Instruction Manual

1. Marking

RFID Reader RFID20-*-*NF-****-N**
ATEX certificate: UL 24 ATEX 3251 U
ATEX marking: Ⓔx II 3G Ex ec IIC T4 Gc Ⓔx II 3D Ex tc IIIC 135°C Dc
IECEx certificate: IECEx ULD 24.0019 U
IECEx marking: Ex ec IIC T4 Gc Ex tc IIIC 135°C Dc
North America Certifcates: OrdLoc: E223772 (UL) HazLoc: E492874 (UL)
US marking: Class I, Division 2, Groups A,B,C,D Class I Zone 2, AEx ec IIC Gc Class II, Division 2, Groups F,G Class III Zone 22, AEx tc IIIB Dc
CAN marking: Ex ec IIC Gc U Ex tc IIIC Dc U

The *-marked letters of the type code are placeholders for versions of the device.

Pepperl+Fuchs Group Lilienthalstraße 200, 68307 Mannheim, Germany
Internet: www.pepperl-fuchs.com

2. Validity

Specific processes and instructions in this instruction manual require special provisions to guarantee the safety of the operating personnel.

3. Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the device. The trained and qualified personnel must have read and understood the instruction manual.

4. Reference to Further Documentation

Observe directives, standards, and national laws applicable to the intended use and the operating location.
Observe Directive 1999/92/EC in relation to hazardous areas.

The corresponding datasheets, manuals, declarations of conformity, EU-type examination certificates, certificates, and control drawings if applicable (see datasheet) are an integral part of this document. You can find this information under www.pepperl-fuchs.com.

For specific device information such as the year of construction, scan the QR code on the device. As an alternative, enter the serial number in the serial number search at www.pepperl-fuchs.com.

Refer to the relevant certificate to see the relationship between the connected circuit type, the maximum permitted ambient temperature, the surface temperature, and the effective inner reactances.

Due to constant revisions, documentation is subject to permanent change. Please refer only to the most up-to-date version, which can be found under www.pepperl-fuchs.com.

5. Intended Use

The device is only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability.

Only use the device in the industrial location.

The RFID reader is used for user authentication and logging into the application running on the host server.

The RFID reader is certified for use in Zone 2/22 and must be used in conjunction with a Zone 2/22 or higher surrounding enclosure.

Use the device only within the specified ambient and operating conditions.

Observe the instruction manual and the certificate of the installed apparatus.

Observe the schedule of limitations.

The certificate applies only to the use of apparatus under atmospheric conditions.

Ex components are not intended to be used alone. Mounting and usage of Ex components in devices or systems must be certified separately.
Ex components have the U marking at the end of the certificate number.

The device is an electrical apparatus for hazardous areas of Zone 2.

The device can be used in hazardous areas containing combustible dust.

The device is designed for panel mounting.

6. Improper Use

Protection of personnel and the plant is not ensured if the device is not used according to its intended use.

7. Schedule of Limitations

Mount the device in a metal housing or in a housing that is certified for this use.

Install the device in locations with a low risk of mechanical hazard according to IEC/EN 60079-0 only.

Avoid mechanical impacts to the device (e. g. from heavy or sharp-edged objects).

Mount the device into an opening of a suitable panel or enclosure in accordance with the requirements of the end product.

Observe the requirements on material, wall thickness, mounting fixture, separation distances and segregation.

The minimum wall thickness of the enclosure has to be 1.5 mm.

The wall thickness of the enclosure may not exceed 4 mm.

Mount the device in such a way that it is protected from direct sunlight.

The device may only be installed and operated in Zone 2 if it has been mounted in a surrounding enclosure with degree of protection IP54 according to IEC/EN 60529. The surrounding enclosure must correspond to equipment protection level Gc.

The device may only be installed and operated in Zone 22 if mounted in a surrounding enclosure, which corresponds to equipment protection level Dc.

Ensure that the degree of protection is maintained by the entire installation.

