



FAL

FAL4/BN-3E

**Photo.M18,Laser emiss.,NPN-NO+NC,M12
plug,Diffuse**

M18 PHOTOELECTRIC SENSORS DC LASER EMISSION

OVERVIEW

- Complete range of M18 sensors with 10...30 Vdc power supply
- Axial and radial optic with flat surface
- Visible red laser emission models
- IP67 protection degree
- Metallic or plastic housing
- Sensitivity adjustment available for all models
- Total protection against any type of electric damages
- Approvals: CE and cULus listed



TECHNICAL FEATURES

Detection properties

Nominal sensing distance	200mm
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Thermal drift of Sr	≤10% Sr
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Repeat Accuracy	5%
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Sensitivity adjustment	Teach-in
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Application	
Function Principle	Diffuse reflection (short distance, $\leq 200\text{mm}$)
Notes	(focalized 100mm) white target 90% Kodak 200x200mm
Optic position	Radial 90°

Outputs	
Output type	NPN NO+NC
Output Function	NO+NC
Switching frequency	800Hz
Response time	625 μs

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	Green power supply/yellow (LightON $E_G \geq 2$)/yellow flashing (LightON $1 < E_G < 2$)
Time delay before availability	$\leq 200\text{ms}$
Short-circuit protection	Short circuit (autoreset), Overvoltage

Reverse Polarity Protection	Polarity inversal, Impulsive voltage
Emission	LASER Red (650nm) class1
Interference to external light	3000lux (incandescent lamp), 10000lux (sunlight)

Mechanical data

Dimensions	M18 x 1/L=107,6mm
Housing material	Nickel plated brass / PC plug
Weight	100g
Connections	M12 plug
Active Head Material	Glass / PC
Tightening torque	25Nm
Operating temperature	-15°C...+ 55°C (Without freeze)
Diameter/Dimension	M18

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

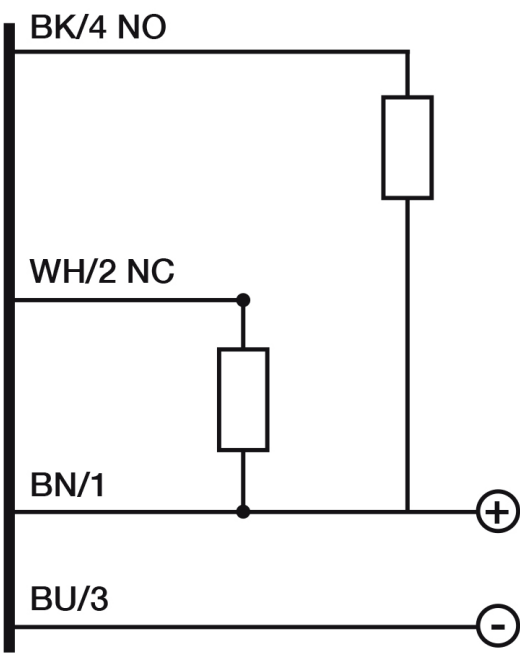
Accessories

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Supplied Accessories	nuts M18 x 1, screwdriver
Generical Data	
Dimensions	M18 x 1/L=107,6mm
Operating Temperature	- 15°C...+ 55°C (Without freeze)
Mechanical Protection	IP67

