



User Manual

RFID Snap On Module

RFID LF Reader

RFID HF Reader

RFID UHF (EU) Reader

RFID UHF (US) Reader

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Reservation: Technical data subject to change without notice. Changes, errors and misprints may not be used as a basis for any claim for damages.

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1. Basic Safety Instructions

1.1 Notes on this manual



Please read carefully before commissioning the devices..

The user manual is a constituent part of the product. It must be kept in the direct vicinity of the device and accessible at all times to installation, operating and maintenance personnel.

It contains important notes, safety instructions and test certificates which are necessary for perfect functioning when the devices are being operated and handled.

The user manual is written for all people who carry out assembly, installation, commissioning and maintenance work on the product, whereby the directives and standards applicable to areas with a gas or dust atmosphere (99/92/EC, EN 60079-17, EN 60079-19, IEC 60079-17, IEC 60079-19) must be observed when doing such work.

Familiarity with and strict adherence to the safety instructions and warnings in this manual are essential for safe installation and commissioning. Careful handling and consistent observation of these instructions can prevent accidents, personal injuries and damage to property.

The illustrations in these operating instructions serve to make the information and descriptions more clear. They are not necessarily true to scale and may deviate slightly from the actual construction of the device.

Safety instructions and warnings are specially highlighted in this manual and marked by symbols.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

ATTENTION

ATTENTION identifies a potentially damaging situation which, if not avoided, could damage the equipment or something in its environment.



Important instructions and information on effective, economical and environmentally compatible handling.

2. Warnings for Use of Wireless Devices

Please observe all warning notices with regard to the usage of wireless devices.

2.1 Radio Frequency Interference Requirements - FCC

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.

FCC Note according to 15.21

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radio Transmitters (Part 15)

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.

2.2 Radio Frequency Interference Requirements - Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radio Transmitters

This device complies with RSS 210 of Industry & Science Canada. 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.

Label Marking: The Term "IC:" before the radio certification only signifies that "Industry Canada" technical specifications were met.

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.

3. Product Description

Available for:

- Industrial Environment
- ATEX/IECEx Zone 2 and Zone 22
- UL Class I, II, III Division 2



3.1 Operation

3.1.1 Exclusive Purpose

The RFID Snap On Module is a accessory. The modules read and write data on RFID tags in industrial and hazardous locations.

It is used exclusively in combination with operating devices which satisfy the requirements for overvoltage category I.

3.1.2 Site of Operation

The **RFID Snap On Module type G7-A0Z0-....**, has been modified for use in following environment:

- Industrial environment outside of hazardous location

The **RFID Snap On Module type G7-A0Z0-....**, may not be used in locations of:

- Hazardous location

The **RFID Snap On Module type B7-A2Z0-....**, has been modified for use in following environment:



- ATEX/IECEX Zone 2 and Zone 22
- UL Class I Division 2 Groups A, B, C and D
- UL Class II Division 2 Groups F and G
- UL Class III


The **RFID Snap On Module type B7-A2Z0-....**, may not be used in locations of:

- ATEX/IECEX Zone 0
- ATEX/IECEX Zone 1 and Zone 21
- UL Class I Division 1
- UL Class II Division 1

4. Technical Data

4.1 Certification

For hazardous location	
Type	B7-A2Z0-0020 B7-A2Z0-0021 B7-A2Z0-0022 B7-A2Z0-0023
Ex protection type ATEX	 II 3G Ex ic IIC T6 Gc  II 3D Ex ic IIIC T80°C Dc
Ex protection type UL	Class I Division 2 Gruppen A, B, C and D Class II Division 2 Gruppen F and G Class III
Ambient temperature	$-20\text{ °C} \leq T_a \leq +50\text{ °C}$
Temperature class	T6
Certification ATEX	xxxx
Certification UL	xxxx

