



EASY DETECTION OF SMALL PARTS

SLOT AND SLOT GRID SENSORS



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Slot and slot grid sensors work according to the familiar principle of thru-beam sensors and are often used for detecting objects of all kinds on vibrating and oscillating conveyors. The special U-shaped design means the transmitter and receiver can be accommodated in one housing, which achieves high resistance to vibrations. There is no time-intensive adjustment of the transmitter and receiver lenses and only one device to be wired. Slot sensors are especially suited to detecting small parts over short distances.



HIGHLIGHTS

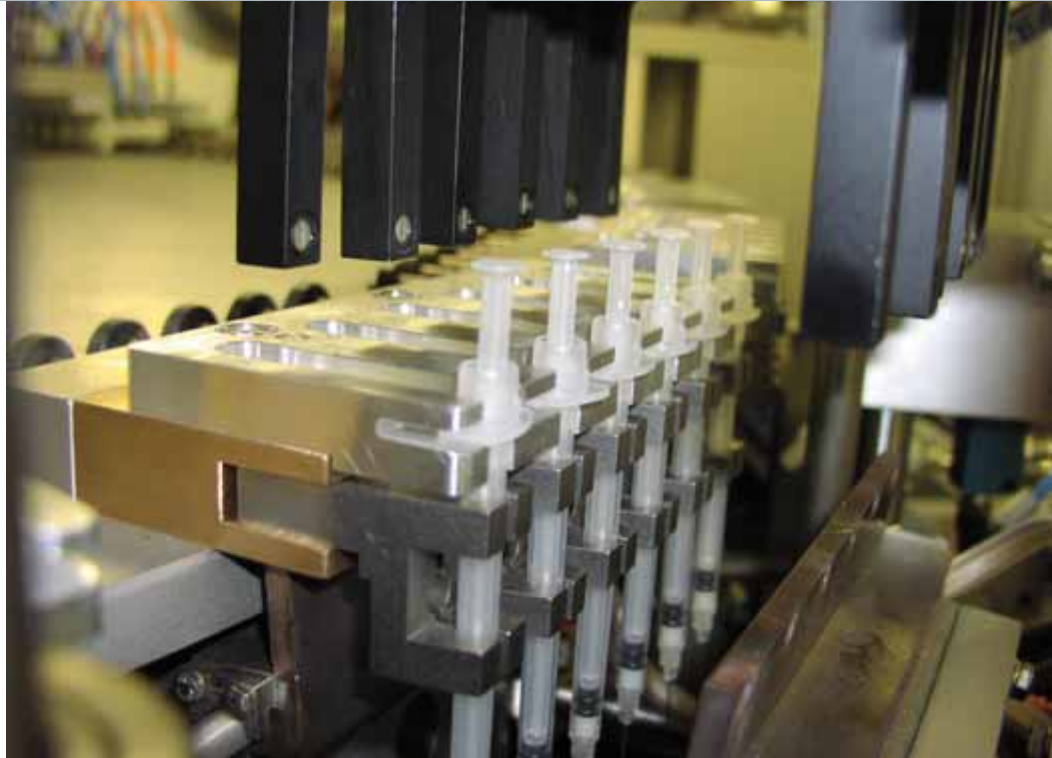
- Fast and easy mounting
- Can be used in environments with high vibration
- Exact position detection possible thanks to fast response times
- Very high resolution
- High repeatability
- Different slot widths
- Quick and easy operation
- Detection of very small objects

AREAS OF APPLICATION

- Packaging industry
- Pharmaceutical industry
- Assembly automation
- Feed technology
- Semiconductor industry
- Elevator construction

GL SERIES – NEW GENERATION OF SLOT SENSORS

Discover the outstanding features that define the new generation of slot sensors: high resolution, high repeatability, micro-processor-controlled automatic switching threshold adaptation, detection of transparent and semi-transparent objects. The devices also feature protection against mutual interference, which enables multiple devices to be installed adjacent to each other with no cross-talk despite very high switching frequency. These features guarantee reliable detection of very small parts and high-speed movements and facilitate extremely accurate positioning.



