Q4X Series
Versatile, Rugged, Laser Measurement Sensor

Easy-to-Use
- Save time and money with the Q4X Series which is ready to measure right out of the box
- A simple user experience from installation to setup
  - Bright spot for easy alignment
  - Three push buttons simplify setup
  - Intuitive menus
- Four-digit display shows distance to target in mm
- FDA-grade stainless steel is suitable for IP69K washdown environments

Superior Performance
- A powerful problem-solving sensor with advanced functions including:
  - Remote teach
  - Background suppression
  - Laser inhibit
  - Cross-talk avoidance
- Versatile Dual Mode uses both distance and intensity measurements to:
  - Error proofing part placement
  - Detect clear objects
  - Detect objects beyond 600 mm
- Best-in-class excess gain allows the sensor to see black targets at a 600 mm range
- Durable housing rated IP69K
- Superior ambient light resistance

Q4XT100...
Q4XF110...
Q4XT300...
Q4XF310...
Q4XT600...
Q4XF610...

Height: 57 mm
Width: 18 mm
Depth: 44 mm

Height: 57 mm
Width: 18 mm
Depth: 34 mm

SHOP ONLINE at www.airlinehyd.com 800-999-7378
Detecting a thin light target on a light background

**Sample Applications**

- Error-proofing
- Multicolor foil packaging
- Black foam on black plastic
- Black rubber in front of metal
- Clear objects without using a reflector

**Discrete**

<table>
<thead>
<tr>
<th>Output</th>
<th>Range</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bipolar</td>
<td>300 mm</td>
<td>Q4XTBLAF300-Q8</td>
</tr>
<tr>
<td>Bipolar</td>
<td>100 mm</td>
<td>Q4XTBLAF100-Q8</td>
</tr>
<tr>
<td>PNP</td>
<td>310 mm</td>
<td>Q4XFPLAF310-Q8</td>
</tr>
<tr>
<td>NPN</td>
<td>310 mm</td>
<td>Q4XFNLAF310-Q8</td>
</tr>
<tr>
<td>PNP</td>
<td>110 mm</td>
<td>Q4XFPLAF110-Q8</td>
</tr>
<tr>
<td>NPN</td>
<td>110 mm</td>
<td>Q4XFNLAF110-Q8</td>
</tr>
</tbody>
</table>

**Dual Discrete with IO-Link®**

<table>
<thead>
<tr>
<th>Range</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 mm</td>
<td>Q4XTKLAF600-Q8</td>
</tr>
<tr>
<td>300 mm</td>
<td>Q4XTKLAF300-Q8</td>
</tr>
<tr>
<td>100 mm</td>
<td>Q4XTKLAF100-Q8</td>
</tr>
<tr>
<td>610 mm</td>
<td>Q4XFKLAF610-Q8</td>
</tr>
<tr>
<td>310 mm</td>
<td>Q4XFKLAF310-Q8</td>
</tr>
<tr>
<td>110 mm</td>
<td>Q4XFKLAF110-Q8</td>
</tr>
</tbody>
</table>

Detecting black parts on a black background
Bottle fill level measurement

Analog

<table>
<thead>
<tr>
<th>Output</th>
<th>Range</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 20 mA</td>
<td>300 mm</td>
<td>Q4XTAILF300-Q8</td>
</tr>
<tr>
<td>4 to 20 mA</td>
<td>100 mm</td>
<td>Q4XTAILF100-Q8</td>
</tr>
<tr>
<td>0 to 10 V</td>
<td>300 mm</td>
<td>Q4XTULF300-Q8</td>
</tr>
<tr>
<td>0 to 10 V</td>
<td>100 mm</td>
<td>Q4XTULF100-Q8</td>
</tr>
<tr>
<td>4 to 20 mA</td>
<td>310 mm</td>
<td>Q4XFILF310-Q8</td>
</tr>
<tr>
<td>4 to 20 mA</td>
<td>110 mm</td>
<td>Q4XFILF110-Q8</td>
</tr>
<tr>
<td>0 to 10 V</td>
<td>310 mm</td>
<td>Q4XFULF310-Q8</td>
</tr>
<tr>
<td>0 to 10 V</td>
<td>110 mm</td>
<td>Q4XFULF110-Q8</td>
</tr>
</tbody>
</table>

