

CE

Model number

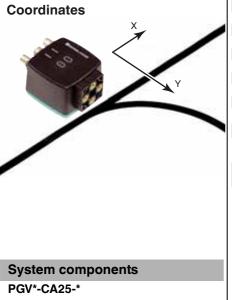
PGV100-F200A-R4-V19

Read head for incident light positioning system

Features

- Mechanically rugged: no wearing ٠ parts, long operating life, maintenance-free
- **RS-485** interface .
- Noncontact lane tracking of a colored . strip
- Noncontact positioning along the . colored strip using Data Matrix codes
- Reading of Data Matrix control codes

Diagramms



VAZ-V1S-B

Pepperl+Fuchs Group

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Blind plug for M12 sockets

| Technical data |
|--------------------------------------|
| General specifications |
| Passage speed v |
| Measuring range |
| Light type |
| Read distance |
| Depth of focus |
| Reading field |
| Ambient light limit |
| Resolution |
| Nominal ratings |
| Camera |
| Туре |
| Processor |
| Clock pulse frequency |
| Speed of computation |
| Functional safety related parameters |
| MTTF _d |
| Mission Time (T _M) |
| Diagnostic Coverage (DC) |
| Indicators/operating means |
| LED indicator |
| Electrical specifications |
| Operating voltage U _B |
| No-load supply current I0 |
| Power consumption P ₀ |
| Interface |
| Interface type |
| Data output code |
| Transfer rate |
| Termination |
| Query cycle time |
| Input |
| Input type |
| Input impedance |
| Output |
| Output type |
| Switching voltage |
| Switching current |
| Standard conformity |
| Emitted interference |
| Noise immunity |
| Shock resistance |
| Vibration resistance |
| Ambient conditions |
| Operating temperature |
| |

. . . .

Storage temperature Relative humidity Mechanical specifications Connection type Housing width Housing height Housing depth Degree of protection Material Housing Mass

Approvals and certificates

UL approval

CCC approval

PGV100-F200A-R4-V19

≤ 8 m/s max. 10000 m Integrated LED lightning (white/blue) 100 mm ± 20 mm 120 mm x 80 mm 100000 Lux ± 0.2 mm CMOS, Global shutter 600 MHz 4800 MIPS 96 a 48 a 0% 7 LEDs (communication, alignment aid, status information) 15 ... 30 V DC , PELV max. 200 mA 3 W RS 485 interface binarv code 38400 ... 230400 Bit/s Switchable terminal resistor ≥ 10 ms 1 to 3 functional inputs , programmable \geq 27 k Ω 1 to 3 switch outputs , PNP , programmable , short-circuit protected Operating voltage 150 mA each output EN 61000-6-4:2007+A1:2011

EN 61000-6-2:2005 EN 60068-2-27:2009 EN 60068-2-6:2008

 $0\ ...\ 60\ ^\circ C\ (32\ ...\ 140\ ^\circ F)\ ,\ \ -20\ ...\ 60\ ^\circ C\ (-4\ ...\ 140\ ^\circ F)\ (noncondensing;\ prevent\ icing\ on\ the\ lens!)$ -20 ... 85 °C (-4 ... 185 °F) 90 % , noncondensing

8-pin, M12 x 1 connector 70 mm 70 mm 50 mm IP67

PC/ABS approx. 160 g

cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure CCC approval / marking not required for products rated \leq 36

Refer to "General Notes Relating to Pepperl+Fuchs Product Information" USA: +1 330 486 0001 fa-info@us.pepperl-fuchs.com

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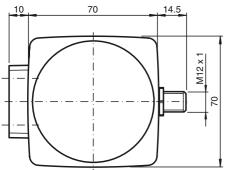


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Date of issue: 2018-06-05 Release date: 2017-03-24 11:45

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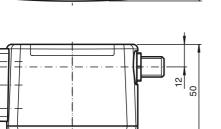
Dimensions



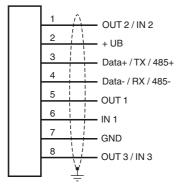
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ø 25

M6 x 9 (4x)



Electrical connection



Pinout



General

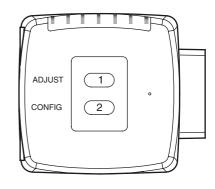
The PGV... reader forms part of the positioning system in the Pepperl+Fuchs incident light process. The reader's features include a camera module and an integrated illumination unit. The reader uses these features to detect a colored strip stuck to the floor to track the lane. The reader also detects control codes and position markers in the form of Data Matrix codes attached to a self-adhesive code tape. The code tape is usually mounted in a fixed position instead of the colored strip or parallel to the colored strip. The reader is located on the front of an automated guided vehicle and guides this vehicle along the colored strip.

