

# Optical reading head PCV80I-F200-R4-V19

- RS-485 interface
- Non-contact positioning on Data Matrix code tape
- Travel ranges up to 10 km, in X and Y direction
- Mechanically rugged: no wearing parts, long operating life, maintenance-free
- High resolution and precise positioning, especially for facilities with curves and switch points as well as inclines and declines.
- Infrared light

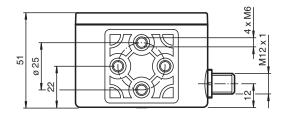
Read head for incident light positioning system

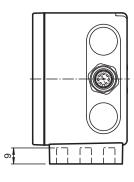


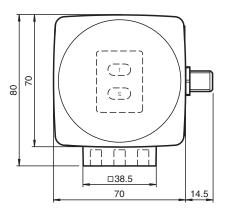




### **Dimensions**







### **Technical Data**

General specifications		
Passage speed	V	≤ 12.5 m/s
Measuring length		max. 10000 m
Light type		Integrated LED lightning, infrared
Read distance		80 mm
Depth of focus		± 15 mm
Reading field		40 mm x 25 mm
Ambient light limit		100000 Lux
Resolution		± 0.1 mm
Nominal ratings		
Camera		
Туре		CMOS , Global shutter

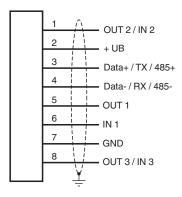
Release date: 2024-12-12 Date of issue: 2024-12-12 Filename: 242704\_eng.pdf

