Explorer Series

Model: EP20CQ / CKQ

All Weather Outdoor Multi-tech Smart Reader

Quick Start Guide
Version1.0

www.armatura.us

The EP20C series reader is one of the most compact multi-frequency RFID readers available that supports over 100 RFID card types and both NFC and Bluetooth Low Energy credentials. Installs on Single-Gang, European-standard gang box and Asian standard boxes to fit all kinds of installation environments.

Parts Included

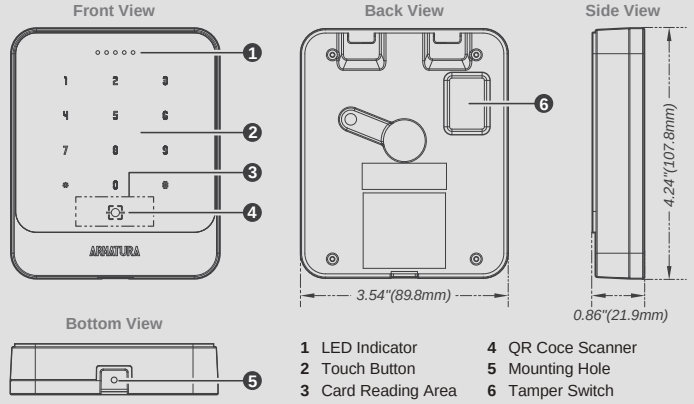
Make sure your box contains everything listed. If any pieces are missing, contact your dealer. Please save the original box and packing materials if you ever need to ship your device.

- Explorer Series - EP20C/CK/CQ/CKQ Reader (1pc)
- Quick Start Guide (1pc) and Mounting Template (1pc)
- Mounting Plate (1pc)
- Screwdriver (1pc)
- Grub screw/Countersunk KA3.6 x 1.57 inchs (40mm) self – tapping screws (4pcs) and Anchors (4pcs) – for mounting directly to a wall (no junction box)
- Torx screw TM3 x 0.24 inches (6mm) (1pc) – for fixing the reader to the mounting plate

Recommended Parts(not supplied)

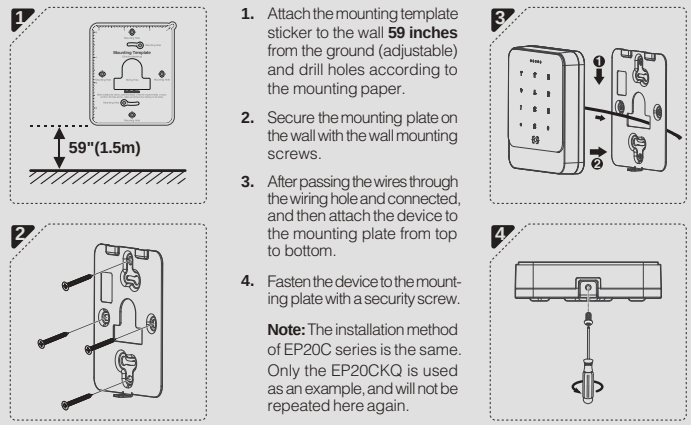
- Cable
  5-10 conductor (Wiegand)
  4 conductor Twisted Pair Over-All Shield and UL approved, Belden 3107A or equivalent (OSDP)
- Certified LPS DC power supply
- Metal or plastic junction box
- Drill with various bits for mounting hardware
- Mounting hardware

1 Product Overview



1 LED Indicator
2 Touch Button
3 Card Reading Area
4 QR Coce Scanner
5 Mounting Hole
6 Tamper Switch

2 Install The Reader On The Wall



1. Attach the mounting template sticker to the wall **59 inches** from the ground (adjustable) and drill holes according to the mounting paper.
2. Secure the mounting plate on the wall with the wall mounting screws.
3. After passing the wires through the wiring hole and connected, and then attach the device to the mounting plate from top to bottom.
4. Fasten the device to the mounting plate with a security screw.

