QUICK START GUIDE

ODV120-F200-R2

DE **Stationäres Lesegerät für Multicodes**

EN **Stationary reader for multicodes**

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SENSING YOUR NEEDS

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1 Introduction

1.1 Purpose of this quick start guide

This quick start guide contains basic instructions for operating the device. However, the manual takes priority over the quick start guide.

1.2 Product documentation on the internet

You can view all the relevant documentation and additional information on your product at http://www.pepperl-fuchs.com. Simply enter the product name or model number in the **Product/Key word search** box and click **Search**.
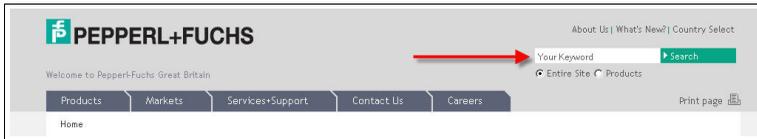
Select your product from the list of search results. Click on the information you require in the product information list, e.g., **Technical documents**.

A list of all available documents is displayed.

1.3 Intended use

The ODV120 stationary reader is intended to be used only for the indentification of objects by means of 1D- and 2D-codes.

Always operate the device as described in these instructions to ensure that the device and connected systems function correctly. The protection of operating personnel and plant is only guaranteed if the device is operated in accordance with its intended use.

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2   Product Description

2.1   Displays and controls

The illumination unit contains 7 indicator LEDs that provide information on the status of the device.
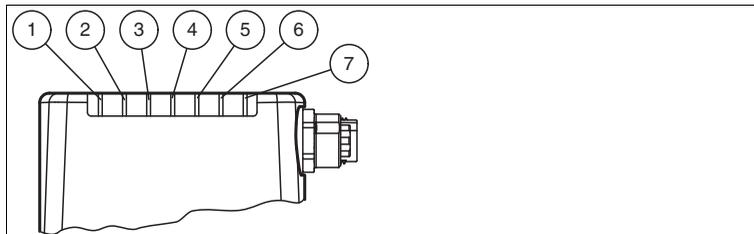
Figure 2.1   Displays and controls

1   DIAG 2
Yellow LED. Generales different flashing sequences to signal diagnostic messages.

2   DIAG 1
Yellow LED. Generales different flashing sequences to signal diagnostic messages.

3   Power (PWR)
Lights up green when the sensor is ready for operation.

4   Ready
 Lights up yellow if the sensor is ready.

5   Reading process triggered (BAD)
 Lights up yellow if the reading was unsuccessful.

6   Reading process triggered (GOOD)
Lights up yellow if the reading was successful.

7   Trigger sensor (TRG)
 Lights up yellow when a connected trigger sensor send a trigger (impulse).

> **Caution!**
> Software update
>
> The Ready LED flashes when the sensor is programmed. The sensor must **not** be switched off during this time.

Definition of LEDs and outputs for individual states

	GOOD LED	BAD LED	Match code mode	Status	Good output	Bad output	Match code output
Good reading	ON	OFF	OFF	80	ON	OFF	OFF (not used)
Bad reading	OFF	ON	OFF	81	OFF	ON	OFF (not used)
Good reading and match code OK	ON	OFF	ON	82	ON	OFF	ON
Good reading and match code not OK	ON	OFF	ON	83	ON	OFF	OFF
Bad reading	OFF	ON	ON	81	OFF	ON	OFF
Decoder timeout	OFF	ON		84	OFF	ON	OFF

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2.2 Interfaces and connections

The device includes the following connections:
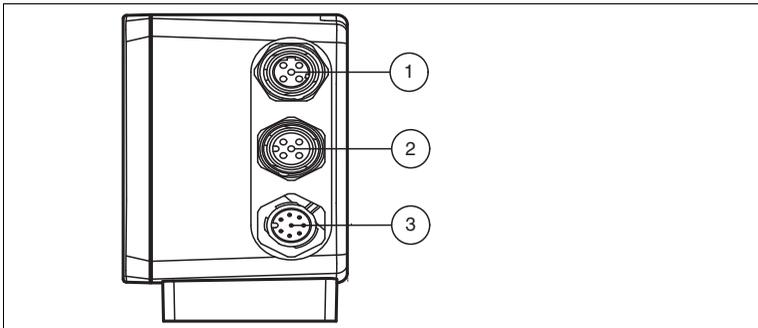
Figure 2.2   Device connections

