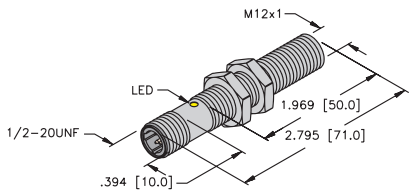
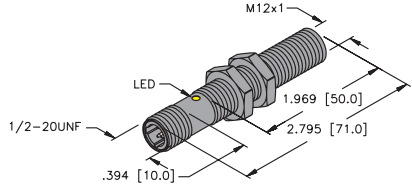
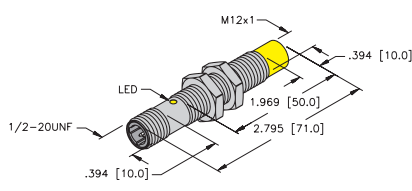
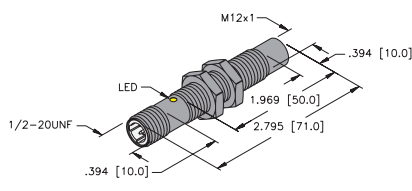
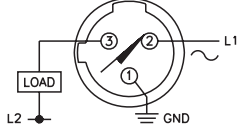


# Inductive Sensors

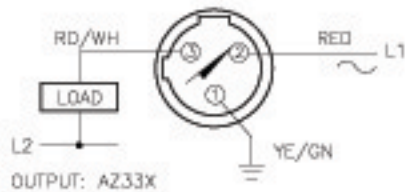


| Housing Style  | Part Number                       | ID Number                     | Features                 | Sensing Range (mm) | Output                                  |              |
|--|-----------------------------------|-------------------------------|--------------------------|--------------------|---|--------------|
| <b>12 mm - Embeddable, <i>microfast</i>® Connection</b><br>                    | Bi 2-G12-ADZ32X-B3131             | T4205001                      |                          | 2                  | 2-Wire AC/DC<br>Short-circuit Protected |              |
|  | Bi 2U-G12-ADZ32X-B3131            | M4281005                      | <i>Uprox</i>             | 2                  |   |              |
|  | Bi 4-G12-ADZ32X-B3131             | T4205031                      | <i>Ext. Range</i>        | 4                  |   |              |
|  |                                   | Bi 2-G12-AZ33X-B3131          | T1304032                 |                    | 2                                       | 2-Wire AC/DC |
| <b>12 mm - Embeddable, <i>microfast</i> Connection, Teflon Coated</b><br>      | Bi 2-GT12H-ADZ32X-B3131/S34       | T4205093                      | <i>WFI</i>               | 2                  | 2-Wire AC/DC<br>Short-circuit Protected |              |
|  | Bi 2-GT12H-ADZ32X-B3131/S34/S1589 | T4205096                      | <i>WFI</i>               | 2                  |   |              |
|  | Bi 2-GT12-ADZ32X-B3131/S34        | T4205005                      | <i>WFI</i>               | 2                  |   |              |
|  | Bi 2U-GT12-ADZ32X-B3131           | M4281015                      | <i>Uprox</i>             | 2                  |   |              |
|  |                                   | Bi 4-GT12H-ADZ32X-B3131       | T4205097                 | <i>Stoneface</i>   | 4                                       | 2-Wire AC/DC |
|  |                                   | Bi 4-GT12H-ADZ32X-B3131/S1589 | T4205087                 | <i>weldguard</i> ® | 4                                       |              |
| <b>12 mm - Nonembeddable, <i>microfast</i> Connection</b><br>                | Ni 4-G12-ADZ32X-B3131             | T4205201                      |                          | 4                  | 2-Wire AC/DC<br>Short-circuit Protected |              |
|  | Ni 8-G12-ADZ32X-B3131             | M4205401                      | <i>Ext. Range</i>        | 8                  |   |              |
|  | Ni 8U-G12-ADZ32X-B3131            | M4281105                      | <i>Ext. Range, Uprox</i> | 8                  |   |              |
|  |                                   | Ni 4-G12-AZ33X-B3131          | T1304232                 |                    | 4                                       | 2-Wire AC/DC |
| <b>12 mm - Nonembeddable, <i>microfast</i> Connection, Teflon Coated</b><br> | Ni 4-GT12-ADZ32X-B3131/S34        | T4205205                      | <i>WFI</i>               | 4                  | 2-Wire AC/DC                            |              |
|  | Ni 4-GT12-AZ33X-B3131/S34         | T1304292                      | <i>WFI</i>               | 4                  |   |              |
|  | Ni 4-GT12H-ADZ32X-B3131/S34/S1589 | T4205293                      | <i>weldguard</i>         | 4                  |   |              |
|  | Ni 8-GT12H-ADZ32X-B3131/S1589     | T4205480-1                    | <i>weldguard</i>         | 8                  |   |              |
|  | Ni 8U-GT12-ADZ32X-B3131           | M4281115                      | <i>Uprox</i>             | 8                  |   |              |

