

Mtech Product Update

TURCK *WORKS* Product News

www.turck-usa.com

Compact Sensor with Extended Range and Versatile Mounting

TURCK's uprox®+ line of advanced factor I sensors has been expanded to include a Q10S sensor: a very compact 10 by 10 by 28 millimeter sensor that can achieve sensing distances of up to 5 millimeters, depending on how the sensor is mounted. The Q10S sensors have an active side face and detect all metals at the same rated distance, making it applicable across all industries including material handling, automated assembly, conveying, sorting, product positioning and even industrial robotics.

These sensors provide an extended range and integrated pre-damping function that allows it to be mounted directly on metal, or flush mounted on four sides. Furthermore, with an intermediate metal plate, the sensors can even be mounted directly beside one another without causing interference. Internal electronics also make the sensors particularly resistant to EMC and rated for IP 68 degree of protection.



Product Strengths

- Active side face
- Plastic construction, PP-GF20
- Bright, corner mounted LED
- uprox+ for all metals
- Extended sensing range
- Magnetic field immunity
- Up to 4-side flush mounting possible

Product Specifications

- 3-wire DC, 10 to 30 VDC
- Normally open, PNP & NPN outputs available
- 2 meter molded on pigtail
- IP 68 degree of protection
- Operating temperature range of -30°C to 85°C

Part Number	ID Number	List Price	Description
NI 5U-Q10S-AP6X	S1609364	\$71.10	5mm Sn, 3-wire DC, N.O., PNP. 2M molded pigtail
NI 5U-Q10S-AN6X	S1609365	\$71.10	5mm Sn, 3-wire DC, N.O., NPN. 2M molded pigtail

5 Port Unmanaged Industrial Ethernet Switch

TURCK has introduced a new unmanaged industrial Ethernet switch to their line network products and Ethernet connectivity.

Ethernet switches can be used to simplify Ethernet networks and reduce traffic. By forwarding messages only to the port that needs to the message, Ethernet switches perform an important role in traffic management.

Features

- Store & forward wire-speed switching
- Automatic address learning, aging and migration
- Full duplex operation with flow control (no collisions)
- All IEEE 802.3 Ethernet protocols supported
- 1024 MAC addresses supported
- Degree of protection IP 20
- Memory bandwidth 3.2 Gbps
- 10/100 Mbps - Auto Negotiation
- Ethernet isolation 1500 VRMS 1 minute

Product Specifications

Part Number SE20-84X-RJ522

System power supply 24 VDC

Field supply 24 VDC
 Input Power ≤ 2.0 W (All ports active at 100 Mbps)
 Transient Protection 15,000 watts peak
 Spike Protection 5,000 watts (10 times for 10uS)
 Voltage supply connection removable screw terminal

Dimensions (W x L x H)

Operating temperature -10 to +60 °C
 Relative humidity 5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)
 Vibration and Shock acc. to IEC 60068-2-6
 Protection degree IP 20
 Mounting DIN Rail Mountable
 Housing Material UL94V0 Lexan



List Price \$99



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WORLD-BEAM QS30H2O—New super high-power models

The QS30H2O product line was developed to detect the presence of water and water-based liquids. The typical application is verifying liquid fill on bottling lines and packaging machines. The sensors can also be used to verify water flow at a nozzle, or detect liquid level in a sight glass.

New higher output emitters have been specified in the super high-power models which allow the maximum sensor gain to be increased by a factor of 10. This extra burn-through power will enable the detection of liquid contents in thicker containers. The sensor combines very high optical power to penetrate the clear or translucent container, yet remains very sensitive to the presence of water which absorbs the 1450 nm light. In the event that the sensor is burning through both the container and the liquid contents, the system gain should be reduced with apertures, increased separation distance, or misalignment of the sensors.



Features

- Special emitter/receiver technology tuned to an absorption band of water makes the sensor pair sensitive to the presence of water and water based liquids.
- Extremely high excess gain makes the sensors powerful enough to burn through many types of plastic and glass containers but still sensitive to the presence of liquid inside the container.
- Built in electronic crosstalk avoidance allows multiple sensor pairs to be used in close proximity.
- Rugged IP67 housing for harsh environments with epoxy encapsulated electronics.
- Washdown rated PW12 – tested with 1200 psi spray.
- Compact housing, mounting versatility — 30 mm threaded barrel- or side-mount
- Models available with 2 m or 9 m (6.5' or 30') cable, or 150 mm (6") pigtail with quick-disconnect fitting
- Apertures included with the sensor to adjust sensor gain and shape the effective beam

Application Considerations:

The standard gain (2 m) receivers are recommended for detecting thin layers of water in clear containers (fluid in test tubes or water in clear bottles). The effective beam can be shaped with the use of apertures when needed for small containers of liquid.

The high gain (4 m) receiver is recommended when the container is translucent or partially light-blocking (milk containers, colored PET bottles, brown or etched glass containers). The higher excess gain allows the light to penetrate the empty container, but still be blocked by the water-based contents.

