

Системы оптической идентификации

Технические характеристики

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Россия +7(495)268-04-70

Казахстан +7(727) 345-47-04

Беларусь +(375) 257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: phb@nt-rt.ru || сайт: <https://pepperl-fuchs.nt-rt.ru/>



High temperature identification system OIT200-F113-B12-CB

- High-temperature code carrier up to 500 °C (932 °F)
- Sturdy and compact design
- Integrated illumination

Optical high temperature identification system, 140 to 200 mm

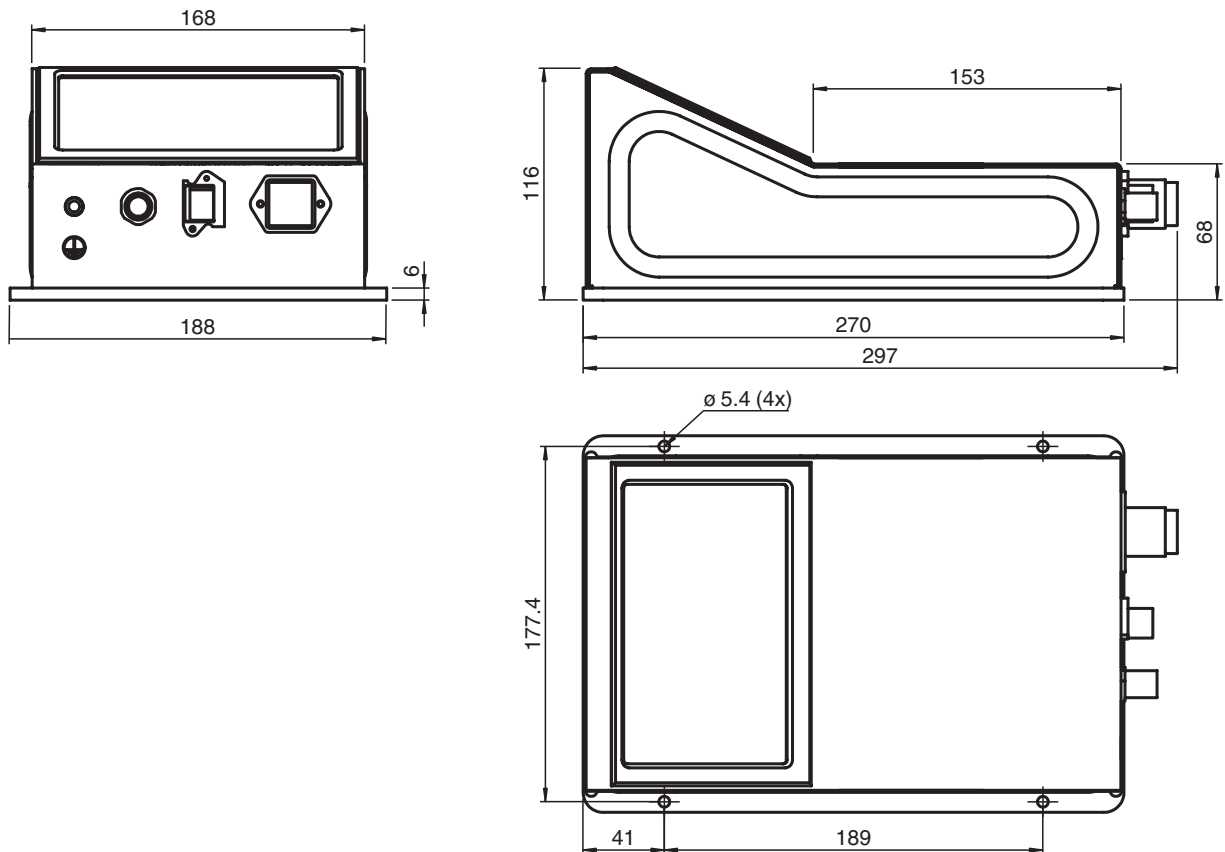


Function

The stationary scanner OIT200-F113-B12-CB is an optical identification system using the methods of industrial image processing, which finds application in automated manufacturing processes. In particular with bodyshell work, there are harsh ambient conditions, which complicate or render impossible the application of code carriers with electronic components due to cyclical changes in temperature, for example. For this reason, the high-temperature identification system OIT is fitted with code carriers with massive metal plates provided with a perforated matrix, which can withstand temperatures up to 500 °C and high mechanical loads.

Simple installation as well as commissioning without complicated and long-winded TEACH-IN enable fast application. Plug-in connections for fast exchange of devices and the control with simple command sets through an Ethernet interface ensure very easy operation. A scratch resistant quartz glass pane, which can be replaced, if and when required, as well as the stable metal housing turn the OIT200-F113-B12-CB into a robust and powerful identification system.

Dimensions

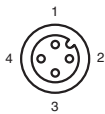


Technical Data

General specifications		
Light source		Integrated LED lightning
Light type		infrared
Symbologies		Hole matrix Data format: decimal Data capacity: 6 (numerical) Orientation: omnidirectional
Read distance		140 ... 200 mm (factory setting) max. 260 mm
Reading field		210 mm x 135 mm at max. read distance
Evaluation frequency		5 Hz
Target velocity		triggered max. 0.5 m/s
Functional safety related parameters		
MTTF _d		51 a
Mission Time (T _M)		10 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: supply LED green: ready
Function indicator		Yellow LED: trigger Yellow LED: code read Red LED: pre-fault Red LED: group error
Electrical specifications		
Operating voltage	U _B	24 V DC ± 15% , PELV
Operating current	I _B	250 mA without output drivers
Interface		
Physical		Ethernet
Protocol		TCP/IP
Transfer rate		100 MBit/s
Input		
Input voltage		to be applied externally 24 V ± 15% PELV
Number/Type		1 trigger input 2 control unit inputs , optically decoupled
Input current		approx. 1 mA at 24 V DC
Output		
Number/Type		1 electronic output, PNP, optically decoupled
Switching voltage		to be applied externally 24 V ± 15 % PELV
Switching current		100 mA each output
Conformity		
Shock resistance		EN 60068-2-27:2009
Vibration resistance		EN 60068-2-6:2008
Emitted interference		EN 61000-6-4:2007+A1:2011
Noise immunity		EN 61326-1:2013
Photobiological safety		EN 62471:2008 exempt group
Approvals and certificates		
CE conformity		CE
Ambient conditions		
Ambient temperature		0 ... 45 °C (32 ... 113 °F)
Storage temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP64
Connection		8-pin Harting HAN RJ-45 5-pin M12 socket Supplied ferrite sleeve for suppression of the Ethernet cable
Material		
Housing		Metal /high-grade steel powder coated
Mass		approx. 3100 g

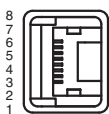
Connection Assignment

4-pin M12 socket
(Trigger)



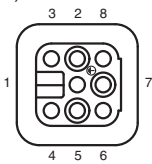
Pin	Signal
1	24 V power supply
2	not assigned
3	Ground
4	Trigger signal

8-pin Network connection
(LAN)



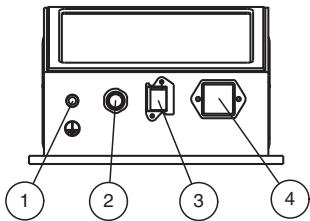
Pin	Signal
1	Transmit data (+)
2	Transmit data (-)
3	Receive data (+)
4	not assigned
5	not assigned
6	Receive data (-)
7	not assigned
8	not assigned

8-pin Harting connection
(Process)



Pin	Signal
1	n.c. (reserved)
2	Ground for separate I/O supply (GND IO)
3	Mode bit 1 (MOD 1)
4	Mode bit 0 (MOD 0)
5	24 V supply for separate I/O (24 V IO)
6	24 V supply device
7	n.c. (reserved)
8	Device ground (GND)

Assembly



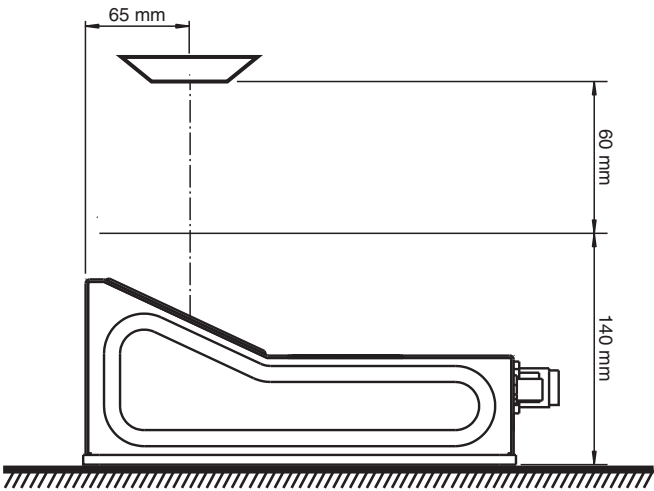
1	Erdung
2	Trigger
3	LAN
4	Process

Accessories

	V8HAN-G-10M-PVC-ABG	Female cordset, Harting, 8-pin, shielded, PVC cable
	V45-GP-10M-PUR-ABG-V45-G	Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable
	V45-GP	Male connector RJ45 straight 4-pin, Cat5, shielded, field-attachable, insulation displacement connection, Outdoor
	V1S-G-10M-PVC	Male cordset single-ended M12 straight A-coded, 4-pin, PVC cable grey
	V8HAN-G	Female connector, Harting, 8-pin, field attachable
	OITControl	Software for OIT high temperature identification system
	OIZ-FG500	Replacement glass for series OIT300, OIT500 and OIT1500

Installation Conditions

Distance Code Carrier / OIT



High temperature identification system

OIT500-F113-B12-CB



- High-temperature code carrier up to 500 °C (932 °F)
- Sturdy and compact design
- Integrated illumination
- High operating range
- Large sensing range
- High depth of focus

Optical high temperature identification system, 200 to 450 mm

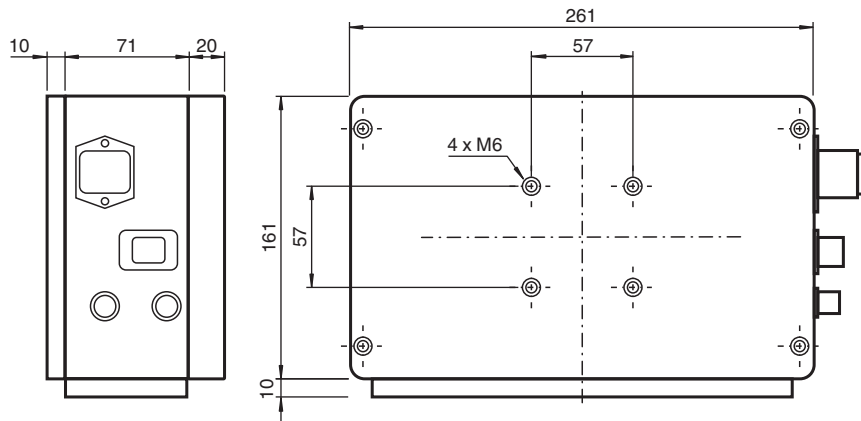


Function

The OIT500-* stationary read device is an optical identification system that works using industrial vision methods and is used in automated manufacturing processes. The ambient conditions in automobile construction in particular, for example the cyclical temperature changes, often make the use of read-only tags with electronic components difficult if not impossible. For the OIT high-temperature identification system, read-only tags of solid metal plates with a perforated matrix are used, which are designed for use at temperatures of up to 500 °C and suitable for high mechanical stress.

Simple installation and commissioning without complicated, time-consuming Teach-In processes enable rapid entry. Pluggable connections for the rapid exchange of devices and a controller with simple command set via the Ethernet interface guarantee simple operation. A scratch-resistant, replaceable quartz glass panel and sturdy metal housing make the OIT500-* a robust, efficient identification system.