Processor	Technical Data		
Clock pulse frequency	Processor		
Speed of computation   32 Bit	Clock pulse frequency		600 MHz
Digital resolution	, , ,		4800 MIPS
### Processor   Part			
MTFd         94 a           Mission Time (T₂)         10 a           Diagnostic Coverage (DC)         0 %           Indicators Coverage (DC)         0 %           Indication         7 LEDs (communication, alignment aid, status information)           Electrical specifications         7 LEDs (communication, alignment aid, status information)           Operating voltage         Up         1530 V DC , PELV           No-load supply current         Ip         max. 200 mA           Power consumption         Pa         3 W           Interface         Interface         Interface binary code           Data output code         binary code           Transfer rate         38400 230400 Bit/s           Termination         Switchable terminal resistor           Query cycle time         ≥ 10 ms           Input         1 to 3 functional inputs , programmable           Output type         1 to 3 switch outputs , PNP, programmable , short-circuit protected           Switching oursent         50 mA each output           Conformity         exempt group according to EN 62471:2008           Standard conformity         EN 61000-64:2007+A1:2011           Emitted interference         EN 61000-64:2007+A1:2011           Noise immunity         EN 60068-22-72:009			
Mission Time (Tw)         10 a           Diagnostic Coverage (DC)         0 %           Indicators/operating means         Valenticators/operating means           LED inclication         7 LEDs (communication, alignment aid, status information)           Electrical specifications         Up 1530 V DC , PELV           Operating voltage         Up 1530 V DC , PELV           No-load supply current         Io max 200 mA           Power consumption         Po 3 W           Interface bye         RS-485 - Interface           Data output code         binary code           Transfer rate         38400230400 Bit/s           Termination         Switchable terminal resistor           Query cycle time         10 ms           Input         1 to 3 functional inputs , programmable           Output type         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Output type         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Overating voltage         Operating voltage           Switching current         150 mA each output           Conformity         Emitted interference           Emitted interference         EN 61000-6-4:2007+A1:2011           Sindard conformity         EN 61006-8-2:2005           Shock resista			94 a
Disgnostic Coverage (PC)			
Indicators/operating means  LED indication  EDetricial psoelifications  7 LEDs (communication, alignment aid, status information)  Electrical specifications  Operating voltage  U <sub>B</sub> 1530 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  No-load supply current  U <sub>B</sub> 1030 V DC, PELV  U <sub>B</sub> 1030 V DC, PELV 1030 V DC, PELV 1030 V DC, PELV 1030 V DC, PELV 10			
LED indication         7 LEDs (communication, alignment aid, status information)           Electrical specifications           Operating voltage         U <sub>B</sub> 1530 V DC , PELV           No-load supply current         I <sub>B</sub> max. 200 mA           Power consumption         P <sub>B</sub> 3W           Interface         Interface         Interface           Interface type         RS-485 - Interface         Bata output code           Data output code         38400 230400 Bit/s           Termination         Switchable terminal resistor           Ouery cycle time         2 10 ms           Input         1 to 3 functional inputs , programmable           Output type         1 to 3 winch outputs , PNP , programmable , short-circuit protected           Output type         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching current         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching current         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching current         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching current         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching current         1 to 3 switch outputs , PNP , programmable , short-circuit protected			
Detailing voltage	-		7 LEDs (communication, alignment aid, status information)
Operating voltage         U <sub>B</sub> 15 30 V DC , PELV           No-load supply current         I <sub>B</sub> max. 200 mA           Power consumption         P <sub>B</sub> 3W           Interface         Interface type         RS-485 - Interface           Data output code         binary code           Transfer rate         38400 230400 Bit/s           Termination         Switchable terminal resistor           Query cycle time         > 10 ms           Imput         Imput type           Uniput type         1 to 3 switch outputs , programmable           Output type         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching current         1 50 mA each output           Conformity         Yend each output           Conformity         Example of the Search output           Standard conformity         Example of the Search output           Photobiological safety         exempt group according to EN 62471:2008           Standard conformity         EN 61000-6-4:2007+A1:2011           Vibration resistance         EN 61000-6-2:2005           Shock resistance         EN 60068-2:-6:2008			( (
No-load supply current   No-load supply corps   No-load supply current   No-load supply code		U <sub>R</sub>	15 30 V DC . PELV
Power consumption			
Interface   Int			
