



Proximity Sensors

Up-to-date price list:
www.automationdirect.com/pricelist

FREE Technical Support:
www.automationdirect.com/support

FREE Videos:
www.automationdirect.com/videos

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www.automationdirect.com/documentation

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www.automationdirect.com/cad



Name Brand Quality at an AutomationDirect Price

Why buy a proximity sensor from AutomationDirect?

A sensor may only cost \$10.00, but it may be responsible for millions of dollars worth of product for you or your customer. That is why AutomationDirect only works with world class manufacturing companies that have been in the industry for decades, and operate in hundreds of thousands of installations around the world. Our customers can rest easy knowing we work with the best.

Many of our sensors are certified by CE, UL, or CSA to ensure the highest quality. Here are a few examples of how serious we are when it comes to design and manufacturing quality:

- Every proximity sensor is thoroughly tested during the manufacturing process to ensure out of the box operation.
- Most proximity and photoelectric sensors undergo robust temperature testing to eliminate startup failures.
- A vacuum is pulled in the resin filling to eliminate air bubbles which may form in the epoxy and cause long-term maintenance problems or short-term failures.
- Every proximity sensor is adjusted to ensure repeatable and accurate detection and provide you better product stability.
- Our sensor suppliers test the product from start to finish to ensure the highest quality.

But actions speak louder than words. That's why we back every sensor with a 45-day, money-back guarantee, and all proximity sensors carry a limited lifetime warranty. All this results in a return rate that is near zero.

See the quality for yourself

- Two-meter cable exit
Also available in quick-disconnect
- Sink/source switching on two-wire sensors
(low leakage current < .8 ma)
- Convenient two-, three- and four-wire designs are available
- LED presence indicator
- Nickel-plated brass body and stainless steel available
- IP67 rating (unless indicated otherwise)
- Excellent electrical protection (short circuit, reverse polarity, transient)
- PBT sensing face

CE UL US



45-day money-back guarantee

Proximity Sensors For All Applications

All the features you expect

These proximity sensors provide benefits to our customers on everything from price to quality:

- Super low prices compared to the competition. This allows OEM-like pricing on single item purchases. In fact, some of our sensors are actually cheaper than competitors' cables.
- 2-wire designs on the most popular models. This makes for easier and faster terminations (i.e., one less wire to terminate). Faster wiring time and fewer termination points (materials) result in lower system costs. This technology works with sinking or sourcing devices, eliminating the need for multiple sensors, since one sensor works both ways.

Most sensors are available in quick-disconnect cable versions. Proximity sensors are subject to physical damage from machine overtravel, etc. and quick-disconnect sensors make for fast and easy replacement. Also, troubleshooting is much faster with quick-disconnect devices, as the user need only unscrew the connector and change out the sensor. This eliminates the need for disconnecting wires and cutting wire ties, and speeds up the replacement process with much less room for error.

- Food and Beverage sensors available. IP69K rated, stainless steel, made of FDA approved materials able to withstand 1500psi of 80°C water jet at varying angles, 4-6" away



What do 2-, 3- or 4-wire outputs mean to me?

| Benefits | |
|----------|---|
| 2-wire | <ul style="list-style-type: none"> • Will work with sinking or sourcing devices • Only 2 wires to terminate |
| 3-wire | <ul style="list-style-type: none"> • Most popular output - familiar to most users • Must select between NPN and PNP outputs |
| 4-wire | <ul style="list-style-type: none"> • Allows configurability in one device • May have both NPN/PNP selection or NO/NC selection. <p>Allows user to stock one part for numerous applications.</p> |

- **Flush, semi-flush or non-flush sensors are available for mounting variations.** flush or semi-flush versions allow flush mounting, but limit the target detection range, while non-flush versions do not allow flush mounting, but offer greater sensing distance and area.
- **All sensors feature electrical protection for short circuit, reverse polarity, and transient noise.** Whether the sensor is initially wired wrong, or wired into a noisy environment, it will still operate properly.
- **A lifetime warranty means you can install your proximity sensor and be assured of its quality and endurance.**

Rectangular sensors are a perfect fit

Have you ever tried using a tubular sensor or short body sensor, and it just won't fit? For those instances, we also offer rectangular sensors. The same technology found in our standard tubular proximity sensor is put into a rectangular housing, including sensing distances, electrical protection and switching frequencies.

