



FAL

FAL4/BN-3A

Photo.M18,Laser
emiss.,NPN-NO+NC,Cable,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

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|--------------------|---|
| Function Principle | Diffuse reflection (short distance, $\leq 200\text{mm}$) |
| Notes | (focalized 100mm) white target 90% Kodak 200x200mm |
| Optic position | Radial 90° |

Outputs

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

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| Reverse Polarity Protection | Polarity inversal, Impulsive voltage |
|-----------------------------|--------------------------------------|

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|----------|--------------------------|
| Emission | LASER Red (650nm) class1 |
|----------|--------------------------|

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| Interference to external light | 3000lux (incandescent lamp), 10000lux (sunlight) |
|--------------------------------|--|

Mechanical data

| | |
|------------|------------------|
| Dimensions | M18 x 1/L=93,5mm |
|------------|------------------|

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|--------|------|
| Weight | 130g |
|--------|------|

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|------------------|-------------------------------------|
| Housing Material | Nickel plated brass / PC cable exit |
|------------------|-------------------------------------|

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|-------------|--------------|
| Connections | 2m PVC cable |
|-------------|--------------|

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|----------------------|------------|
| Active Head Material | Glass / PC |
|----------------------|------------|

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|-------------------|------|
| Tightening torque | 25Nm |
|-------------------|------|

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|-----------------------|---------------------------------|
| Operating temperature | -15°C...+ 55°C (Without freeze) |
|-----------------------|---------------------------------|

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|--------------------|-----|
| Diameter/Dimension | M18 |
|--------------------|-----|

Test/Approvals

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|-----------|----------|
| Approvals | CE cULus |
|-----------|----------|

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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 | IP67 |
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Accessories

Supplied Accessories

nuts M18 x 1, screwdriver

Generical Data

Dimensions

M18 x 1/L=93,5mm

Operating Temperature

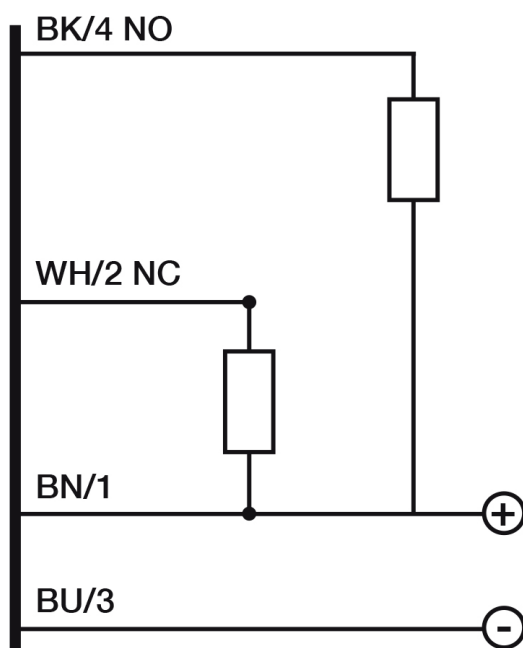
- 15°C...+ 55°C (Without freeze)