Some interfaces of the device must be closed during operation in the explosion-hazardous area. Ensure that these interfaces are closed.

Do not use interfaces that are not intended for the use in the explosion-hazardous area.

The device must be installed and operated only in a controlled environment that ensures a pollution degree 2 (or better) according to IEC/EN 60664-1.

The device must be installed and operated only in an environment of overvoltage category II (or better) according to IEC/EN 60664-1.

Provide a transient protection. Ensure that the peak value of the transient protection does not exceed 140 % of the rated voltage.

Avoid electrostatic charges which could result in electrostatic discharges while installing, operating, or maintaining the device.

Mount the device in a location with low electrostatic charge.

Observe the mounting instructions for the mechanical cut outs and stud pattern.

Use the device only within the specified operating temperature range.

Evaluate the temperature for the respective operating location in the explosion-hazardous area and in the end product.

Information on electrostatic hazards can be found in the technical specification IEC/TS 60079-32-1.

8. Mounting and Installation

Prior to mounting, installation, and commissioning of the device you should make yourself familiar with the device and carefully read the instruction manual.

Do not mount a damaged or polluted device.

Observe the installation instructions according to IEC/EN 60204-1.

Observe the ambient and operating conditions when mounting and installing the device.

Only use accessories specified by the manufacturer.

Observe the installation instructions according to IEC/EN 60079-14.

Connect the device in compliance with the IEC/EN 60079-14 requirements.

Use the supplied parts to ensure the required degree of protection.

Only connect safety extra-low voltage circuits (SELV) or protective extra-low voltage circuits (PELV) to the device.

Only connect supplies that provide protection against electric shock (e. g. SELV or PELV).

Observe the tightening torque of the screws.

Safety-relevant markings are found on the nameplate supplied.

The usage of 2400 MHz equipment is bound to local restrictions. Ensure that local restrictions allow usage of this device before commissioning.

Requirements for Surrounding Enclosures

Ensure that the surrounding enclosure can only be opened with a tool.

Mount the device so that it complies with the specified degree of protection according to IEC/EN 60529.

Ensure that the surrounding enclosure is not damaged, distorted, or corroded.

Ensure that all seals are clean, undamaged, and correctly fitted.
Tighten all screws of the surrounding enclosure/surrounding enclosure cover with the appropriate torque.

9. Operation, Maintenance, Repair

Prior to using the product make yourself familiar with it. Read the instruction manual carefully.
Do not remove the nameplate.
Modifications are permitted only if approved in this instruction manual and in the device-related documentation.
Observe the requirements according to IEC/EN 60079-19 for repair and overhaul.
Observe IEC/EN 60079-17 for maintenance and inspection.
If the device is installed in potentially explosive dust atmosphere, observe that the thickness of the dust layer does not exceed 5 mm. Remove the dust layers in regular intervals.
The device is designed for mounting onto an enclosure in type of protection Ex e.
Remove the dust before opening the surrounding enclosure.

Return

If there is a defect, always send back the device to Pepperl+Fuchs.
Take the following precautions before you return the device to Pepperl+Fuchs.
Remove all adhering residues from the device. These residues can be hazardous to health.
Fill in the form **Declaration of Contamination**. You can find this form on the product detail page at www.pepperl-fuchs.com.
Enclose the filled in **Declaration of Contamination** form with the device.
Pepperl+Fuchs can examine and repair a returned device, only if a completed form is included in the return.
If needed, include special handling instructions with the device.
Specify the following information:

- Chemical and physical characteristics of the product
- Description of the application
- Description of the error that occurred (specify error code if possible)
- Operating time of the device

10. Delivery, Transport, Disposal

Check the packaging and contents for damage.
Check if you have received every item and if the items received are the ones you ordered.
Keep the original packaging. Always store and transport the device in the original packaging.
Store the device in a clean and dry environment. The permitted ambient conditions must be considered, see datasheet.
The device, built-in components, packaging, and any batteries contained within must be disposed in compliance with the applicable laws and guidelines of the respective country.