For industrial environment	
Type	G7-A0Z0-0001 G7-A0Z0-0002 G7-A0Z0-0003 G7-A0Z0-0004
Protection type	
Ambient temperature	$-20\text{ °C} \leq T_a \leq +50\text{ °C}$
Temperature class	T6
Certification	xxxx

4.2 Characteristics

4.2.1 Physically Characteristic

Dimensions	Length x width x depth	
	80 x 61 x 31 mm	3,15 x 2,4 x 1,22 inch
Weight	approx. 75 g	approx. 0,165 oz

4.2.2 User Environment

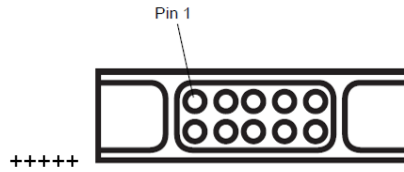
Ambient temperature	-20 °C up to +50 °C	-4 °F up to +122 °F
Storage temperature	-40 °C up to +70 °C	-40 °F up to +158 °F outside of hazardous location
Humidity	5 % up to 95 % (non-condensing)	
Protection type (EN 60529)	IP 54 (with adapter plate)	

4.2.3 Supported RFID Standards

LF Reader Type: B7-A2Z0-0020 Type: G7-A0Z0-0001		HF Reader Type: B7-A2Z0-0021 Type: G7-A0Z0-0002	UHF EU und US Reader Type: B7-A2Z0-0022 Type: B7-A2Z0-0023 Type: G7-A0Z0-0003 Type: G7-A0Z0-0004
HITAG S256	ISO 117845	ISO 14443 (z.B. Mifare Ultralight)	EPC Gen 2
HITAG S 2 kb	ISO Animal		
HITAG 1	ISO 11784/5		
HITAG 2	EM 4450/4550		
Q5	EM4xxx (UNIQUE)	ISO 15693	
ATA5567	HDX -RO		
EM4305	HDX (Multipage)		
BDE	FDX-B		

4.3 External Interface

Pins on the connector:



PIN	Description	PIN	Description
1	Ground	6	USB_DPin
2	Reserved	7	USB_D+
3	5.4 VDC	8	USB_Vbus
4	Cradle_Detect	9	Reserved
5	Power Gnd	10	USB_ID

4.4 Product Marking

Type number	Marking for ex proofed Version Type: B7-A2Z0-...	Marking for Industrial Version Type: G7-A0Z0-....
Type: B7-A2Z0-0020 Type: G7-A0Z0-0001		
Type: B7-A2Z0-0021 Type: G7-A0Z0-0002		
Type: B7-A2Z0-0023 Type: G7-A0Z0-0003		
Type: B7-A2Z0-0022 Type: G7-A0Z0-0004		

5. Commissioning and Operation

DANGER

**Avoid electrostatic charge inside of hazardous location.
There is a risk of fatal injury in an explosive atmosphere!**

- ▶ Don't dry clean or wipe.
- ▶ Wear suitable clothes and shoes.
- ▶ Don't use rubber gloves.

DANGER

**Inproper use is a risk for the explosion protection.
There is a risk of fatal injury in an explosive atmosphere!**

- ▶ The user may not make any alterations to the module.
- ▶ If a function error or a damage on the enclosure occurs then bring the device with the module immediately outside of the hazardous location and switch it off.

DANGER

**Not certified accessories are a risk for the explosion protection.
There is a risk of fatal injury in an explosive atmosphere!**

- ▶ Use only original accessories from BARTEC.

