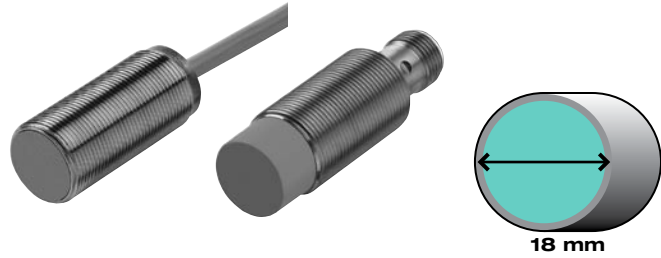


2-Wire DC 18 mm Diameter Inductive Sensors

- 5 to 12 mm sensing ranges
- 18 mm threaded barrels
- LED target indication
- Normally open and normally closed models
- Cable and Micro (M12) quick disconnect models



Technical Specifications

| | | |
|---------------------------------------|-------------------|---------------------------------------|
| SUPPLY VOLTAGE | NBB/NBN Models | 5-60 VDC |
| | NCB/NCN Models | 3.5-30 VDC |
| LOAD CURRENT (I _L) | | 100 mA max. |
| LEAKAGE CURRENT (OFF-STATE) | NBB/NBN Models | ≤ 0.5 mA |
| | NCB/NCN Models | ≤ 0.8 mA |
| OUTPUT | Suffix Z0, Z3, Z4 | Normally open (sinking or sourcing) |
| | Suffix Z1, Z5 | Normally closed (sinking or sourcing) |
| VOLTAGE DROP AT I _L (MAX.) | NBB/NBN Models | ≤ 5 VDC |
| | NCB/NCN Models | ≤ 3.5 VDC |
| HYSTERESIS | | 1-10% (5% typical) |
| SHORT CIRCUIT AND OVERLOAD PROTECTION | | Yes |
| REVERSE POLARITY PROTECTED | | Yes |
| LED INDICATION | | See dimension drawings |
| SENSING FACE MATERIAL | | PBT |
| STANDARDS | | EN 60947-5-2 |
| ENVIRONMENTAL PROTECTION | | IP67 |
| AMBIENT TEMPERATURE | | -13 °F to +158 °F (-25 °C to +70 °C) |
| APPROVALS | | |



See pages 803-854 for cordsets



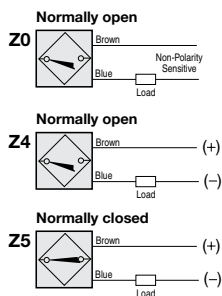
See pages 865-872 for accessories

Wiring Diagrams

2-Wire DC



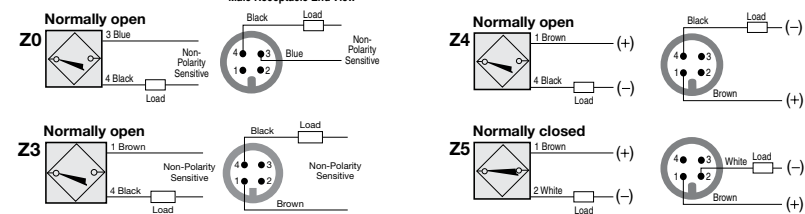
Cable Connection



Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

V1 Type



18 mm Diameter

2-Meter Cable Models

| Dia. (mm) | Model Number | Range (mm) | Mounting | Electrical Output | Switching Frequency | Barrel Material* | Cable Jacket/Size | Dwg. No. |
|-----------|-----------------|------------|----------|-------------------|---------------------|------------------|-------------------|----------|
| 18 | NBB5-18GM40-Z0 | 5 | Flush | Normally open | 500 Hz | Ni-Brass | PVC/#22 AWG | 1 |
| | NBN8-18GM40-Z0 | 8 | Nonflush | Normally open | 500 Hz | Ni-Brass | PVC/#22 AWG | 2 |
| | NCB8-18GM50-Z4 | 8 | Flush | Normally open | 1 kHz | SS | PVC/#22 AWG | 3 |
| | NCB8-18GM50-Z5 | 8 | Flush | Normally closed | 1 kHz | Ni-Brass | PVC/#22 AWG | 3 |
| | NCN12-18GM50-Z4 | 12 | Nonflush | Normally open | 1 kHz | Ni-Brass | PVC/#22 AWG | 4 |
| | NCN12-18GM50-Z5 | 12 | Nonflush | Normally closed | 1 kHz | Ni-Brass | PVC/#22 AWG | 4 |