The super high-power (8 m) emitter and receivers are useful for burning through thicker or more opaque plastic containers. Examples include shampoo bottles and thin walled yogurt containers. With an excess gain of 10X more and a response speed 10 X slower than previous models, these sensors will burn through more containers reliably detecting liquid-based contents.

The analog output model provides a 0-10V dc output signal which is non-linearly proportional to the received light level near the blocked condition. The analog output behaves similarly to the blinking AID light on the discrete output models of the QS30H2O photoelectric sensors. Both an increasing blink rate and increasing voltage level indicate more light reaching the receiver.

When the AID light is on solid or when the analog output reaches 10V, the excess gain is anywhere from 25 to 100,000+ times the blocked threshold. The customer can use the analog output to establish a pass or fail threshold in a PLC.

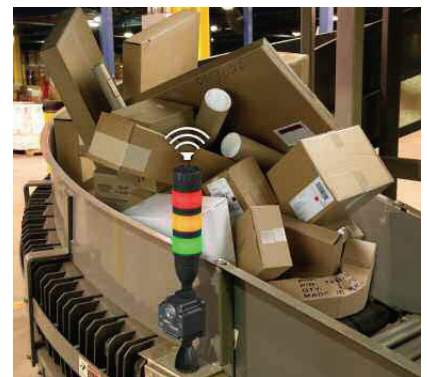
DX80 Wireless Node with Tower Light

Wireless machine monitoring enables an entirely new category of applications and machine diagnostics free from wired limitations. Banner's solution combines a SureCross Wireless I/O Network and the Banner TL50 Tower Light indicator to create a Wireless EZ-LIGHT™. This Node provides a simple plug-n-play solution for machine status applications.

Banner's SureCross Wireless EZ-LIGHT system enables users to monitor machines remotely and provides a central point to log information. Users can track individual machine up time and cycle counts, giving operators machine status updates when and where it is needed. Capturing machine status helps users determine when repairs are needed, use predictive maintenance systems and make decisions about new machine investments.

Specifications

- DX80 Node with 6 discrete inputs and 6 discrete outputs
- On-board rotary switch for easy network configuration
- IP67 black housing with integrated mounting holes or DIN-rail bracket for simple installation
- Robust and secure wireless radio communication with user selectable default output conditions
- Part Number DX80N9C-11396 list price is \$395 (TL50 is ordered separately)



New Surecross Wireless Accessories

Banner has introduced several new accessory products to their Surecross wireless product line

Fiberglass Enclosures 14"x12"x8" \$135 - 10"x8"x6" \$95 - 8"x6"x6" \$85

Enclosure Sub-Panels 14"x12" \$26 - 10"x8" \$15 - 8"x6" \$10

Relay Boxes IB6RP Interface Relay Box, 18-26V dc inputs, isolated relay output \$149

Input Configuration 6 PNP sourcing inputs

Input Voltage/Current 18 to 26V dc, 25 mA each

Output Configuration 6 relays, single pole single throw (25 millisecond response time)

Relay Output Rating Maximum Switch Voltage: 130V ac or 30V dc

Switching Current: 0.1 to 5.0 amps

Mechanical Life: 10 million operations

Electrical Relay Life at Maximum Load: 100,000 operations





R58A Registration Mark Sensors

Banner has developed the R58A product to provide a lower priced, high-performance registration mark sensor for markets demanding a single emitter color and simplified set-up and sensor adjustment. The R58A provides Banner's customers another registration sensor at a lower price point with simpler set-up.

Features:

- Fast 10 kHz switching frequency; 15 μ s repeatability.
- Rugged zinc alloy die-cast housing with high quality acrylic lens suitable for food processing applications: Rated IP67.
- Fixed-convergent sensing at 10 mm \pm 3 m (0.39" \pm 0.12").
- Rectangular 1.2 mm \times 3.8 mm (0.05" \times 0.15") sensing image at 10 mm (0.39") from the lens.
- Easy selection of Light/Dark Operate (LO/DO) by selection switch.
- Red or Green LEDs available depending on model.
- Parallel or perpendicular sensing image, depending on model.
- 20 millisecond OFF-delay by model.
- The switching threshold is adjusted with a potentiometer, and the operator is assisted by two green LEDs which guide the operator to the optimal setting.
- Bright easy to see LEDs in red or green.
- Short warm-up period before stable operation.



Applications:

- Printing:
 - Labels
 - Wraps
 - Plastic Bag Printing, Forming, and Sealing
- Filling and bottling machines
- Packaging
 - Labeling machines
 - Any high-speed application where the web is being processed by the machine and timing is critical (registration applications)
- Newspaper
- Sealing machines for food and candy

The green emitter color is the most commonly applied; it works well for most color applications. The red emitter color can be used where the application uses green and white color combinations.

The R58A has a list price of \$189

EZ Light-WL50F Work Light

Banner Engineering has introduced a new product to the EZ Light product family. The new WL50 has been designed as a general purpose work area light for industrial applications. The WL50 utilizes LED technology for long life, low power usage and industrial ruggedness for high vibration and shock applications.

