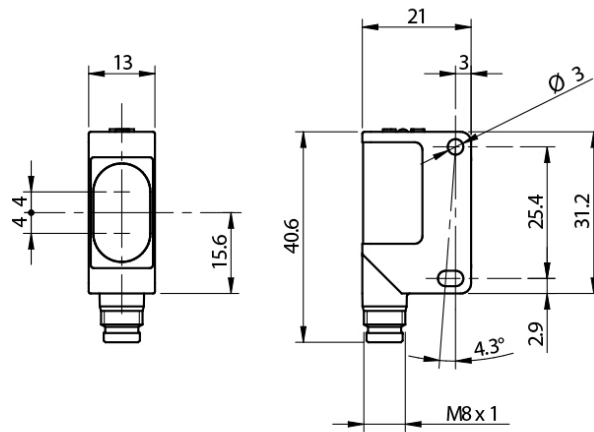


Connector

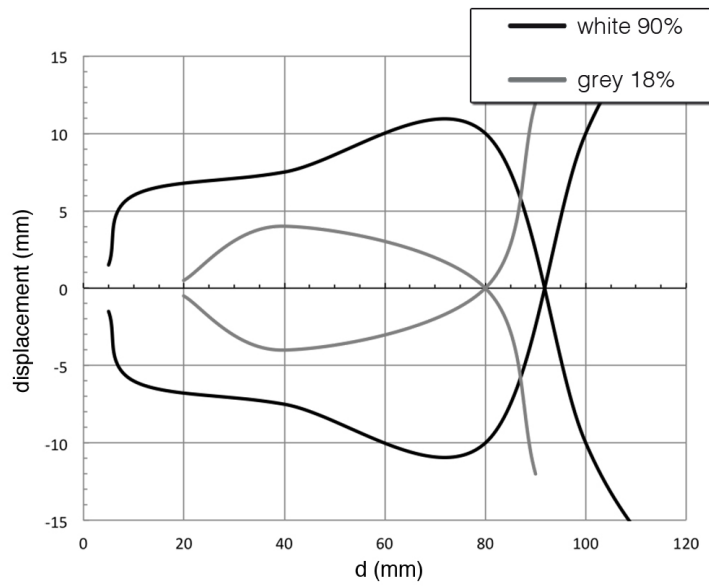


## OTHERS

### Dimensions



### Response curves



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