Interface type		U	
Data output code         binary code           Transfer rate         38400 290400 Bit/s           Tremination         Switchable terminal resistor           Query cycle time         ≥ 10 ms           Input         Input yepe           Unuty type         1 to 3 functional inputs , programmable           Output Vype         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching voltage         Operating voltage           Switching current         150 mA each output           Conformity         Photobiological safety           Photobiological safety         exempt group according to EN 62471:2008           Standard conformity         Emitted interference           Noise immunity         EN 61000-6-4:2007+A1:2011           Shock resistance         EN 60068-2-27:2009           Vibration resistance         EN 60068-2-2:2005           Approvals and certificates         EN 60068-2-6:2008           CE conformity         CE           UKCA conformity         UKCA           UL approval         cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure           CCC approval / marking not required for products rated ≤36 V           Armbient conditions         O 60° C (32 140° F) , -20 60° C (-4 140° F) (noncondensing; prevent icin on the lensl)			RS-485 - Interface
Transfer rate         38400 230400 Bit/s           Termination         Switchable terminal resistor           Query cycle time         ≥ 10 ms           Input         Input type           Uspect Unjust         1 to 3 functional inputs , programmable           Output Uype         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching outage         Operating voltage           Switching current         150 mA each output           Conformity         Photobiological safety           Standard conformity         Emitted interference           Emitted interference         EN 61000-6-4:2007+A1:2011           Noise immunity         EN 61000-6-2:2005           Shock resistance         EN 60068-2:27:2009           Vibration resistance         EN 60068-2:27:2009           Vibration resistance         EN 60068-2:20:208           Approvals and certificates         EN 60068-2:27:2009           CE conformity         UKCA           UL approval         cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure           CC approval         cCC approval/ marking not required for products rated ≤36 V           Ambient conditions        60 °C (32140 °F) , -2060 °C (-4140 °F) (noncondensing: prevent icinon the lensi)           Storage temperature			
Termination Switchable terminal resistor Query cycle time ≥ 10 ms Input Input type 1 to 3 functional inputs , programmable Output Output Output type 1 to 3 switch outputs , PNP , programmable , short-circuit protected Switching voltage Operating voltage Switching current 150 mA each output Conformity Photobiological safety exempt group according to EN 62471:2008 Standard conformity Emitted interference EN 61000-6-4:2007+A1:2011 Noise immunity EN 61000-6-2:2005 Shock resistance EN 60068-2-27:2009 Vibration resistance EN 60068-2-26:2008 Approvals and certificates CEC conformity CE UKCA conformity UKCA UL approval CCC approval CCC approval Accordinations Operating temperature O60 °C (22140 °F) , -2060 °C (-4140 °F) (noncondensing: prevent icino in the lensi) Storage temperature 2-2085 °C (-4185 °F) Pelative humidity 90 % , noncondensing Machanical specifications Connection type 8-pin, M12 x 1 connector Degree of protection IP67 Material Housing PC/ABS Mass Dimensions			
Query cycle time         ≥ 10 ms           Input         Input           Unput type         1 to 3 functional inputs , programmable           Output Vpe         1 to 3 switch outputs , PNP , programmable , short-circuit protected           Switching voltage         Operating voltage           Switching current         Conformity           Photobiological safety         exempt group according to EN 62471:2008           Standard conformity         Emited interference           Emited interference         EN 61000-6-4:2007+A1:2011           Noise immunity         EN 61000-6-2:2005           Shock resistance         EN 60088-2-27:2009           Vibration resistance         EN 60088-2-6:2008           Approvals and certificates         EN 60088-2-6:2008           CE conformity         UKCA           UKCA conformity         UKCA           UL approval         cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure           CCC approval         CC approval / marking not required for products rated ≤36 V           Ambient conditions         Operating temperature         0 60°C (32 140°F) , -20 60°C (-4 140°F) (noncondensing; prevent icing on the lens!)           Storage temperature         -20 85°C (-4 185°F)           Relative humidity         90 %, noncondensing			
Input type			
Input type			2 10 1110
Output type 1 to 3 switch outputs , PNP , programmable , short-circuit protected  Switching voltage Operating voltage Switching current 150 mA each output  Conformity  Photobiological safety exempt group according to EN 62471:2008  Standard conformity  Emitted interference EN 61000-6-4:2007+A1:2011  Noise immunity EN 61000-6-2:2005  Shock resistance EN 60068-2-27:2009  Vibration resistance EN 60068-2-6:2008  Approvals and certificates  CE conformity CE  UKCA conformity UKCA  UL approval CCC approval CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature 060 °C (32 140 °F), -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens)  Storage temperature 2.085 °C (-4 185 °F)  Relative humidity 90 % , noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection BF6  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions			1 to 3 functional inputs programmable
