



# FA

## FAI5/BN-3A

Photo.M18,NPN-NO+NC,Cable,Diffuse  
M18 PHOTOELECTRIC SENSORS DC

## OVERVIEW

- Complete range of M18 sensors with 10...30 Vdc power supply
- Axial and radial optic with flat surface
- Retro-reflective models for transparent objects detection, with red emission 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          |
| Thermal drift of Sr      | $\leq 10\%$ Sr |
| Repeat Accuracy          | 5%             |
| Sensitivity adjustment   | No             |

### Application

|                                |                                                           |
|--------------------------------|-----------------------------------------------------------|
| Function Principle             | Diffuse reflection (short distance, $\leq 200\text{mm}$ ) |
| Notes                          | white target Kodak 90% 200 x 200mm                        |
| Optic position                 | Radial 90°                                                |
| Outputs                        |                                                           |
| Output type                    | NPN NO+NC                                                 |
| Output Function                | NO+NC                                                     |
| Switching frequency            | 250Hz                                                     |
| Response time                  | 2ms                                                       |
| 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 (Lon) or output status Lo/Do                       |
| Time delay before availability | $\leq 200\text{ms}$                                       |
| Short-circuit protection       | Short circuit (autoreset), Overvoltage                    |

|                                |                                                  |
|--------------------------------|--------------------------------------------------|
| Reverse Polarity Protection    | Polarity inversal, Impulsive voltage             |
| Emission                       | LED Infrared (880nm)                             |
| Interference to external light | 3000lux (incandescent lamp), 10000lux (sunlight) |

Mechanical data

|                       |                                     |
|-----------------------|-------------------------------------|
| Dimensions            | M18 x 1/L=78,5mm                    |
| Housing material      | Nickel plated brass / PC cable exit |
| Weight                | 130g                                |
| Connections           | 2m PVC cable                        |
| Active Head Material  | PC                                  |
| Tightening torque     | 25Nm                                |
| Operating temperature | - 25°C...+ 70° 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                                           |

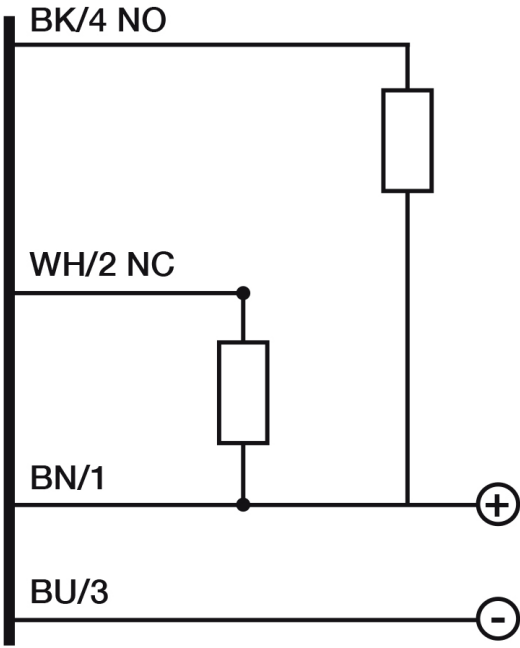
Accessories

||
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||

|                       |                                  |
|-----------------------|----------------------------------|
| Supplied Accessories  | nuts M18 x 1                     |
| Generical Data        |                                  |
| Dimensions            | M18 x 1/L=78,5mm                 |
| Operating Temperature | - 25°C...+ 70°C (Without freeze) |
| Mechanical Protection | IP67                             |

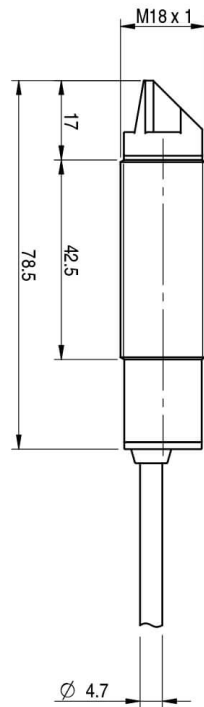
# CONNECTIONS

Eletrical diagram

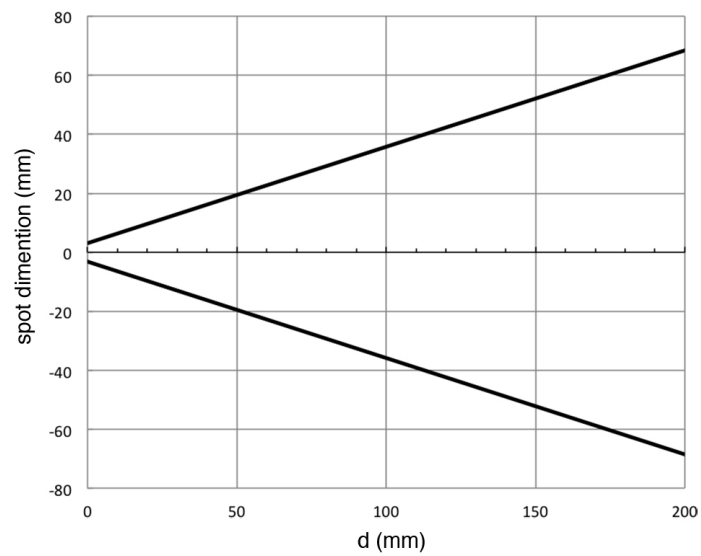


# OTHERS

Dimensions



Response curves



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**date of  
printing**  
10/08/2026  
00:20:44