



Vision Sensor
BIS510P-F201A-60



- Automatic learning of the reference image
- Automatic search for optimum image section
- Reliable on reflective surfaces through polarization filter technology
- Integrated error image memory
- Integrated illumination
- Image and barcode recognition with 10 page/s and a maximum sheet speed of 4 m/s

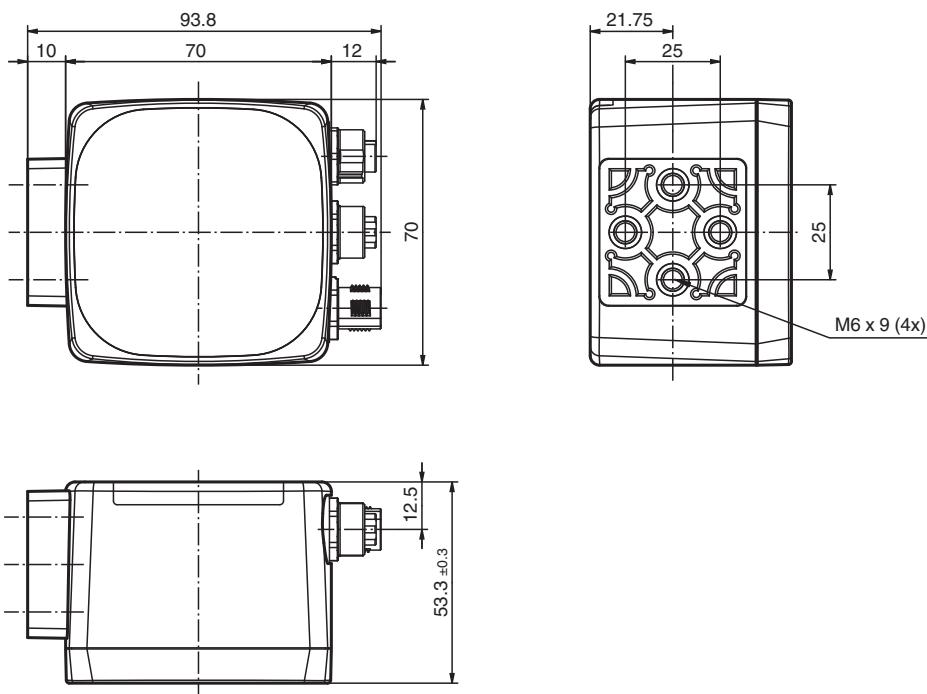
Sheet inspection sensor for monitoring print by comparing stored images or barcode evaluation



Function

The sheet identification sensor from Pepperl+Fuchs enables fast and simple monitoring of the correct sheet sequence in collating, folding and binding machines. Sheets can be monitored either by using the image comparison method or reading in barcodes printed on the sheets. The device can be operated locally, as a stand-alone unit or in a network where several sensors are connected together. The sensor includes a camera, illumination unit and evaluating computer with digital input and output signals as well as a network interface.

Dimensions



Technical Data

General specifications

Light type	Integrated LED lightning (white)
Symbolologies	2/5 interleaved, Code13, Code39, Code128, Pharmacode
Object size	25 mm x 25 mm
Read distance	52 mm

Release date: 2024-01-03 Date of issue: 2024-01-03 Filename: 268532_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Technical Data

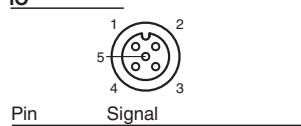
Depth of focus	± 5 mm	
Reading field	65 mm x 40 mm	
Evaluation frequency	10 Hz	
Target velocity	triggered max. 4 m/s	
Nominal ratings		
Camera		
Type	CMOS , Global shutter	
Number of pixels	752 x 480 pixels	
Gray scale	256	
Image recording	real-time , Program-controlled or triggered externally	
Indicators/operating means		
Operation indicator	LED green: Ready for operation	
Control elements	2 x Button	
LED indication	Trigger, Good, Bad, Teach, Diag1, Diag2, PWR	
Electrical specifications		
Operating voltage	U_B	24 V DC ± 15% , PELV
No-load supply current	I_0	max. 250 mA
Power consumption	P_0	6 W
Interface 1		
Interface type	Ethernet	
Protocol	TCP/IP	
Transfer rate	100 MBit/s	
Cable length	max. 30 m	
Input		
Input voltage	to be applied externally 24 V ± 15% PELV	
Number/Type	1 trigger input 1 teach input 2 input (IN1, IN2)	
Input current	approx. 2 mA at 24 V DC	
Switching threshold	low: < 10 V, high: > 15 V	
Cable length	max. 30 m	
Output		
Number/Type	Teach active, Good, Bad, Ready	
Switching type	PNP , short-circuit/overload protected	
Switching voltage	to be applied externally 24 V ± 15 % PELV	
Switching current	max. 100 mA each output	
Cable length	max. 30 m	
Compliance with standards and directives		
Standard conformity		
Noise immunity	EN 61326-1	
Emitted interference	EN 61000-6-4	
Degree of protection	EN 60529	
Photobiological safety	Risk group 1 according to IEC 62471	
Approvals and certificates		
Approvals	CE	
Ambient conditions		
Ambient temperature	0 ... 45 °C (32 ... 113 °F)	
Storage temperature	-20 ... 60 °C (-4 ... 140 °F)	
Relative humidity	80 % , noncondensing	
Shock resistance	< 50 g	
Vibration resistance	< 3 G , 11 ... 200 Hz	
Mechanical specifications		
Degree of protection	IP67	

Technical Data

Connection	8-pin, M12x1 connector, standard (supply+IO) , 5-pin, M12x1 socket, standard (IO) , 4-pin, M12x1 socket, D-coded (LAN)
Material	
Housing	PC/ABS
Optical face	Plastic pane
Installation	4 x M6 threading
Mass	approx. 160 g
Dimensions	
Height tolerance	± 0.3 mm
Width	70 mm

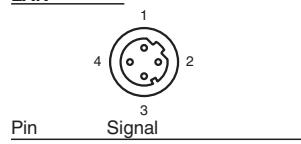
Connection

IO



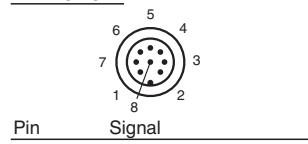
1	OUT +UB
2	IN 1
3	GND
4	IN 2
5	OUT 1

LAN



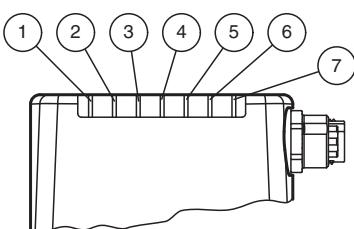
1	TX+ Ethernet
2	RX+ Ethernet
3	TX- Ethernet
4	RX- Ethernet

24 V DC+IO



1	IN Trigger
2	+UB
3	OUT Good
4	OUT Bad
5	IN Start Teach
6	OUT Ready
7	GND
8	OUT Teach Active

Assembly



1	LED DIAG2	yellow
2	LED DIAG1	yellow
3	LED POWER	green
4	LED TEACH	yellow
5	LED BAD	yellow
6	LED GOOD	yellow
7	LED TRIGGER	yellow