SLOT SENSORS IN STURDY DIE-CAST ZINC HOUSING – GL SERIES

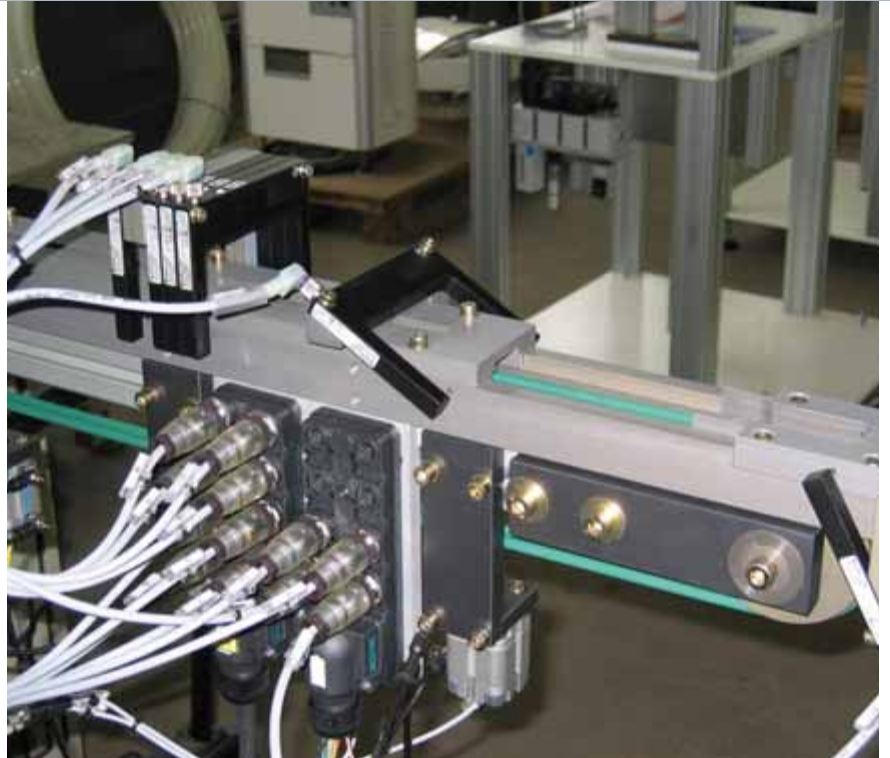


FEATURES

- Slot widths from 10 mm thru 220 mm
- Red or infrared light source
- High resolution
- Very high switching frequency of 3 kHz
- Fast response time of 160 ms
- Light received indicator
- Can be connected in series: no mutual interference
- Automatic switching threshold adjustment
- Enhanced immunity to EMC and ambient light
- Light-on/dark-on selectable
- Output display
- Operating voltage 10 V DC ... 30 V DC
- Protection to IP67
- Versions for explosive environments with EC-type-examination certificate 3G

APPLICATION EXAMPLES

- Reliable detection of high-speed movements
- Detection of small parts with an object size as small as 0.3 mm
- Contour checking
- Through control
- Edge control
- Positioning of robot arms
- Checking of micro assemblies
- Counting of very small parts
- Feed control on assembly lines
- Car positioning in elevators
- Detection or irradiation of transparent objects



SLOT SENSORS IN PLASTIC HOUSING – GLP SERIES



FEATURES

- Slot widths from 30 mm thru 120 mm
- Red LED light source
- Sturdy plastic housing
- Innovative indicator LEDs with good visibility of switching state displays from all directions
- Teach-in for setting the sensitivity and operating mode (light-on/dark-on switching)
- External and dynamic teach-in
- Operating voltage 10 V DC ... 30 V DC
- Protection to IP67
- Flexible mounting options using mounting holes or dovetail mount

SLOT SENSORS WITH LASER LIGHT

Slot sensors with laser light can be used in applications with special, demanding requirements and are suited to highly precise and extremely fast applications.