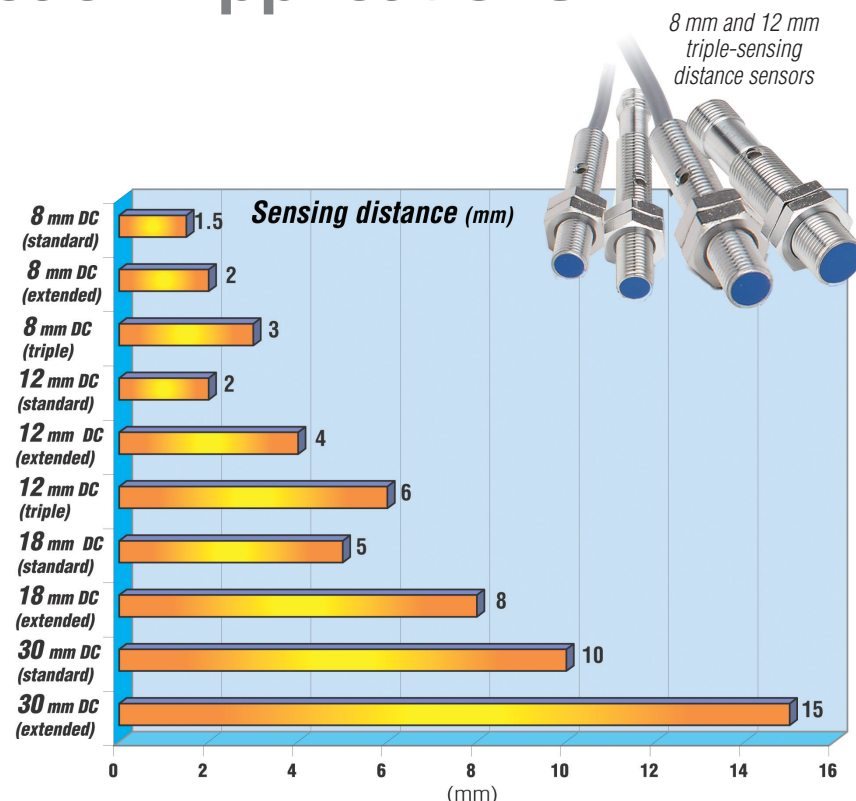


Extended and Triple-sensing Distances for Tough-to-reach Applications

Why extended distance?

In many applications, it might not be possible to mount a sensor close to the sensed object. In those cases, longer sensing distances are needed. For instance:

- Longer sensing distances may eliminate the need to buy more expensive high temperature sensors. If a sensor is placed too close to a hot temperature source, the sensor will fail quicker and require more maintenance.
- Mounting the sensor further from the detection object may eliminate unneeded contact with the sensor, which will extend the life of the sensor.



We sell good proximity sensors at great prices – and we back them up!

AutomationDirect Lifetime Warranty

For inductive proximity sensors sold to the Original User for the lifetime of the original application.

The following terms apply to the LIFETIME WARRANTY in addition to the General Terms:

1. This warranty is available only to AutomationDirect's authorized Value Added Resellers and to the Original User. In the event the ownership of the product is transferred to a person, firm, or corporation other than the Original User, this WARRANTY shall terminate.
2. This WARRANTY is applicable only to the original installation of the product. In the event the machinery, equipment, or production line to which the product is connected, or on which it is installed, is substituted, changed, moved or replaced, the WARRANTY shall terminate.
3. This WARRANTY shall be valid only if the product was purchased by the Original User from AutomationDirect, or from an authorized AutomationDirect Value Added Reseller, or was an integral part of a piece of machinery and equipment obtained by the Original User from an original equipment manufacturer, where the part was purchased by the original equipment manufacturer directly from AutomationDirect or from an authorized AutomationDirect Value Added Reseller.

Purchaser's remedies

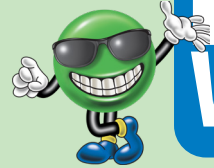
This remedy shall apply to all WARRANTIES. If an AutomationDirect Value Added Reseller desires to make a WARRANTY claim, the Value Added Reseller shall, if requested by AutomationDirect, ship the product to AutomationDirect's facility in Cumming, GA postage or freight prepaid. If the Original User desires to make a WARRANTY Claim, they shall notify the authorized Value Added Reseller from whom it was purchased or, if purchased directly from AutomationDirect, shall notify AutomationDirect and, if requested by AutomationDirect, ship the Product to AutomationDirect's facility in Cumming, GA postage or freight prepaid. AutomationDirect shall, at its option, take any of the following two courses of action for any products which AutomationDirect determines are defective in materials or workmanship.