Continuous Measurement Applications

- Fill level indication
- Roll diameter
- Loop control
- Thickness/height verification
Simplified Interface for Clear Object

<table>
<thead>
<tr>
<th>Output</th>
<th>Range</th>
<th>Model*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bipolar</td>
<td>300 mm</td>
<td>Q4XTBCOD300-Q8</td>
</tr>
<tr>
<td>PNP</td>
<td>310 mm</td>
<td>Q4XFPCOD310-Q8</td>
</tr>
<tr>
<td>NPN</td>
<td>310 mm</td>
<td>Q4XFNCOD310-Q8</td>
</tr>
</tbody>
</table>

* Discrete models with a simplified user interface designed specifically for clear object detection applications

Clear Object Applications

- Clear plastic bottling lines
- Food containers/trays
- IV liquid bags
- Pharmaceutical vials

Reference Surface

Move as close as possible

Can also be tilted left or right

Tilt the beam axis downward

Detecting clear plastic PET bottles
LTF Series
12 Meter Laser Measurement Sensor

Superior Performance
- A powerful distance measuring sensor with advanced functions including:
  - Remote teach
  - High excess gain for seeing really dark targets
  - Laser power control for accurately measuring shiny targets
  - Laser inhibit
  - Cross-talk avoidance
  - Fast response speed
  - Delay timers
- Sensing range of 50 to 12,000 mm
- Durable housing rated IP67
- Superior resistance to ambient light sources

Precision Measurement
- Detects dark targets at 7 meters and white targets at 12 meters
- Repeatability of <5 mm
- Accuracy of +/- 10 mm

Time-of-Flight Measurement
The LTF sensor uses time-of-flight measurement, emitting a pulsed light, measuring the amount of time for the light to reflect off the object and return to the sensor to calculate the distance. This enables sensing in long-range applications across a wide variety of targets.
Loop control on a calendaring machine

LTF Series

<table>
<thead>
<tr>
<th>Output</th>
<th>Range</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 20 mA Analog and (1) NPN/PNP Discrete</td>
<td>12 m</td>
<td>LTF12IC2LDQ</td>
</tr>
<tr>
<td>0 to 10 V Analog and (1) NPN/PNP Discrete</td>
<td>12 m</td>
<td>LTF12UC2LDQ</td>
</tr>
<tr>
<td>Dual Discrete (NPN/PNP configurable) with IO-Link</td>
<td>12 m</td>
<td>LTF12KC2LDQ</td>
</tr>
</tbody>
</table>

Long Range Measurement Applications

- Roll diameter
- Loop control
- Automated storage
- Presence/absence
- Palletizer
- Transfer press
- Robot end effector
- Fill Level

Detecting black parts on a shiny background
LE Series
Laser Measurement Sensor

Superior Performance

- Measurement range up to 1 m
- Measurement resolution down to 0.02 mm
- Smaller laser spot for detecting small features or larger spot for averaging across uneven surfaces
- Excellent repeatability and accuracy for challenging targets, from black rubber to shiny metal
- Advanced measurement modes reduce PLC programming required to find average, minimum or maximum measurements

Easy-to-Use

- Ready to measure right out of the box
- Easy alignment with a visible laser
- Multiple teach options simplifies setup for any application
- Convenient setup with a two-line, eight-character display

LE Series Specifications:

LE550
- Spot Size: 1.2 x 0.9 mm
- Resolution: 0.2 mm
- Height: 77 mm
- Width: 26 mm
- Depth: 56 mm