Dimensions



Technical Data

General specifications

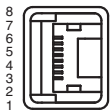
Light source	Integrated LED lightning
Light type	infrared
Symbologies	Hole matrix Data format: decimal Data capacity: 6 (numerical) Orientation: omnidirectional
Read distance	200 ... 450 mm
Depth of focus	± 50 mm
Reading field	330 mm x 250 mm at max. read distance
Evaluation frequency	5 Hz

Technical Data

Target velocity		triggered max. 0.5 m/s
Functional safety related parameters		
MTTF _d		51 a
Mission Time (T _M)		10 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: supply LED green: ready
Function indicator		Yellow LED: trigger Yellow LED: code read Red LED: pre-fault Red LED: group error
Electrical specifications		
Operating voltage	U _B	24 V DC ± 15% , PELV
Operating current	I _B	250 mA without output drivers
Interface		
Physical		Ethernet
Protocol		TCP/IP
Transfer rate		100 MBit/s
Input		
Input voltage		to be applied externally 24 V ± 15% PELV
Number/Type		1 trigger input 2 control unit inputs , optically decoupled
Input current		approx. 1 mA at 24 V DC
Output		
Number/Type		1 electronic output, PNP, optically decoupled
Switching voltage		to be applied externally 24 V ± 15 % PELV
Switching current		100 mA each output
Conformity		
Shock resistance		EN 60068-2-27:2009
Vibration resistance		EN 60068-2-6:2008
Emitted interference		EN 61000-6-4:2007+A1:2011
Noise immunity		EN 61326-1:2013
Photobiological safety		EN 62471:2008 exempt group
Approvals and certificates		
CE conformity		CE
Ambient conditions		
Ambient temperature		0 ... 45 °C (32 ... 113 °F)
Storage temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP64
Connection		8-pin Harting HAN RJ-45 2 x 5-pin M12 socket Supplied ferrite sleeve for suppression of the Ethernet cable
Material		
Housing		diecast aluminum powder coated
Mass		approx. 4000 g

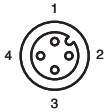
Connection Assignment

8-pin Network connection
(LAN)



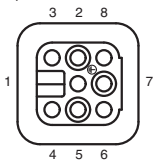
Pin	Signal
1	Transmit data (+)
2	Transmit data (-)
3	Receive data (+)
4	not assigned
5	not assigned
6	Receive data (-)
7	not assigned
8	not assigned

4-pin M12 socket
(external illumination)



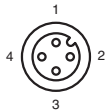
Pin	Signal
1	24 V power supply
2	Laser control
3	Ground
4	Illumination control

8-pin Harting connection
(Process)



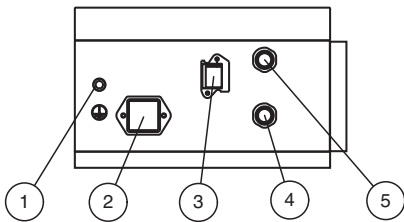
Pin	Signal
1	n.c. (reserved)
2	Ground for separate I/O supply (GND IO)
3	Mode bit 1 (MOD 1)
4	Mode bit 0 (MOD 0)
5	24 V supply for separate I/O (24 V IO)
6	24 V supply device
7	n.c. (reserved)
8	Device ground (GND)

4-pin M12 socket
(Trigger)



Pin	Signal
1	24 V power supply
2	not assigned
3	Ground
4	Trigger signal

Assembly






1	Grounding screw
2	Power supply
3	Network
4	Trigger
5	external illumination

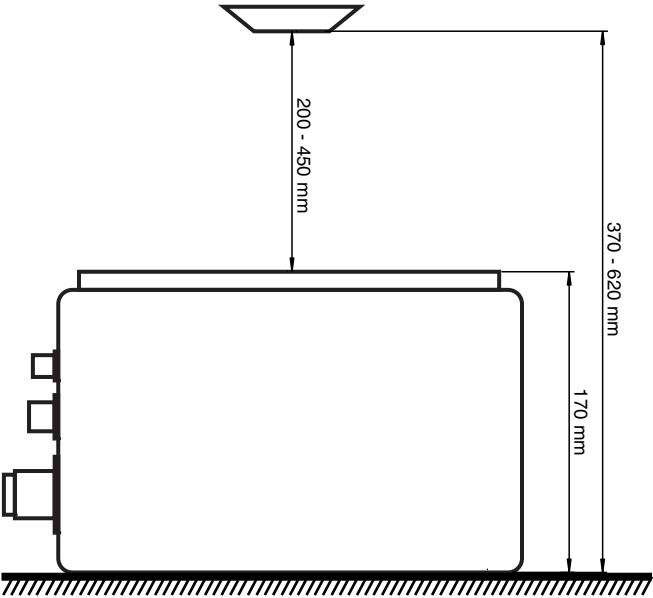
Accessories

	V8HAN-G-10M-PVC-ABG	Female cordset, Harting, 8-pin, shielded, PVC cable
	V45-GP-10M-PUR-ABG-V45-G	Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable
	V45-GP	Male connector RJ45 straight 4-pin, Cat5, shielded, field-attachable, insulation displacement connection, Outdoor
	V1S-G-10M-PVC	Male cordset single-ended M12 straight A-coded, 4-pin, PVC cable grey

Accessories

	V8HAN-G	Female connector, Harting, 8-pin, field attachable
	OITControl	Software for OIT high temperature identification system
	OIZ-FG500	Replacement glass for series OIT300, OIT500 and OIT1500

Distance Code Carrier/OIT



High temperature identification system

OIT300-F113-B12-CB2



- High-temperature code carrier up to 500 °C (932 °F)
- Sturdy and compact design
- Integrated illumination
- Large sensing range
- High depth of focus

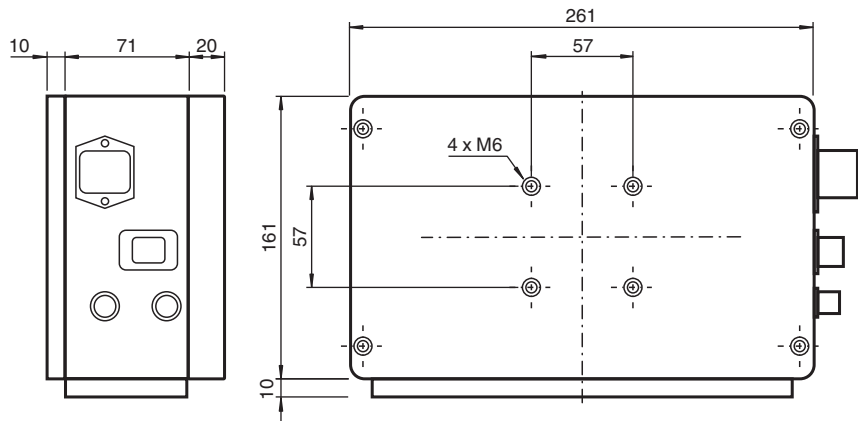
Optical high temperature identification system, 100 to 270 mm



Function

The stationary scanner OIT300-F113-B12-CB2 is an optical identification system using the methods of industrial image processing, which finds application in automated manufacturing processes. For this reason, the high-temperature identification system OIT is fitted with code carriers with massive metal plates provided with a perforated matrix, which can withstand temperatures up to 500°C and high mechanical loads. Simple installation as well as commissioning without complicated and long-winded TEACH-IN enable fast application. Plug-in connections for fast exchange of devices and the control with simple command sets through an Ethernet interface ensure very easy operation. A scratch resistant quartz glass pane, which can be replaced, if and when required, as well as the stable metal housing turn the OIT300-F113-B12-CB2 into a robust and powerful identification system.

Dimensions



Technical Data

General specifications

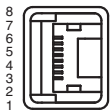
Light source	Integrated LED lightning
Light type	infrared
Symbologies	Hole matrix Value range: 4-digit numerical, between 1 and 4095 Code carrier size: 80 mm x 36 mm
Read distance	adjustable 100 ... 270 mm
Depth of focus	± 50 mm
Reading field	210 mm x 160 mm at max. read distance
Evaluation frequency	5 Hz

Technical Data

Target velocity		triggered max. 0.5 m/s
Functional safety related parameters		
MTTF _d		51 a
Mission Time (T _M)		10 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: supply LED green: ready
Function indicator		Yellow LED: trigger Yellow LED: code read Red LED: pre-fault Red LED: group error
Electrical specifications		
Operating voltage	U _B	24 V DC ± 15% , PELV
Operating current	I _B	250 mA without output drivers
Interface		
Physical		Ethernet
Protocol		TCP/IP
Transfer rate		100 MBit/s
Input		
Input voltage		to be applied externally 24 V ± 15% PELV
Number/Type		1 trigger input 2 control unit inputs , optically decoupled
Input current		approx. 1 mA at 24 V DC
Output		
Number/Type		1 electronic output, PNP, optically decoupled
Switching voltage		to be applied externally 24 V ± 15 % PELV
Switching current		100 mA each output
Conformity		
Shock resistance		EN 60068-2-27:2009
Vibration resistance		EN 60068-2-6:2008
Emitted interference		EN 61000-6-4:2007+A1:2011
Noise immunity		EN 61326-1:2013
Photobiological safety		EN 62471:2008 exempt group
Approvals and certificates		
CE conformity		CE
Ambient conditions		
Ambient temperature		0 ... 45 °C (32 ... 113 °F)
Storage temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP64
Connection		8-pin Harting HAN RJ-45 2 x 5-pin M12 socket Supplied ferrite sleeve for suppression of the Ethernet cable
Material		
Housing		diecast aluminum powder coated
Mass		approx. 4000 g

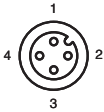
Connection Assignment

8-pin Network connection
(LAN)



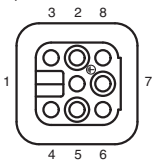
Pin	Signal
1	Transmit data (+)
2	Transmit data (-)
3	Receive data (+)
4	not assigned
5	not assigned
6	Receive data (-)
7	not assigned
8	not assigned

4-pin M12 socket
(external illumination)



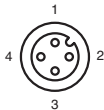
Pin	Signal
1	24 V power supply
2	Laser control
3	Ground
4	Illumination control

8-pin Harting connection
(Process)



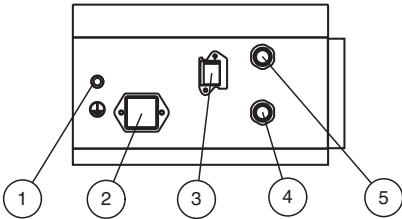
Pin	Signal
1	n.c. (reserved)
2	Ground for separate I/O supply (GND IO)
3	Mode bit 1 (MOD 1)
4	Mode bit 0 (MOD 0)
5	24 V supply for separate I/O (24 V IO)
6	24 V supply device
7	n.c. (reserved)
8	Device ground (GND)

4-pin M12 socket
(Trigger)