1. Repair or replace the product and ship the product to the Original User or to the authorized AutomationDirect Value Added Reseller, postage or freight prepaid; or
2. Repay to the Original User that price paid by the Original User; provided that if the claim is made under the lifetime warranty, and such product is not then being supplied by AutomationDirect, then the amount to be repaid by AutomationDirect to the Original User shall be reduced according to the following schedule:

| Number of Years Since Date of Purchase by Original User | Percent of Original Purchase Price To Be Paid by AutomationDirect |
|---|---|
| 10 | 50 percent |
| 15 | 25 percent |
| 20 | 10 percent |
| More than 20 | 5 percent |

REMEDIES OF PURCHASERS AND VALUE ADDED RESELLERS SHALL BE LIMITED EXCLUSIVELY TO THE RIGHT OF REPLACEMENT, REPAIR OR REPAYMENT AS PROVIDED ABOVE AND DOES NOT INCLUDE ANY LABOR COST OR REPLACEMENT AT ORIGINAL USER'S SITE. AUTOMATIONDIRECT.COM SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF ANY WARRANTY, EXPRESSED OR IMPLIED, APPLICABLE TO THE PRODUCT, INCLUDING WITHOUT LIMITATION, ANY DAMAGES RESULTING FROM PROPERTY DAMAGE, PERSONAL INJURY OR BUSINESS INTERRUPTION, EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

Proximity sensors allow non-contact detection of objects. They are used in many industries, including manufacturing, robotics, semiconductor, etc. Inductive sensors detect metallic objects while capacitive sensors detect all other materials. Ultrasonic sensors detect all materials by using sound wave reflections to determine presence.



LIFETIME WARRANTY

Inductive Proximity Sensors



Miniature (3, 4, 5mm)

Starting from \$26.50

AutomationDirect PY and PD SERIES

Three-wire DC

- 3 to 5 mm diameters
- 0.6 to 1.5 mm sensing distances
- Stainless steel construction
- IP67 protection rating



10mm x 16mm Small rectangular

Starting from \$30.50

Micro Detectors DR10 SERIES

Three-wire DC with embedded cable or M12 quick-disconnect, IP67 rating

- 3 and 6 mm sensing distances
- Compact 10 x 16 mm plastic housing
- Axial cable or M8 quick-disconnect models
- IP67 protection rating



8mm x 16mm Small rectangular

Starting from \$78.00

ProSense P8 SERIES

Three-wire DC, IP67 rating, embedded cable or M8 quick-disconnect

- 1.5 and 2.5 mm sensing distances
- Compact 8 x 16 x 4mm plastic housing
- Axial cable or M8 quick-disconnect models
- IP67 protection rating



Contrinex DW Series Made in the USA 8, 12, 18 and 30mm Tubular

Starting from \$16.50

Contrinex DW Series

Flush and non-flush mounting options with nickel-plated brass housings (8mm is 304 stainless steel), overload protection, IP67 protection rating.

- 1.5 to 25 mm sensing distances
- I/O Link (PNP N.O. models only)
- Axial cable or quick-disconnect models



8mm x 8mm Small rectangular

Starting from \$32.50

AutomationDirect CR8 SERIES

Three-wire DC with embedded cable or M8 quick-disconnect

- Sensing distances up to 3mm
- Compact 8 x 8 x 40 mm metal housing
- Axial cable or M8 quick-disconnect models
- IP67 protection rating

5mm x 5mm Small rectangular

Starting from \$47.50

AutomationDirect CR5 SERIES

Three-wire DC, IP67 rating, embedded cable or M8 quick-disconnect

Sensing distance:

- 0.8 and 1.5 mm sensing distances
- Compact 5 x 5 x 25 mm metal housing
- Axial cable or M8 quick-disconnect models
- IP67 protection rating

Inductive Proximity Sensors continued...