1   Network (4-pin M12 socket)

2   RS232 interface (5-pin M12 socket)

3   Power supply, inputs and outputs (8-pin M12 connector)

Power supply

There is an 8-pin M12 plug on the side of the housing to connect the power supply and the inputs and outputs. The following diagram shows the pin assignment:
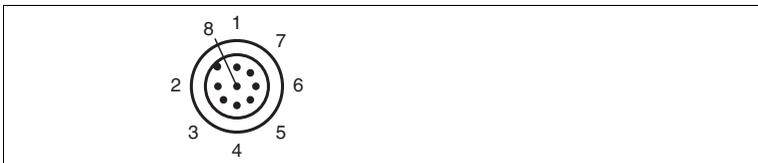
Figure 2.3   Connection layout for supply voltage and inputs and outputs

1   IN Trigger

2   + UB

3   OUT Good

4   OUT Bad

5   IN 1

6   OUT 1

7   GND

8   OUT Matchcode

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RS 232 interface

There is a 5-pin M12 socket on the side of the housing. The following diagram shows the pin assignment:

Figure 2.4   RS 232 interface connection layout

1   + UB

2   TX RS232

3   GND

4   RX RS232

5   NC

Network

There is a 4-pin M12 socket on the side of the housing to connect to the network. The following diagram shows the pin assignment:
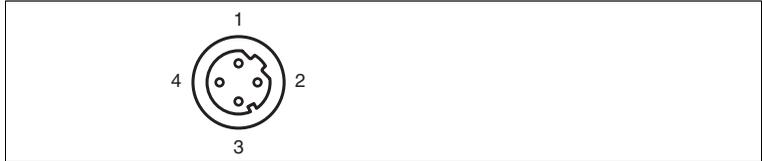
Figure 2.5   Network connection layout

1   TX+ Ethernet

2   RX+ Ethernet

3   TX- Ethernet

4   RX- Ethernet

2.3   Contents

- ODV120-F200
- Quick start guide

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2.4 Accessories

Various accessories are available.

2.4.1 Power supply

Use the following connection cable to connect the power supply, inputs and outputs to the sensor.

M12 connection cables

	Material	Length	Cable end, field attachable
8-pin M12 socket, straight	PUR	2 m	V19-G-2M-PUR-ABG
		5 m	V19-G-5M-PUR-ABG
		10 m	V19-G-10M-PUR-ABG
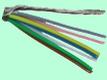
Field-attachable M12 connectors

Model number	Description	mm^2	Cable dia.
V19-G-ABG-PG9	8-pin M12 socket, straight	max. 0.75	5 to 8 mm

Other lengths on request.

2.4.2 Network cable

The sensor is connected to the network using an M12 connector.

Designation	Description
V45-G	RJ45 network connector, field attachable
V1S-G	4-pin M12 connector, field attachable
V1SD-G-2M-PUR-ABG-V45X-G	Connection cable, RJ45 network connector with M12 plug, cross-over, 4-pin
V1SD-G-2M-PUR-ABG-V45-G	Connection cable, RJ45 network connector with M12 plug, 4-pin

2.4.3 RS232 interface

The RS232 sensor interface is connected via an M12 connector.

Designation	Description
V15S-G-5M-PUR-ABG	Male cordset, M12, 5-pin, PUR cable, shielded cap nut
V15S-G-5M-PUR-ABG-SUBD9	Connection cable, M12 plug, 5-pin, to Sub-D housing, 9-pin

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3 Installation

3.1 Mounting the device

Note!