Pin	Signal
1	24 V power supply
2	not assigned
3	Ground
4	Trigger signal

Assembly







1	Grounding screw
2	Power supply
3	Network
4	Trigger
5	external illumination

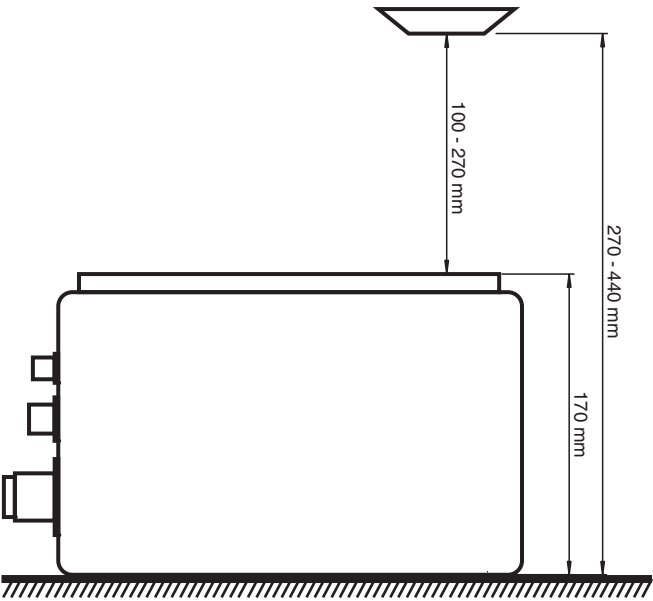
Accessories

	OIC-C11V4A-CB2	Code carrier for optical high-temperature identification system, stainless steel
	V8HAN-G-10M-PVC-ABG	Female cordset, Harting, 8-pin, shielded, PVC cable
	V45-GP-10M-PUR-ABG-V45-G	Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable
	V45-GP	Male connector RJ45 straight 4-pin, Cat5, shielded, field-attachable, insulation displacement connection, Outdoor

Accessories

	V1S-G-10M-PVC	Male cordset single-ended M12 straight A-coded, 4-pin, PVC cable grey
	V8HAN-G	Female connector, Harting, 8-pin, field attachable
	OITControl	Software for OIT high temperature identification system
	OIZ-FG500	Replacement glass for series OIT300, OIT500 and OIT1500

Distance Code Carrier/OIT



High temperature identification system

OIT500-F113-B12-CB3



- High-temperature code carrier up to 500 °C (932 °F)
- Sturdy and compact design
- Integrated illumination
- High operating range
- Large sensing range
- High depth of focus

Optical high temperature identification system, 300 to 450 mm

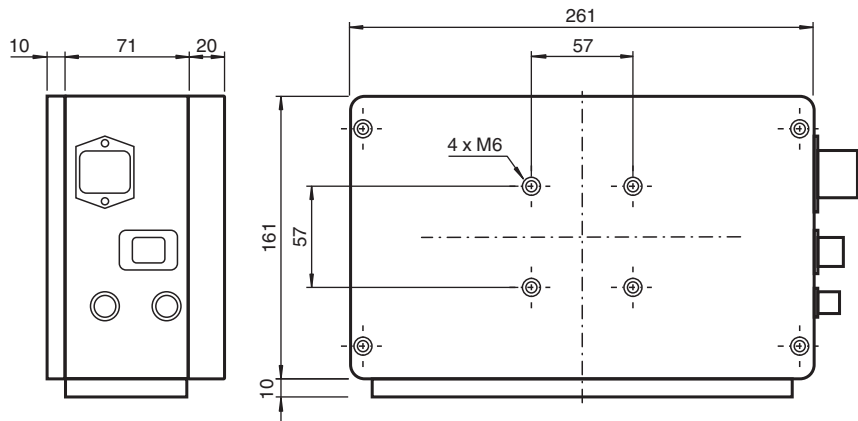


Function

The OIT500-* stationary read device is an optical identification system that works using industrial vision methods and is used in automated manufacturing processes. The ambient conditions in automobile construction in particular, for example the cyclical temperature changes, often make the use of read-only tags with electronic components difficult if not impossible. For the OIT high-temperature identification system, read-only tags of solid metal plates with a perforated matrix are used, which are designed for use at temperatures of up to 500 °C and suitable for high mechanical stress.

Simple installation and commissioning without complicated, time-consuming Teach-In processes enable rapid entry. Pluggable connections for the rapid exchange of devices and a controller with simple command set via the Ethernet interface guarantee simple operation. A scratch-resistant, replaceable quartz glass panel and sturdy metal housing make the OIT500-* a robust, efficient identification system.

Dimensions



Technical Data

General specifications

Light source	Integrated LED lightning
Light type	infrared
Symbologies	CB1: perforated matrix 6 x 6 6 decimal digits CB3: hole pattern 3 x 12 12 binary digits
Read distance	CB1: 300 ... 450 mm CB3: 350 ... 400 mm
Reading field	340 mm x 210 mm at max. read distance
Evaluation frequency	5 Hz
Target velocity	triggered max. 1.5 m/s

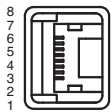
Functional safety related parameters

Technical Data

MTTF _d		51 a
Mission Time (T _M)		10 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: supply LED green: ready
Function indicator		Yellow LED: trigger Yellow LED: code read Red LED: pre-fault Red LED: group error
Electrical specifications		
Operating voltage	U _B	24 V DC ± 15% , PELV
Operating current	I _B	250 mA without output drivers
Interface		
Physical		Ethernet
Protocol		TCP/IP
Transfer rate		100 MBit/s
Input		
Input voltage		24 V ± 15% PELV
Number/Type		1 trigger input 3 control unit inputs
Input current		approx. 1 mA at 24 V DC
Output		
Number/Type		1 conventional electronic output, PNP
Switching voltage		24 V ± 15 % PELV
Switching current		100 mA each output
Conformity		
Shock resistance		EN 60068-2-27:2009
Vibration resistance		EN 60068-2-6:2008
Emitted interference		EN 61000-6-4:2007+A1:2011
Noise immunity		EN 61326-1:2013
Photobiological safety		EN 62471:2008 exempt group
Approvals and certificates		
CE conformity		CE
Ambient conditions		
Ambient temperature		0 ... 45 °C (32 ... 113 °F)
Storage temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP64
Connection		8-pin Harting HAN RJ-45 2 x 5-pin M12 socket
Material		
Housing		diecast aluminum powder coated
Mass		approx. 4000 g

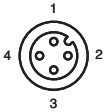
Connection

8-pin Network connection
(LAN)



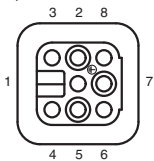
Pin	Signal
1	Transmit data (+)
2	Transmit data (-)
3	Receive data (+)
4	not assigned
5	not assigned
6	Receive data (-)
7	not assigned
8	not assigned

4-pin M12 socket
(external illumination)



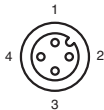
Pin	Signal
1	24 V power supply
2	not connected
3	Ground
4	Illumination control

8-pin Harting connection
(Process)



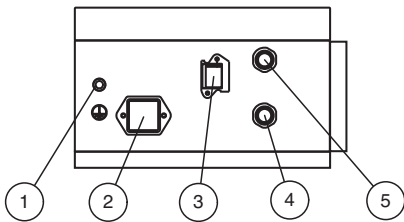
Pin	Signal
1	not connected
2	External ground
3	not connected
4	not connected
5	24 V external power supply
6	24 V device power supply
7	not connected
8	Device ground

4-pin M12 socket
(Trigger)



Pin	Signal
1	24 V power supply
2	not connected
3	Ground
4	Trigger signal

Assembly








1	Grounding screw
2	Power supply
3	Network
4	Trigger
5	external illumination

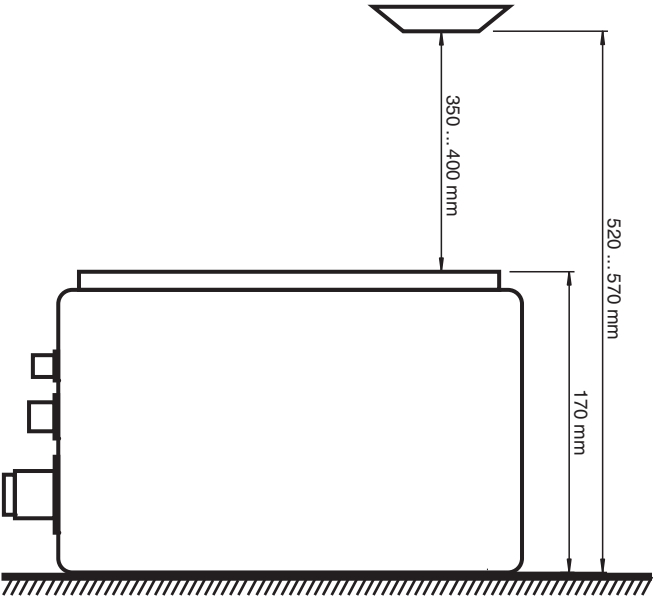
Accessories

	V8HAN-G-10M-PVC-ABG	Female cordset, Harting, 8-pin, shielded, PVC cable
	V45-GP-10M-PUR-ABG-V45-G	Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable
	V45-GP	Male connector RJ45 straight 4-pin, Cat5, shielded, field-attachable, Outdoor
	V45-G	Male connector RJ45 straight 4-pin, Cat5, shielded, field-attachable

Accessories

	V1S-G-10M-PVC	Male cordset single-ended M12 straight A-coded, 4-pin, PVC cable grey
	V8HAN-G	Female connector, Harting, 8-pin, field attachable
	OIZ-FG500	Replacement glass for series OIT300, OIT500 and OIT1500
	Vision Configurator	Operating software for camera-based sensors
	OIC-C10V2A-CB1-xxxxxx-yyyyyy	Code carrier for optical high-temperature identification system, stainless steel

Distance Code Carrier/OIT



High temperature identification system

OIT500-F113-B17-CB



- High-temperature code carrier up to 500 °C (932 °F)
- PROFINET interface with integrated switch
- Connection to Ethernet TCP/IP
- Optional reading of CB3 code plates
- Sturdy and compact design
- Integrated illumination
- High operating range
- Large sensing range
- High depth of focus

Optical high temperature identification system, 300 to 450 mm

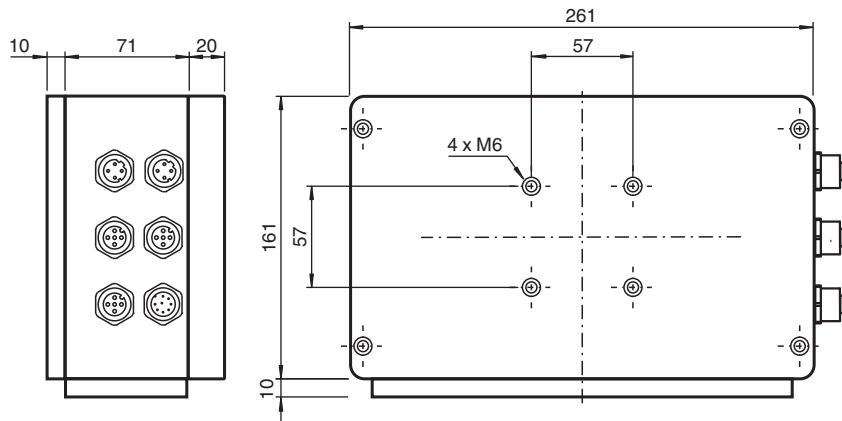


Function

The OIT500-* stationary read device is an optical identification system that works using industrial vision methods and is used in automated manufacturing processes. The ambient conditions in painting facilities in particular, for example the cyclical temperature changes, often make the use of read-only tags with electronic components difficult if not impossible. For the OIT high-temperature identification system, read-only tags of solid metal plates with a perforated matrix are used, which are designed for use at temperatures of up to 500 °C and suitable for high mechanical stress.

Simple installation and commissioning without complicated, time-consuming Teach-In processes enable rapid entry. The integrated PROFINET interface enables simple integration into the controller. A scratch-resistant, replaceable quartz glass panel and sturdy metal housing make the OIT500-* a robust, efficient identification system.