Output type 1 to 3 switch outputs , PNP , programmable , short-circuit protected  Switching voltage Operating voltage  Switching current 150 mA each output  Conformity  Photobiological safety exempt group according to EN 62471:2008  Standard conformity  Emitted interference EN 61000-6-4:2007+A1:2011  Noise immunity EN 61000-6-2:2005  Shock resistance EN 60068-2-27:2009  Vibration resistance EN 60068-2-6:2008  Approvals and certificates  CE conformity UKCA conformity  UL approval cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure  CCC approval According to CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature 0.060 °C (32140 °F) , -2060 °C (-4140 °F) (noncondensing; prevent icinon the lensi)  Storage temperature 2.085 °C (-4185 °F)  Relative humidity 90 % , noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection   Pe7  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions			1 to o functional inputs , programmable
Switching voltage Switching current  150 mA each output  Conformity  Photobiological safety  Standard conformity  Emitted interference Noise immunity Shock resistance Vibration resistance Approvals and certificates  CE conformity  UKCA UL approval  CCC approval  CCC approval  CCC approval  CDC			1 to 2 cwitch outpute PND programmable chart circuit protected
Switching current Conformity Photobiological safety exempt group according to EN 62471:2008 Standard conformity  Emitted interference EN 61000-6-4:2007+A1:2011 Noise immunity EN 61000-6-2:2005 Shock resistance EN 60068-2-27:2009 Vibration resistance EN 60068-2-6:2008  Approvals and certificates CE conformity CE UKCA conformity UKCA UL approval CCC approval CCC approval Purpose, Class 2 Power Source, Type 1 enclosure CCC approval CCC approval / marking not required for products rated ≤36 V  Ambient conditions Operating temperature 060 °C (32140 °F), -2060 °C (-4140 °F) (noncondensing; prevent icing on the lens!) Storage temperature 2.085 °C (-4185 °F) Relative humidity 90 %, noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector Degree of protection IP67  Material Housing PC/ABS Mass approx. 160 g  Dimensions			· · · · · · · · · · · · · · · · · · ·
Photobiological safety exempt group according to EN 62471:2008  Standard conformity  Emitted interference EN 61000-6-4:2007+A1:2011  Noise immunity EN 61000-6-2:2005  Shock resistance EN 60068-2-27:2009  Vibration resistance EN 60068-2-6:2008  Approvals and certificates  CE conformity CE  UKCA conformity UKCA  UL approval CCC approval CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature 060 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature 2.085 °C (-4 185 °F)  Relative humidity 90 % , noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection PF7  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions	• •		1
Photobiological safety  Standard conformity  Emitted interference  EN 61000-6-4:2007+A1:2011  Noise immunity  En 61000-6-2:2005  Shock resistance  EN 60068-2-27:2009  Vibration resistance  EN 60068-2-6:2008  Approvals and certificates  CE conformity  UKCA  ULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure  CCC approval  CCC approval  CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature  0 60 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icinon the lens!)  Relative humidity  90 % , noncondensing  Mechanical specifications  Connection type  8-pin, M12 x 1 connector  Degree of protection  Hearial  Housing  PC/ABS  Mass  approx. 160 g  Dimensions			150 IIIA each output
Emitted interference EN 61000-6-4:2007+A1:2011  Noise immunity EN 61000-6-2:2005  Shock resistance EN 60068-2-27:2009  Vibration resistance EN 60068-2-6:2008  Approvals and certificates  CE conformity CE  UKCA conformity UKCA  UL approval CCC approval CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature 060 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature 2.085 °C (-4 185 °F)  Relative humidity 90 % , noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection   IP67  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions	-		evernt group eccepting to EN 60471:0009
Emitted interference         EN 61000-6-4:2007+A1:2011           Noise immunity         EN 61000-6-2:2005           Shock resistance         EN 60068-2-27:2009           Vibration resistance         EN 60068-2-6:2008           Approvals and certificates         CE           UKCA conformity         UKCA           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           Ambient conditions         0 60 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icinon the lenst)           Storage temperature         -20 85 °C (-4 185 °F)           Relative humidity         90 % , noncondensing           Mechanical specifications         Connection type           Degree of protection         IP67           Material         Housing           Mass         approx. 160 g           Dimensions			exempt group according to EN 02471.2000
Noise immunity  Shock resistance  Vibration resistance  Vibration resistance  EN 60068-2-6:2008  Approvals and certificates  CE conformity  UKCA  UL CA  UL approval  CCC approval  Ambient conditions  Operating temperature  O 60 °C (32 140 °F), -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lensi)  Storage temperature  -20 85 °C (-4 185 °F)  Relative humidity  90 % , noncondensing  Mechanical specifications  Connection type  8-pin, M12 x 1 connector  Degree of protection  IP67  Material  Housing  PC/ABS  Mass  approx. 160 g  Dimensions	-		FN 61000 6 4:0007, A1:0011