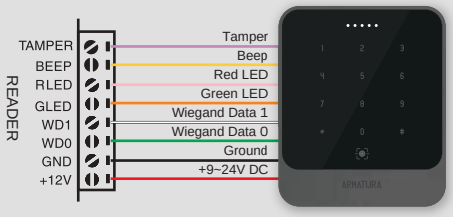
Note: The installation method of EP20C series is the same. Only the EP20CKQ is used as an example, and will not be repeated here again.

3 Reader Connection

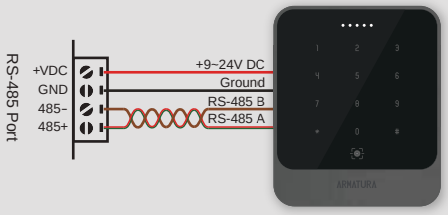
The EP20C series can communicate with the control panel via either RS-485 (OSDP) or Wiegand.

Pigtail	Description
Red	+9~24V DC
Black	Ground
Red/Green	RS-485 A
Brown	RS-485 B
Bare	Drain
Green	Wiegand Data 0
White	Wiegand Data1
Orange	Green LED Input
Pink	Red LED Input
Yellow	Beep Input
Violet	Tamper

1. Connection via Wiegand.



2. Connection via RS-485 (OSDP).



4 Using And Testing The Reader



Power the reader on, the reader will beep and the LED's will flash.

Present the card face-on to the reader until you hear a "beep". Reader is now working correctly.

5 Frequency Bands And Maximum Output Power

Frequency bands	Maximum output power
2402MHz - 2480MHz	7.08dBm
125kHz	-24.83dBuA/m@10m
13.56MHz	4.21 dBuA/m@10m

6 Certificate Information

ARMATURA

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7 Explorer Series Dimensions

Specifications		
Explorer Series		
Internal Number	EP20CQ	EP20CKQ
Operating Frequency / Standards	125 kHz 13.56 MHz: ISO14443A types A & B, ISO15693 2.4 GHz Bluetooth®	
Functions	RFID, Bluetooth® and QR code	
Keypad	N/A	Touch Keypad
QR Code Scanner	Supported	
QR Code Scaning Pattern	Area image (648*488 pixel array)	
QR Code Scan Angle	Horizontal: 66°/ Vertical: 50°	
QR Code Scanning Print Contrast	Print Contrast: 25% minimum reflectance difference Rotation, Pitch, Skew: 360°, +/-40°, +/-60°	
QR Code Capability	**One-Dimensional Code:** UPC-A , UPC-E, UPC-E1, EAN-8, EAN-13,EAN-14, EAN-128, UCC128, ISBN/ISSN, CODE11, CODE32, CODE39, CODE39 Full ASCII, CODE93, CODE128, Interleaved 2 of 5 code, Industrial 2 of 5 code,Matrix 2 of 5 code, Toshiba code, UK/Plessey, GS1 **Two-Deimensional Code:** QR code, PDF417, Data matrix, MicroPDF417, Aztec	
QR Code Scanning Performance*	Narrow Width 6.0 mil (Code128) 9.0 mil (Code128) 15.0 mil (Code128) 20.0 mil (Code128) 6.0 mil (QR) 9.0 mil (QR) 15.0 mil (QR) 20.0 mil (QR)	Depth of Field 2.0"-3.1" (5cm-8cm) 2.0"-4.7" (5cm-12cm) 2.3"-7.7" (6cm-19.5cm) 2.3"-9.8" (6cm-25cm) 2.0"-2.3" (5cm-6cm) 2.0"-3.5" (5cm-9cm) 2.0"-6.3" (5cm-16cm) 2.3"-7.9" (6cm-20cm)
Dimensions	3.54" W x 4.24" H x 0.86" D (89.8 x 107.8 x 21.9mm)	

8 FCC + CE

"Hereby, Armatura LLC declares that this Product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

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.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

"This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with a minimum distance of 7.87 inches (20cm) between the radiator and your body.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."