Dimensions



Technical Data

General specifications

Light source	Integrated LED lightning
Light type	Infrared
Symbologies	CB1: perforated matrix 6 x 6 decimal digits
Read distance	CB1: 300 ... 520 mm
Reading field	335 mm x 185 mm at max. read distance
Evaluation frequency	5 Hz
Target velocity	triggered max. 1.5 m/s

Functional safety related parameters

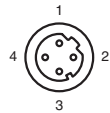
MTTF _d	86 a
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Technical Data

Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
LED indication		status , Function , communication
Electrical specifications		
Operating voltage	U _B	24 V DC ± 15% , PELV
Operating current	I _B	200 mA without output drivers
Interface 1		
Interface type		100 BASE-TX
Protocol		PROFINET IO Real-Time (RT) Conformance Class B Netload Class III
Transfer rate		100 Bit/s
Interface 2		
Interface type		Ethernet
Protocol		TCP/IP
Transfer rate		100 MBit/s
Input		
Input voltage		24 V DC low: < 8 V, high: > 12 V
Number/Type		2 trigger input and supply max. 4 switching inputs
Output		
Number/Type		supply max. 200 mA and 1 control output for External lighting max. 4 switching outputs programmable
Switching voltage		operating voltage minus voltage drop typ. 1.1 V
Switching current		100 mA each output
Conformity		
Shock resistance		EN 60068-2-27:2009
Vibration resistance		EN 60068-2-6:2008
Emitted interference		EN 61000-6-4:2007+A1:2011
Noise immunity		EN 61000-6-2:2005
Photobiological safety		EN 62471:2008 exempt group
Approvals and certificates		
CE conformity		CE
Ambient conditions		
Ambient temperature		0 ... 60 °C (32 ... 140 °F)
Storage temperature		-20 ... 75 °C (-4 ... 167 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		8-pin, M12x1 connector, standard (supply+IO) 2 x 4-pin, M12x1 socket, D-coded (LAN) 3 x 5-pin, M12x1 socket, A-coded (Trigger , External lighting)
Material		
Housing		diecast aluminum powder coated
Mass		approx. 4000 g

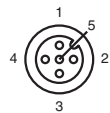
Connection

4-pin M12 socket, D-coded
(PROFINET 1 & 2)



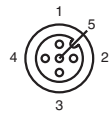
Pin	Signal
1	Tx +
2	Rx +
3	Tx -
4	Rx -

5-pin M12 socket
(Trigger 1 & 2)



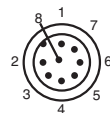
Pin	Signal
1	24 V power supply
2	not connected
3	Ground
4	Trigger signal
5	not connected

5-pin M12 socket
(external illumination)



Pin	Signal
1	24 V power supply
2	not connected
3	Ground
4	Illumination control
5	not connected

8-pin M12 plug
(Power & IO's)

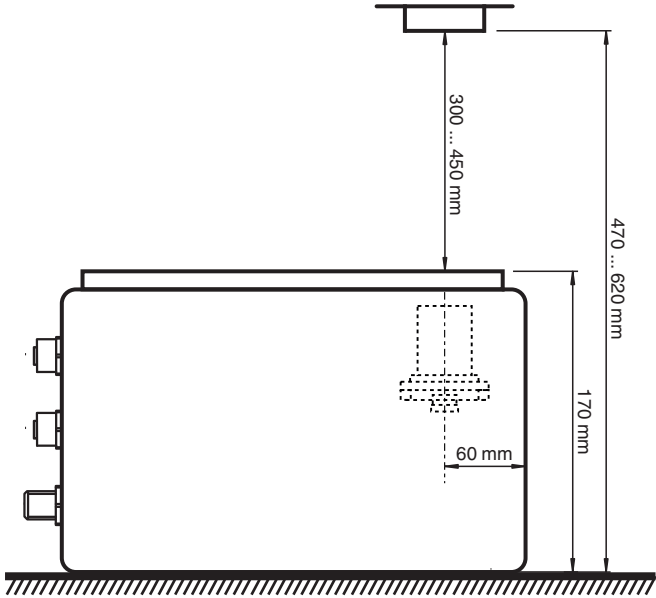


Pin	Signal
1	I/O 1
2	24 V power supply
3	not connected
4	not connected
5	I/O 2
6	I/O 3
7	Ground
8	I/O 4

Accessories

	V19-G-2M-PUR-ABG	Female cordset single-ended M12 straight A-coded, 8-pin, PUR cable grey, shielded
	V19-G-ABG-PG9	Female connector M12 straight A-coded 8-pin, for cable diameter 5 - 8 mm, shielded, field-attachable
	OIZ-FG500	Replacement glass for series OIT300, OIT500 and OIT1500
	Vision Configurator	Operating software for camera-based sensors
	V1S-G-2M-PUR	Male cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey
	OIC-C10V2A-CB1-xxxxxx-yyyyyy	Code carrier for optical high-temperature identification system, stainless steel
	V1SD-G-GN2M-PUR-E1S-V45-G	Ethernet bus cable M12 plug straight D-coded to RJ45 Ethernet-coded, 4-pin, PUR cable green, Cat5e, shielded, drag chain suitable

Installation Conditions





Handheld reader OHV1000-F223-R2

- All common 1-D or 2-D codes can be read
- Dual lens for large read range
- Reading of laser-engraved, etched, or printed codes
- Reads from reflective surfaces
- Programmable with JavaScript
- Audible, tactile, and visual user feedback
- Degree of protection IP54

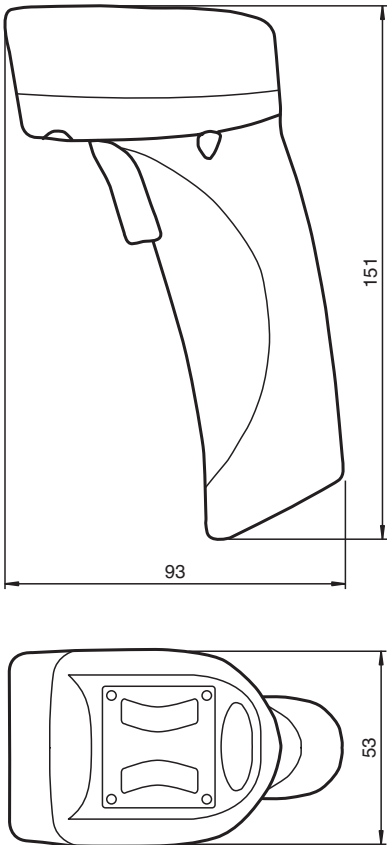
Handheld reader for reading lasered, punched or printed 1-D and 2-D codes



Function

The OHV1000 handheld is a compact handheld reader for all common 1-D and 2-D codes applied directly to the surface of a product. For example, the code may have been etched, printed, or laser-engraved on the housing. Special technology to prevent glare allows the device to accurately read codes on highly reflective surfaces. With its patented dual lens and a resolution of 1.2 million pixels, it can read both small and large codes from a wide range of distances. Feedback comes in the form of a visual or audible signal or a vibration. Using the Vision Configurator software, rule sets can be created for formatting read results without the need for extensive programming work. This facilitates integration into ERP systems. Data is transferred via USB or RS-232, depending on which connection cable is selected. With its robust housing and IP54 protection, the handheld reader is ideally suited to heavy-duty industrial use.

Dimensions



Technical Data

General specifications	
Light type	Integrated LED lightning (red)
Readable codes	1-D Codes: Codabar, Code 11, Code 32, Code 39, Code 93, Code 128, IATA 2 of 5, Interleaved 2 of 5, GS1 DataBar, Hong Kong 2 of 5, Matrix 2 of 5, MSI Plessey, NEC 2 of 5, Pharmacode, Plessey, Straight 2 of 5, Telepen, Trioptic, UPC/EAN/JAN Stacked 1-D Codes: GS1 Composite, MicroPDF, PDF417 2-D Codes: Aztec Code, Code 49, Codablock F, Data Matrix, Han Xin, MaxiCode, Micro QR, QR Code Postal Codes: Australian Post, Intelligent Mail, Japan Post, KIX Code, Korea Post, Planet, Postnet, UK Royal Mail, UPU ID-tags
Read distance	0 ... 200 mm depending on the code type and reading mode
Modul size	min. 0.1 mm
Ambient light limit	96890 Lux
Target velocity	Stop
Nominal ratings	
Camera	
Type	CMOS
Number of pixels	1280 x 960
Image recording	real-time , manually triggered
Indicators/operating means	
Function indicator	LED green: Data carrier read
Electrical specifications	
Supply	via cable
Interface	
Physical	USB 2.0 , RS-232

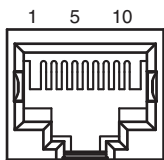
Technical Data

Ambient conditions		
Ambient temperature		-20 ... 55 °C (-4 ... 131 °F)
Storage temperature		-30 ... 65 °C (-22 ... 149 °F)
Relative humidity		5 ... 95 % non-condensing
Shock and impact resistance		Withstands multiple drops from 1.8 m / 6 ft onto a concrete surface
Mechanical specifications		
Degree of protection		IP54
Connection		System connector for connecting cable
Material		
Housing		plastic
Mass		130 g
Dimensions		93 mm x 53 mm x 151 mm (l x w x h)
General information		
Scope of delivery		Handheld reader

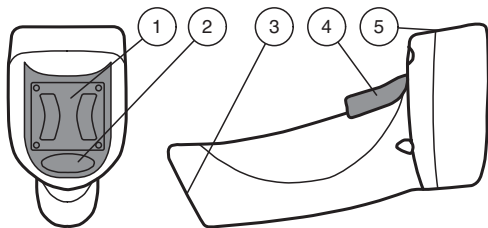
Connection

Pin	Signal
1	+VIN
2	USB_DM
3	USB_DP
4	RS 232 TX
5	RS 232 RTS
6	RS 232 RX
7	RS 232 CTS
8	External Trigger
9	not connected
10	Ground

Connection Assignment



Assembly








1	Mounting bracket
2	Function indicator
3	10-pin connector socket
4	Trigger button
5	Optics

Accessories

	Vision Configurator	Operating software for camera-based sensors
	V45-G-2M-PVC-ABG-USB-G	Adapter cable, RJ50 to USB

Accessories

	V45-G-2M-PVC-SUBD9	Adapter cable, RJ50 to RS 232
	V50-G-2M-PVC-5V-SUBD25	Adapter cable, RJ-50 to D-Sub 25
	OHV1000-BRACKET	Bracket for OHV1000-F223-R2
	V19S-G-1,7/3M-PVC-V50	Adapter cable, M12 8-pin to RS 232
	OHV-F230-B17	PROFINET Gateway for OHV handheld



Handheld reader OHV110-F228-R2

- All common 1-D or 2-D codes can be read
- Dual lens for large read range
- Reads from reflective surfaces
- Programmable with JavaScript
- Audible, tactile, and visual user feedback
- Degree of protection IP54

Handheld reader for all common 1-D and 2-D codes

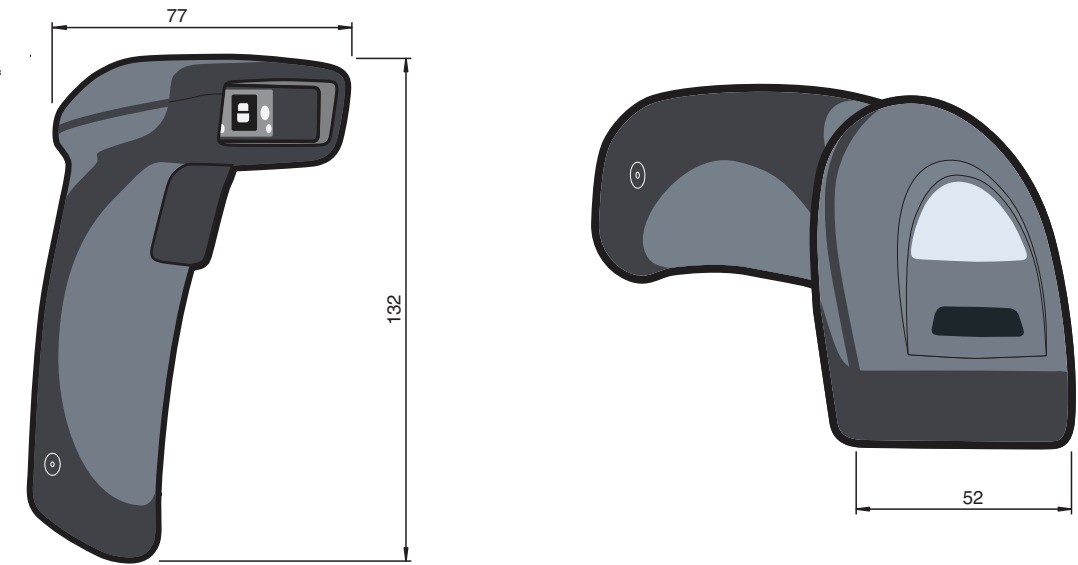


Function

The handheld is a compact handheld reader for all common 1-D and 2-D codes. Special technology to prevent glare allows the device to accurately read codes on highly reflective surfaces. With its patented dual lens and a resolution of 1.2 million pixels, it can read both small and large codes from a wide range of distances. A different-colored target projection makes it easier to see the relevant code. Feedback comes in the form of a visual or audible signal or a vibration.

