Operation Manual

RFID Reader “IDE-XG-MUL-USB”

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Covered Variants:

10090-3x[1]-y[1]
10090-300
10090-330
IDE-XG-MUL-USB
IDE-XG-MUL-iClass-USB

[1] “x“ and “y”shall represent any numerical number.

Introduction

The “10089-3XY” Reader/Writer is a desktop contactless smart card USB reader and writer combining the high- and low frequency technologies. It supports Mifare, ISO 14443A/B and ISO 15693 standards as well as all major 125KHz-based transponders.
Based on BALTECH’s core technology it provides support of the latest smartcard technologies, encryption and security features.

Mounting and Connection

The reader generates a magnetic field at 13.56MHz and at 125 KHz frequencies which could be influenced by any electrically conductive material close to the device.
To ensure good performances and functionalities in terms of read range and reliability a minimum distance of 10cm from such materials is required. Mounting the unit directly to metal would result in a severe reduction of read range down to zero functionality. Care should be taken when testing the device after mounting at a problematic environment: Read ranges and performance vary from card to card and very much from card to tag or key-fob.

When mounting multiple readers, the distance between readers should be minimum 0.5 m in order to avoid degradation of performance due to interference.

To connect the device to a host system (a printer or a PC), please make sure that the system provides an USB socket intended for connection of the reader.

Operation

Whenever the device is connected to a proper power supply, it will switch on the internal antenna and periodically scan for a card. Once a card has been detected, the card number is read, the data converted and sent to the host system through the USB Interface. To enable the device to read cards, tags and key-fobs successfully, they should be placed centred above the reader.

Technical Features

Parameters		Descriptions
RF-Characteristics	Operated Frequencies	13.56MHz & 125KHz
	Data transmission modulation reader to card:	ASK
	Data transmission modulation card to reader:	AM/Load modulation
Interfaces	Host	USB: Full speed 2.0
	Contactless	Supported standards: ISO14443 A & B, ISO15693, Communication speed ISO14443A/B: Baud rate up to 424kBaud Reading distance : Up to 9 cm- depending on tags and antenna
	Human	LEDs, Buzzer
Power	Supply [V_{DC}]	USB bus powered: 5 (±5%)
	Consumption [W]	Up to 1.0 / 0.75 typ.
Temperature	Operating [°C]	-20 to +65
	Storage [°C]	-25 to +85
Humidity	Operating[%]	20 to 80 relative humidity; non condensing
	Non Operating [%]	10 to 90 relative humidity; non condensing

Pinout 4-Pin USB-A plug and Signal Descriptions

Pin	Name	Type	Description
1	PWR	Power	5V Power Supply
2	D-	Output	USB-Data inverted
3	D+	Input	USB-data
4	GND	Power	Signal and Power Ground

General regulatory requirements

FCC ID OKY10089300A03B
IC: 7657A- 10089300

NOTICE:
This device complies with Part 15 of the FCC Rules and with Industry Canada licence-exempt RSS standard(s).
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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications made to this equipment not expressly approved by BALTECH AG may void the FCC authorization to operate this equipment.

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.