CONNECTIONS

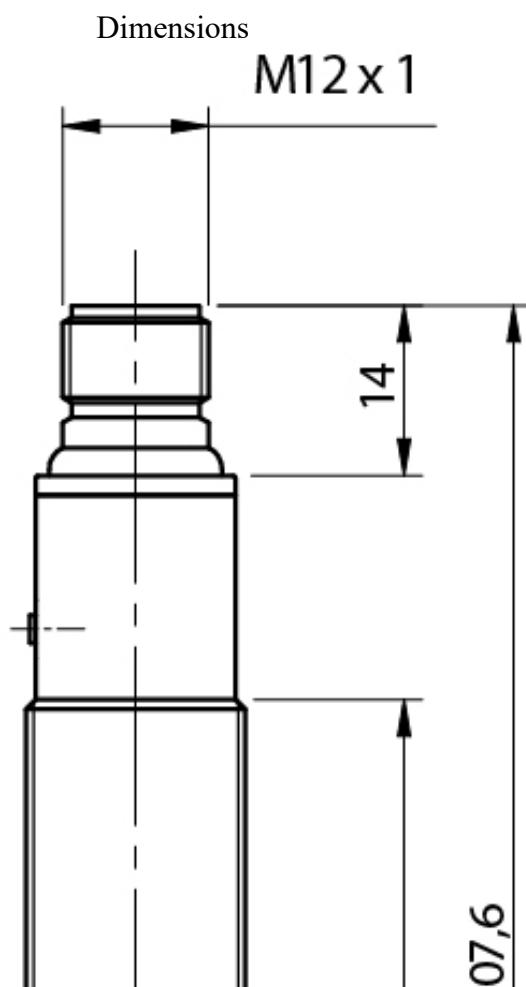
Eletrical diagram

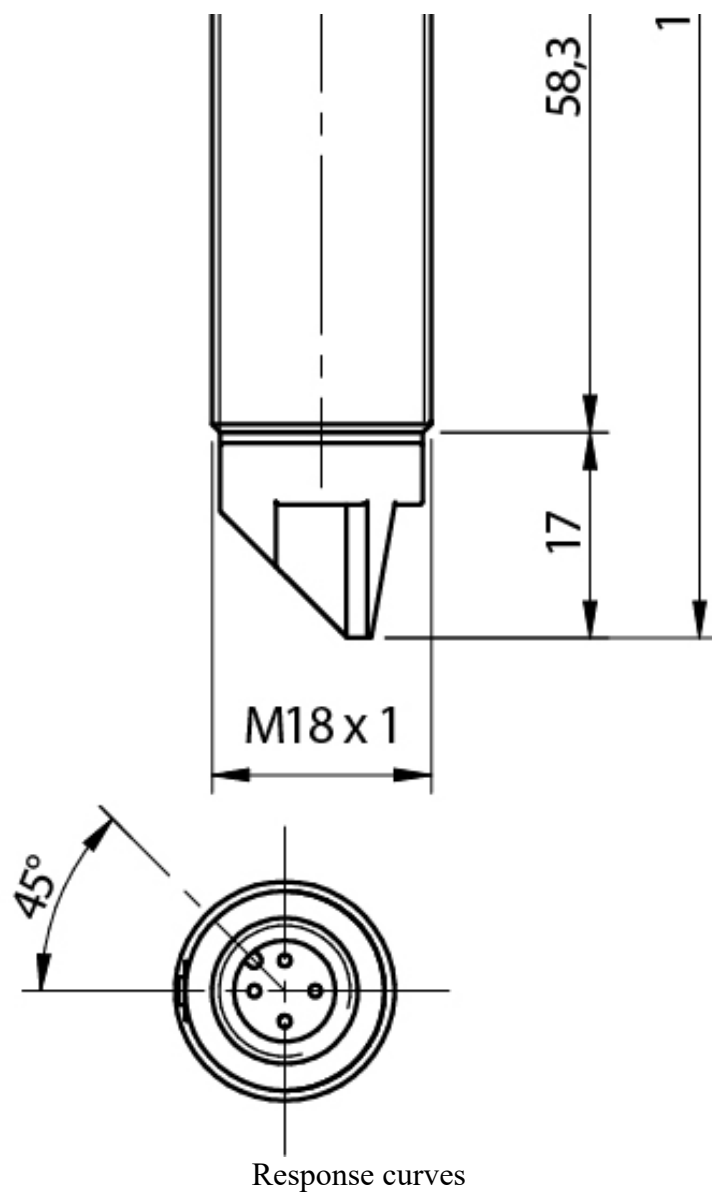


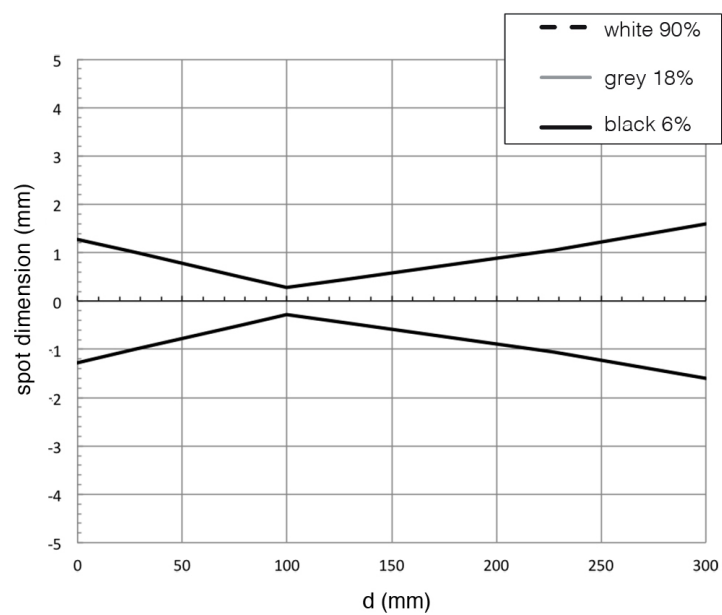
Connector



OTHERS







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