

## S3N



## MINIATURE PHOTOELECTRIC SENSOR



- All models with visible and bright red emission
- LED and Laser emission models
- Multiple Background suppression functions
- Shiny and clear object detection
- Single, Double trimmer & Push Button models
- Diffuse proximity up to 100 cm
- Background suppression up to 800 mm (LED trimmer version)
- Polarized RRX 7 m (Red LED emission)
- Polarized RRX 12 m (Red Laser emission)
- Through-beam 20 m and Laser 30 m
- Connection with 2 m Cable or M8 connector
- Rugged IP67 Plastic miniature case
- M3 threaded holes on the front side with metal inserts
- State of the art IO-Link connectivity with extended Smart Tasks

**Detection properties**

Nominal sensing distance	800mm
Sensitivity adjustment	1 turn trimmer
Minimum sensing distance (blind zone)	0mm

**Application**

Function Principle	Background suppression
Notes	white target Kodak 90% 100 x 100mm
Optic position	Radial 90°
Functions	Background suppression

**Outputs**

Output type	PNP Lon
Output Function	Lon
Switching frequency	500Hz
Response time	1ms

### Electrical data

Operating Voltage	10...30VDC
No-Load supply current	≤ 35mA
Load current	≤100mA
Leakage current	≤ 300 µA
Output voltage drop	≤2V@Iload=100mA
Max ripple content	≤10%
LED indicators	yellow OUTPUT LED, green POWER ON LED
Short-circuit protection	Yes
Reverse Polarity Protection	Yes
Emission	LED Red (635nm)
Interference to external light	according to EN 60947-5-2 : 2020
Impulsive Overvoltage Protection	Yes
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing
Contact resistance	500 Vac 1 min., between electronics and housing
0,1µF @Vmax - 1µF @Vmin	Yes

### Mechanical data

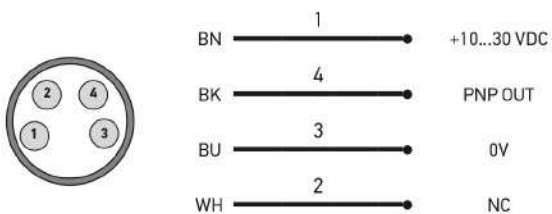
Housing Material	Plastic Polymer Fiber Glass reinforced
Connections	M8 plug 4pin
Active Head Material	PMMA
Storage temperature	- 25°C...+70°C
Plug connector material	Metal
shaft material	POM, PMMA
Diameter/Dimension	Cubic

### Test/Approvals

Approvals	CE cULus
EMC compatibility	EN 60947-5-2
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)

### Generical Data

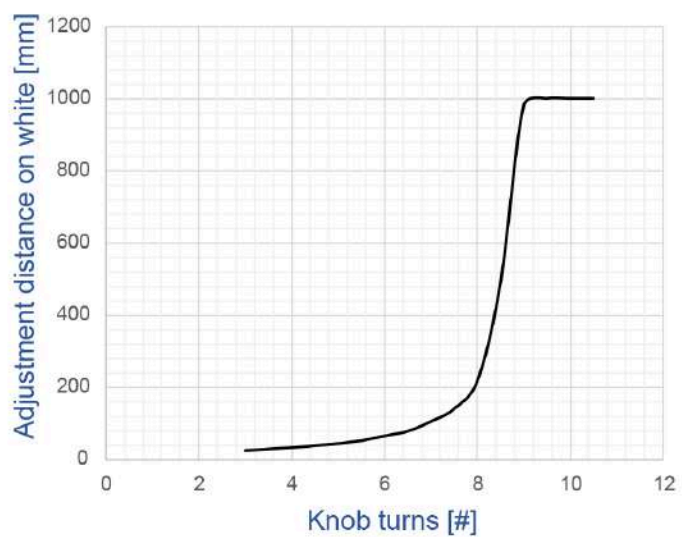
Dimensions	11x31x19 mm
Operating Temperature	-25°C ... 55°C
Mechanical Protection	IP67