8mm Tubular

Starting from \$12.50

PBE6, PNE6 and AE SERIES

Three-wire DC with embedded cable, M8 or M12 quick-disconnect

- 1.5 to 6 mm sensing distances
- Metal housings
- Up to IP69K protection rating

V SERIES

Two- and three-wire AC/DC with embedded cable or quick-disconnect

- 2 to 4 mm sensing distances
- Nickel-plated brass construction
- IP67 protection rating



30mm Tubular

Starting from \$16.00

PBT6, AT and PNT SERIES

Two- and three-wire DC, standard or harsh duty, embedded cable or M12 quick-disconnect

- 10 to 22 mm sensing distances
- Metal housings
- Up to IP69K protection rating

V SERIES

N.O. and N.C., two- and three-wire AC/DC with embedded cable or quick-disconnect

- 10 to 18 mm sensing distances
- Nickel-plated brass construction
- IP67 protection rating



12mm Tubular

Starting from \$9.75

PBM6, AM and PNM SERIES

Two- and three-wire DC, standard or harsh duty, embedded cable or M12 quick-disconnect

- 2 to 8 mm sensing distances
- Metal housings
- Up to IP69K protection rating

V SERIES

Two- and three-wire AC/DC with embedded cable or quick-disconnect

- 2 to 6 mm sensing distances
- Nickel-plated brass construction
- IP67 protection rating



Stainless Steel Tubular

Starting from \$33.50

PEW2, PMW2, PKW2 and PTW2 SERIES

Three and four-wire DC with M8 or M12 quick-disconnect

- 8 to 30 mm diameters
- 3 to 25 mm sensing distances
- Complete overload protection
- IP65/66/67/68/69K protection rating



18mm Tubular

Starting from \$12.00

PBK6, AK and PNK SERIES

Two- and three-wire DC, standard or harsh duty, embedded cable or M12 quick-disconnect

- 5 to 12 mm sensing distances
- Metal housings
- Up to IP69K protection rating

V SERIES

Two- and three-wire AC/DC with embedded cable or quick-disconnect

- 5 to 10 mm sensing distances
- Nickel-plated brass construction
- IP67 protection rating



12, 18, 30mm IP69K FDA-approved materials

Starting from \$43.00

PFM, PFK, PFT, and VF SERIES

An assortment of AC and DC IP69K food and beverage rated proximity sensors with quick-disconnects

- 2 to 22 mm sensing distances
- 316L stainless steel construction
- AC and DC operating voltages
- IP69K rated for food and beverage applications

Inductive Proximity Sensors continued...

Inductive Proximity Sensors continued...



Contrinex® (Rectangular and 3, 4, 5, 8, 12, 18 and 30mm tubular)
Starting from \$64.00

2 to 40 mm sensing distances - Flush and Non-flush

- NO and NC, output models available
- Prewired and Quick-Disconnect options
- IO-Link models available
- Factor 1 (on steel and Al)
- High temperature models available on steel
- Lifetime warranty

CONTRINEX

Correction Factor 1 (K1) and Weld Proxes

Starting from \$28.50

AutomationDirect KS, WK, and WS Series

(8, 12, 18 and 30mm tubular)

- Correction factor = 1; Sense all metals at same distance
- Weld field immunity
- Weld slag resistant coating
- 2 to 15 mm sensing distances

Smooth Barrel (4 and 6.5mm)

Starting from \$25.00

Micro Detectors AC1 and AHS Series

- embedded cable or quick-disconnect
- 0.8 to 2 mm sensing distances

Contrinex Specialty Inductive Proximity Sensors

Starting from \$105.00

Contrinex specialty inductive proximity sensors feature a rugged, stainless steel housing, are designed for extreme environments, and provide a wide range of options, including:

- 3mm to 50mm diameters
- 0.6mm to 25mm sensing distances
- Models for high-temperature applications up to 230°C [446°F]
- Models for high-pressure applications up to 500 bar [7251 psi]
- Models with metal chip immunity eliminate the risk of false switching due to metal debris
- Models DNV-GL certified for maritime use
- IO-Link v1.1 on select models
- Protection ratings up to IP69K

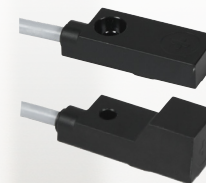
8, 12, 18mm Achieve™

Starting from \$10.50

PAE, PAM, PAK SERIES

Achieve brand inductive proximity sensors feature an all-metal construction, three- or four-wire hookups, axial cable or quick-disconnect connections, and a great price

- 1.5mm to 8mm sensing distances
- PNP or NPN, N.O. output
- 10-30 VDC operating voltage
- Complete overload protection
- IP67 protection rating



12mm x 27mm Small Rectangular

Contrinex DW Series

Starting from \$22.00

- 4mm sensing distance
- Models with top and front sensing
- 10-30 VDC operating voltage
- IO-Link v1.0 (PNP models only)
- IP67 protection rating



Koyo APS4 Series

Starting from \$22.50

- 4mm sensing distance
- Models with top and front sensing
- 10-30 VDC operating voltage
- IP67 protection rating