Using the Vision Configurator software, rule sets can be created for formatting read results without the need for extensive programming work. This facilitates integration into ERP systems. Data is transferred via USB or RS-232, depending on which connection cable is selected. With its robust housing and IP54 protection, the handheld reader is ideally suited to heavy-duty industrial use.

Dimensions



Technical Data

General specifications		
Light type	Integrated LED lightning (red)	
Readable codes		1-D Codes: Codabar, Code 11, Code 32, Code 39, Code 93, Code 128, IATA 2 of 5, Interleaved 2 of 5, GS1 DataBar, Hong Kong 2 of 5, Matrix 2 of 5, MSI Plessey, NEC 2 of 5, Pharmacode, Plessey, Straight 2 of 5, Telepen, Trioptic, UPC/EAN/JAN Gestapelte 1-D Codes: Codablock F, Code 49, GS1 Composite (CC-A/CC-B/CC-C), MicroPDF, PDF417 2-D Codes: Aztec Code, Data Matrix, Data Matrix Rectangular, Grid Matrix, Han Xin, Maxicode, Micro QR Code, QR Code, QR Model 1 Post Codes: Australian Post, Canada Post, Intelligent Mail, Japan Post, KIX Code, Korea Post, Post-Net, Planet, Postnet, UK Royal Mail, UPU ID-tags
Read distance	40 ... 310 mm depending on the code type	
Reading field		max. 190 mm x 290 mm
Modul size	min. 0.1 mm	
Ambient light limit		96890 Lux
Target velocity	Stop	
Nominal ratings		
Camera		
Type		CMOS
Number of pixels	1280 x 960	
Image recording		real-time , manually triggered
Indicators/operating means		
Function indicator		LED green: Data carrier read
Electrical specifications		
Supply		via cable

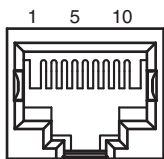
Technical Data

Interface		
Physical		USB 2.0 , RS-232
Compliance with standards and directives		
Standard conformity		
Noise immunity		EN 55024:2010
Emitted interference		EN 55032:2012+AC:2013
Ambient conditions		
Ambient temperature		-20 ... 55 °C (-4 ... 131 °F)
Storage temperature		-30 ... 65 °C (-22 ... 149 °F)
Relative humidity		5 ... 95 % non-condensing
Shock and impact resistance		Withstands multiple drops from 1.8 m / 6 ft onto a concrete surface
Mechanical specifications		
Degree of protection		IP54
Connection		System connector for connecting cable
Material		
Housing		plastic
Mass		116 g
Dimensions		77 mm x 52 mm x 132 mm (l x w x h)
General information		
Scope of delivery		Handheld reader

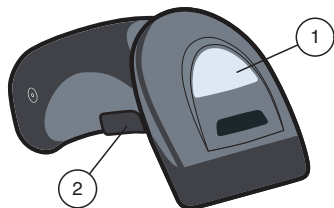
Connection

Pin	Signal
1	+VIN
2	USB_DM
3	USB_DP
4	RS 232 TX
5	RS 232 RTS
6	RS 232 RX
7	RS 232 CTS
8	External Trigger
9	not connected
10	Ground

Connection Assignment









Assembly



2	Functional display	green
3	Trigger button	

Accessories

	Vision Configurator	Operating software for camera-based sensors
	OHV-BRACKET	End stop for OHV100-F222-R2
	V45-G-2M-PVC-ABG-USB-G	Adapter cable, RJ50 to USB
	V45-G-2M-PVC-SUBD9	Adapter cable, RJ50 to RS 232
	V50-G-2M-PVC-5V-SUBD25	Adapter cable, RJ-50 to D-Sub 25
	V19S-G-1,7/3M-PVC-V50	Adapter cable, M12 8-pin to RS 232



Handheld reader

OHV10-F228-R2

- All common 1-D or 2-D codes can be read
- Reads from reflective surfaces
- Audible, tactile, and visual user feedback
- Degree of protection IP54

Handheld reader for all common 1-D and 2-D codes

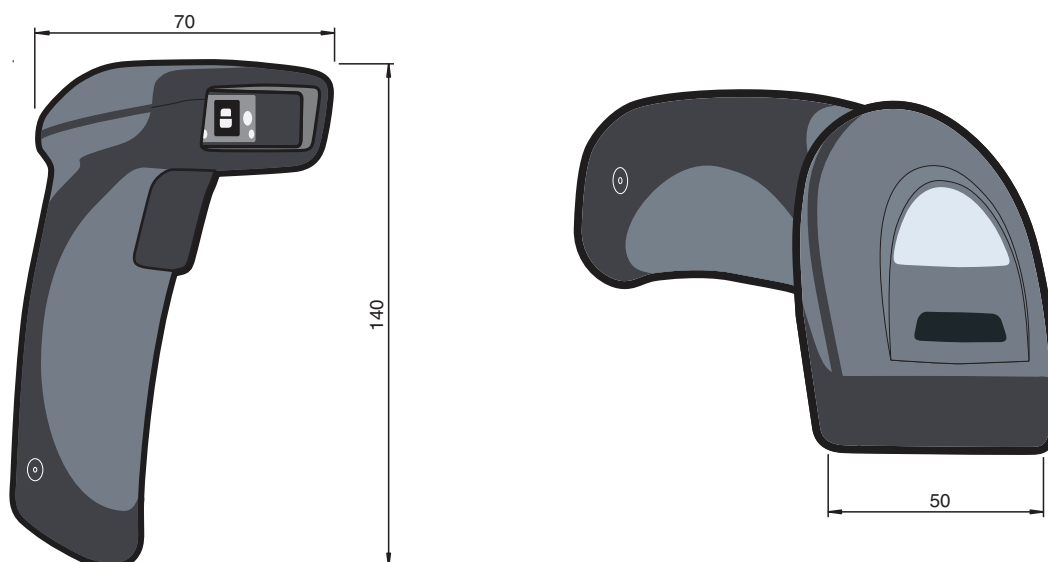


Function

The handheld is a compact handheld reader for all common 1-D and 2-D codes. Special technology to prevent glare allows the device to accurately read codes on highly reflective surfaces. With a resolution of 1.2 million pixels, it can read both small and large codes from a wide range of distances. A different-colored target projection makes it easier to see the relevant code. Feedback comes in the form of a visual or audible signal or a vibration.

Data is transferred via USB or RS-232, depending on which connection cable is selected. With its robust housing and IP54 protection, the handheld reader is ideally suited to heavy-duty industrial use.

Dimensions



Technical Data

General specifications

Light type

Integrated LED lightning (red)

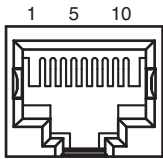
Technical Data

Readable codes	1-D Codes: Codabar, Code 11, Code 32, Code 39, Code 93, Code 128, IATA 2 of 5, Interleaved 2 of 5, GS1 DataBar, Hong Kong 2 of 5, Matrix 2 of 5, MSI Plessey, NEC 2 of 5, Pharmacode, Plessey, Straight 2 of 5, Telepen, Trioptic, UPC/EAN/JAN Gestapelte 1-D Codes: Codablock F, Code 49, GS1 Composite (CC-A/CC-B/CC-C), MicroPDF, PDF417 2-D Codes: Aztec Code, Data Matrix, Data Matrix Rectangular, Grid Matrix, Han Xin, Maxicode, Micro QR Code, QR Code, QR Model 1 Post Codes: Australian Post, Canada Post, Intelligent Mail, Japan Post, KIX Code, Korea Post, Post-Net, Planet, Postnet, UK Royal Mail, UPU ID-tags
Read distance	40 ... 310 mm depending on the code type
Reading field	max. 190 mm x 290 mm
Modul size	min. 0.2 mm
Ambient light limit	96890 Lux
Target velocity	Stop
Nominal ratings	
Camera	
Type	CMOS
Number of pixels	1280 x 960
Image recording	real-time , manually triggered
Indicators/operating means	
Function indicator	LED green: Data carrier read
Electrical specifications	
Supply	via cable
Interface	
Physical	USB 2.0 , RS-232
Compliance with standards and directives	
Standard conformity	
Noise immunity	EN 55024:2010
Emitted interference	EN 55032:2012+AC:2013
Ambient conditions	
Ambient temperature	-20 ... 55 °C (-4 ... 131 °F)
Storage temperature	-30 ... 65 °C (-22 ... 149 °F)
Relative humidity	5 ... 95 % non-condensing
Shock and impact resistance	Withstands multiple drops from 1.8 m / 6 ft onto a concrete surface
Mechanical specifications	
Degree of protection	IP54
Connection	System connector for connecting cable
Material	
Housing	plastic
Mass	110 g
Dimensions	70 mm x 50 mm x 140 mm (l x w x h)
General information	
Scope of delivery	Handheld reader

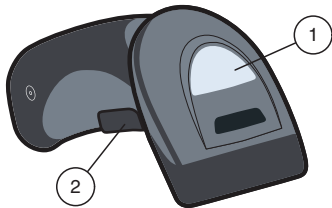
Connection

Pin	Signal
1	+VIN
2	USB_DM
3	USB_DP
4	RS 232 TX
5	RS 232 RTS
6	RS 232 RX
7	RS 232 CTS
8	External Trigger
9	not connected
10	Ground

Connection Assignment








Assembly



2	Functional display	green
3	Trigger button	

Accessories

	OHV-BRACKET	End stop for OHV100-F222-R2
	V45-G-2M-PVC-ABG-USB-G	Adapter cable, RJ50 to USB
	V45-G-2M-PVC-SUBD9	Adapter cable, RJ50 to RS 232
	V50-G-2M-PVC-5V-SUBD25	Adapter cable, RJ-50 to D-Sub 25
	V19S-G-1,7/3M-PVC-V50	Adapter cable, M12 8-pin to RS 232



Handheld reader OHV210-F229-B15

- Reads all standard 1-D and 2-D codes
- Wireless Bluetooth connection
- Dual lens for large read range
- Reads from reflective surfaces
- Use as stationary code reader possible
- Convenient output string formatting
- Programmable with JavaScript
- Audible, tactile, and visual user feedback
- Replaceable battery with status indicator
- Degree of protection IP65

Handheld reader with Bluetooth for all common 1-D and 2-D codes

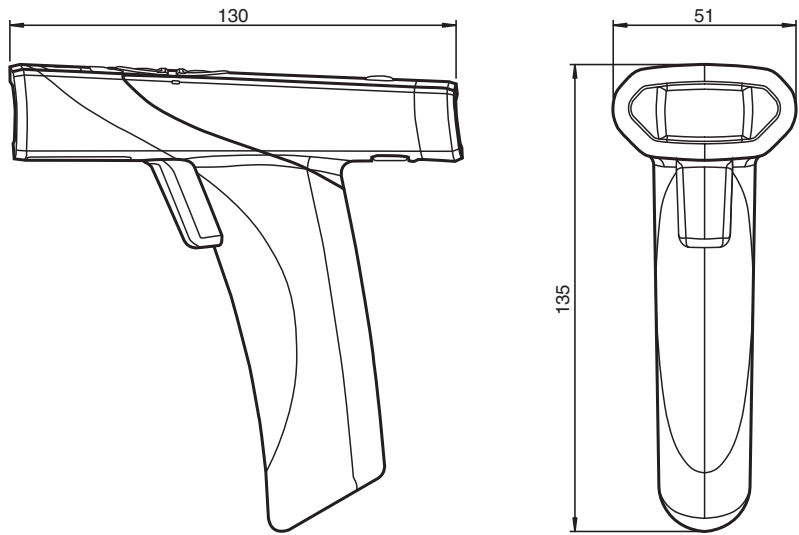


Function

The OHV210* handheld is a compact handheld reader for all common 1-D and 2-D codes. Special technology to prevent glare allows the device to accurately read codes on highly reflective surfaces. With its patented dual lens and a resolution of 1.2 million pixels, it can read both small and large codes from a wide range of distances. A different-colored target projection makes it easier to see the relevant code. Feedback comes in the form of a visual or audible signal or a vibration.

