



# FF + FFRS

## FFI8/0P-1E

Photo.M18,PNP-NO/NC,M12 plug,Diffuse  
M18 IP69K PHOTOELECTRIC SENSORS FOR HARSH  
ENVIRONMENTS

## OVERVIEW



## TECHNICAL FEATURES

### Detection properties

Nominal sensing distance	800mm
Thermal drift of Sr	10% Sr
Repeat Accuracy	5%
Sensitivity adjustment	Teach-in

### Application

Function Principle	Diffuse reflection (long distance, >600mm)
Notes	white target Kodak 90% 400 x 400mm

Optic position	Axial
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#### Outputs

Output type	PNP L/D Selectable
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Output Function	L/D Selectable
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Switching frequency	500Hz
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Response time	1ms
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#### Electrical data

Operating Voltage	10...30VDC
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No-Load supply current	$\leq 35\text{mA}$
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Load current	$\leq 100\text{mA}$
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Leakage current	$\leq 10\mu\text{A}$
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Output voltage drop	$\leq 2\text{V}@I_{\text{load}}=100\text{mA}$
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Max ripple content	$\leq 10\%$
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LED indicators	Green Stability ; Yellow Output state ,
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Time delay before availability	$\leq 200\text{ms}$
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Short-circuit protection	Yes
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Reverse Polarity Protection	Yes
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Emission	LED Infrared (880nm)
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Interference to external light	5.000lux (incandescent lamp), 10.000lux (sunlight)
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#### Mechanical data

Dimensions	M18x1/L=83mm
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Housing material	Stainless steel AISI 316L / PA12 plug
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Weight	60g
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Connections	M12 plug
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Active Head Material	PA12
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Tightening torque	50Nm
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Operating temperature	-25°C...+80°C (without freeze)
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Diameter/Dimension	M18
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#### Test/Approvals

Approvals	CE cULus ECOLAB Diversey
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EMC compatibility	EN 60947-5-2
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Shocks and vibrations	Vibration IEC 60068-2-6 / Shock IEC 60068-2-27
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Degree of protection	IP68, IP69K
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#### Accessories

Supplied Accessories	Nuts M18 x 1
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#### Generical Data

Dimensions	M18x1/L=83mm
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Operating Temperature

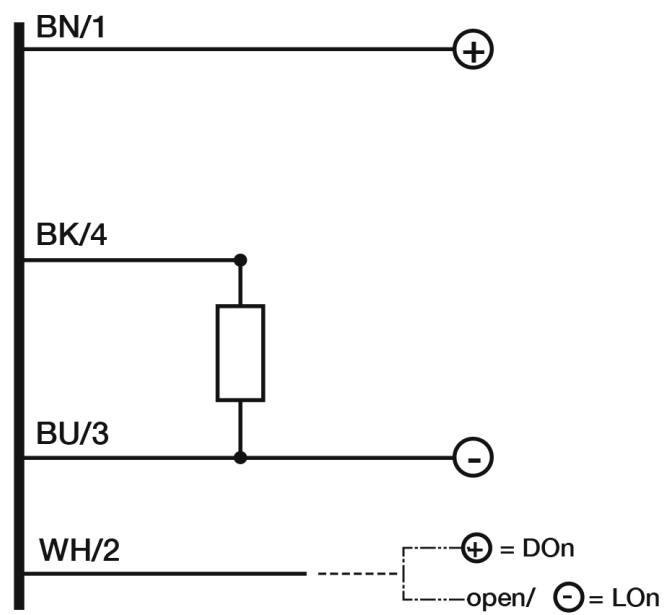
- 25°C...+ 80°C (Without freeze)