LE250
- Spot Size: 12.1 x 4.9 mm
- Resolution: 1.0 mm
- Height: 77 mm
- Width: 26 mm
- Depth: 56 mm

LE550
- Height: 77 mm
- Width: 26 mm
- Depth: 56 mm
LE Series

<table>
<thead>
<tr>
<th>Output</th>
<th>Range</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) NPN/PNP discrete</td>
<td>400 mm</td>
<td>LE250DQ</td>
</tr>
<tr>
<td>4 to 20 mA analog and (1) NPN/PNP discrete</td>
<td>400 mm</td>
<td>LE250IQ</td>
</tr>
<tr>
<td>0 to 10 V analog and (1) NPN/PNP discrete</td>
<td>400 mm</td>
<td>LE250UQ</td>
</tr>
<tr>
<td>IO-Link and (1) PNP discrete</td>
<td>400 mm</td>
<td>LE250KQ</td>
</tr>
<tr>
<td>(2) NPN/PNP discrete</td>
<td>1000 mm</td>
<td>LE550DQ</td>
</tr>
<tr>
<td>4 to 20 mA analog and (1) NPN/PNP discrete</td>
<td>1000 mm</td>
<td>LE550IQ</td>
</tr>
<tr>
<td>0 to 10 V analog and (1) NPN/PNP discrete</td>
<td>1000 mm</td>
<td>LE550UQ</td>
</tr>
<tr>
<td>IO-Link and (1) PNP discrete</td>
<td>1000 mm</td>
<td>LE550KQ</td>
</tr>
</tbody>
</table>

Precision Measurement Applications

- Presence or absence detection
- Roll diameter monitoring
- Loop tension control
- Part size verification
- Part positioning

Monitoring sheet metal roll diameter

Detect Faulty or Broken Loop
Discrete Output [D_OUT]

Teach Switch Point 1
Teach Midpoint
Teach Switch Point 2

Tension Control
Analog Output [A_OUT]
Q3X Series
Versatile, Rugged, Laser Contrast Sensor

High-Performance Detection
• High-speed part detection as fast as 250 μs, capturing up to 2,000 events per second
• Angled three-digit display shows a clear intensity readout that is easily viewed from multiple vantage points
• Short-range models available with both diffuse and fixed background suppression making them two sensors in one
• Bright laser spot for easy setup

Easy-to-Use
• Save time and simplify set up with two tactile buttons
• The three-digit display can be inverted for a clear readout during setup or inspections
• Easy mounting and precise alignment with an adjustable mounting bracket
• Fixed-field models with background suppression capabilities ignore changing background conditions
• The multi-function remote input line can be used for remote teach, laser power inhibit, and cross-talk avoidance

Can detect small changes in contrast from up to 300 mm away

Height: 49 mm
Width: 18 mm
Depth: 37 mm
Bottle label verification with background suppression

**Q3X Series**

<table>
<thead>
<tr>
<th>Contrast Sensing Range</th>
<th>Background Suppression Distance</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 300 mm</td>
<td>NA</td>
<td>Q3XTBLD-Q8</td>
</tr>
<tr>
<td>0 to 50 mm</td>
<td>60 mm</td>
<td>Q3XTBLD50-Q8</td>
</tr>
<tr>
<td>0 to 100 mm</td>
<td>120 mm</td>
<td>Q3XTBLD100-Q8</td>
</tr>
<tr>
<td>0 to 150 mm</td>
<td>190 mm</td>
<td>Q3XTBLD150-Q8</td>
</tr>
<tr>
<td>0 to 200 mm</td>
<td>280 mm</td>
<td>Q3XTBLD200-Q8</td>
</tr>
</tbody>
</table>

**Contrast Applications**

- High-speed registration mark detection
- Label presence verification
- Verifying small part placement

Ignores backgrounds, including shiny metal, while reliably detecting small contrast changes (by model)
**QS18 Series**