Using the Vision Configurator software, rule sets can be created for formatting read results without the need for extensive programming work. This facilitates integration into ERP systems. The read data is transferred via the Bluetooth interface or by plugging the handheld reader into the charger. Thanks to its robust housing and IP65 protection, the handheld reader is also suitable for outdoor use.

Dimensions



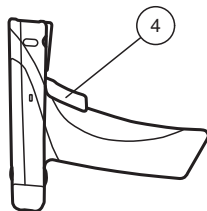
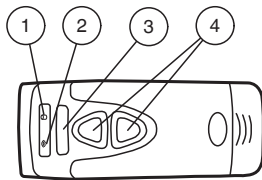
Technical Data

General specifications	
Light type	Integrated LED lightning (red)
Readable codes	1-D Codes: Codabar, Code 11, Code 32, Code 39, Code 93, Code 128, IATA 2 of 5, Interleaved 2 of 5, GS1 DataBar, Hong Kong 2 of 5, Matrix 2 of 5, MSI Plessey, NEC 2 of 5, Pharmacode, Plessey, Straight 2 of 5, Telepen, Trioptic, UPC/EAN/JAN Gestapelte 1-D Codes: Codablock F, Code 49, GS1 Composite (CC-A/CC-B/CC-C), MicroPDF, PDF417 2-D Codes: Aztec Code, Data Matrix, Data Matrix Rectangular, Grid Matrix, Han Xin, Maxicode, Micro QR Code, QR Code, QR Model 1 Postal Codes: Australian Post, Intelligent Mail, Japan Post, KIX Code, Korea Post, Planet, Postnet, UK Royal Mail, UPU ID-tags
Read distance	40 ... 310 mm depending on the code type
Reading field	High density reading range: 30° horizontal by 20° vertical Wide reading range: 50° horizontal by 33.5° vertical
Modul size	min. 0.1 mm
Ambient light limit	96890 Lux
Target velocity	Stop
Nominal ratings	
Camera	
Type	CMOS
Number of pixels	1280 x 960
Image recording	real-time , manually triggered
Indicators/operating means	
Function indicator	3 LEDs
Key	3 programmable function keys
Electrical specifications	

Technical Data

Supply	from Li-Ion battery	
Interface		
Physical	Bluetooth 5.0 LE , USB 2.0	
Transmitter frequency		2.4 GHz
Compliance with standards and directives		
Standard conformity		
Electromagnetic compatibility	EN 61000-6-1:2007 EN 61000-6-2:2005/AC:2005 EN 61000-6-3:2007/A1:2011/AC:2012 EN 61000-6-4:2007/A1:2011	
Radio spectrum		ETSI EN 300328 V2.2.2
Standards	EN 50581:2012	
Approvals and certificates		
FCC approval	FCC-ID: HSW2832 (handheld reader), X8WBT840 (charger)	
Ambient conditions		
Ambient temperature	-20 ... 55 °C (-4 ... 131 °F)	
Storage temperature		-30 ... 65 °C (-22 ... 149 °F)
Relative humidity	5 ... 95 % non-condensing	
Shock and impact resistance		Withstands multiple drops from 1.8 m / 6 ft onto a concrete surface
Mechanical specifications		
Degree of protection		IP65
Material		
Housing		plastic
Mass	177 g (incl. battery)	
Dimensions		130 mm x 51 mm x 135 mm (l x w x h)
General information		
Scope of delivery	Handheld reader + Lithium ion battery 1200 mAh + charger	

Assembly



1	Memory access	Green
2	Bluetooth	Green
3	Function indicator	Green
4	Trigger buttons	

Accessories

	Vision Configurator	Operating software for camera-based sensors
	OHV210-BAT	Lithium ion battery 1200 mAh
	OHV210-CHARGER-B15	Charger for OHV210 with built-in Bluetooth modem



Stationary read device

OPC120W-F200-R2



- 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

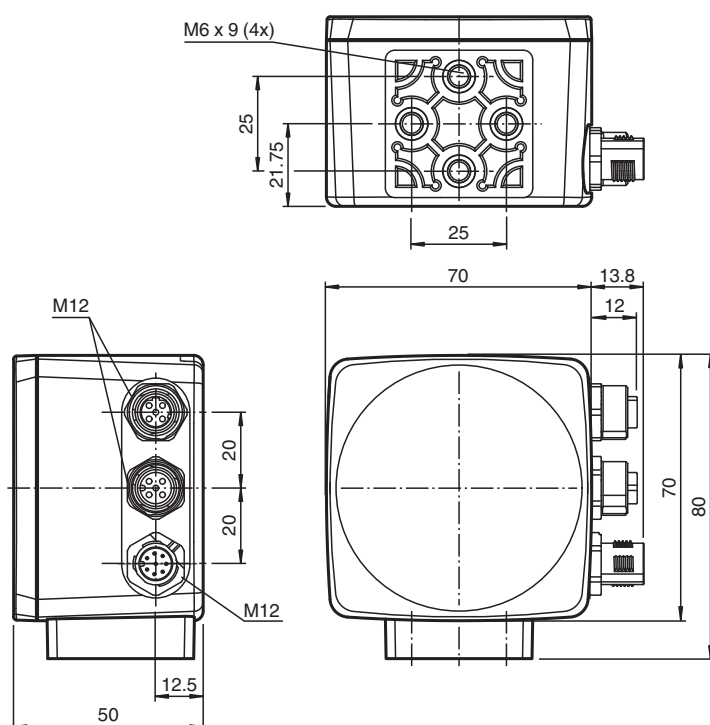
Optical Print Inspector, reads all common 1-D and 2-D codes, detects logos, Ethernet, RS 232, speeds of up to 6 m/s



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.

Dimensions



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

Technical Data

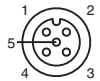
Reading field		Minimum read field: 28 mm x 45 mm Read field at nominal distance: 45 mm x 70 mm Maximum read field: 65 mm x 105 mm
Modul size		Minimum module size: 0.2 mm
Evaluation frequency		up to 30 Hz
Target velocity		triggered max. 6 m/s
Data Matrix		
Symbol size		rectangular up to 144 x 144 modules 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
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 indication		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
Compliance with standards and directives		
Standard conformity		
Noise immunity		EN 61326-1
Emitted interference		EN 61000-6-4
Degree of protection		EN 60529

Technical Data

Photobiological safety		EN 62471:2008 exempt group
Approvals and certificates		
CCC approval		CCC approval / marking not required for products rated ≤36 V
Approvals		CE
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
Dimensions		
Height		70 mm
Width		70 mm
Depth		50 mm


Connection

RS 232



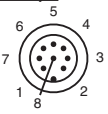
Pin	Signal
1	+UB
2	TX RS232
3	GND
4	RX RS232
5	NC

LAN



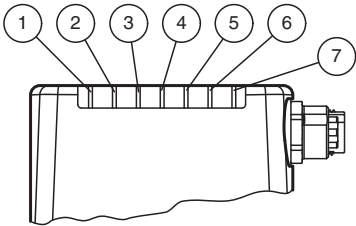
Pin	Signal
1	TX+ Ethernet
2	RX+ Ethernet
3	TX- Ethernet
4	RX- Ethernet

(24 V DC + I/O)



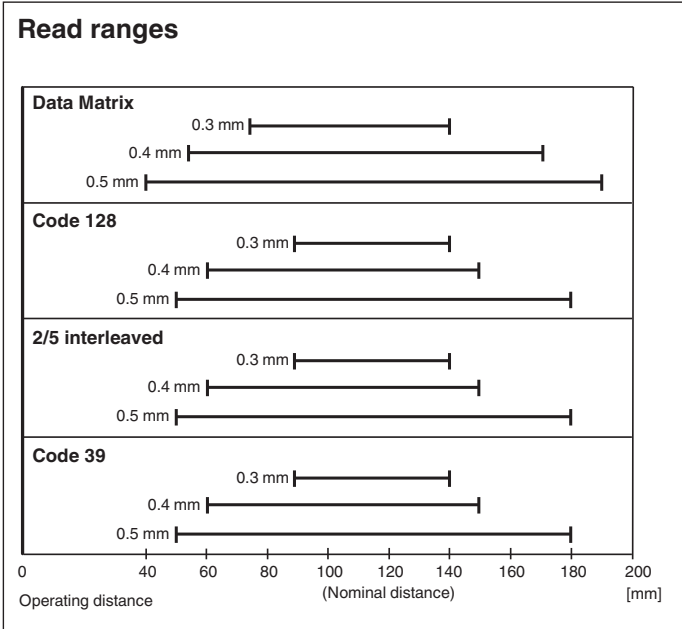
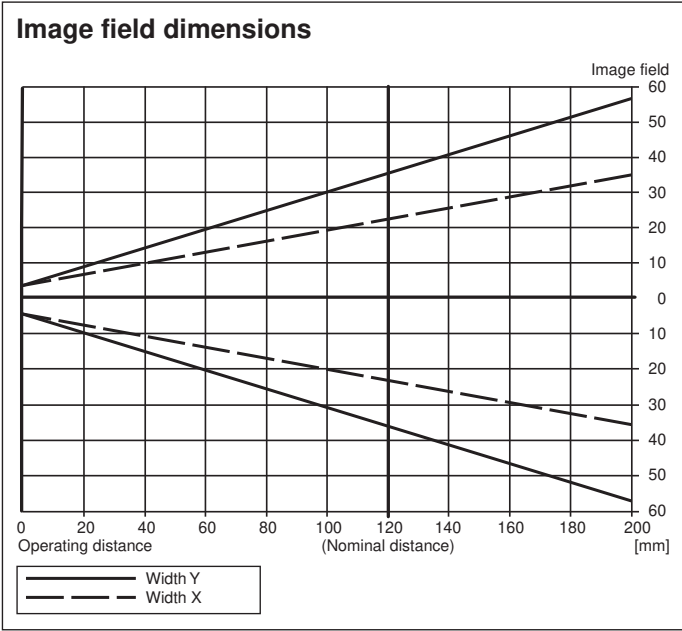
Pin	Signal
1	IN Trigger
2	+UB
3	OUT Good
4	OUT Bad
5	IN 1
6	IN Encoder A
7	GND
8	OUT Matchcode