Mechanical Protection

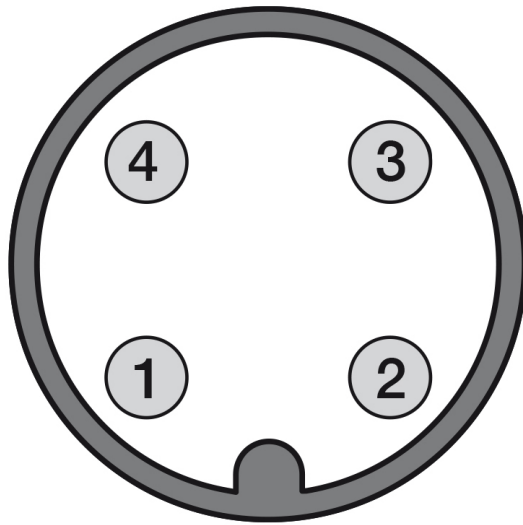
IP68, IP69K

# CONNECTIONS

Electrical diagram

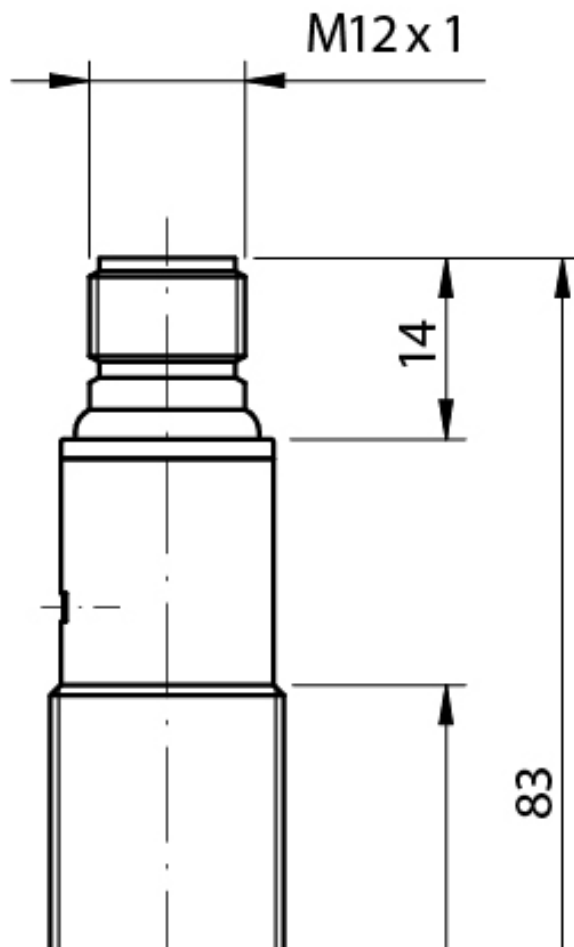


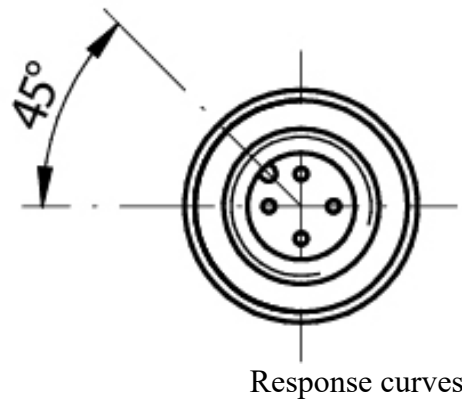
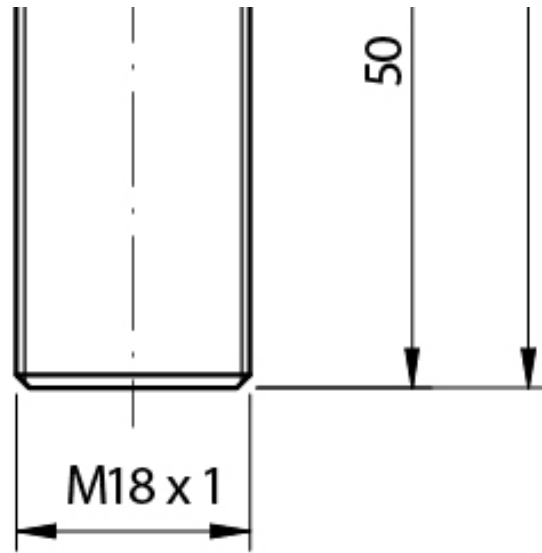
Connector

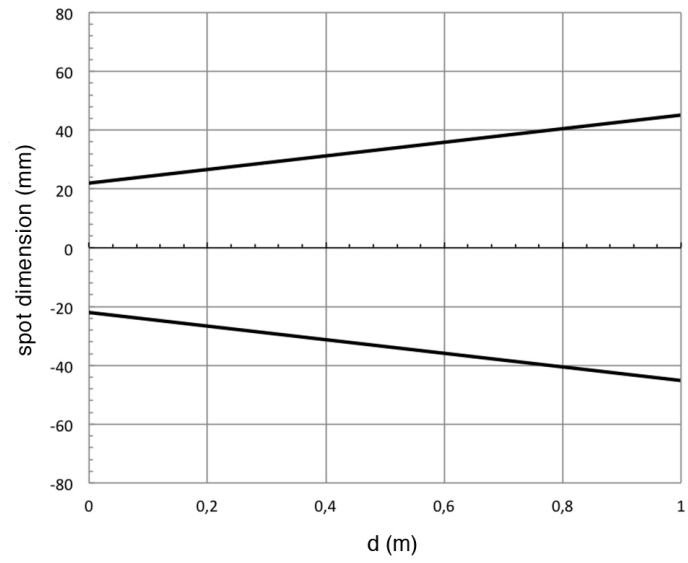


## OTHERS

Dimensions







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