

# TURCK


## Inductive Sensors - Rectangular

**Q12**



### Rectangular Sensors, Plastic

*Plastic Housing with Potted-In Cable*

2-Wire AC   
 35-250 VAC, 10-65 VDC  
 Normally Open (AZ31X) or Normally Closed (RZ31X)

### Sensor Selection

| Part Number    | Embeddable | Rated Operating Distance (mm) | Housing Height (mm) | Normally Open | Normally Closed | Drawing # | Wiring Diagram | # of LEDs | Weld Field Immune (S34) | Switching Frequency (Hz) | ID Number |
|----------------|------------|-------------------------------|---------------------|---------------|-----------------|-----------|----------------|-----------|-------------------------|--------------------------|-----------|
| Bi 2-Q12-AZ31X | •          | 2                             | 12                  | •             |                 | 1         | A              | 1         |                         | 20                       | M1310000  |
| Ni 4-Q12-AZ31X |            | 4                             | 12                  | •             |                 | 1         | A              | 1         |                         | 20                       | M1310200  |
| Bi 2-Q12-RZ31X | •          | 2                             | 12                  |               | •               | 1         | B              | 1         |                         | 20                       | M1320000  |
| Ni 4-Q12-RZ31X |            | 4                             | 12                  |               | •               | 1         | B              | 1         |                         | 20                       | M1320200  |

### Cable/Conductor

Cable: PVC Jacket; 2 meter standard length  
 Copper Conductor: 24 AWG  
 (PVC insulated)

### Material

Housing: PBT-GF30-VO Plastic  
 Sensing Face: PBT-GF30-VO Plastic

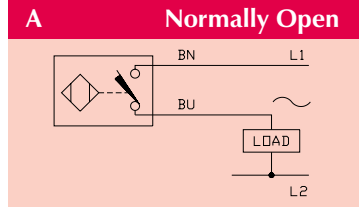
### Accessories

[Accessories and mounting devices can be found in Section J.](#)

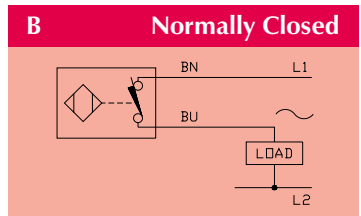
## Specifications

|   |                                       |
|---|---------------------------------------|
| Line Frequency . . . . .                        | 40-60 Hz                              |
| Differential Travel (Hysteresis) . . . . .      | 3-15% (5% typical)                    |
| Voltage Drop Across Conducting Sensor . . . . . | ≤11.0 V at 100 mA                     |
| Continuous Load Current . . . . .               | ≤100 mA                               |
| Off-State (Leakage) Current . . . . .           | ≤1.7 mA                               |
| Minimum Load Current . . . . .                  | ≥5.0 mA                               |
| Inrush Current . . . . .                        | ≤1.0 A (≤10 ms, 5% Duty Cycle)        |
| Time Delay Before Availability . . . . .        | ≤8 ms                                 |
| Power-On Effect . . . . .                       | Per IEC 947-5-2                       |
| Transient Protection . . . . .                  | Per EN 60947-5-2                      |
| Operating Temperature . . . . .                 | -25°C to +70°C (-13°F to +158°F)      |
| Enclosure . . . . .                             | Meets NEMA 1,3,4,6,13 and IEC IP 67   |
| Shock . . . . .                                 | 30 g, 11 ms                           |
| Vibration . . . . .                             | 55 Hz, 1 mm Amplitude in all 3 Planes |
| Repeatability . . . . .                         | ≤2% of Rated Operating Distance       |
| LED On . . . . .                                | Output Energized                      |

## Wiring Diagrams



Rectangular



## Dimensions