Assembly



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

Characteristic Curve





Stationary read device OPC120P-F201-R2



- Reads 1-D and 2-D 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

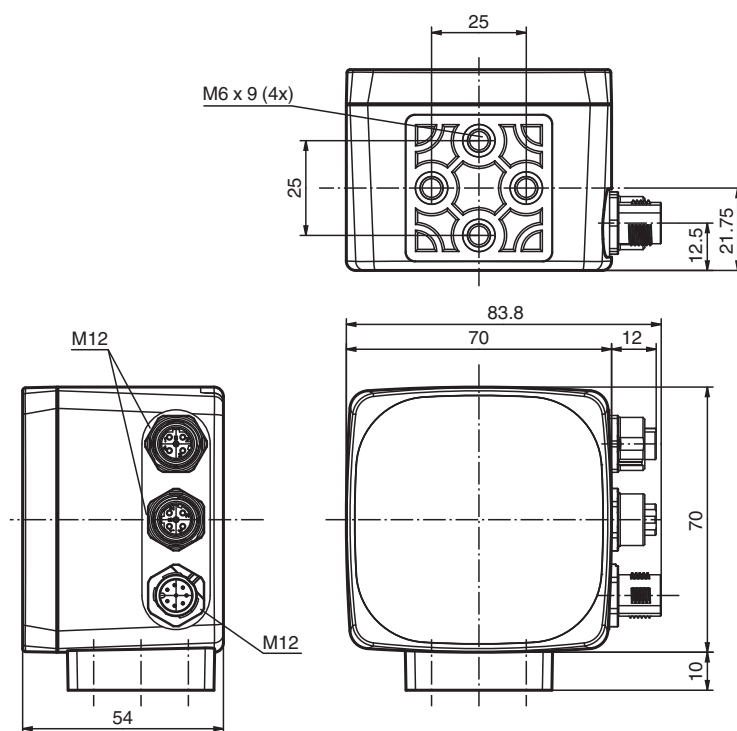
Optical Print Inspector, reads all common 1-D and 2-D codes, detects logos, Ethernet, RS 232, speeds of up to 10 m/s; polarization filter



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.

Dimensions



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, Pharmacode

Technical Data

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
Evaluation frequency		up to 100 Hz
Target velocity		triggered max. 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
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 indication		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
Compliance with standards and directives		
Standard conformity		
Noise immunity		EN 61326-1:2006

Technical Data

Emitted interference	EN 61000-6-4:2007/A1:2011
Degree of protection	EN 60529
Photobiological safety	Risk group 1 according to IEC 62471
Approvals and certificates	
CCC approval	CCC approval / marking not required for products rated ≤36 V
Approvals	CE
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
Dimensions	
Height	70 mm
Width	70 mm
Depth	53 mm

Connection

RS 232



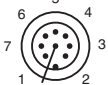
Pin	Signal
1	+UB
2	TX RS232
3	GND
4	RX RS232
5	NC

LAN



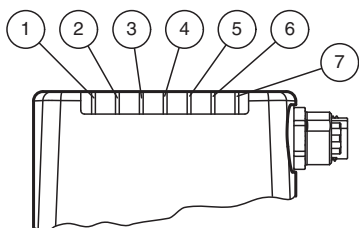
Pin	Signal
1	TX+ Ethernet
2	RX+ Ethernet
3	TX- Ethernet
4	RX- Ethernet

(24 V DC + I/O)



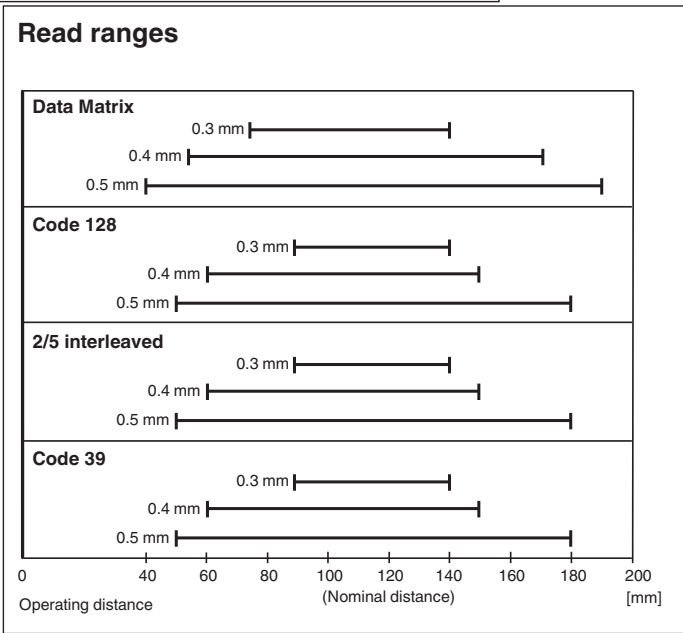
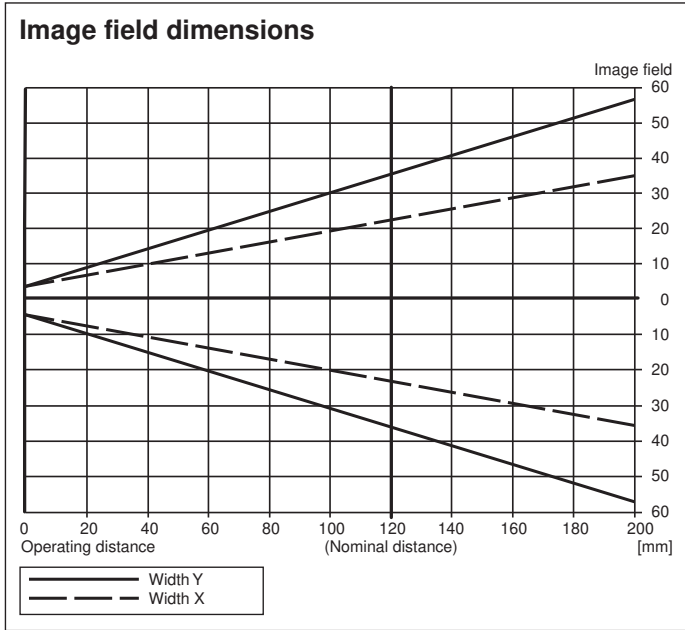
Pin	Signal
1	IN Trigger
2	+UB
3	OUT Good
4	OUT Bad
5	IN 1
6	IN Encoder A
7	GND
8	OUT Matchcode

Assembly



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

Characteristic Curve





Stationary read device

OPC120P-F201-B17



- Reading on highly reflective surfaces with new polarization filter
- PROFINET interface with integrated switch
- Reads Data Matrix codes at high speeds of up to 10 m/s at 50 readings/s

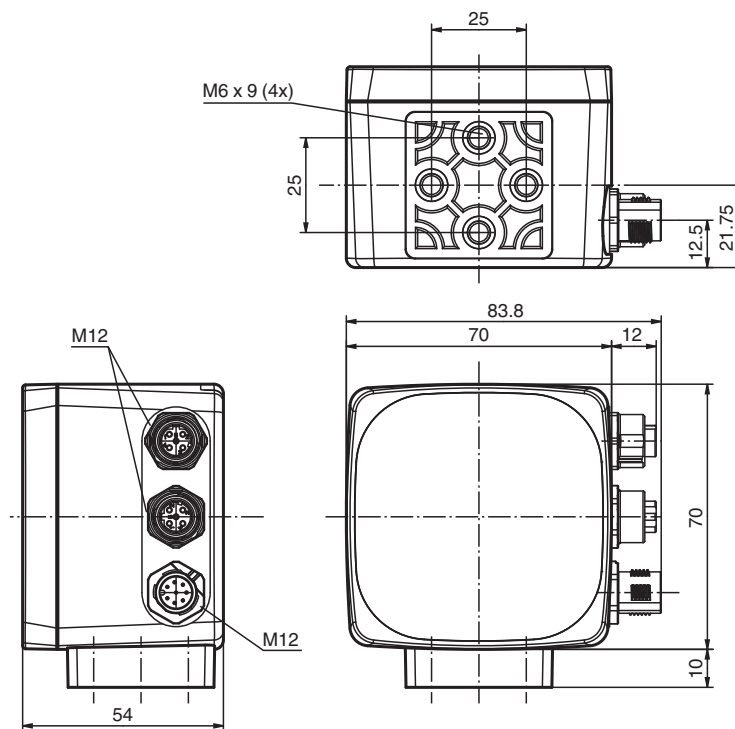
Optical Print Inspector, reading of Data Matrix codes, PROFINET, speeds up to 10 m/sec, polarization filter



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, or performing various detection tasks — with the Optical Print Inspector, you always have the right Vision Sensor close at hand.

Dimensions



Technical Data

General specifications

Light type	Integrated LED lightning (white)
Polarization filter	yes
Symbologies	Data Matrix

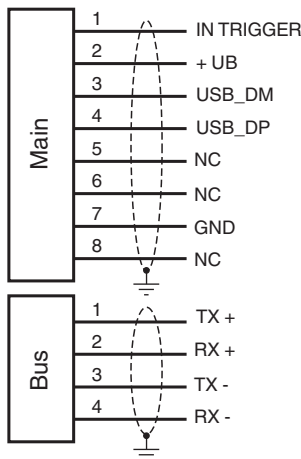
Technical Data

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
Evaluation frequency		up to 50 Hz
Target velocity		triggered max. 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
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		
LED indication		7 LEDs (communication, alignment aid, status information)
Electrical specifications		
Operating voltage	U _B	24 V DC ± 15% , PELV
No-load supply current	I ₀	max. 300 mA
Power consumption	P ₀	6 W
Interface		
Interface type		100 BASE-TX
Protocol		PROFINET IO Real-Time (RT) Conformance class A
Transfer rate		100 MBit/s
Interface 2		
Interface type		USB Service
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		
Switching type		PNP
Switching voltage		to be applied externally 24 V ± 15 % PELV
Switching current		100 mA each output
Cable length		max. 30 m
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
Photobiological safety		Risk group 1 according to IEC 62471
Approvals and certificates		
CCC approval		CCC approval / marking not required for products rated ≤36 V

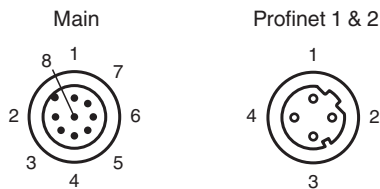
Technical Data

Approvals		CE
Ambient conditions		
Ambient temperature		0 ... 45 °C (32 ... 113 °F)
Storage temperature		-20 ... 85 °C (-4 ... 185 °F)
Relative humidity		90 % , noncondensing
Mechanical specifications		
Degree of protection		IP67
Connection		8-pin, M12x1 connector, standard (supply+IO) , 4-pin, M12x1 socket, D-coded (LAN) , 4-pin, M12x1 socket, D-coded (LAN)
Material		
Housing		PC/ABS
Optical face		Plastic pane
Installation		4 x M6 threading
Mass		approx. 200 g
Dimensions		
Height		70 mm
Width		70 mm
Depth		53 mm