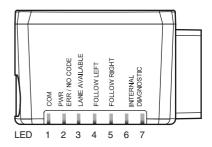
> Refer to "General Notes Relating to Pepperl+Fuchs Product Information" Pepperl+Fuchs Group www.pepperl-fuchs.com

System components PGV*-CC25-*

Control code tape für PGV System PGV25M-CD100-CLEAR Protective laminate for PGV code tape

Additional information





Accessories

PCV-USB-RS485-Converter Set

USB to RS 485 interface converter

PCV-KBL-V19-STR-RS485

Cable unit with power supply for USB / RS-485 interface converter

V19-G-ABG-PG9

Female connector, M12, 8-pin, shielded, field attachable

V19-G-ABG-PG9-FE

Female connector, M12, 8-pin, shielded, field attachable

PCV-SC12

Grounding clip for PCV system

Alignment guide for PCV100-* read head

PCV-LM25

PCV-AG100

Marker head for 25 mm code tape

PCV-MB1

Mounting bracket for PCV* read head PGV33M-CB19-BU

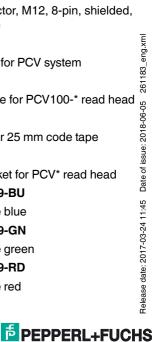
PGV color-tape blue

PGV33M-CB19-GN

PGV color-tape green

PGV33M-CB19-RD

PGV color-tape red



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Accessories

PGV33M-CB19-YE

PGV color-tape yellow

Vision Configurator

Operating software for camera-based sensors

Mounting and Commissioning

Mount the reader such that the optical surface of the device captures the optimum reading distance to the colored strip (see "Technical Data"). The stability of the mounting and the manner in which the vehicle is guided ensure that the reader is not operated outside of its depth of focus range. The colored strip must not leave the maximum reading window for the reader during this process.

All readers can be adapted to optimally meet specific requirements by means of parameterization.

Indicators and Operating Controls

The PGV... reader is equipped with seven indicator LEDs for carrying out visual function checks and rapid diagnostics. The reader is equipped with two buttons at the back for activating the alignment aid and parameterization mode.

LEDs

| LED | Color | Label | Meaning |
|-----|----------------|----------------|------------------------------------|
| 1 | Yellow | COM | Communication active |
| 2 | Green/red | PWR | Code detected/not detected, error |
| | | ERR/NO CODE | |
| 3 | Yellow | LANE AVAILABLE | Lane available |
| 4 | Yellow | FOLLOW LEFT | "Follow left-hand lane" activated |
| 5 | Yellow | FOLLOW RIGHT | "Follow right-hand lane" activated |
| 6 | Red/green/yel- | INTERNAL | Internal diagnostics |
| 7 | low | DIAGNOSTIC | |

External Parameterization

In order to parameterize the device externally, the parameterization code is required in the form of a Data Matrix containing the desired reader parameters. Data Matrix code cards detailing the step-by-step process for externally parameterizing the device are printed in the operating instructions for the reader.

The reader can be parameterized only within ten minutes of being switched on. If a key is pressed after ten minutes of the device being switched on, a visual signal is given by the LEDs (LED1, yellow/LED2, red/LED3, yellow/LED4, yellow/LED5, yellow, flashing for two seconds).

 The switchover from normal mode to parameterization mode is made by pressing button 2 on the back of the reader. To switch the device over, button 2 must be pressed and held for more than two seconds. LED3 then flashes.

Note: Parameterization mode is exited automatically if the device is inactive for one minute. In this case, the reader reverts to normal mode and operates without the settings having been changed.

- Place the parameterization code in the field of vision of the camera module. After the parameterization code is detected, the green LED2 lights up for one second. In the event of an invalid parameterization code, LED2 lights up red for two seconds.
- Briefly pressing button 2 will end parameterization mode.

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