SLOT SENSORS WITH LASER LIGHT – GL...-LAS SERIES



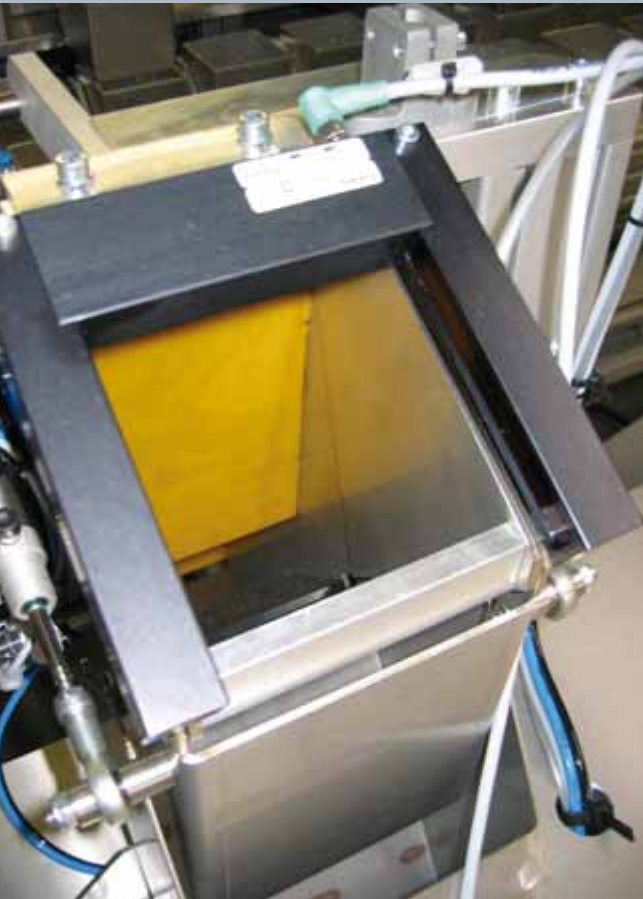
FEATURES

- Slot widths from 20 mm thru 220 mm
- Sturdy metal housing (aluminum)
- Laser class 2, no danger to eyesight
- High switching frequency of 10 kHz
- High repeatability of 0.01 mm
- High switching point accuracy
- Target size 0.05 mm
- Can be connected in series:
no mutual interference
- Light-on/dark-on selectable
via potentiometer
- Sensitivity adjustment
- Output LED
- Operating voltage 10 V DC ... 30 V DC
- Protection to IP65

APPLICATIONS FOR SLOT SENSORS WITH LASER LIGHT

- Reliable detection of high-speed movements
- Positioning of robot arms
- Detection of unbalanced rotating parts
- Checking of micro assemblies
- Counting of very small parts
- Feed control on assembly lines





Slot grid sensors handle challenging counting and monitoring tasks such as detecting non-guided objects in free fall.

SLOT GRID SENSORS – RAL SERIES

Unlike single-beam slot sensors, slot grid sensors have a whole beam field for detecting objects, which makes detecting objects in free fall, for example, much easier.

Their high response speed makes the devices ideal for detecting objects of very small size.

In addition to the standard configuration, the devices also feature dynamic operating mode. In this operating mode, non-moving machine parts in the detection range can be ignored.



FEATURES

- Slot sizes from 50 mm thru 150 mm
- Sturdy metal housing (aluminum)
- Switchover between static and dynamic operation
- Fast response time of 0.1 ms
- High switching frequency of 5 kHz
- Target size 0.5-3 mm
- Off delay timer
- Sensitivity adjustment
- Operating voltage 24 V DC +/-20%
- Protection to IP67

APPLICATIONS FOR SLOT GRID SENSORS

- Detection of very small non-guided parts in free fall
- Counting in or on feeding hoppers, dispensing devices or chutes
- Ejection controls on stamping and pressing machines
- Ejection controls on vibrator bowls
- Length measurement of wires and tubes
- Tool interrogation, boring and milling machines
- Reliable detection of irregularly shaped objects, e.g., screws on belt conveyors



MINIATURE SLOT SENSORS

Miniature designs are used in confined environments such as in the semiconductor or micro assembly industries.

MINIATURE SLOT SENSORS – GL2, GL3, OR GL5 SERIES

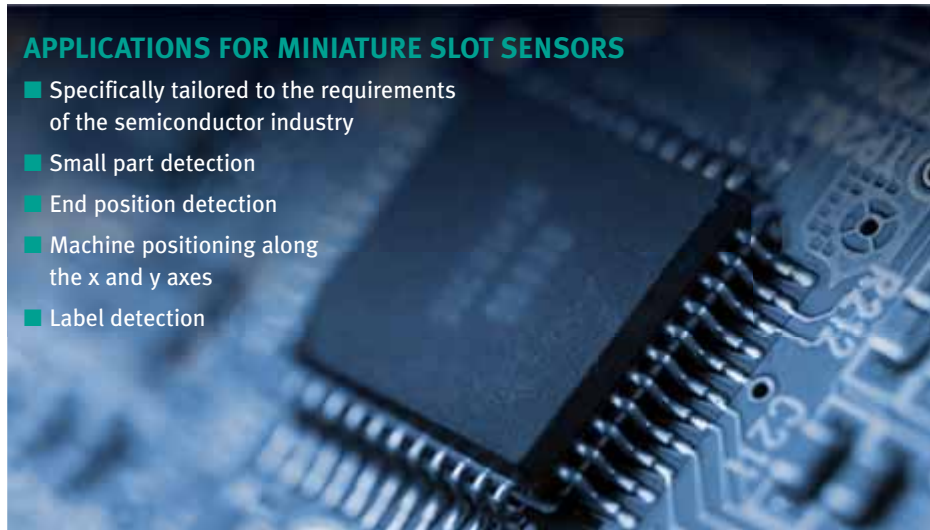
FEATURES

- Slot widths 2 mm, 3 mm or 5 mm
- Infrared light
- High resolution
- Very high switching frequency of 5 kHz
- Fast response time
- Output LEDs
- Enhanced immunity to ambient light
- No adjustments
- Operating voltage 5 V DC ... 24 V DC
- Wide range of mounting configurations
- Connection via 2 m fixed cable or flat connector



APPLICATIONS FOR MINIATURE SLOT SENSORS

- Specifically tailored to the requirements of the semiconductor industry
- Small part detection
- End position detection
- Machine positioning along the x and y axes
- Label detection



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