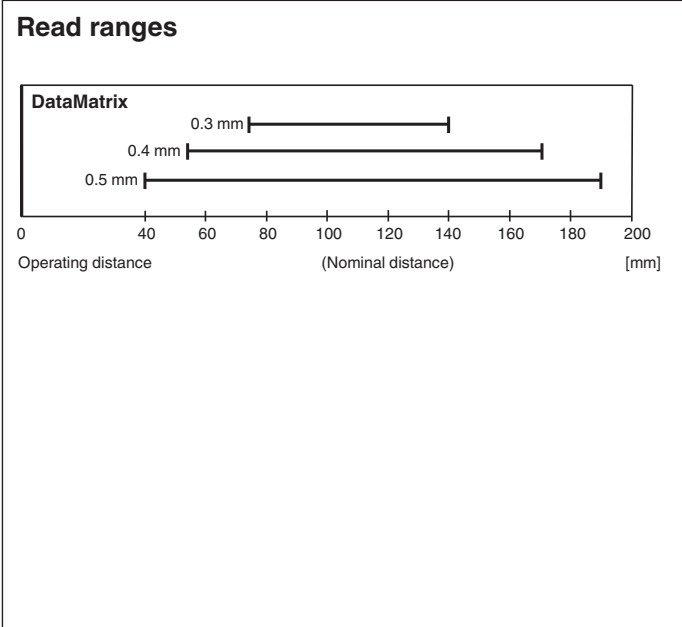
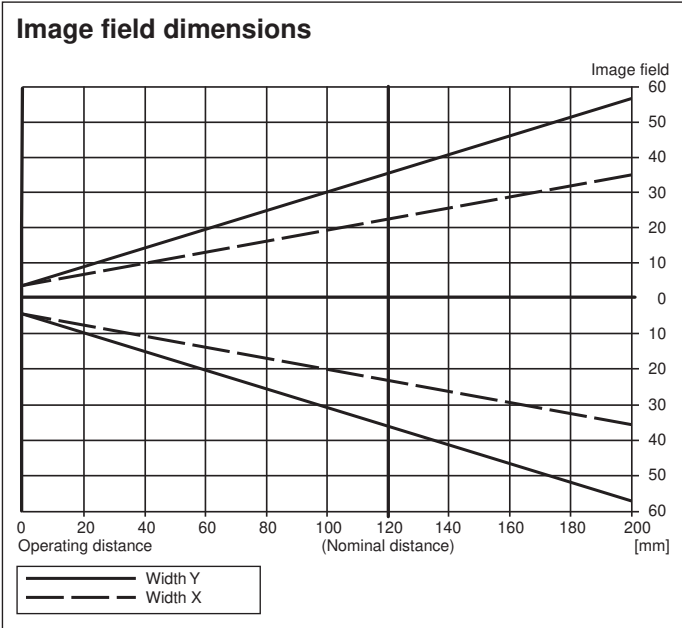
Connection



Connection Assignment

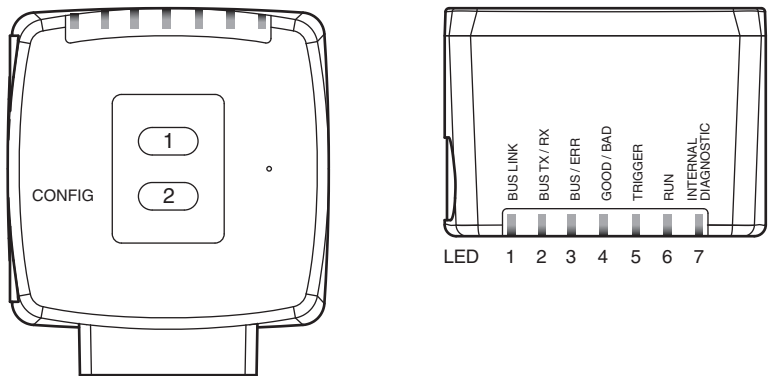


Characteristic Curve



Indication

The Optical Print Inspector is equipped with seven indicator LEDs for carrying out visual function checks and rapid diagnostics. In addition, the device is fitted with two buttons on the back of the unit.



LED	Color	Label	Description
1	Green	BUS Link	PROFINET connection activated
2	Yellow	BUS TX / RX	PROFINET data transfer
3	Red	BUS / ERR	PROFINET communication error
4	Green/red	GOOD / BAD	Reading successful/failed
5	Yellow	TRIGGER	Trigger sensor triggered
6	Yellow	RUN	Device ready for operation
7	Red/yellow/green	INTERNAL DIAGNOSTICS	Diagnostic message



Stationary read device OPC70P-F201-R2-45



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

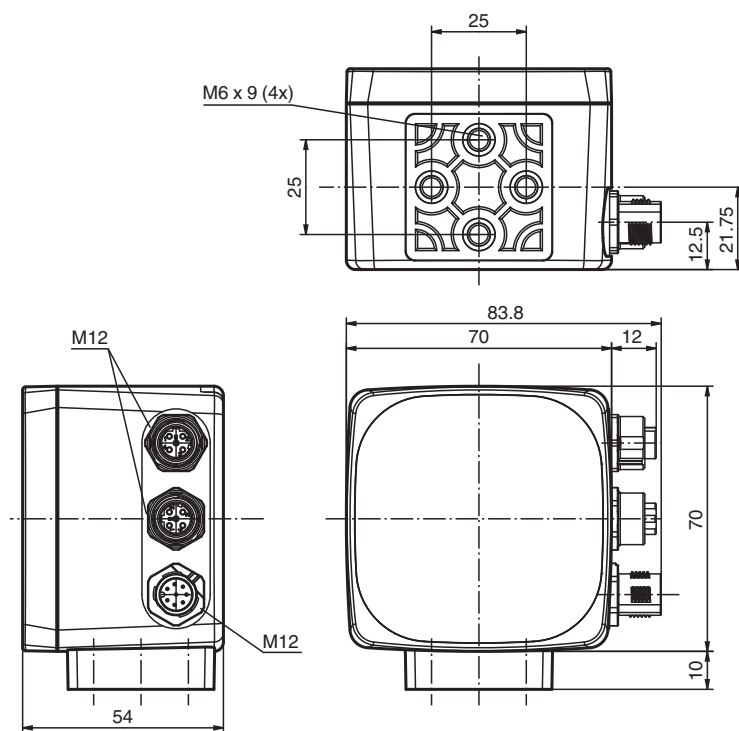
Optical Print Inspector, reads all common 1-D and 2-D codes, detects logos, Ethernet, RS 232, speeds of up to 10 m/s; polarization filter



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.

Dimensions



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, Pharmacode

Technical Data

Read distance		45 ... 90 mm Nominal distance: 70 mm
Reading field		Minimum read field: 22 mm x 30 mm Read field at nominal distance: 28 mm x 45 mm Maximum read field: 35 mm x 55 mm
Modul size		Minimum module size: 0.15 mm
Evaluation frequency		up to 100 Hz
Target velocity		triggered max. 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
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 indication		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
Compliance with standards and directives		
Standard conformity		
Noise immunity		EN 61326-1:2006

Technical Data

Emitted interference	EN 61000-6-4:2007/A1:2011
Degree of protection	EN 60529
Photobiological safety	Risk group 1 according to IEC 62471
Approvals and certificates	
CCC approval	CCC approval / marking not required for products rated ≤36 V
Approvals	CE
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
Dimensions	
Height	70 mm
Width	70 mm
Depth	53 mm

Connection

RS 232



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

LAN



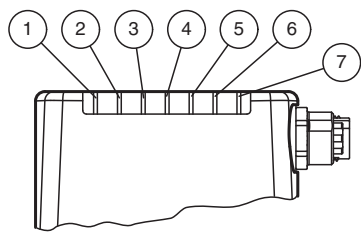
Pin	Signal
1	TX+ Ethernet
2	RX+ Ethernet
3	TX- Ethernet
4	RX- Ethernet

(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

Assembly



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



Stationary read device OPC120W-F200-R2-Ex

- Explosion protection for use in Zone 1, Zone 2, Zone 21 and Zone 22
- 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

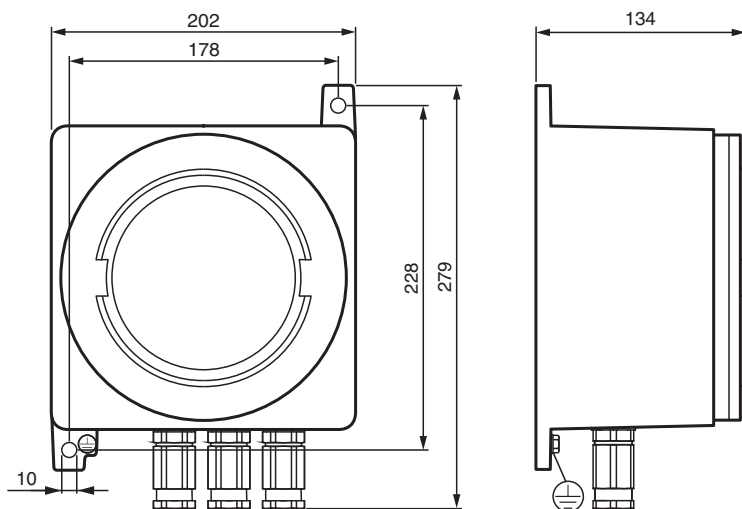
Stationary read device for hazardous area



Function

With the OPC120, Pepperl+Fuchs provides the solution to code reading and detection tasks for many industries and applications. Whether reading 1D and 2D codes at high speed, at varying intervals, reflective surfaces or a variety of detection tasks, with the OPC120 you always have the right Vision Sensor at your disposal.

Dimensions



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	60 ... 160 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: 60 mm x 95 mm
Modul size	Minimum module size: 0.3 mm
Evaluation frequency	up to 30 Hz
Target velocity	triggered max. 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

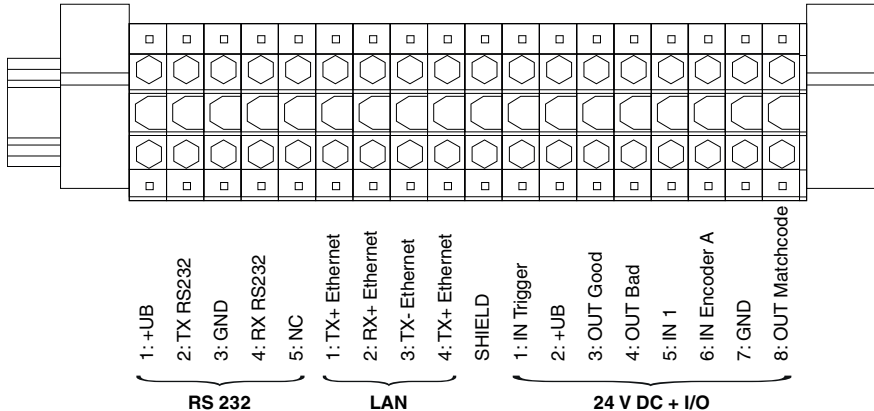
Technical Data

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	
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 indication		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	
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			
IECEX approval		IECEX INE 14.0042X	
ATEX approval		INERIS 14 ATEX 0035X Device type: GUBW1.D.OS-OPC120W-F200-R2	
Marking		Ⓜ II 2 GD Ex db IIC T6 Gb Ex tb IIIC T85°C Db	
Ambient conditions			
Ambient temperature		0 ... 37 °C (32 ... 98.6 °F)	

Technical Data

Mechanical specifications		
Connection type		Connection terminals, max. conductor cross-section 2.5 mm²
Conductor cross section		0.13 ... 2.5 mm²
Cable gland		3 ... 8.5 mm
Enclosure cover		threaded round cover
Cover fixing		flamepath thread
Cover seal		none, O-ring for IP66/67
Flamepath grease		petroleum jelly
Degree of protection		IP66 (IP66/67 with O-ring)
Material		
Enclosure		aluminum alloy
Glass		thermo-resistant tempered glass
Finish		epoxy coated RAL 7005 (grey)
Mass		approx. 7 kg
Grounding		M6 external grounding points

Connection



Accessories

	V1SD-G-2M-PUR-ABG	Ethernet bus cable, M12, PUR cable, 4-pin, CAT5e
	V45-G-C5-GN3M-PUR-E1S	Ethernet bus cable male cordset single-ended RJ45, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable

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Россия +7(495)268-04-70

Казахстан +7(727) 345-47-04

Беларусь +(375) 257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: phb@nt-rt.ru || сайт: <https://pepperl-fuchs.nt-rt.ru/>