8mm x 6.5mm Small Rectangular

Koyo APS25 Series

Starting from \$22.50

- 2.5mm sensing distance
- Models with top and front sensing
- 10-30 VDC operating voltage
- IP67 protection rating



40mm x 40mm Large Rectangular

Starting from \$47.50

AutomationDirect LF Series

Three-wire and four-wire DC, IP67 rating, M12 quick-disconnect

- 20 to 35 mm sensing distances
- Sensing face has five selectable positions
- Single and complementary outputs
- IP67 protection rating



80mm x 40mm Large Rectangular

Starting from \$146.00

ProSense D80 Series Rectangular

- 50mm (flush) and 60mm (non-flush) sensing distances
- Large active sensor face
- AC and DC operating voltages
- Select models with potentiometer sensitivity adjustment
- PPE housing with diecast zinc nickel-plated mounting clip



Sensor Tester

Priced at \$73.00

- Fast field check of various sensor types
- LED and acoustic indicator
- Current supply to 100mA
- Rechargeable battery
- Adapted to Universal micro-USB charger

Magnetic Proximity Sensors

Magnetic proximity sensors from AutomationDirect provide non-contact object detection beyond the normal limits of inductive proximity sensors. These sensors offer very long sensing ranges in a small package and can detect magnets through walls of non-ferrous metal, stainless steel, aluminum, plastic, or wood.

8mm Tubular



Starting from
\$59.00

AutomationDirect MAE Series

- 60mm sensing distance
- 316L stainless steel housing
- Flush mount

12mm Tubular

AutomationDirect MMW Series

- 60mm sensing distance
- 316L stainless steel housing
- Flush mount



Starting from
\$61.00



Starting from
\$45.00

ProSense MAFM Series

- 60mm sensing distance
- 316L stainless steel housing
- Flush mount
- IP65/68/69K protection rating

18mm Tubular

AutomationDirect MKW Series

- 70mm sensing distance
- 316L stainless steel housing
- Flush mount



Starting from
\$64.00



Starting from
\$50.00

ProSense MAFK Series

- 70mm sensing distance
- 316L stainless steel housing
- Flush mount
- IP65/68/69K protection rating

Magnetic Proximity Sensors continued...

Rectangular



Starting from
\$49.00

AutomationDirect MDR Series

- 60mm sensing distance
- PBT thermoplastic housing
- Flush mount

Magnetic Proximity Sensor Accessories

A variety of mounting brackets and adapters are available for affixing magnetic proximity sensors, including axial, right-angle, and swivel-mount models, in various materials, including plastic, plated, or stainless steel. Magnets and spare hex nuts are also available.



Starting from
\$2.00

Capacitive Proximity Sensors

Capacitive proximity sensors are used to detect metallic and non-metallic objects, can sense through insulating materials, and are often used to detect fill levels of liquids, pellets, and powders through container walls. They are available in tubular, round, or rectangular shapes, and in a variety of sensing distances.

8mm Tubular



Starting from
\$110.00

ProSense CE1 Series

- 1.5mm flush or 3mm non-flush sensing distances
- Sensitivity adjustment via potentiometer
- Stainless steel housing
- LED function indicator

12mm Tubular

AutomationDirect CM1 Series

- 6 mm flush or 12mm non-flush sensing distances
- Sensitivity adjustment via potentiometer

- Stainless steel housing
- LED function indicator



Starting from
\$92.00



Starting from
\$100.00

BALLUFF BCS Series

- 4mm or 5mm flush or 8mm non-flush sensing distances
- Sensitivity adjustment via potentiometer
- Stainless steel or PBT thermoplastic housings
- LED function indicator
- IP67 protection rating

Capacitive Proximity Sensors continued...

18mm Tubular



Starting from
\$96.00

AutomationDirect CK1 Series

- 12mm non-flush sensing distance
- Teach-in pushbutton
- PBT thermoplastic housing
- LED function indicator

AutomationDirect CK2 Series

- 8mm flush or 15mm non-flush sensing distances
- Sensitivity adjustment via potentiometer
- PBT thermoplastic housing
- LED function indicator
- IP65/67/69K protection rating



Starting from
\$66.00



Starting from
\$108.00

BALLUFF BCS Series

- 8mm flush or 15mm non-flush sensing distances
- Sensitivity adjustment via potentiometer
- Stainless steel or PBT thermoplastic housings
- LED function indicator
- IP67 protection rating