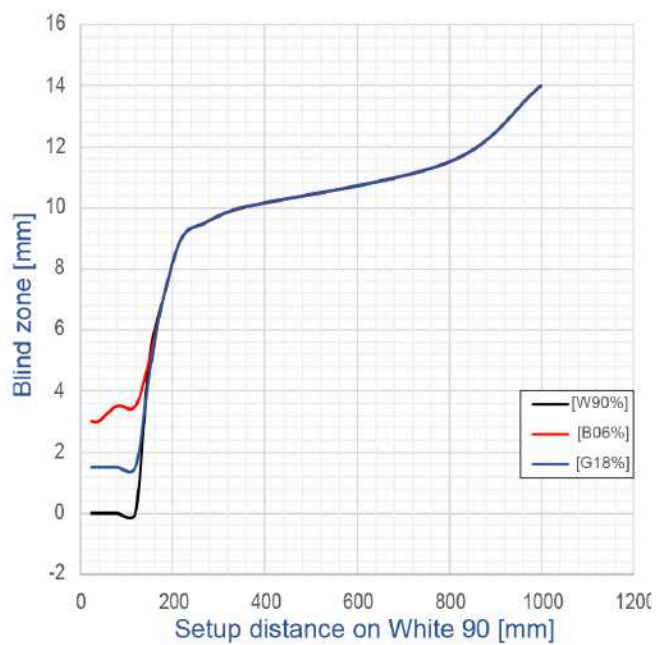
## RESPONSE CURVES

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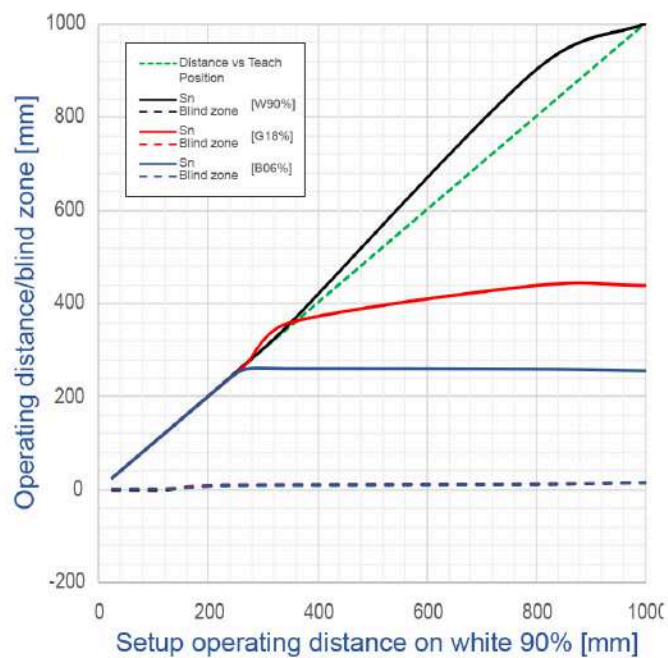
### Adjustment function



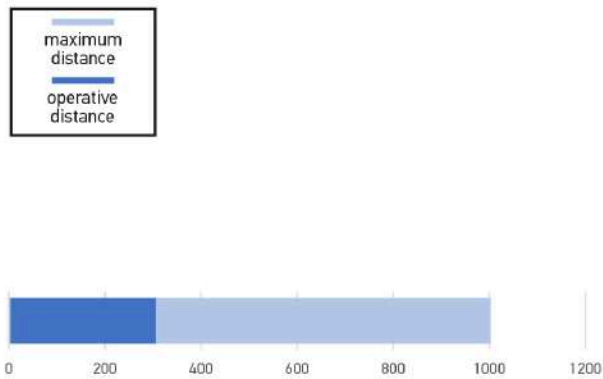
### Blind zone VS sensing distance



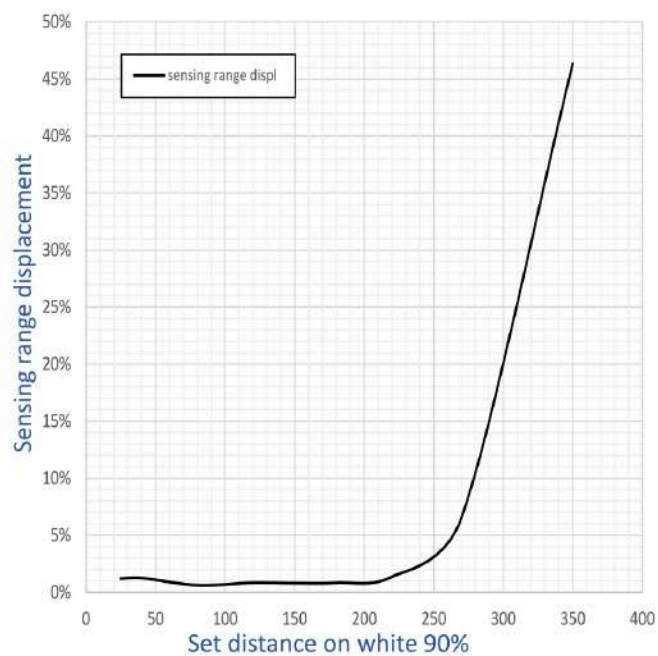
### Effective operative distance



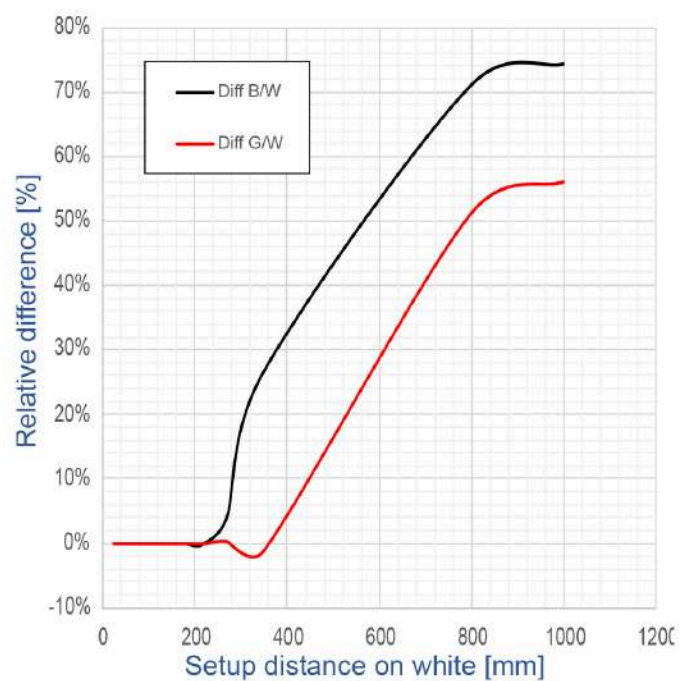
### Operating distance



### Sensing range displacement



### Teach behaviour



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