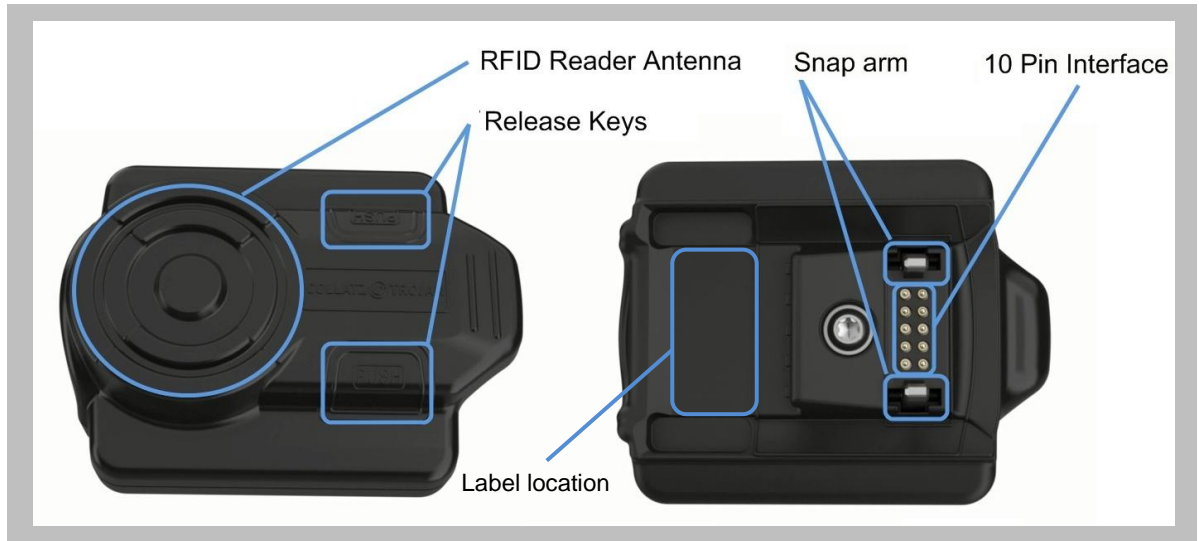
Only allowed outside of the hazardous location:

- ▶ Snap on, release and remove of the module

5.1 Requirements inside of hazardous location

- Don't open it!
- Don't use, change or replace not specified!
- Protect the device from impact effects!
- Do not expose the equipment to any caustic/aggressive liquids, vapours or mist!
- Avoid the effects of moisture!
- Avoid the influence of heat that is outside of the specified temperature range!
- Snap on of the 10-pin data interface is only permissible outside the hazardous area and only with devices specified by the manufacturer!

5.2 Composition



6. Order Number

6.1 RFID Snap On module for hazardous location

Order number:	Version:	Type:	Frequency range:
B7-A2Z0-0020	Ex	RFID LF Reader	125 kHz / 134 kHz
B7-A2Z0-0021	Ex	RFID HF Reader	13,56 MHz
B7-A2Z0-0022	Ex	RFID UHF (US) Reader	902 up to 928 MHz
B7-A2Z0-0023	Ex	RFID UHF (EU) Reader	865,6 up to 867,5 MHz

6.2 RFID Snap On Module for industrial environment

Order number:	Version:	Type:	Frequency range:
G7-A0Z0-0001	Industry	RFID LF Reader	125 kHz / 134 kHz
G7-A0Z0-0002	Industry	RFID HF Reader	13,56 MHz
G7-A0Z0-0003	Industry	RFID UHF (EU) Reader	865,6 up to 867,5 MHz
G7-A0Z0-0004	Industry	RFID UHF (US) Reader	902 up to 928 MHz

7. Compliance Information Statement

Compliance Information Statement (Declaration of Conformity Procedure)

Responsible Party:

BARTEC US Corp

Address:

600 Century Plaza Drive
Suite C160
Houston, TX 77073
USA

Telephone:

+ 1 281 214 8542

Type of Equipment:

RFID Snap On Module
Type B7-A2Z0-0020, -0021 and -0022 and
G7-A0Z0-0001, -0002 and -0004



Model Name:

RFID LF Snap On Module

RFID HF Snap On Module

RFID UHF (US) Snap On Module

FCC ID: TBULFG2

FCC ID: TBUHFG2

FCC ID: TBUUHF2