



Sensors



Vision



Wireless I/O



Lighting & Indicators



Machine Safety

Worldwide sales and distribution with global customer support and local specialist networks give the best solutions to your application

Strong commitment to **R&D, technology and innovation** with over 15 % of employees dedicated to product development

Over **20000 products** to solve a wide range of applications and provide customized sensing products for specific customer requirements in all industries

Expert logistics together with local stock provide fast worldwide delivery

Global market leader and number one brand name for photoelectric sensors in North America

Within factory automation, Banner Engineering is recognized for its **high quality** standards

Over forty years of **engineering experience**

<p>Sensors</p> <ul style="list-style-type: none"> • Presence/Absence Detection • Foreground & Background Suppression • GO/NO GO Inspection • Gating and Triggering • Parts Counting • Level and Distance Measurement • Positioning • Contrast and Colour Sensing 	<p>Lighting & Indicators</p> <ul style="list-style-type: none"> • Bin & Part Picking • Error/Mistake Proofing • Pick-to-Light & Put-to-Light • Operator Guidance • Call for Parts • Incorrect Pick Signal • Remote Start/Stop Indication • Work lights and cabinet lighting
<p>Vision</p> <ul style="list-style-type: none"> • Vision Sensors with Onboard User Interface • Pattern Recognition • Traceability (Barcode, Datamatrix and Text Reading) • OCR/OCV • Complex Part Inspection • Part Orientation • Assembly Verification • Colour Inspections 	<p>Machine Safety</p> <ul style="list-style-type: none"> • Safety Light Screens • Optical Non-Contact Safety Systems • Ergonomic Two-hand Control Devices • Safety Modules • Emergency Stop Devices • Safety Interlocking • Laser Scanners for Safety Applications
<p>Wireless I/O</p> <ul style="list-style-type: none"> • Slip Ring Replacement • Tank Farm Monitoring • Livestock Environmental Monitoring • Water and Wastewater Treatment • HVAC Remote Monitoring • Traffic Monitoring & Control • Remote Sensing in Process Automation • Cable Replacement • ATEX Approved Solutions 	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>MARPEX</p> <p>Marpex, s.r.o. Športovcov 672 018 41 Dubnica nad Váhom ☎ & Fax +421 42 4440010/+421 42 4440011 marpex@marpex.sk www.marpex.sk</p></div> <p style="font-size: small;">F161 for SK SEP 2011</p>

Banner Competencies

Productivity Solutions for Lean Manufacturing



- EZ-LIGHT™ CL50 Column Light**
- Models with 1, 2 or 3 colours and audible alert
 - 30 mm threaded base
 - IP67 rated (audible IP54 rated)

- EZ-LIGHT™ TL50 Tower Light**
- Preassembled multi-segment indicators
 - Up to 5 colours in a single tower; multiple lights can be on simultaneously
 - Optional audible function
 - LED light source for low-power consumption and long life

- EZ-LIGHT™ K30L Indicator**
- 30 mm dome/22 mm threaded base
 - General-purpose or sensor emulator indicators
 - Models with 1, 2 or 3 colours
 - Rugged IP67-rated housing

- EZ-LIGHT™ PVA Parts Verification Array**
- Two-component light screen
 - Four lengths to fit common bin sizes
 - Operating range up to 2 m

- EZ-LIGHT™ PVD Parts Verification Sensor**
- One-component light sensor
 - Automatically operates in diffuse or retroreflective mode
 - 100 or 225 mm to fit existing bin sizes and configurations
 - Up to 2 m range in retroreflective mode

- EZ-LIGHT™ K50 Single-Point Sensor**
- Large dome with up to 3 coloured lights and a 30 mm mounting hub
 - Background suppression, retroreflective or push-button models
 - Rugged housings; IP69K rated

- EZ-LIGHT™ VTB Verification Touch Button**
- Effortless and ergonomically safe push-button alternative
 - Green, red, blue and green/red combination job light options

- SureCross™ DX80 Wireless I/O Network**
- Collects sensor data and communicates information back to a Gateway
 - Analog and discrete I/O in a single unit
 - 2.4 GHz or 900 MHz models with choice of antennas

Operator Guidance/ Pick-to-Light

EZ-LIGHT™ CL50 Column Light
Provides highly visible operator guidance and machine status indication at long distances

EZ-LIGHT™ TL50 Tower Light
Provides highly visible operator guidance and machine status indication at long distances

EZ-LIGHT™ K30L Indicator
Indicates action to perform and signals errors in process

EZ-LIGHT™ PVA Parts Verification Array
Guides assemblers through the correct part-gathering sequence

EZ-LIGHT™ PVD Parts Verification Sensor
Indicates action to perform and signals errors in process

EZ-LIGHT™ VTB Verification Touch Button
Used as a call for parts when parts run low

EZ-LIGHT™ K50 Single-Point Sensor
Provides error-proofing of bin-picking operations

SureCross™ DX80 Wireless Node
Sends status or call signals without wires

Semi-Automated Assembly

EZ-SCREEN LP Safety Light Screen
Provides point-of-operation machine guarding

EZ-LIGHT™ K30L Indicators
Indicates press is in motion

D10 Expert™ Plastic Fibre Optic Amplifier
Allows up to 16 sensors to be wired together and powered by one power supply