The WL50 has the following features:

- Designed for enclosure or area lighting
 - Illuminates a large area with an even pattern of light and no shadows
 - Rugged, sealed polycarbonate housing rated for IP69K
 - Low profile design with several mounting options
 - 12 to 30V dc operation
 - Cabled and Quick Disconnect models available
 - Low power consumption; < 2 watts
- Coming Soon – sealed on-off pushbutton models



Models

Model	Connection	Input
WL50F	2 m (6.5') cable	12 to 30V dc
WL50FQ	4-Pin Euro-style integral QD connector	12 to 30V dc
WL50FQP 1	50 mm (6") 4-pin Euro pigtail QD	12 to 30V dc

Specifications

Supply Voltage: 12 to 30V dc (10% maximum ripple)
 Max. current: 105 mA @ 12V dc; 55 mA @ 30V dc
 Max. input power: 1.7 watts

Light Characteristics

Color temperature (CCT): 5,000 to 10,000 K
 Color: Cool white

Intensity (typical): 65 lumens; 50 lux @ 1 meter

Construction: Polycarbonate housing; Nickel-plated QD connector or PVC-jacketed cable

Environmental Rating: IEC IP67, IP69K per DIN 40050

Connections: Integral 4-pin Euro-style QD, 150 mm (6") 4-pin Euro-style pigtail or 2 m (6.5') integral cable, depending on model

Operating Conditions: -40° to +50° C (-40° to +122° F)

Certifications Approvals: pending

The WL50F has a list price of \$99

Tritex II Awarded Best Product by Design News

Integrated Motion in a Compact Package—Direct ac input delivers high force and torque

Exlar is proud to announce that its Tritex II is the winner of Design News' Golden Mousetrap Award for best new product of 2009 in the Motion Control Category, Motors/Mechanical Components!

Almost from the day Exlar introduced its Tritex DC actuator, which is based on a patented concept of integrating roller-screw technology into a servo motor to create linear motion and combining it with a position controller into a compact package, the company says that design engineers were asking for an ac version. In the general servo market, approximately 90 percent of the drives are ac.

In April 2009, Exlar announced the Tritex II AC actuator. Available in a linear or rotary version, its designers say that the device delivers the highest power density and smallest footprint available in the market.

The actuator is available in 90 and 115-mm frame linear frames that allow forces up to 4,000 lbs continuous and 10,000 lbs peak and speeds up to 33.33 in/sec. Technical Services Manager Mike Wolfe says that comparable, rod-style versions of dc linear servo actuators are limited to light duty applications, typically under 500 lbf or speeds of less than 20 in/sec.

To achieve the high performance levels of the Tritex II, Exlar engineers took the 3-inch-frame dc actuator and integrated it into a 90-mm stator design (115-mm stator on the 4-inch frame). The fact that the ac unit is rated for 230V, which translates into a bus voltage of 325V dc (thereby requiring less amperage for the same power), was a major benefit, though design engineers wrestled with thermal management and size issues to optimize the design.

"Because we were building an amplifier that has three times the power of the Tritex DC, we had to increase the size of the bus capacitors and the ADC, and that took up a significant amount of the footprint," says John Walker, Exlar's VP of marketing and sales. Designers went through a number of iterations in the components to ensure there would be no waste from the power available from the 1.5 kW servo amplifier and components would be kept cool.

The Tritex II includes standard motion features, including analog following for position, torque or velocity, compound moves, move chaining and individual force/torque control for each move. Modbus communications is standard and gear ratios of 4:1 to 100:1 are available

For more product details go to www.tritex2.com

Call us today to discuss your application requirements and learn more about the benefits of an Exlar solution!



*Mtech Represents
the following fine manufacturers*



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OUR OBJECTIVE

Mtech is a manufacturer's representative dedicated to providing O.E.M.'s and users with solutions to their factory automation applications. This objective is accomplished by integrating over 70 years of experience with state of the art products to fill our customer requirements.

REGIONS SERVED

TURCK, BANNER, & AMC

Minnesota, Western Wisconsin, North Dakota, & South Dakota

EXLAR and Horner

Minnesota, Western Wisconsin, North Dakota, South Dakota, Iowa, & Nebraska

Premium, world class products and high caliber support result in successful projects for Factory and Process Automation

2594 Rice Street
Roseville, MN 55113

Sandy Holmes 651.704.9767

sandy@mtechmn.com

John Braatz 612.382.0815

johnb@mtechmn.com

Jay Silverberg 612.386.8864

jay@mtechmn.com

Eric Lavigne 612.382.0819

eric.lavigne@mtechmn.com

Brian Bendel 952.484.9508

bendelb@mtechmn.com

Mark Ingalls 612.998.6449

mingalls@mtechmn.com

Tom Filipek 612.840.6653

tfilipek@mtechmn.com

Brian Freecheck 612.889.0008

bfreecheck@mtechmn.com