Micro (M12) Quick Disconnect Models

| Dia. (mm) | Model Number | Range (mm) | Mounting | Electrical Output | Switching Frequency | Barrel Material* | Quick Disconnect | Dwg. No. |
|-----------|--------------------|------------|----------|-------------------|---------------------|------------------|------------------|----------|
| 18 | NBB5-18GM40-Z0-V1 | 5 | Flush | Normally open | 500 Hz | Ni-Brass | M12 Micro | 5 |
| | NBB5-18GM40-Z3-V1 | 5 | Flush | Normally open | 500 Hz | Ni-Brass | M12 Micro | 5 |
| | NBN8-18GM40-Z0-V1 | 8 | Nonflush | Normally open | 450 Hz | Ni-Brass | M12 Micro | 6 |
| | NBN8-18GM40-Z3-V1 | 8 | Nonflush | Normally open | 450 Hz | Ni-Brass | M12 Micro | 6 |
| | NCB8-18GM50-Z4-V1 | 8 | Flush | Normally open | 1 kHz | Ni-Brass | M12 Micro | 7 |
| | NCB8-18GM50-Z5-V1 | 8 | Flush | Normally closed | 1 kHz | Ni-Brass | M12 Micro | 7 |
| | NCN12-18GM50-Z4-V1 | 12 | Nonflush | Normally open | 1 kHz | Ni-Brass | M12 Micro | 8 |
| | NCN12-18GM50-Z5-V1 | 12 | Nonflush | Normally closed | 1 kHz | Ni-Brass | M12 Micro | 8 |



Inductive Cylindrical

2-Wire DC

*SS = stainless steel, Ni-Brass = nickel-plated brass

- ⚡ Stocked item
- Typical delivery 4 weeks or less
Consult factory for all other models

Look for this logo in the drawings to identify our X-Series extended range sensors



X-Series™
Sensing range 25-240% beyond "traditional" inductive sensors

Drawing No. 1
NBB5-18GM40-Z0 [N.O.]

LED
Yellow: Output Status

5 mm Sensing Range

Drawing No. 2
NBN8-18GM40-Z0 [N.O.]

LED
Yellow: Output Status

8 mm Sensing Range

Drawing No. 3
NCB8-18GM50-Z4 [N.O.]
NCB8-18GM50-Z5 [N.C.]

X SERIES

LEDs
Yellow: Output Status
*Red: Precision Alignment

8 mm Sensing Range

Drawing No. 4
NCN12-18GM50-Z4 [N.O.]
NCN12-18GM50-Z5 [N.C.]

X SERIES

LED
Yellow: Output Status
*Red: Precision Alignment

12 mm Sensing Range

Drawing No. 5
NBB5-18GM40-Z0-V1 [N.O.]
NBB5-18GM40-Z3-V1 [N.O.]

4-way LED
Yellow: Output Status

5 mm Sensing Range

Drawing No. 6
NBN8-18GM40-Z0-V1 [N.O.]
NBN8-18GM40-Z3-V1 [N.O.]

4-way LED
Yellow: Output Status

8 mm Sensing Range

Drawing No. 7
NCB8-18GM50-Z4-V1 [N.O.]
NCB8-18GM50-Z5-V1 [N.C.]

X SERIES

4-way LED
Yellow: Output Status
*Red: Precision Alignment

8 mm Sensing Range

Drawing No. 8
NCN12-18GM50-Z4-V1 [N.O.]
NCN12-18GM50-Z5-V1 [N.C.]

X SERIES

4-way LED
Yellow: Output Status
*Red: Precision Alignment

12 mm Sensing Range

*Illuminates when the target is between 80-100% of the nominal sensing distance.

Subject to modifications without notice

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SENSING YOUR NEEDS