| Voltage                  | Switching Freq. (Hz) | Operating Current (mA) | Operating Temp. (°C) | Protection | Housing | Face  | Power LED | Output LED | Mating Cordset | Wiring Diagram # | Wiring Diagrams   |
|--------------------------|----------------------|------------------------|----------------------|------------|---------|-------|-----------|------------|----------------|------------------|---|
| 20-250 VAC<br>10-300 VDC | 20                   | ≤100                   | -25 to +70           | IP 67      | CPB     | PA 12 | N/A       | YE         | KB 3T-*        | 1                | <p><b>Diagram 1</b></p>  |
|                          | 20                   | ≤100                   | -30 to +85           | IP 67      | CPB     | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | CPB     | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
| 20-250 VAC<br>10-300 VDC | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | TC    | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | WG    | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | TC    | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -30 to +85           | IP 67      | TC      | TC    | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | TC    | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | TC    | N/A       | YE         | KB 3T-*        | 1                |   |
| 20-250 VAC<br>10-300 VDC | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | TC    | N/A       | YE         | KB 3T-*        | 1                |   |
| 20-250 VAC<br>10-300 VDC | 20                   | ≤100                   | -25 to +70           | IP 67      | CPB     | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | CPB     | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -30 to +85           | IP 67      | CPB     | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
| 20-250 VAC<br>10-300 VDC | 20                   | ≤100                   | -25 to +70           | IP 67      | CPB     | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
| 20-250 VAC<br>10-300 VDC | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | WG    | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -25 to +70           | IP 67      | TC      | WG    | N/A       | YE         | KB 3T-*        | 1                |   |
|                          | 20                   | ≤100                   | -30 to +85           | IP 67      | TC      | PA 12 | N/A       | YE         | KB 3T-*        | 1                |   |

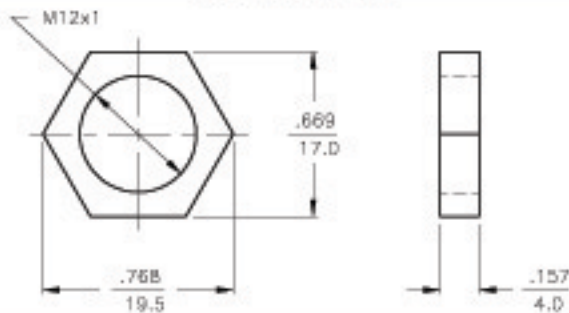
\* Length in meters.

WIRING DIAGRAMS



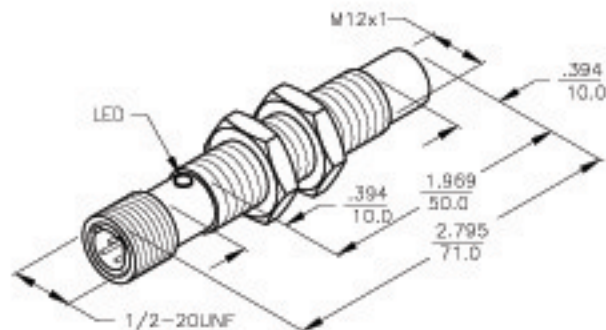
**WARNING: NO SHORT-CIRCUIT PROTECTION**  
ALWAYS WIRE A LOAD IN SERIES WITH THE SENSOR.