**Reliable Clear Object Detection Sensor**

**Easy-to-Use**
- Save time and simplify setup with a pushbutton teach or potentiometer
- 18 mm threads or side mount holes for easy installation
- **Small LED spot size** for tight installations
- Detect from the object to the face of the sensor with **no blind spot**

**Coaxial Optics**
- Detects clear and mirror-like surfaces
- Operates at very short distances from the reflector
- Enables very precise leading edge detection

**Superior Performance**
- Coaxial optics allow for reliable clear object detection
- Response speeds as fast as 400 μs ON/OFF
- Banner’s ClearTracking algorithm provides reliable operation by compensating for dust build up and ambient temperature changes (Expert models only)
- IP67-rated housing

**Height:** 35 mm  
**Width:** 15 mm  
**Depth:** 31 mm
# QS18 Expert™ Clear Object Detection

<table>
<thead>
<tr>
<th>Adjustment</th>
<th>Output</th>
<th>Connector</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pushbutton</td>
<td>NPN</td>
<td>2 m Integral Cable</td>
<td>QS18EN6XLPC</td>
</tr>
<tr>
<td></td>
<td>PNP</td>
<td>2 m Integral Cable</td>
<td>QS18EP6XLPC</td>
</tr>
<tr>
<td></td>
<td>NPN</td>
<td>M12 4-pin Euro QD</td>
<td>QS18EN6XLPCQ8</td>
</tr>
<tr>
<td></td>
<td>PNP</td>
<td>M12 4-pin Euro QD</td>
<td>QS18EP6XLPCQ8</td>
</tr>
<tr>
<td></td>
<td>NPN</td>
<td>M8 4-pin metal QD</td>
<td>QS18EN6XLPCQ7</td>
</tr>
<tr>
<td></td>
<td>PNP</td>
<td>M8 4-pin metal QD</td>
<td>QS18EP6XLPCQ7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adjustment</th>
<th>Output</th>
<th>Connector</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potentiometer</td>
<td>NPN</td>
<td>2 m Integral Cable</td>
<td>QS18VN6XLP</td>
</tr>
<tr>
<td></td>
<td>PNP</td>
<td>2 m Integral Cable</td>
<td>QS18VP6XLP</td>
</tr>
<tr>
<td></td>
<td>NPN</td>
<td>M12 4-pin Euro QD</td>
<td>QS18VN6XLPCQ8</td>
</tr>
<tr>
<td></td>
<td>PNP</td>
<td>M12 4-pin Euro QD</td>
<td>QS18VP6XLPCQ8</td>
</tr>
<tr>
<td></td>
<td>NPN</td>
<td>M8 4-pin metal QD</td>
<td>QS18VN6XLPCQ7</td>
</tr>
<tr>
<td></td>
<td>PNP</td>
<td>M8 4-pin metal QD</td>
<td>QS18VP6XLPCQ7</td>
</tr>
</tbody>
</table>

# Three User-Selectable Thresholds
Optimize the sensor’s performance to detect small changes in the amount of light received.

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8%</td>
<td>Glass</td>
</tr>
<tr>
<td>16%</td>
<td>PET Bottles</td>
</tr>
<tr>
<td>32%</td>
<td>Glass Vials</td>
</tr>
</tbody>
</table>

**SHOP ONLINE at www.airlinehyd.com**

800-999-7378
DF-G Series

Broad Selection of World Class Fiber Amplifiers

Easy-to-Use

- Simple push button Teach
- Rocker switch for manual adjustment
- **Easy-to-read display** shows both the current signal strength and switching threshold

DF-G Series

- DF-G1: Expert teach and set methods ensure optimal gain and threshold
- DF-G2: Ideal for short duration events with 10 µs response speed
- DF-G3: Ideal for long range sensing, low contrast and precise positioning

General Purpose

DF-G1

DF-G2

DF-G3

High Speed

High Power

Dual Display

Expert TEACH

Rocker Button

Remote Wire

Simple Menu

One Click

*IO-Link®*
Application Specific

Light Receiver: DF-G1
- External light source monitoring
- Error-proofing and functional verification of light emitting assemblies.

