

AHS Series Inductive Proximity Sensors



Miniature $\Phi 6.5$ mm stainless steel – DC

- Smooth barrel
- Sixteen models available
- NPN or PNP, N.O. or N.C.
- Complete overload protection
- IP67-rated
- Stainless steel construction
- Yellow output LED 360 degree visible
- Lifetime warranty



AHS Series $\Phi 6.5$ DC Inductive Prox Selection Chart

| Part Number | Price | Sensing Range | Mounting | Output State | Logic | Connection | Wiring | Dimensions |
|--------------------------|-------|------------------|----------|--------------|-------|-------------------------|-----------|------------|
| Standard Distance | | | | | | | | |
| AHS-AN-1A | | 1.5 mm (0.06 in) | Flush | N.O. | NPN | 2m (6.5 ft) axial cable | Diagram 1 | Figure 1 |
| AHS-AP-1A | | 1.5 mm (0.06 in) | Flush | N.O. | PNP | 2m (6.5 ft) axial cable | Diagram 2 | Figure 1 |
| AHS-AN-1F | | 1.5 mm (0.06 in) | Flush | N.O. | NPN | M8 connector | Diagram 3 | Figure 2 |
| AHS-AP-1F | | 1.5 mm (0.06 in) | Flush | N.O. | PNP | M8 connector | Diagram 4 | Figure 2 |
| AHS-CN-1A | | 1.5 mm (0.06 in) | Flush | N.C. | NPN | 2m (6.5 ft) axial cable | Diagram 1 | Figure 1 |
| AHS-CP-1A | | 1.5 mm (0.06 in) | Flush | N.C. | PNP | 2m (6.5 ft) axial cable | Diagram 2 | Figure 1 |
| AHS-CN-1F | | 1.5 mm (0.06 in) | Flush | N.C. | NPN | M8 connector | Diagram 3 | Figure 2 |
| AHS-CP-1F | | 1.5 mm (0.06 in) | Flush | N.C. | PNP | M8 connector | Diagram 4 | Figure 2 |
| Extended Distance | | | | | | | | |
| AHS-AN-3A | | 2mm (0.08 in) | Flush | N.O. | NPN | 2m (6.5 ft) axial cable | Diagram 1 | Figure 1 |
| AHS-AP-3A | | 2mm (0.08 in) | Flush | N.O. | PNP | 2m (6.5 ft) axial cable | Diagram 2 | Figure 1 |
| AHS-AN-3F | | 2mm (0.08 in) | Flush | N.O. | NPN | M8 connector | Diagram 3 | Figure 2 |
| AHS-AP-3F | | 2mm (0.08 in) | Flush | N.O. | PNP | M8 connector | Diagram 4 | Figure 2 |
| AHS-CN-3A | | 2mm (0.08 in) | Flush | N.C. | NPN | 2m (6.5 ft) axial cable | Diagram 1 | Figure 1 |
| AHS-CP-3A | | 2mm (0.08 in) | Flush | N.C. | PNP | 2m (6.5 ft) axial cable | Diagram 2 | Figure 1 |
| AHS-CN-3F | | 2mm (0.08 in) | Flush | N.C. | NPN | M8 connector | Diagram 3 | Figure 2 |
| AHS-CP-3F | | 2mm (0.08 in) | Flush | N.C. | PNP | M8 connector | Diagram 4 | Figure 2 |

Dimensions

mm [inches]

Figure 1

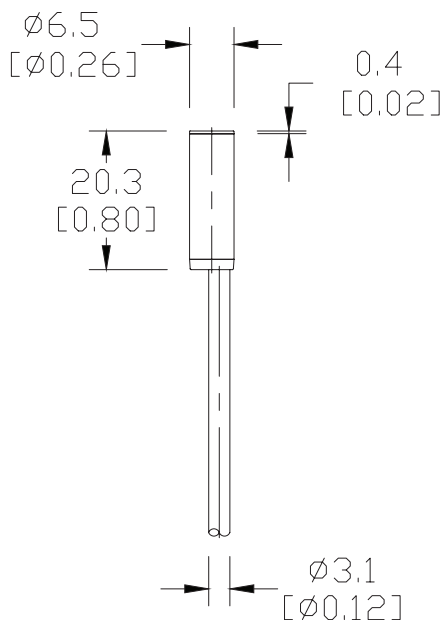
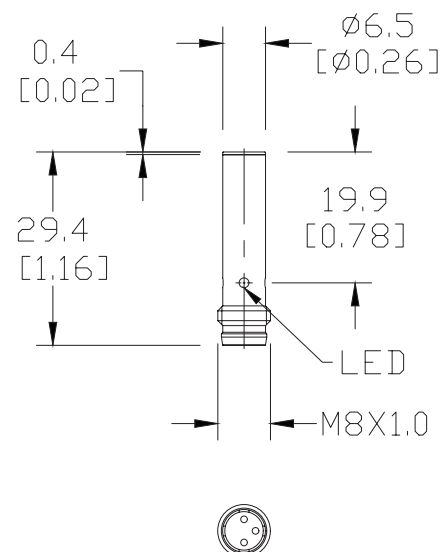