LOCKNUT LN-M12



SPECIFICATIONS

|   |  |
|---|--|
| OPERATING VOLTAGE                         | 35-250 VAC/DC                              |
| LINE FREQUENCY                            | 40-60 Hz                                   |
| DIFFERENTIAL TRAVEL (HYSTERSIS)           | 3-15% (5% TYPICAL)                         |
| VOLTAGE DROP ACROSS CONDUCTING SENSOR     | ≤11.0 V at 100 mA                          |
| OUTPUT FUNCTION -AZ                       | NORMALLY OPEN<br>2-WIRE AC SELF-CONTAINED  |
| SHORT-CIRCUIT PROTECTED                   | NO   |
| CONTINUOUS LOAD CURRENT                   | ≤200 mA                                    |
| OFF-STATE (LEAKAGE) CURRENT               | ≤1.7 mA                                    |
| MINIMUM LOAD CURRENT                      | ≥3.0 mA                                    |
| INRUSH CURRENT                            | ≤1.0 A @ 10 ms/5 Hz                        |
| TIME DELAY BEFORE AVAILABILITY            | ≤8 ms                                      |
| POWER-ON EFFECT PROTECTION                | INCORPORATED                               |
| PROTECTION AGAINST TRANSIENTS             | 5 kV, 10 ms, 10 k Ω                        |
| OPERATING TEMPERATURE                     | -25°C to +70°C (-13°F to +158°F)           |
| ENCLOSURE                                 | MEETS NEMA 1, 3, 4, 6, 13 AND IEC IP67     |
| SHOCK                                     | 30 g, 11 ms                                |
| VIBRATION                                 | 55 Hz, 1 mm AMPLITUDE<br>(IN ALL 3 PLANES) |
| LED FUNCTION                              | RED: OUTPUT ENERGIZED                      |
| RATED OPERATING DISTANCE(S <sub>n</sub> ) | 4 mm = .157" (NOMINAL)                     |
| SWITCHING FREQUENCY                       | 20 Hz                                      |
| REPEATABILITY                             | ≤2% of RATED OPERATING DISTANCE            |
| EMBEDDABLE (SHIELDED)                     | NO   |
| MATING PLUGS/CABLES                       | 3-PIN "MICROFAST" CONSTRUCTION             |



SOURCE DRAWING - FOR REFERENCE ONLY

|   |   |   |  |   |              |
|---|---|---|--|---|--------------|
| RELATED DOCUMENTS<br>1.<br>2.<br>3.<br>4. | 3RD ANGLE PROJECTION<br>                          | THIS DRAWING IS PROPERTY OF TURCK INC. USE OF THIS DOCUMENT WITHOUT WRITTEN PERMISSION IS PROHIBITED.   |  | <b>TURCK INC</b><br>High Technology Sensors and Automation Controls |              |
|   | MATERIAL<br><br>SEE SPECIFICATIONS                | TOLERANCES UNLESS OTHERWISE SPECIFIED<br><br>.X ±0.02<br>.XX ±0.01<br>.XXX ±0.005<br>ANGLES ±1°<br><br>ALL MILLIMETER DIMENSIONS ARE REFERENCE ONLY | DWT SWC<br>DATE 06/02/94<br>URSN SCALE 1=2.0 |   |              |
| FINISH<br><br>SEE SPECIFICATIONS          | UNIT OF MEASUREMENT<br><b>INCH [ MILLIMETER ]</b> |   | IDENTIFICATION NO.<br>T1304232               | REV<br>B  |              |
| B UPDATE OPERATING VOLTAGE, SEE ECO       | RWC   | 08/09/07  | 18320  | DO NOT SCALE THIS DRAWING   |              |
| REV DESCRIPTION                           | BY  | DATE  | ECO NO.                                      | FILE: T1304232  | SHEET 1 OF 1 |