Small Object: DF-G2
- Pill counting
- Small part counting

Color LED's: DF-G2/DF-G3
- Infrared: Long range
- Red, blue, green or white for registration mark detection

Water Detection: DF-G3
- 1450 nm infrared wavelength to enhance contrast of clear liquids
- Reliable detection of presence or absence of water-based liquids

Dual Discrete: DF-G3
- Part size verification
- Detect two events with one sensor using a dual bifurcated fiber

Analog: DF-G3
- Web guiding
- Contrast matching
- Intensity monitoring

IO-Link®: DF-G1/DF-G2/DF-G3
- Remote teach
- Remote monitoring and data collection
- Remote configuration download and adjustment

Energy Efficient Light Resistance: DF-G3
- Stable detection in industrial lighting environment

Dense Sensing Point Environment: DF-G3
- Cross talk avoidance algorithm allows multiple sensors to work in close proximity
- Includes synchronization wire for up to six sensors to avoid mutual interference

Fiber Optics

Vantage Line

- Competitively priced standard plastic and glass fibers
- Most models offer PVC overmold flex relief
- OEM friendly packaging

Speciality Fibers

Array & Slot
Durabend & High Flex
Convergent

SteelSkin
High Temperature
Liquid

SHOP ONLINE at www.airlinehyd.com
800-999-7378
Vibration Monitoring Applications

- Motors
- Pumps
- Compressors
- Fans
- Blowers
- Gear boxes

QM42VT Sensors

<table>
<thead>
<tr>
<th>Description</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration and temperature via 1-wire serial interface</td>
<td>QM42VT1</td>
</tr>
<tr>
<td>Vibration and temperature via RS-485 Modbus</td>
<td>QM42VT2</td>
</tr>
</tbody>
</table>

Vibration Monitoring

- **Predictive maintenance** made easy by high accuracy vibration (RMS velocity) and temperature measurements
- Easily **monitor machine health** by sending information wirelessly
- **Detect problems earlier** to avoid machine failures and delays
- Manufactured with a robust zinc alloy housing

Wireless Network

1. Choose the Node that is right for your application

   - Up to six Nodes per sensor

2. Choose a matching Gateway (Modbus/TCP to Ethernet/IP converter, user-selectable serial interface)

QM42VT or K50U mounted on your machine

Battery-powered

Height: 42 mm
Width: 13 mm
Depth: 42 mm

Wireless Network
K50U Ultrasonic Sensor

Wireless Level and Tank Monitoring

Level and Tank Monitoring

• Provides a distance measurement from the target to the sensor
• Monitor wirelessly to avoid long cable runs
• Built-in temperature compensation for reliable measurement
• Sensing range from 300 mm to 3 m
• Threaded housing for easy installation

K50U Sensors

<table>
<thead>
<tr>
<th>Description</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultrasonic sensor with 1-wire serial interface</td>
<td>K50UX1RA</td>
</tr>
<tr>
<td>Ultrasonic sensor that functions as a modbus slave device via RS-485</td>
<td>K50UX2RA</td>
</tr>
</tbody>
</table>

Diameter: 50.0 mm
Connection: 1¼ NPT
Depth: 59.5 mm

Ideal for monitoring portable tanks
VE Smart Camera

Compact and Durable Camera with Intuitive Software

Superior Performance

- Two-line, eight-character display and push buttons enable troubleshooting and camera status
  - Perform product change or trigger
  - Change or view IP address, MAC address or speed
  - View firmware, focus number or status
- Robust, aluminum housing for harsh environments
- Ethernet connector with GigE transfer capability
- C-mount lens to suit a variety of applications
- Optional lens cover provides an IP67-rated solution

Height: 88 mm
Width: 67 mm
Depth: 41 mm
Intuitive Software

Vision Manager Software is easy to configure with powerful functions. Download at bannerengineering.com

