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 1D and 2D codes at high speeds, at varying intervals, with reflective surfaces, 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
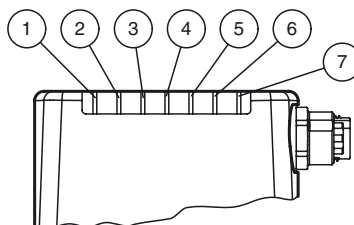
1	LED DIAG2	yellow
2	LED DIAG1	yellow
3	LED POWER	green
4	LED READY	yellow
5	LED BAD	yellow
6	LED GOOD	yellow
7	LED TRIGGER	yellow

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)
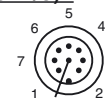
Pin	Signal
1	IN Trigger
2	+UB
3	OUT Good
4	OUT Bad
5	IN 1
6	IN Encoder A
7	GND
8	OUT Matchcode

Model Number

OPC120W-F200-R2

Optical Print Inspector, reads all common 1-D and 2-D codes, detects logos, Ethernet, RS 232, speeds of up to 6 m/s

Features

- Reads 1-D and 2-D codes at high speeds of up to 6 m/s at 30 readings/s
- High depth of focus
- Code quality index output
- Logo comparison
- Presence detection

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Technical data

General specifications	
Light type	Integrated LED lightning (white)
Symbologies	Data Matrix, Code 39, Code 128, Int 2 of 5, EAN13, Pharmacode
Read distance	70 ... 180 mm Nominal distance: 120 mm
Reading field	Minimum read field: 28 mm x 45 mm Read field at nominal distance: 44 mm x 70 mm Maximum read field: 63 mm x 100 mm
Modul size	Minimum module size: 0.2 mm
Evaluation frequency	up to 30 Hz
Target velocity	triggered $\leq$ 6 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
Number of pixels	752 x 480 pixels
Gray scale	256
Image recording	real-time , Program-controlled or triggered externally

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

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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
Emitted interference	EN 61000-6-4
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
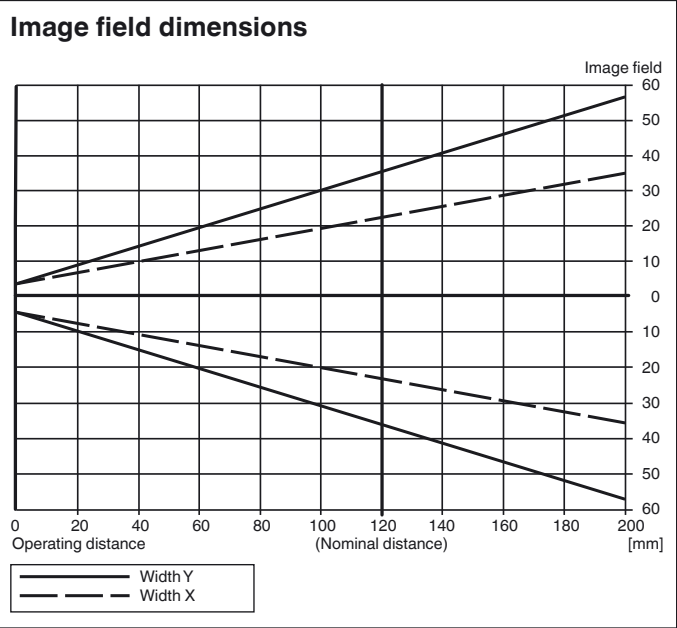
PCV-MB1
Mounting bracket for PCV* read head
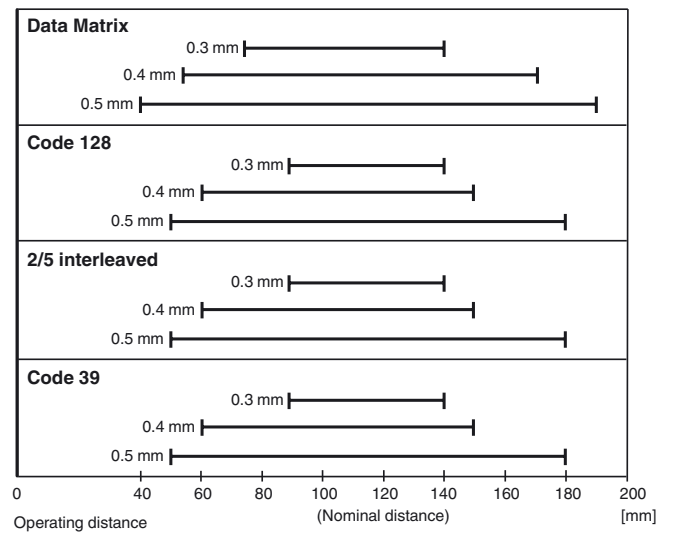
V19-G-0,2M-YOPC-0,2M-V1S/V31-G
Y connection cable

Other suitable accessories can be found at www.pepperl-fuchs.com

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Curves / Diagrams

Image field dimensions

Operating distance — (Nominal distance) — [mm]

- —— 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]

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

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Dimensions

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