Lixus-i PN 1024

Intelligent Line Scan Camera

The intelligent line scan camera Lixus-i PN 1024 is an autonomously functioning measurement and monitoring system with an extremely high line scan rate. The integrated, highly powerful signal processing system exactly evaluates each scan. It delivers measurement results, and it can filter these results as well as monitor defined deviations. It can intervene directly in the process via several outputs.

The electronically integrated shutter enables the achievement of very short exposure times. Fast and short events create an external impulse that asynchronously triggers the camera. Several systems can be linked and synchronized.

High flexibility is achieved through a configurable signal processing core. The range of functions is regularly extended. User-friendly software for Windows® is being used to select the functional modules and their parameters. When the modules have been set up and the settings have been stored, the camera works autonomously.

The anti-blooming function prevents the camera Lixus-i PN 1024 from being sensitive to saturation of individual pixels. The camera has manual and automatic controllers for exposure time, gain and video offset (contrast adjustment). Thus it is capable of correcting object illumination, and it guarantees optimum adjustment of the sensor to signal processing.

Key Features

- **Autonomous measuring and monitoring system**
- **Integrated signal processing for evaluating each scan in real time**
- **Extremely high line scan rate (≤ 57,000 Scans/s)**
- **High resolution (1,024 Pixel)**
- **Integrated electronic shutter**
- **Anti-Blooming-function**
- **Electrically separated digital inputs and outputs**
- **Analog current interface**
- **Sturdy, industrial strength design**
- **Asynchronously triggerable**

Applications

- Measurement and monitoring of geometric dimensions (position, width, diameter)
- Edge detection for position and width measurement with threshold values that can be uniformly defined or set for each picture element and with different filtering methods
- Monitoring of surface faults, holes and tears in web materials (sheet metal, paper, foil, textiles, wood)
- Radial and axial measurement
- Monitoring the presence of components (adhesives, coatings, etc.)
- Monitoring of the number of objects
- Monitoring of the tolerance limits of a light intensity progression

Options and accessory

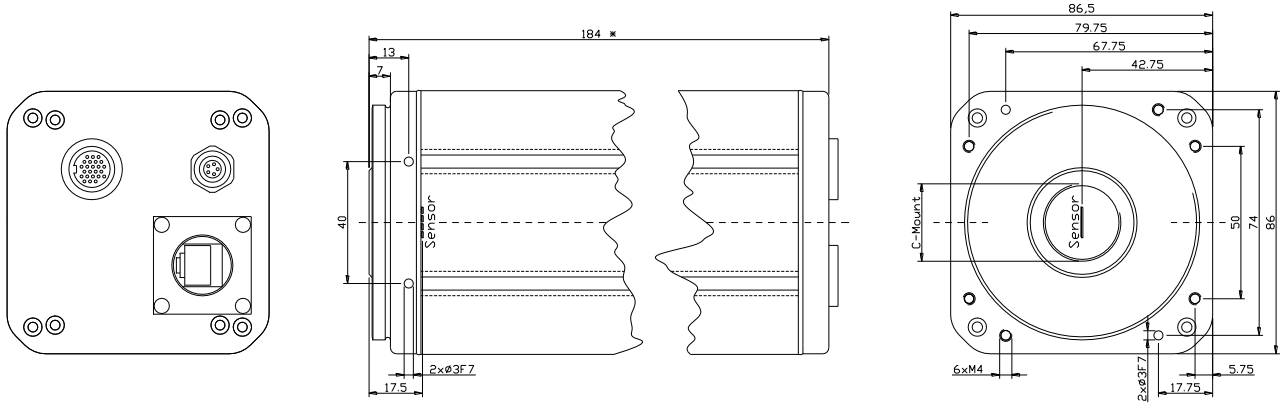
- Lens protector for IP 65
- Ready-made connection cable
- Lamps LixusLight
- Lenses, lens mount adapter

Technical Data

Sensor	CCD [1], 1024 Pixel 10 µm x 10 µm, Anti-Blooming, Shutter
Sensing area	5.1 mm x 10 µm
Exposure Time	-18 option: 4.0 µs … 13 ms -35 option: 2,0 µs … 6.5 ms
Line Scan Rate	-18 option: max. 17,700 Scans/s -35 option: max. 35,400 Scans/s
Control (manually / automatically)	Exposure time, gain, offset (contrast) for a selected section
Interface	RS232 or RS422 max. 115 kBaud, opti-isolated Optional: separate RS232 connection for configuration in site
Ethernet	100 Mbit/s, RJ45-Connection, opto-isolated (optional)
Inputs	3x digital, opto-isolated
Outputs	4x digital, opto-isolated (3x digital with anlog output) Optional: 1x analog 4 mA … 20 mA or 0 mA ... 20 mA, opto-isolated
Lens mounting	C-Mount Optional: F-Mount (M42x1) Optional: Nikon – Bayonet
Fastening	2 T-grooves with 2x M4 sliding blocks each, 4 reference holes Ø3F7 for fitting pins Ø3m6, 6x M4 screw tap holes on the front
Protection class	IP 65 with lens protector
Power supply	20 VDC … 30 VDC
Power consumption	Approx. 9 W
Operating temperature	0 °C … +50 °C

[1] CCD = Charge Coupled Device

Mechanical Dimensions



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