Figure 2



SEE OUR WEBSITE: WWW.AUTOMATIONDIRECT.COM FOR COMPLETE ENGINEERING DRAWINGS.

AHS Series Inductive Proximity Sensors

| AHS Series Specifications | | |
|---|---|-------------------|
| | Standard Distance | Extended Distance |
| Mounting Type | Flush | |
| Nominal Sensing Distance | 1.5 mm (0.06 in) | 2mm (0.078 in) |
| Operating Distance | NA | |
| Material Correction Factors | See the Material influence table | |
| Output Type | NPN or PNP/N.O. or N.C./3-wire | |
| Operating Voltage | 10 to 30 VDC | |
| No-load Supply Current | ≤ 10mA | |
| Operating (Load) Current | ≤ 100mA | |
| Off-state (Leakage) Current | ≤ 10 μA | |
| Voltage Drop | ≤ 1.5 V | |
| Switching Frequency | 7kHz | |
| Differential Travel (% of Nominal Distance) | ≤ 10% | |
| Repeat Accuracy | ≤ 5% | |
| Ripple | ≤ 10% | |
| Time Delay Before Availability (tv) | ≤ 50 ms | |
| Reverse Polarity Protection | Yes | |
| Short-Circuit Protection | Yes (auto-reset) | |
| Operating Temperature | -25° to 70°C (-13° to 158° F) | |
| Protection Degree (DIN 40050) | IP67 | |
| Indication/Switch Status | Yellow output (on energized) | |
| Housing Material | Stainless Steel | |
| Sensing Face Material | Polybutylene Terephthalate | |
| Shock/Vibration | See Proximity Sensor Terminology | |
| Tightening Torque | NA | |
| Weight | 30g (1.06 oz) (cable version) 4g (0.14 oz) (M8 connector) | |
| Connection | 2m PUR Cable or M8 Connector | |
| Agency Approvals | CE cULus E187310 | |

Wiring diagrams

Diagram 1

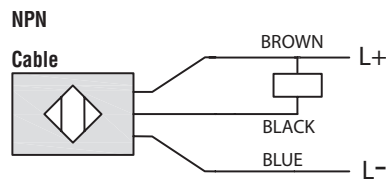
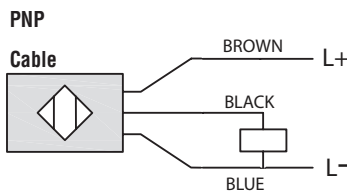


Diagram 2



Connector



Diagram 3

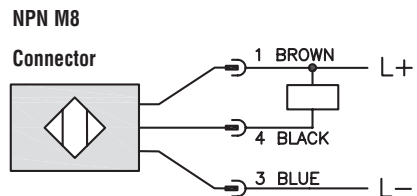
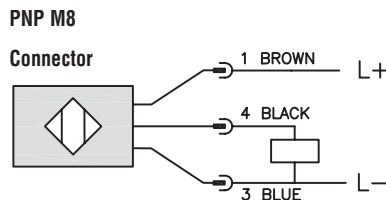


Diagram 4



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Accessories for 6.5 mm Sensors

Right-angle Mounting Bracket

Mounting bracket, right-angle, plastic. For use with 6.5 mm sensors.

| Accessories for 6.5 mm Sensors | | | | |
|--------------------------------|-------|---|---------------------|-------------|
| Part Number | Price | Description | Drawing Link | Weight [lb] |
| OPT2107 | | Wenglor mounting bracket, right-angle, plastic. For use with 6.5mm sensors. | PDF | 0.02 |



OPT2107