Function

With the Optical Print Inspector, Pepperl+Fuchs provides the solution to code reading and detection tasks in the field of printing, paper, and packaging.

Whether reading 1-D and 2-D codes at high speeds, reading reliably on reflective surfaces and at varying intervals, with overly long barcodes or performing diverse detection tasks with the Optical Print Inspector, you always have the right Vision Sensor at your disposal.

Indicating / Operating means
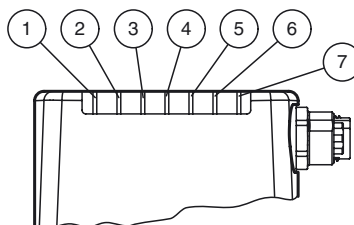
1	LED DIAG2	yellow
2	LED DIAG1	yellow
3	LED POWER	green
4	LED READY	yellow
5	LED BAD	yellow
6	LED GOOD	yellow
7	LED TRIGGER	yellow

Electrical connection

RS 232

Pin	Signal
1	+UB
2	TX RS232
3	GND
4	RX RS232
5	NC

LAN

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

(24 V DC + I/O)
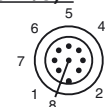
Pin	Signal
1	IN Trigger
2	+UB
3	OUT Good
4	OUT Bad
5	IN 1
6	IN Encoder A
7	GND
8	OUT Matchcode

Model Number

OPC120P-F201-R2

Optical Print Inspector, reads all common 1-D and 2-D codes, detects logos, Ethernet, RS 232, speeds of up to 10 m/s; polarization filter

Features

- Reads 1D and 2D codes at high speeds of up to 10 m/s at 100 readings/s
- High depth of focus
- Reads barcodes up to 200†mm long
- Code quality index output
- Logo comparison
- Rotary encoder input
- Reliable on reflective surfaces through polarization filter technology
- Presence detection

Technical data

General specifications	
Light type	Integrated LED lightning (white)
Polarization filter	yes
Symbologies	Data Matrix, Code 39, Code 128, Int 2 of 5, EAN13, Pharma-code
Read distance	70 ... 180 mm Nominal distance: 120 mm
Reading field	Minimum read field: 28 mm x 45 mm Read field at nominal distance: 45 mm x 70 mm Maximum read field: 65 mm x 105 mm
Modul size	Minimum module size: 0.2 mm
Sensor principle	Camera system
Evaluation frequency	up to 100 Hz
Target velocity	triggered ≤ 10 m/s
Data Matrix	
Symbol size	rectangular up to 144 x 144 modules rectangular up to 16 x 48 modules
Data format	ASCII, C40, Text, X12, Edifact, Base 256 , all according to ISO 646
Orientation	omnidirectional
Nominal ratings	
Camera	
Type	CMOS , Global shutter

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

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Number of pixels		752 x 480 pixels
Gray scale		256
Image recording		real-time , Program-controlled or triggered externally
Functional safety related parameters		
$MTTF_d$		40.5 a
Mission Time (T_M)		8 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: Ready for operation
LED indicator		for good/poor reading
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		
Interface type		serial , RS 232
Transfer rate		max. 115.2 kBit/s
Cable length		max. 30 m
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		Trigger
Input current		approx. 10 mA at 24 V DC
Switching threshold		low: < 10 V, high: > 15 V
Cable length		max. 30 m
Output		
Number/Type		GOOD, BAD, Matchcode
Switching type		PNP
Switching voltage		to be applied externally 24 V ± 15 % PELV
Switching current		100 mA each output
Cable length		max. 30 m
Ambient conditions		
Ambient temperature		0 ... 45 °C (32 ... 113 °F)
Storage temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		8-pin, M12x1 connector, standard (supply+IO) , 5-pin, M12x1 socket, standard (RS 232) , 4-pin, M12x1 socket, standard (LAN)
Material		
Housing		PC/ABS
Installation		4 x M6 threading
Mass		approx. 160 g
Compliance with standards and directives		
Standard conformity		
Noise immunity		EN 61326-1:2006
Emitted interference		EN 61000-6-4:2007/A1:2011
Degree of protection		EN 60529
Laser class		IEC 60825-1:2007

Approvals and certificates	
UL approval	cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V
Approvals	CE