Mechanical Protection

IP67

CONNECTIONS

Electrical diagram

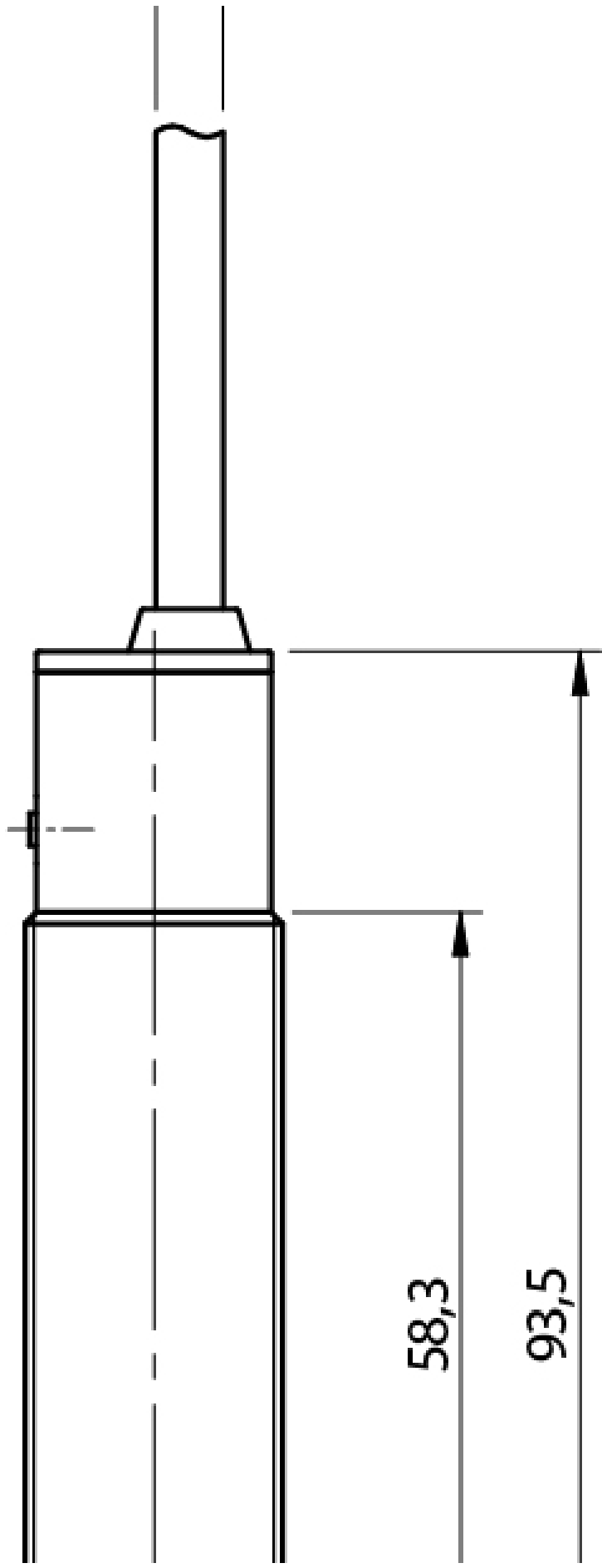


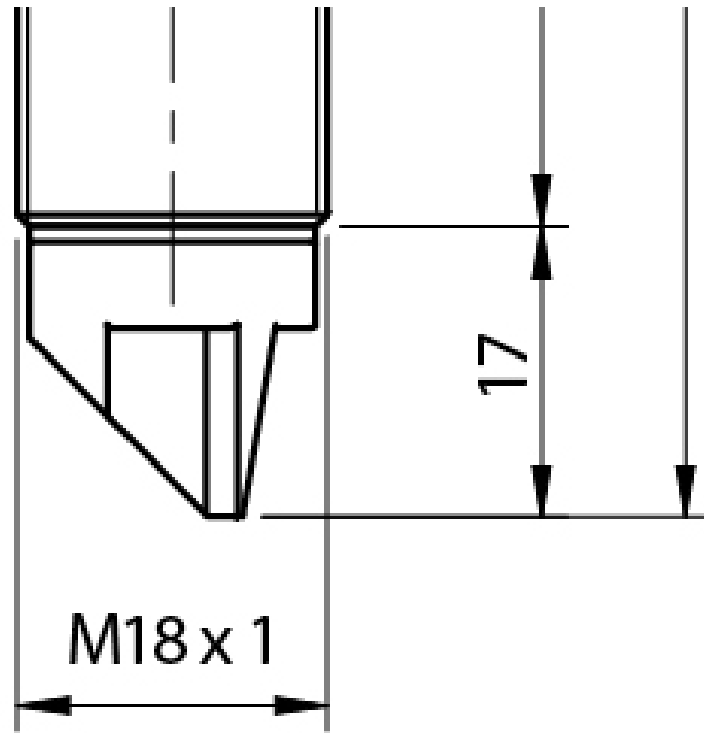
OTHERS

Dimensions

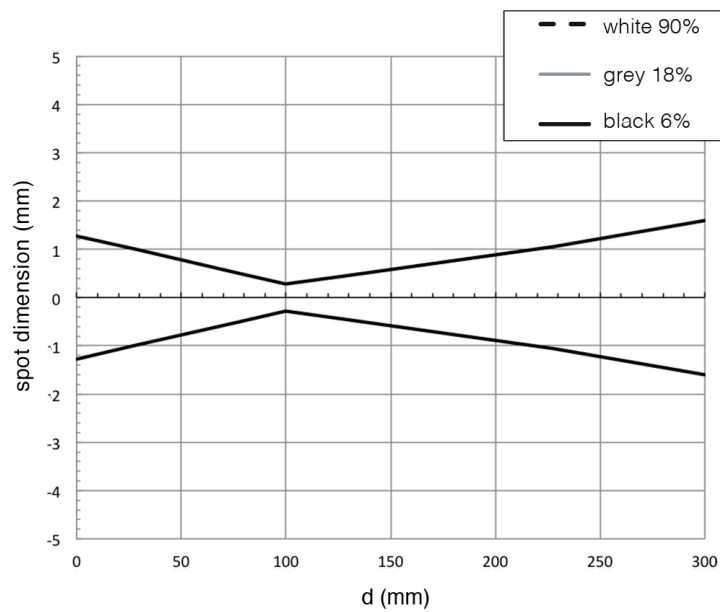
Ø 4,7







Response curves



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