- **Runtime editing** allows for quick inspection changes on the fly to reduce costly downtime
- An emulator to assist with offline building and troubleshooting of applications
- **EtherNet/IP, Modbus/TCP and PROFINET** for seamless communication on the manufacturing floor

VE Smart Camera

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Imager</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>2MP, 1600 x 1200</td>
<td>Grayscale</td>
<td>VE202G1A</td>
</tr>
<tr>
<td>1.3MP, 1280 x 1024</td>
<td>Grayscale</td>
<td>VE201G1A</td>
</tr>
<tr>
<td>WVGA, 752 x 480</td>
<td>Grayscale</td>
<td>VE200G1A</td>
</tr>
</tbody>
</table>

Vision Applications

- **Inspect**: Verify correct parts, labels or components are present
- **Count**: Confirm the number of parts found
- **Measure**: Measure distances or angles to validate size or location of parts
- **Detect**: Find edges and determine part location
- **Flaw Detection**: Inspect for flaws, such as scratches on a part
- **Uniformity**: Check for consistent application of sealant or adhesives
WLS27 Series
Industrial LED Light Bar

Advanced Design
- Rugged, water-resistant IP66, IP67 and IP69K design
- Cascade models for connecting multiple lights end-to-end, minimizing wiring
- Energy efficient for overall cost savings
- Optional snap clips for easy installation and repositioning
- Ability to adjust the lights to Hi/Lo/Off
- Automatic temperature protection built into the unit protects the life of the product
- Eight different lengths and dual-color models available

Applications
- Laminar airflow applications requiring a round shape
- Marine environments
- Car wash
- Food and beverage processing equipment

<table>
<thead>
<tr>
<th>Length (mm)</th>
<th>Cool White</th>
<th>Warm White</th>
<th>Red</th>
<th>Green</th>
<th>Blue</th>
<th>Yellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>145</td>
<td>325</td>
<td>325</td>
<td>55</td>
<td>180</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>285</td>
<td>650</td>
<td>650</td>
<td>110</td>
<td>360</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>430</td>
<td>975</td>
<td>975</td>
<td>165</td>
<td>540</td>
<td>120</td>
<td>150</td>
</tr>
<tr>
<td>570</td>
<td>1300</td>
<td>1300</td>
<td>220</td>
<td>720</td>
<td>160</td>
<td>200</td>
</tr>
<tr>
<td>710</td>
<td>1625</td>
<td>1625</td>
<td>275</td>
<td>900</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>850</td>
<td>1950</td>
<td>1950</td>
<td>330</td>
<td>1080</td>
<td>240</td>
<td>300</td>
</tr>
<tr>
<td>990</td>
<td>2275</td>
<td>2275</td>
<td>385</td>
<td>1260</td>
<td>280</td>
<td>350</td>
</tr>
<tr>
<td>1130</td>
<td>2600</td>
<td>2600</td>
<td>440</td>
<td>1440</td>
<td>320</td>
<td>400</td>
</tr>
</tbody>
</table>

*Typical operating wattage is measured at 24 V dc.

LED color options

Length: 145 - 1130 mm
Width: 27 mm
Depth: 27 mm

SHOP ONLINE at www.airlinehyd.com

800-999-7378
High-Quality LED Lighting

- Increase worker productivity and ergonomics with bright, high-quality, uniform light
- Durable light stands up to difficult environments with a rugged metal housing and shatterproof light cover
- Energy efficient for overall cost savings
- Easy installation with a variety of mounting brackets: surface, swivel, snap and hanging
- All models include built in dimmable control
- AC models are DLC qualified with a five year warranty
- Six color options available

Applications

- Economical lighting solution for low- and mid-bay areas
- Machine and work cell illumination
- Quality inspections requiring bright even lighting