Shock resistance  Vibration resistance  Vibration resistance  Approvals and certificates  CE conformity  UKCA  UL approval  UL approval  CCC approval  Operating temperature  Storage temperature  CCnaption  Connection type  8-pin, M12 x 1 connector  Degree of protection  Material  Housing  Mass  Dimensions  EN 60068-2-27:2009  EN 60068-2-6:2008  An 60068-2-6:2008  CE  UKCA  CULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure  CCC approval / marking not required for products rated ≤36 V  And over C (32 140 °F), -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature  -20 85 °C (-4 185 °F)  90 % , noncondensing  Mechanical specifications  Connection type  8-pin, M12 x 1 connector  Degree of protection  PC/ABS  Mass  approx. 160 g  Dimensions			
Vibration resistance       EN 60068-2-6:2008         Approvals and certificates       CE         CE conformity       UKCA         UKCA conformity       UKCA         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         Ambient conditions       COPerating temperature       0 60 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icins on the lens!)         Storage temperature       -20 85 °C (-4 185 °F)         Relative humidity       90 % , noncondensing         Mechanical specifications         Connection type       8-pin, M12 x 1 connector         Degree of protection       IP67         Material       Housing         Mass       approx. 160 g         Dimensions       Dimensions	,		
Approvals and certificates  CE conformity  CE  UKCA conformity  ULCA  UL approval  CCC approval  CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature  O60 °C (32 140 °F), -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature  -20 85 °C (-4 185 °F)  Relative humidity  Mechanical specifications  Connection type  8-pin, M12 x 1 connector  Degree of protection  Material  Housing  PC/ABS  Mass  approx. 160 g  Dimensions			
CE conformity       CE         UKCA conformity       UKCA         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         Ambient conditions         Operating temperature       0 60 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icins on the lens!)         Storage temperature       -20 85 °C (-4 185 °F)         Relative humidity       90 % , noncondensing         Mechanical specifications       Spin, M12 x 1 connector         Connection type       8-pin, M12 x 1 connector         Degree of protection       IP67         Material       Housing       PC/ABS         Mass       approx. 160 g         Dimensions       Dimensions			EN 60068-2-6:2008
UKCA conformity UL approval CCC approval CCC approval CCC approval / marking not required for products rated ≤36 V  Ambient conditions Operating temperature O 60 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!) Storage temperature -20 85 °C (-4 185 °F) Relative humidity 90 % , noncondensing  Mechanical specifications Connection type Begree of protection IP67  Material Housing Mass approx. 160 g  Dimensions			
CCC approval  CCC approval  CCC approval  CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature  O 60 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature  -20 85 °C (-4 185 °F)  Relative humidity  90 % , noncondensing  Mechanical specifications  Connection type  8-pin, M12 x 1 connector  Degree of protection  IP67  Material  Housing  PC/ABS  Mass  approx. 160 g  Dimensions	-		
CCC approval CCC approval / marking not required for products rated ≤36 V  Ambient conditions  Operating temperature 0 60 °C (32 140 °F) , -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature -20 85 °C (-4 185 °F)  Relative humidity 90 % , noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection IP67  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions	·		
Ambient conditions  Operating temperature  060 °C (32140 °F), -2060 °C (-4140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature  -2085 °C (-4185 °F)  Relative humidity  90 %, noncondensing  Mechanical specifications  Connection type  8-pin, M12 x 1 connector  Degree of protection  IP67  Material  Housing  PC/ABS  Mass  approx. 160 g  Dimensions	• • • • • • • • • • • • • • • • • • • •		1
Operating temperature  O 60 °C (32 140 °F), -20 60 °C (-4 140 °F) (noncondensing; prevent icing on the lens!)  Storage temperature  -20 85 °C (-4 185 °F)  Relative humidity  90 % , noncondensing  Mechanical specifications  Connection type  8-pin, M12 x 1 connector  Degree of protection  IP67  Material  Housing  PC/ABS  Mass  approx. 160 g  Dimensions			CCC approval / marking not required for products rated ≤36 V
Storage temperature -20 85 °C (-4 185 °F)  Relative humidity 90 % , noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection IP67  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions			
Relative humidity 90 % , noncondensing  Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection IP67  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions			on the lens!)
Mechanical specifications  Connection type 8-pin, M12 x 1 connector  Degree of protection IP67  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions			, ,
Connection type 8-pin, M12 x 1 connector  Degree of protection IP67  Material  Housing PC/ABS  Mass approx. 160 g  Dimensions			90 % , noncondensing
Degree of protection         IP67           Material         Housing         PC/ABS           Mass         approx. 160 g           Dimensions         IP67	Mechanical specifications		
Material Housing PC/ABS Mass approx. 160 g Dimensions	Connection type		8-pin, M12 x 1 connector
Housing PC/ABS Mass approx. 160 g Dimensions	Degree of protection		IP67
Mass approx. 160 g  Dimensions	Material		
Dimensions	Housing		PC/ABS
	Mass		approx. 160 g
Height 70 mm	Dimensions		
	Height		70 mm
Width 70 mm	Width		70 mm
Depth 50 mm	Depth		50 mm



