



# FA

## FAI9/BN-2E

Photo.M18,NPN-NO+NC,M12 plug,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 | 800mm |
|--------------------------|-------|

|                     |                |
|---------------------|----------------|
| Thermal drift of Sr | $\leq 10\%$ Sr |
|---------------------|----------------|

|                 |    |
|-----------------|----|
| Repeat Accuracy | 5% |
|-----------------|----|

|                        |    |
|------------------------|----|
| Sensitivity adjustment | No |
|------------------------|----|

### Application

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Function Principle             | Diffuse reflection (long distance, >600mm) |
| Notes                          | white target Kodak 90% 400 x 400mm         |
| 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         | ≤ 30mA                                     |
| Load current                   | ≤100mA                                     |
| Leakage current                | ≤10μA                                      |
| Output voltage drop            | ≤2V@Iload=100mA                            |
| Max ripple content             | ≤10%                                       |
| LED indicators                 | Yellow (Lon) or output status Lo/Do        |
| Time delay before availability | ≤200ms                                     |
| 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=92,7mm                  |
| Housing material      | PBT / PC plug                     |
| Weight                | 30g                               |
| Connections           | M12 plug                          |
| Active Head Material  | PC                                |
| Tightening torque     | 1Nm                               |
| 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**

|  |
|--|
|  |
|--|

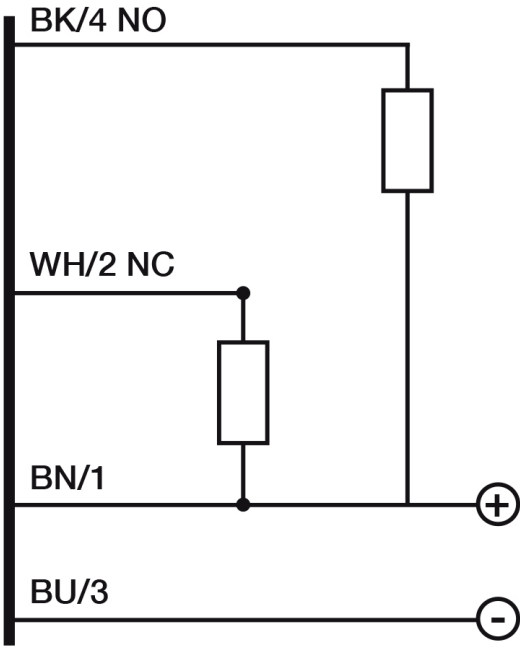
|                      |              |
|----------------------|--------------|
| Supplied Accessories | nuts M18 x 1 |
|----------------------|--------------|

Generical Data

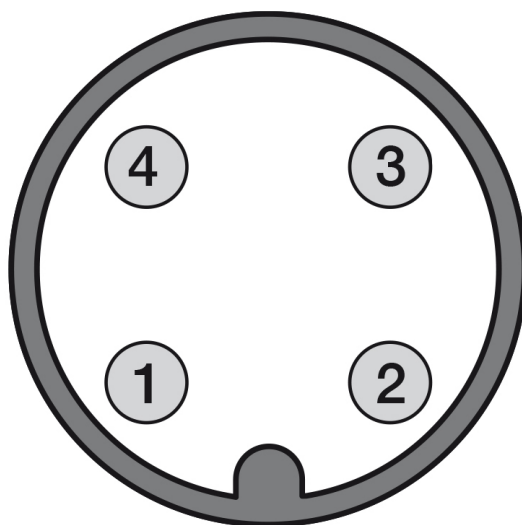
|                       |                                  |
|-----------------------|----------------------------------|
| Dimensions            | M18 x 1/L=92,7mm                 |
| Operating Temperature | - 25°C...+ 70°C (Without freeze) |
| Mechanical Protection | IP67                             |

CONNECTIONS

Eletrical diagram

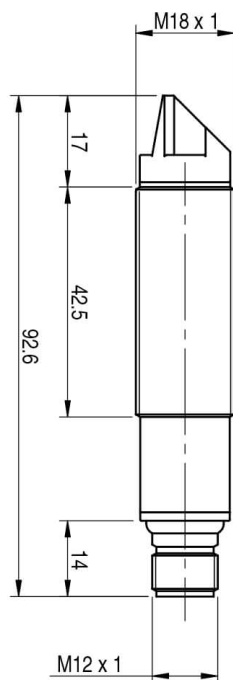


Connector



## OTHERS

### Dimensions



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