Accessories

V19-G-2M-PUR-ABG
Female cordset, M12, 8-pin, shielded, PUR cable

V15S-G-5M-PUR-ABG
Male cordset, M12, 5-pin, shielded, PUR cable

V1SD-G-2M-PUR-ABG-V45-G
Connection cable, M12 to RJ-45, PUR cable 4-pin, CAT5e

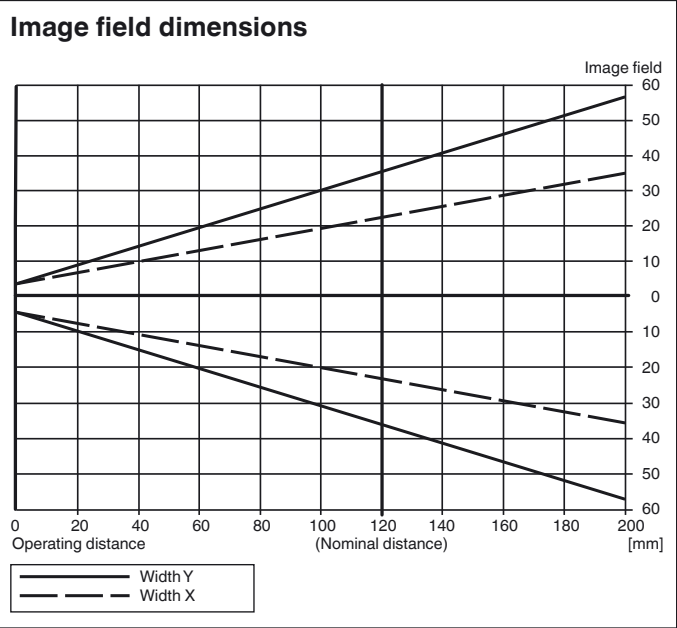**V1SD-G-2M-PUR-ABG-V45X-G**
Connection cable, M12 to RJ-45, PUR cable 4-pin, CAT5e

V19-G-ABG-PG9
Female connector, M12, 8-pin, shielded, field attachable

Other suitable accessories can be found at www.pepperl-fuchs.com
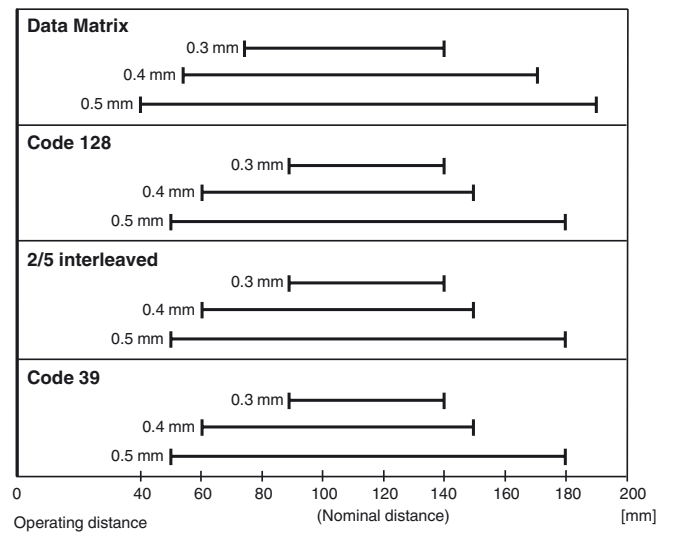
Release date: 2015-04-23 16:19   Date of issue: 2015-04-24   256354_eng.xml

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Curves / Diagrams

Image field dimensions

Image field

[Graph: X-axis labeled "Operating distance" from 0 to 200 with "(Nominal distance)" and "[mm]"; Y-axis "Image field" from 60 to 0 to 60. Two curves: Width Y (solid line) and Width X (dashed line)]

— Width Y
- - - Width X

Read ranges

Data Matrix
- 0.3 mm
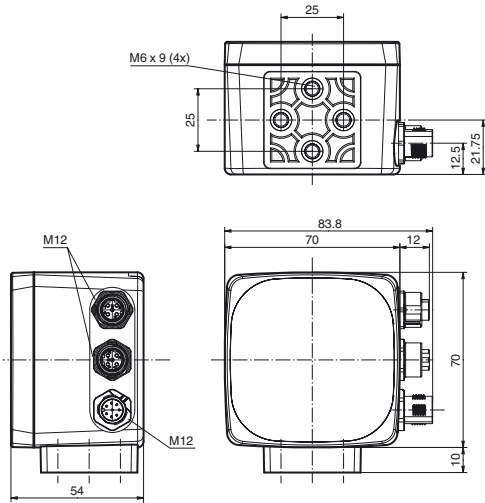- 0.4 mm
- 0.5 mm

Code 128
- 0.3 mm
- 0.4 mm
- 0.5 mm

2/5 interleaved
- 0.3 mm
- 0.4 mm
- 0.5 mm

Code 39
- 0.3 mm
- 0.4 mm
- 0.5 mm

Operating distance   (Nominal distance)   [mm]

0   40   60   80   100   120   140   160   180   200

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Dimensions

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