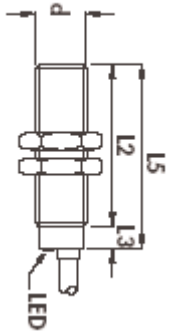


M12 12mm Plastic Short Body Inductive 3 Wire 2mm/4mm ranges



| |
|--|
| M12 12mm Plastic Short Body Inductive Proximity Sensor |
| 2 mm shielded range |
| 4 mm unshielded range |
| 3 wire 5-40VDC |
| 2 meter standard integrated cable |
| IP67 protection degree |
| protection from electrical damages |
| Plastic housing |

| | |
|-----------|-----------|
| L2 | L2 (26mm) |
| L3 | L3 (5mm) |
| L5 | L5 (30mm) |



Parts Matrix

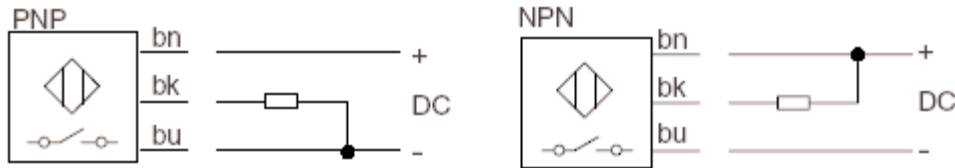
| | | |
|-------------------------------------|-------|-------|
| inductive sensor series | X | X |
| M12 12mm diameter body | 12 | 12 |
| short body diameter-standard ranges | S | S |
| plastic housing | P | P |
| 3 wire device | 3 | 3 |
| PNP output | P | P |
| NPN output | N | N |
| NO normally open | 1 | 1 |
| NO normally open | 2 | 2 |
| shielded | S | |
| unshielded | | U |
| 2m standard integrated cable | M1 | M1 |
| range (mm) | 2mm | 4mm |
| load current | 200mA | 200mA |

PARTS INDEX

SPECIFICATIONS

| | |
|--------------|----------------------|
| X12SP3P1SM1B | PNP NO SHIELDED M1 |
| X12SP3P2SM1B | PNP NC SHIELED M1 |
| X12SP3N1SM1B | NPN NO SHIELDED M1 |
| X12SP3N2SM1B | NPN NC SHIELDED M1 |
| X12SP3P1UM1B | PNP NO UNSHIELDED M1 |
| X12SP3P2UM1B | PNP NC UNSHIELDED M1 |
| X12SP3N1UM1B | NPN NO UNSHIELDED M1 |
| X12SP3N2UM1B | NPN NC UNSHIELDED M1 |

Wiring Diagram



TECHNICAL SPECIFICATIONS

| | | |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Nominal Sensing Distance S_n | 2 mm | 4 mm |
| Operating Distance | - | - |
| Differential Travel | 10% Typ | 10% Typ |
| Repeat Accuracy R | 2% | 2% |
| Operating Voltage U_b | 10-30VDC | 10-30VDC |
| Ripple U_{pp} | <20% U_b | <20% U_b |
| No-load Supply | 20mA | 20mA |
| Load Current I_a | <200mA | <200mA |
| Leakage Current | <10uA | <10uA |
| Voltage Drop U_a | 1.2V max. | 1.2V max. |
| Output Type | PNP or NPN NO or NC | PNP or NPN NO or NC |
| Switching Frequency | 2KHz | 1.5KHz |
| Time Delay Before Availability t_v | 100ms | 100ms |
| Supply Electrical Protections | polarity reversal, transient | polarity reversal, transient |
| Output Electrical Protections | short circuit protection (autoreset) | short circuit protection (autoreset) |
| Ambient Temperature T_a | -20--+70C | -20--+75C |
| Temperature Drift | +/- 10% SR | +/- 10% SR |
| Protection Degree (DIN 40 050) | IEC IP67 | IEC IP67 |
| LED Indicators | Yellow (NO output energized) | Yellow (NO output energized) |
| Housing Material | PlasticPBT | PlasticPBT |
| Sensing Face Material | plastic | plastic |
| Tightening Torque | - | - |
| Weight (approximate) | 55g(M1) | 55g(M1) |