30mm Tubular



Starting from
\$84.00

AutomationDirect CT1 Series

- 40mm non-flush sensing distance
- Teach-in sensitivity adjustment
- PBT thermoplastic housing
- LED function indicator

AutomationDirect CT2 Series

- 15mm flush or 25mm non-flush sensing distances
- Sensitivity adjustment via potentiometer
- PBT thermoplastic housing
- LED function indicator
- IP65/67/69K protection rating



Starting from
\$63.00



Starting from
\$106.00

AutomationDirect CTV AC/DC Series

- 40mm non-flush sensing distance
- Teach-in pushbutton
- PBT thermoplastic housing
- 30-250 VAC & 20-250 VDC universal supply voltage
- LED function indicator

Capacitive Proximity Sensors continued...

Micro Detectors CT1 Series

- 15mm flush or 20mm non-flush sensing distances
- Sensitivity adjustment via potentiometer
- Nickel-plated brass housing
- LED function indicator



Starting from
\$87.00



Starting from
\$109.00

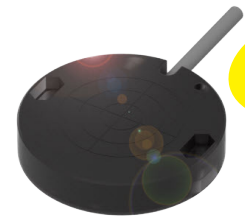
BALLUFF BCS Series

- 15mm or 20mm flush sensing distances
- 25 or 30mm non-flush sensing distances
- Sensitivity adjustment via potentiometer
- Stainless steel or PBT thermoplastic housings
- LED function indicator
- IP67 protection rating

50mm Round

BALLUFF BCS Series

- 25mm flush sensing distance
- Sensitivity adjustment via potentiometer
- POM thermoplastic housing
- LED function indicator
- IP65/57 protection rating



Starting from
\$129.00

Small Rectangular



Starting from
\$71.00

AutomationDirect CR1 Series

- 12mm flush sensing distance
- Teach-in pushbutton
- PBT thermoplastic housing
- LED function indicator

BALLUFF BCS Series

- 8mm or 20mm flush sensing distances
- Sensitivity adjustment via potentiometer
- PP or PBT thermoplastic housing
- LED function indicator
- IP67 protection rating



Starting from
\$92.00

Ultrasonic Proximity Sensors

Ultrasonic proximity sensors emit a sound impulse and measure the elapsed time of the echo from an object to return to the sensor. These sensors detect most materials (metal, wood, plastic, glass, liquid, etc.) and are unaffected by color, transparency, shininess, or lighting conditions.

18mm Tubular



Starting from
\$120.00

Micro Detectors UK1 Series

- In sensing distances up to 2200mm
- Discrete and analog output options
- 316L stainless steel or plastic housings
- LED function indicator

Micro Detectors UK6 Series

- In sensing distances up to 900mm
- Discrete and analog output options

- Plastic housing
- LED function indicator



Starting from
\$109.00



Starting from
\$317.00

Micro Detectors SU Series

- In sensing distances up to 1500mm
- High resolution 0-10 VDC output
- Plastic housing

Wenglor OPT Series

- In sensing distances up to 1200mm
- 0-10 VDC output
- IO-Link v1.0

- Stainless steel housing
- LED function indicator



Starting from
\$141.00

30mm Tubular



Starting from
\$213.00

Micro Detectors UT1B Series

- 250-3500mm sensing range
- Discrete and analog output options
- 316L stainless steel or plastic housings
- LED function indicator

Micro Detectors UT2F Series

- 350-6000mm sensing range
- Discrete and analog output options

- Plastic housing
- LED function indicator



Starting from
\$306.00

Ultrasonic Proximity Sensors continued...

30mm Tubular continued...



Starting from
\$346.00

Micro Detectors UT5L Series

- 600-8000mm sensing range
- Discrete and analog output options
- 316L stainless steel housing
- LED function indicator

Micro Detectors TU1 Series

- 300-2500mm sensing range
- Discrete and analog output options

- Plastic housing
- LED function indicator



Starting from
\$371.00

Rectangular



Starting from
\$112.00

Micro Detectors UQ1 Series

- In sensing distances up to 1200mm
- Discrete models are PNP or NPN and N.O./N.C. selectable
- Plastic housing
- LED function indicator

Micro Detectors UHZ Series

- 0-300mm sensing range
- No dead zone at close range
- Discrete outputs

- Plastic housing
- LED function indicator



Starting from
\$197.00



Starting from
\$127.00

Wenglor OPT Series

- In sensing distances up to 2000mm
- Diffuse and through-beam sensing styles
- NO PNP or NPN discrete output
- IO-Link v1.1
- Plastic housing
- LED function indicator