### WLB92 Series

**Industrial LED Light Bar**

<table>
<thead>
<tr>
<th>Lighted Length (mm)</th>
<th>Lumens (Typical @ 25 °C) Daylight White</th>
<th>AC Models Typical Wattage* (Watts)</th>
<th>DC Models Typical Wattage* (Watts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>550</td>
<td>3130</td>
<td>34</td>
<td>35</td>
</tr>
<tr>
<td>1100</td>
<td>6500</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>

* Typical operating wattage is measured at 120 V ac or 24 V dc, depending on model

DC models | AC QD models | AC Conduit models

Length: 550 or 1100 mm
Width: 97 mm
Depth: 104 mm

SHOP ONLINE at www.airlinehyd.com

800-999-7378
LED Indicators
Bright, Rugged and Highly Visible Indicators

Variety of Shapes and Sizes

- Rugged, **water-resistant housing** made of UV-stabilized material
- Bright, uniform indicators appear gray when OFF to eliminate false indication from ambient light
- A variety of shapes and size have a long lifetime with zero maintenance
- Audible, daylight visible, and wireless integration options on select models
Illuminated Touch Buttons
Ergonomic, Visual and Sealed Operator Touch Buttons

Simple Operation

- Excellent immunity prevents tripping from water and foreign materials; they even work with gloves
- Variety of logic functions available
- Rugged housings with high IP ratings
- Bright, uniform indicators appear gray when OFF to eliminate false indication from ambient light
- Multiple colors available
- Perfect for pick-to-light operations
- Wireless integration options on select models
**TL70 Tower Light**

**Large, Modular Tower Lights**

**Superior Design**
- **Preassembled or modular models** to suit application needs
- Light segments have user-selectable solid ON or flashing
- Up to **five colors plus audible** in one device
- Rugged, water-resistant IP65 housing with UV-stabilized material
- Bright, uniform indicator segments appear gray when off to eliminate false indication from ambient light
- Housings available in either black or gray
- **Wireless options** available

**Simple Set Up**

**Audible Options**
- Audible (92 dB)
- Loud Audible (101 dB)
- Multi Tone (101 dB)
- Programmable Audible (coming soon)

**Light Segments** (up to 5)

**Base**

**TL70 Tower Light**
- **Height:** 46-243 mm
- **Width:** 70 mm
- **Depth:** 70 mm

**LED color options**

**DIP Switch Settings**
- **Position Setting**
- **Flash Rate Setting**
- **Audible Tone Setting**
Modular Tower Lights with Wireless Communication

1. Bind Base to Gateway

2. Build Light Segments

3. Map Base to Gateway

Tower Lights

Premium high-brightness and audible tower lights

Audible
- max. intensity
- 92 db @ 1 meter (typical)

Sealed Audible
- max. intensity
- 94 db @ 1 meter (typical)

Sealed Omni-Directional Audible
- Standard: max. intensity
- 99 db @ 1 meter (typical)
- Intensity Adjust: max. intensity
- 95 db @ 1 meter (typical)

LED color options

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800-999-7378
Industrial Wireless Controller

- **Control wireless networks**, consolidate networks, create a network backbone
- **Programmable** to solve specific applications
- **Ethernet** and cellular connectivity
- Send alert messages
- Create local logs
- Relay register data to the cloud

**DXM100 Controller**

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controller with DX80 Gateway preconfigured as a protocol converter</td>
<td>900 MHz</td>
<td>DXM100-B1R1</td>
</tr>
<tr>
<td>Controller with DX80 Gateway preconfigured as a protocol converter</td>
<td>2.4 GHz</td>
<td>DXM100-B1R3</td>
</tr>
<tr>
<td>Controller with MultiHop Data Radio</td>
<td>900 MHz</td>
<td>DXM100-B1R2</td>
</tr>
<tr>
<td>Controller with MultiHop Data Radio</td>
<td>2.4 GHz</td>
<td>DXM100-B1R4</td>
</tr>
</tbody>
</table>

**Predictive Maintenance Monitoring:** monitor equipment to detect problems early and avoid additional damage and unplanned downtime

