

Optical reading head PCV80-F200-R4-V15-LS221

- RS-485 interface
- Non-contact positioning on Data Matrix code tape
- 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.
- Travel ranges up to 524 m

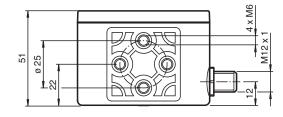
Read head for incident light positioning system

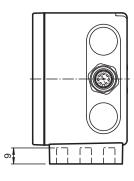


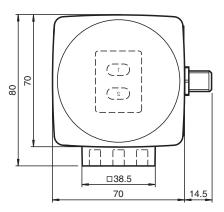




Dimensions







Technical Data

General specifications		
Passage speed	V	≤ 12.5 m/s
Measuring length		max. 524 m
Light type		Integrated LED lightning (red)
Scan rate		40 s ⁻¹
Read distance		80 mm
Depth of focus		± 15 mm
Reading field		40 mm x 25 mm
Ambient light limit		100000 Lux
Resolution		± 1 mm
Nominal ratings		

Camera

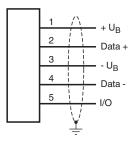
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Output type 1 switch output PNP, programmable, short-circuit protected Switching voltage Operating voltage Switching current 150 mA each output Conformity Photobiological safety exempt group according to EN 62471:2008 Standard conformity Emitted interference 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 CE UKCA conformity CE CCC approval CCC approval CCC approval COCC ADDITIONAL COCC	Technical Data			
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Connection type 5-pin, M12 x 1 connector Degree of protection IP67 Material PC/ABS	Relative humidity		90 % , noncondensing	
Degree of protection IP67 Material Housing PC/ABS	Mechanical specifications			
Material Housing PC/ABS	Connection type		5-pin, M12 x 1 connector	
Housing PC/ABS	Degree of protection		IP67	
	Material			
Mass approx. 160 g	Housing		PC/ABS	
	Mass		approx. 160 g	

Technical Data

Dimensions	
Height	70 mm
Width	70 mm
Depth	50 mm
Factory settings	
X resolution (protocol)	1 mm
Y resolution (protocol)	1 mm
Code tape orientation	0°
Address	0
Baud rate	62500 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

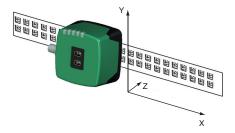


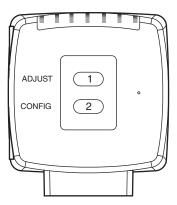
Connection Assignment

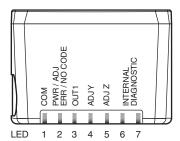


Characteristic Curve

Coordinates







Additional Information

General

The PCV... 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.

Displays and Controls

The PCV... 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.

I FDs

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	ADJ Y	Alignment aid Y
5	Yellow	ADJ Z	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.