

(1)

CERTIFICATE

(2) Equipment Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**



(3) Certificate Number:

PF 24 CERT 7221 U

(4) Equipment: RFID Reader
(5) Manufacturer: **Pepperl+Fuchs SE**
(6) Address: Lilienthalstrasse 200
68307 Mannheim
Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The manufacturer listed under item 5, herewith declares in sole responsibility that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive 2014/34/EU.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2018 EN 60079-7:2015 EN 60079-31:2024

(1) If the sign "X" is placed after the certificate number, it indicates that the equipment is
0) subject to special conditions for safe use specified in the schedule to this certificate.

(1) This certificate relates only to the design and construction of the specified equipment.
1) Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(1) The marking of the equipment shall include the following :
2)

II 3G Ex ec IIC T4 Gc
 II 3D Ex tc IIIC 135 °C Dc

Mannheim, 12.09.2024

i.V. Roolf Wessels
Executive Vice President
Business Unit EM+HMI

i.V. Samuel Prümmer
Norm expert
of the Product Group

(13)

SCHEDULE

(14)

Certificate Number PF 24 CERT 7221 U

(15)

Description of Equipment

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

The RFID Reader is a Zone 2/22 Ex component and shall be used together with a Zone 2/22 or higher rated enclosure.

Type Code

I	II	III	IV	V	VI	VII	VIII
RFID20-	*-	*	NF-	**	**-	N	**

Position	Type	Option Description
I	Type	RFID20 → RFID Reader
II	Reader	A → Elatec Reader TWN4 MultiTech 3 M LF HF B → Elatec Reader TWN4 MultiTech 3 LEGIC M LF HF
III	Certification	N → Non-Ex R → ATEX Self Declaration Zone 2/22
IV	Mounting options	NF → Flush Mount
V	Interface	UA → USB with Type A connector UB → USB with Cable ends with crimped ferrules
VI	Cable length	06 → standard 60 cm cable for installation in FLX System Housing 18 → 1,8 m cable for standalone application
VII	Special accessories	N → none
VIII	Option	N0 → none XX → Other options without impact on explosion protection (Can be replaced by any alphanumeric character)

Electrical Data

Type	TWN4 MultiTech 3 LEGIC M LF HF	TWN4 MultiTech 3 M LF HF
Service Temperature	-20 °C up to +70 °C	-20 °C up to +70 °C
Frequency	125 kHz (LF) / 13.56 MHz (HF)	125 kHz (LF) / 13.56 MHz (HF)
Power	4.3 V - 5.5 V	4.3 V - 5.5 V

	Limited power source according to the safety norms listed in the respective declaration of conformity, short-circuit current < 8 A	Limited power source according to the safety norms listed in the respective declaration of conformity, short-circuit current < 8 A
Transmission power	125 kHz: 34 mW, 15.3 dBm (Rout 10 Ohm, RL 10 Ohm, U0pp = 3.3V) 13.56 MHz: 17 mW, 12.3 dBm (Rout 20 Ohm, RL 20 Ohm, U0pp = 3.3V)	125 kHz: 34 mW, 15.3 dBm (Rout 10 Ohm, RL 10 Ohm, U0pp = 3.3V) 13.56 MHz: 68,1 mW, 18.3 dBm (Rout 20 Ohm, RL 20 Ohm, U0pp = 3.3V)
Current Consumption	RF field on: 200 mA typically / Sleep: 500 µA typ	RF field on: 120 mA typically / Sleep: 500 µA typ. / Cyclic Operation: TBD
Read- / Write distance	LF and HF: Up to 100 mm / 4 inch, depending on environment and transponder	LF and HF: Up to 76 mm / 3 inch, depending on environment and transponder

(16) Test Report

The examination and test results are recorded in the confidential document CERX-7221.

(17) Schedule of limitation:

The RFID Reader is intended to be used together with a metallic enclosure and has to be built in an appropriate rated enclosure.

The wall thickness of the enclosure in which the RFID Reader is intended to build in shall be between 1,5 mm and 4 mm.

The component shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.

The component shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with IEC 60079-0

The component has to be built in an equipment that is providing, or is provided with a controlled overvoltage condition involving transient protection for equipment of overvoltage category II affect electrical segregations under control.

The component has to be built in an equipment that is providing, or is provided with a voltage limitation.

The danger of ignition due to propagating brush discharges must be avoided by mounting the apparatus in areas without intensive charging mechanism. (valid for dust application)

The danger of ignition due to electrostatic discharges must be avoided by mounting the apparatus in areas without electrostatic charging mechanism. (valid for gas application)

Impacts from heavy or sharp-edged objects on the device have to be avoided. The maximum impact energy for the housing parts is 4 J

The device has to be mounted in an area with a lower risk of mechanical impact.

The device contains a Micro USB Connector, a UART Connector and a SAM Slot (SAM Card Holder). These connections have not been evaluated for use in the Hazardous Area and must not be used

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

(18) Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed in item 9.