Factory settings	
X resolution (protocol)	1 mm
Y resolution (protocol)	1 mm
Code tape orientation	0 °
Address	0
Baud rate	115200 Bd
Bus termination	ON
"No Position" X value	0
"No Position" Y value	0
"No Position" speed value	127
Overspeed threshold (protocol)	12.5 m/s
X value in case of error	Error number
Y value in case of error	Error number
Speed value in case of error	Error number
Code tape width	two-rowed
X positon offset	0 mm
Function input/output	inactive

# Connection

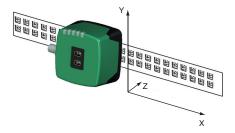


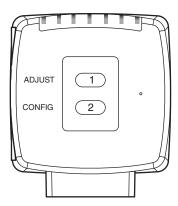
# **Connection Assignment**

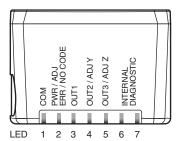


# **Characteristic Curve**

### Coordinates







#### General

The reading head is part of the positioning system in the method for measurement by Pepperl+Fuchs. It consists of a camera module and an integrated illumination unit among other things. The reading head detects position marks, which are put on an adhesive code band in the form of Data Matrix code. The mounting of the code band is as a rule stationary on a firm part of the plant (elevator shaft, overhead conveyor mounting rails...); that of the reading head is parallel on the moving "vehicle" (elevator car, overhead conveyor chassis...).

#### Mounting and commissioning

Mount the reading head such that its optical surface captures the optimal read distance to the code band (see Technical Data). The stability of the mounting and the guidance of the vehicle must be provided such that the depth of field of the reading head is not closed during operation. All reading heads can be optimally customized by parameterization for specific requirements. The parameterization of reading heads with a bidirectional interface (all except SSI-interface) can take place via the interface itself (internal parameterization) or via an optical parameterization code (external parameterization). The reading heads with SSI interface only have the possibility of external parameterization via optical parameterization codes.

#### **Displays and Controls**

The reading head allows visual function check and fast diagnosis with 7 indicator LEDs. The reading head has 2 buttons on the reverse of the device to activate the alignment aid and parameterization mode.

#### **LEDs**

LED	Color	Label	Meaning
1	Yellow	COM	Communication active
2	Green/red	PWR/ADJ ERR/NO CODE	Code recognized/not recognized, Error
3	Yellow	OUT1	Output 1
4	Yellow	OUT2/ADJ Y	Output 2, Alignment aid Y
5	Yellow	OUT3/ADJ Z	Output 3, Alignment aid Z
6,7	red/green/yellow	INTERNAL DIAGNOSTICS	Internal diagnostics

#### **External parameterization**

For external parameterization you require the parameterization code as Data Matrix with the desired reading head parameters. Data Matrix code cards for step-by-step external parameterization are printed in the reading heads operating instructions.

Parameterization is only possible within 10 minutes of switching on the reading head. If a button is pressed after 10 minutes subsequent to switching on, there is visual signaling via the LEDs (LED1, yellow/LED2, red/LED3, yellow/LED4, yellow/LED5, yellow flash for 2 seconds)

- The switchover from normal operation to parameterization mode is via button 2 on the reverse of the reading head. Button 2 must be pressed for more than 2 seconds. LED3 now flashes.
  - **Note:** Parameterization mode automatically ends after 1 minute of inactivity. The reading head returns to normal operation and works with unchanged settings.
- Place the parameterization code in the view of the camera module. After recognition of the parameterization code, the green LED2 lights up for 1s. In the event of an invalid parameterization code, the red LED2 lights up for 2 s.
- A short press on button 2 ends the parameterization mode and the changed parameters are not stored volatile in the reading head.

#### Alignment aid for the Y and Z coordinates

The activation of the alignment aid is only possible within 10 minutes of switching on the reading head. The switchover from normal operation to "alignment aid operating mode is via button 1 on the reverse of the reading head.

- Press the button 1 for longer than 2 s. LED2 flashes green for a recognized code band. LED2 flashes red for an unrecognized code band.
- Z coordinate: If the distance of the camera to the code band too small, the yellow LED5 lights up. If the distance of the camera to the code band too large, the yellow LED5 lights up. Within the target range, the yellow LED5 flashes at the same time as the green LED2.
- Y coordinate: If the optical axis of the camera is too deep in relation to the middle of the code band, the yellow LED4 lights up. If the optical axis is too high, the yellow LED4 extinguishes. Within the target range, the yellow LED4 flashes at the same time as the green LED2.
- A short press on button 1 ends the alignment aid and the reading head changes to normal operation.