Plastic Fibre Optic Cables
Confirms part presence after down-stroke

SLM Metal Fixed-Distance Slot Sensor
Verifies correct part assembly

M12 Threaded 12 mm Sensors
Ensures work piece presence before allowing down-stroke

DUO-TOUCH Run Bar with STB Self-Checking Touch Buttons
Offers an economical means for two-hand control function

SC22-3 Safety Controller
Monitors the safety light screens, two-hand controls and safety interlocking switches

Automated Assembly and Material Handling

WORLD-BEAM QS30 Adjustable-Field Sensors
Monitors part level in bowl feeder

iVu TG Image Sensor
Inspects for correct screw presence before assembly

WLS28 Work Light Strip
Low-profile lights provide excellent illumination in cabinets and large areas

EZ-LIGHT™ TL50 Tower Lights
Indicates process status

WORLD-BEAM QS18 Adjustable-Field Sensors
Verifies part is present before final part assembly

SI-HG63 Hinge-Style Switch
Provides reliable safeguarding of swinging guards, gates or doors

Package, Inspect, Identify & Verify

Vision Lighting
Provides high-intensity illumination over a large area

Presence PLUS P4 Sealed Vision Sensor
Verifies case contains the correct amount of completed parts

Presence PLUS P4 Bar Code Reader
Reads 2D and 1D bar code on carrier

WORLD-BEAM QS18 Sensor
Triggers vision bar code reader

- Presence PLUS P4 Sealed Vision Sensor**
- IP68 rated to withstand dust, moisture and washdown
 - Compact and durable housing to tolerate shock and vibration
 - A complete suite of location, inspection, analysis and geometric tools
 - Ethernet, serial, flexible discrete I/O, real-time video output and ActiveX controls

- iVu Series Image Sensor**
- No PC required
 - Easy configuration: install/connect iVu, select sensor/bar code type, acquire image and set inspection parameters
 - Three sensors in one rugged package: Blemish, Match and Area
 - Models for 1D and 2D bar code reading
 - Compact, rugged housing available with or without an integrated ring light

- Presence PLUS P4 Bar Code Reader**
- Standard or high-resolution 1.3 megapixel models
 - Proven user interface common to all Presence PLUS sensors

- Vision Lighting**
- Complete selection of lighting, including ring lights, backlights, area lights, on-axis and more
 - Infrared, red, white, blue or green LEDs with continuous or strobed operation, and intensity control
 - Sealed (IP68) and non-sealed (IP50) housings
 - LEDs for up to 50,000+ hours of maintenance-free illumination

- EZ-SCREEN LP Safety Light Screen**
- Compact, rugged housing and flexible mounting options for a precise fit with no dead zone
 - 14 or 25 mm resolution; defined areas from 270 to 1810 mm
 - Response times as fast as 8 ms with detection ranges up to 7 m
 - Cascade option for cost-effective installation of multiple light screens

- SI-HG63 Hinge-Style Switch**
- Full 270° range of motion
 - In-line and right-angle hinge models
 - Corrosion-resistant stainless steel
 - Axial and radial load support of 1200 N

- DUO-TOUCH Run Bar with STB Self-Checking Touch Buttons**
- Convenient means for safeguarding when interfaced with Two-Hand Control Modules
 - Ergonomic design for reduced hand, wrist and arm stress
 - Two diverse-redundant microcontroller-based STB Self-Checking Touch Buttons

- SC22-3 Safety Controller**
- 22 input terminals can monitor both contact-based or PNP solid-state outputs
 - Control reliability up to SIL CL3, SIL 3, PL e and Type 4
 - 3 pairs of solid-state safety outputs and 10 configurable auxiliary status outputs
 - Easy configuration with built-in front panel LCD display or PC Interface
 - Models for direct connection to Ethernet/IP™ and Modbus/TCP industrial networks

- D10 Expert™ Plastic Fiber Optic Amplifier**
- Side-by-side mounting and simplified wiring
 - Digital display of signal strength and operating status
 - Push button for easy programming

- SLM Metal Fixed-Distance Slot Sensor**
- Eight slot widths, from 10 to 220 mm
 - Sealed metal housing; rated IP67
 - Yellow painted or nickel-plated housings

- WORLD-BEAM QS30 Adjustable-Field Sensor**
- Advanced background and foreground suppression technology
 - Adjustable setpoints from 50 to 600 mm
 - Midsize, right-angle housing with 30 mm threaded lens or side mount

- WORLD-BEAM QS18 Adjustable-Field Sensor**
- Compact housing with side mounts
 - Advanced background and foreground suppression technology
 - Adjustable setpoints from 20 to 300 mm
 - Visible red LED or laser sensing beam

- WORLD-BEAM QS18 Sensor**
- Universal housing with 18 mm threaded lens or side mounts
 - Available in all sensing modes and ranges to 20 m
 - Rugged sealed housing, protected circuitry

- M12 Threaded 12 mm Sensor**
- Opposed, retroreflective, diffuse and fixed-field sensing models
 - Visible red sensing beam for easy alignment
 - IP67 rated for harsh environments