

# **MB RFID 1120 Reader Rev.1**

## **TN: 60513313**

**Revision: 0.1**  
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# **1 General Information**

## **1.1 SCOPE**

This document describes the basic functionality and the electrical specifications of the MB RFID 1120 READER.

## **1.2 GENERAL DESCRIPTION**

The MB RFID 1120 READER is a highly integrated reader developed by Muehlbauer. Working at 13,56 MHz the Reader supports multiple protocols and is designed to fulfil several requirements.

## **1.3 FEATURES**

- contactless smart card reader
- contactless operating frequency 13.56MHz
- Supports multiple protocols
  - ISO14443A/B
  - ISO15693
  - MIFARE®
- CE and FCC compliant
- Control over Ethernet
- 24 VDC power supply

## 2 Electrical Characteristics

### 2.1 OPERATING CONDITION RANGE

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
T <sub>amb</sub>	Ambient Temperature	-	-10	25	70	°C
VDD	DC Supply Voltage	DVSS = 0V	22,8	24	26,2	V

**Tabelle 1: Operating Condition Range**

### 2.2 CURRENT CONSUMPTION

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
I <sub>DVDD</sub>	Supply Current	Idle, RF off	-	130	-	mA
I <sub>DVDD</sub>	Supply Current	Idle, RF on	-	240	400	mA

**Tabelle 2: Current Consumption**

### 2.3 ETHERNET INTERFACE CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITL
LAN	Ethernet Connection	-	-	10 / 100	-	MBit

**Tabelle 3: Ethernet Characteristics**

Note: The FCC and CE certification are only valid when the Ethernet Cable is equipped with the shielding components (Cat.5 and above).

### **3 Electromagnetic Compatibility**

The MB RFID 1120 READER fulfils the following requirements of electromagnetic compatibility:  
FCC, Part 15 and CE

#### **3.1 FCC COMPLIANCE STATEMENT**

NOTE:

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.**

#### **Caution!**

The Federal Communications Commission (FCC) warns the users that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### **3.2 COMPLIANCE INFORMATION ACCORDING TO 47CFR 2.1077**

We,

**Muehlbauer AG  
Josef-Muehlbauer-Platz 1  
93426 Roding, GERMANY  
Telephone +49 9461 9520**

declare that the product

**MB RFID 1120 READER  
FCC ID XJPMBRFID1120001**

is in conformity with Part 15 of the FCC Rules.

Operation of this product is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC §15.105 (b):

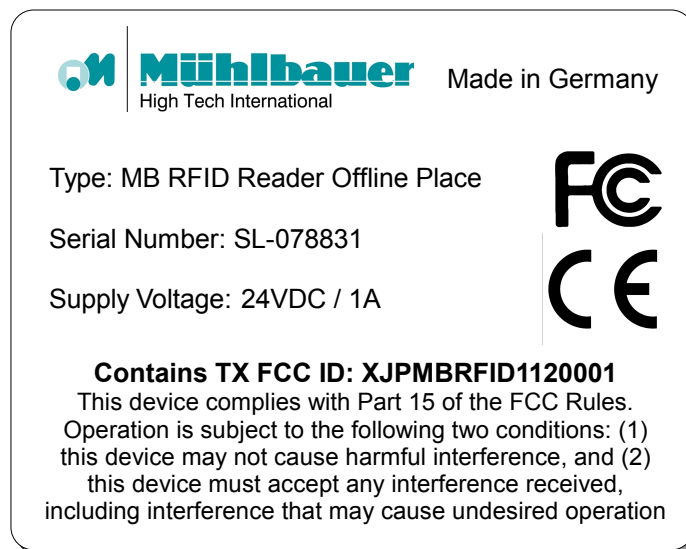
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### 3.3 EXAMPLE OF FCC LABEL

Use a label to show that a FCC compatible device is inside the final application. This label is only necessary if the device is mounted in an invisible place.

Example of this Label:



### 3.4 CE DECLARATION OF CONFORMITY

This Information Technology Equipment has been tested and found to comply with the following European directives:

Harmonised Standards applied	Description

Manufacturer's Name: Muehlbauer AG

Manufacturer's Address: Josef-Muehlbauer-Platz 1, D-93471 Roding, Germany

Type of Equipment: Contactless Smart Card Reader

Model No.: MB RFID 1120 READER

Muehlbauer AG hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s), and said equipment is in conformity with the relevant harmonised standards as mentioned above.

## 4 Revision History

Date	Revision	Description	Autor
25.03.10	0.1	Document Draft	Robert Janich

**Tabelle 4: Document Revision History**