Mounting an optical device

- Do not aim the sensor at the sun.
- Protect the sensor from direct long-term exposure to sun.
- Prevent condensation from forming by not exposing the sensor to any major fluctuations in temperature.
- Do not expose the sensor to the effects of any aggressive chemicals.
- Keep the lenses and reflector of the device clean. Clean with a soft cloth, using standard commercial glass cleaner if necessary.

We recommend to clean the optical surface and to check screw fittings and electrical connections at regular intervals.

The device has four symmetrically positioned M6 threads on the base of the housing to allow easy installation of the sensor in your plant.

The reading distance varies depending on the sensor. Find the appropriate reading distance in the technical data of the sensor to be mounted.

The following illustration shows all the relevant device dimensions in mm:

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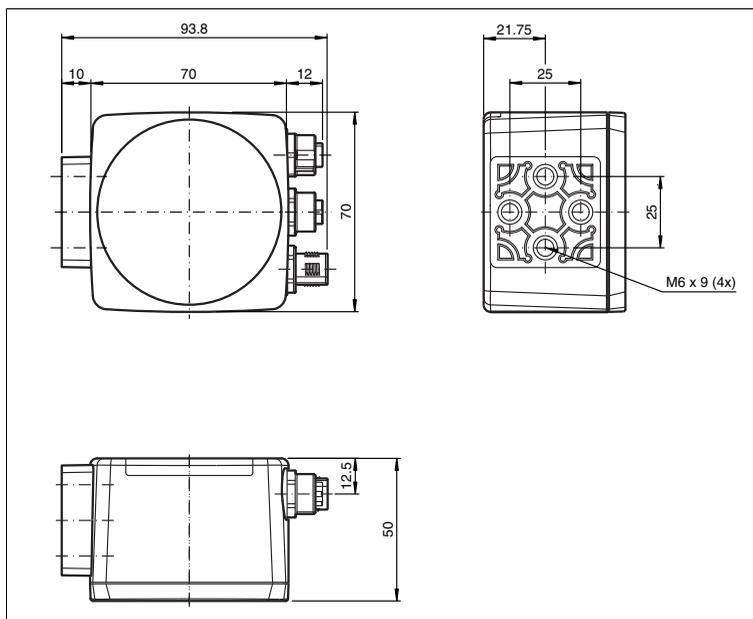
Note!

Preventing reflection and glare

Reflection and glare from reflective surfaces can impair the captured image and therefore lead to incorrect readings. To prevent reflection and glare, install the stationary reading device at a slight angle.

The base surface must be flat to avoid distorting the housing when tightened. Make sure there is enough space to connect the cable to the sensor after installation.

3.2 Connecting the device

▶ Connecting the power supply

To supply power to the sensor, proceed as follows:

1. Plug the 8-pin M12 socket into the connector provided on the side of the housing.
2. Screw the cap nut onto the connector as far as it will go.

   ↳ This ensures that the power cable cannot be inadvertently pulled out.

Note!

Recording the network configuration

The sensor communicates with the connected machine control system using the TCP/IP protocol. To ensure communication works correctly, you must note all the changes you make to the network configuration.

Note!

Network cabling

Use a crossover network cable to connect the sensor directly to a PC. If the sensor is being operated within a network, use a twisted-pair network cable to connect it to the network.

▶ Establishing a network connection

To establish a network connection, proceed as follows.

1. If you are using a network cable with an RJ45 network plug at one end and an 4-pin M12 socket at the other, insert the 4-pin M12 socket in the connector on the side of the sensor.
2. When delivered, the sensor has a fixed IP address (192.168.2.2). To facilitate communication within the network, you must configure your network. The configuration data can be found in the network configuration overview.

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4 Commissioning

4.1 Connecting the stationary reader

The reader has its own web server. You have the option of making settings on the stationary reader using a standard web browser.

▶ Aligning the stationary reader

To find the ideal alignment for the device, use the live image display of the web browsers in the stationary reader.

1. Supply power to the reader via the 24 V DC + IO connector.

2. Set up the device that the live image of the web browser as a sharp contrast between the code and background is available.

   ↳ This sets the ideal reading distance between the stationary reader and the code to be read.