**Environmental Monitoring:** minimize material loss by monitoring temperature and humidity in climate controlled areas

**Productivity Solutions:** create call-for-parts/service and pick-to-light systems to increase productivity and reduce error

Height: 86 mm
Width: 105 mm
Depth: 60 mm
Compatible Wireless Products

Performance I/O Nodes and MultiHop Modbus I/O

Vibration and Temperature Sensors

K50U Ultrasonic Sensors

Temperature and Humidity Sensors

Q45 Wireless Nodes

TL70 Wireless Tower Lights

For more information, visit bannerengineering.com.
XS26-2
Expandable Safety Controller

- **Up to eight expansion I/O modules** can be added as your automation needs grow or change
- Choose from six expansion modules available to suit your application with a variety of safety inputs, solid-state safety outputs and safety relay outputs
- **Simulation mode and live display** feature allows testing and active monitoring of I/O on a PC
- **Free configuration software**
- Standard communications including EtherNet/IP, Modbus/TCP, and Profinet
- Non-expandable controller includes two dual-channel safety outputs and 26 input terminals (eight convertible to outputs)

SC26-2
Safety Controller

- Designed for smaller applications where cost is at a premium
- Intuitive programming includes logic functions for easy implementation
- Non-expandable controller includes two dual-channel safety outputs and 26 input terminals (eight convertible to outputs)
Build Your System & Select Equipment
Configure a system in minutes

1. Add up to eight modules

2. Add safety devices

3. Select safety device properties

4. Configure your system

The icon based configuration environment allows straightforward machine safeguarding development which can be tested on your PC by activating the Simulation Mode feature.

Wiring Diagram in Live Mode

Ladder Logic

800-999-7378

SHOP ONLINE at www.airlinehyd.com
Superior Performance

- Built to withstand challenging environments common to both manufacturing and packaging—rated IP65 and IP67
- No blind zone design provides end-to-end sensing to eliminate gaps in detection
- A 12 m range with three available resolutions: 14, 23 and 40 mm
- Standard pairs, cascade systems and extensive accessories to suit a wide variety of safeguarding configurations
- Addition of remote or integrated indication lights on cascade models provides clear communication of system status

Easy-to-Use

- Alignment indicators are highly visible and intuitive diagnostics simplify setup, facilitate troubleshooting and streamline installation
- Metal end caps, thick aluminum housing and a recessed window to avoid damage from impact
- Remote fixed blanking available on cascade models allows for greater flexibility in dynamic applications
- Automatic cascade configuration requires no PC software, DIP switches or additional devices for quick, easy setup
- Optical synchronization eliminates the need for a wired connection between emitter and receiver

Available in Three Resolutions:

- 14 mm
- 23 mm
- 40 mm

Height: 280 mm - 1820 mm
Width: 36 mm
Depth: 45 mm

Finger detection
Hand detection
Hand, arm, ankle detection

23 mm
40 mm
14 mm
Build a System:

1. Choose one
   - Emitter
   - Receiver
   - Pair

2. Choose your resolution
   - 14 mm
   - 22 mm
   - 40 mm

3. Choose your defined area
   - 250 - 1500 mm

4. Choose your machine interface connection:
   - P8 models
     - Emitter
     - Receiver
   - Blank (RO) models
     - Emitter
     - Receiver
     - Pair

Safety Applications
- Dual-operator robotic work station
- Safeguarding of power press
- Small assembly station protection

Optional EZLSA-K30LGR status indicator available for use with cascade receivers
Designed to facilitate communication between sensors/actuators from different manufacturers and higher-level systems, the fieldbus-independent IO-Link serial communication protocol offers a uniform standard that applies to all manufacturers.
How to Reach Us

Global Sales and Support

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Our highly skilled application engineers and industry experts are ready to support you wherever you are. For a complete listing, go to bannerengineering.com and find your local Banner Representative.

To contact a Banner Engineer about your application, call 1-888-3SENSOR (1-888-373-6767)

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