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5 Operation

5.1 Web-based operator interface

You have the option of configuring and operating the sensor via a web-based operator interface and using it to display information. The web-based user interface should be used only for setup and troubleshooting purposes when the machine is shut down.

Note!

To start the operator interface of the sensor, you need a standard web browser (e.g., Windows Internet Explorer or Mozilla Firefox) with Java script activated.

We recommend the following browser versions

Firefox	3.6.8 or higher	Communication between MAC and PC via LAN interface
Internet Explorer	6.0.2900.2180 or higher	Communication between MAC and PC via LAN interface

Starting the operator interface

To start the operator interface, proceed as follows.

In the input field of a standard web browser, enter the IP address of the stationary reader (**192.168.2.2**) and press return to confirm.

↳ The following tab opens as the start page: **Settings**.

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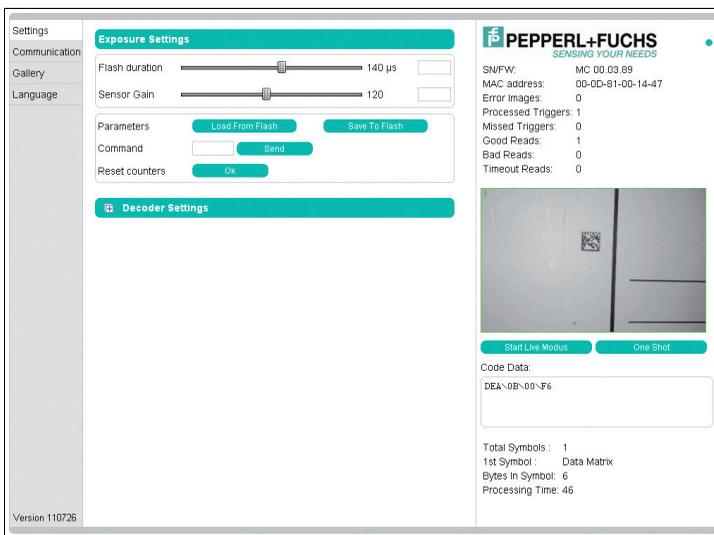
The following four tabs can be found on the left-hand side of the display:

- Settings
- Communication
- Gallery
- Language

Various information is displayed in the central section–depending on which tab is active.

On the right-hand side, various status information (such as the software/firmware version, the MAC address, the number of reads, etc.) is displayed, as well as the last image captured and the decoded information. On the right of the Pepperl+Fuchs company logo there is a pictorial representation of a status LED. This status LED lights up green when a device is connected. Otherwise it is red.

▶ Activating live image capture

Note!
By viewing the captured images on the operator interface during operation, the image refresh rate reduces significantly.

To activate live image capture, click the **Start Live Mode**button on the right-hand side of the display screen.

↪ The stationary reader starts to capture images. The captured images are displayed in the results window. The decoded information is displayed beneath it in a separate window.

▶ Starting single image capture

On the right-hand side of the display screen, click on the button **Single image**.

↪ Clicking the button triggers a single image capture.

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6 Troubleshooting

6.1 What to do in the event of an error

Before requesting a service call, please check that the following actions have been taken:

- Test the equipment according to the following checklists,
- Telephone assistance from the Service Center in order to isolate the problem.

Checklist

Fault	Cause	Remedy
"PWR" LED not lit up	The power supply is switched off.	Check whether there is a reason why it is switched off (installation or maintenance work etc.). Switch the power supply on if appropriate.
"PWR" LED not lit up	Wiring fault in the splitter or control cabinet.	Check the wiring carefully and repair any wiring faults.
No connection to the device	Network cable not connected.	Connect the network cable.
No connection to the device	Wrong network cable used.	Direct connection between PC and device: Use a crossover network cable. Connection via an existing network: Use a twisted-pair network cable.

- If none of the above remedies correct the problem, please contact the Service Center. Please have ready the fault patterns and version numbers of the sensor. The version number can be found at the bottom left of the operator interface.

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6.2   Note

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