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# FDD-LTE Integrated eNodeB Engineering Installation Guide (ZXSDR BS8922)

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## Content

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## Safety Information

The following describes personal health and safety information when you work with ZTE system products. To prevent accidents, read the safety information provided in this document carefully before using ZTE system products.

- Local regulations supersede the information provided in this manual. Where applicable local regulations are unavailable, the information herein prevails.
- All personnel must be equipped with the knowledge of safety operations, technical training, and corresponding qualifications certified by ZTE CORPORATION. For some operations, they may need special trainings or qualifications certified by ZTECORPORATION.

## Safety Symbols

|  |   |
|--|---|
|   | Electrical Hazard: There is a risk of electric shock.                               |
|   | Laser Hazard: Beware of strong laser beams. Do not look directly at the laser beam. |
|  | Heat Hazard: Beware of heat sources or hot surfaces that can cause burns.           |

## Personal Protection

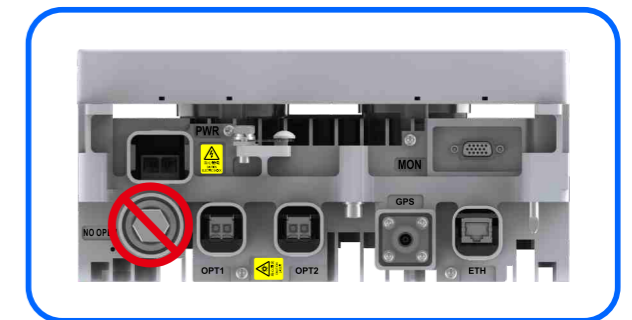
- Remove items of jewelry, such as rings, necklaces, and watches. These items may get entangled with moving parts. Metal jewelry items are conductors that can result in electric shock.
- Always wear appropriate personal protective equipment when working.
- Pay attention to the hazard labels and caution or warning information on products. Never cover or remove the hazard labels and caution or warning information.
- Only use the tools described in the instructions.

## Installation Security

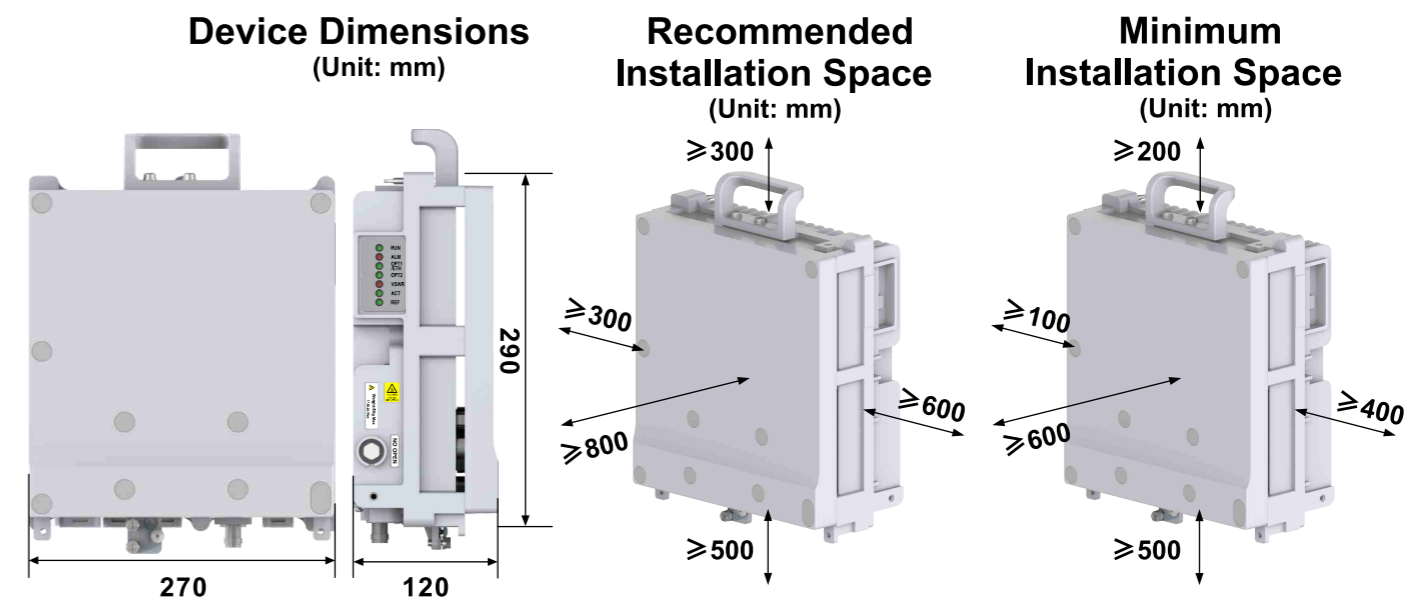
- All personnel working at height must be specially-trained and certificated. Working at height must comply with local laws, regulations, and guidelines.
- The device is heavy. Lifting the device without using a lifting device can result in serious personal injury.
- Do not work at height or iron tower in bad weather such as rain or fog.
- Falling objects can result in serious or even fatal injuries. Always wear a safety helmet. Never stand or walk under any heavy object that is being lifted.
- Incorrect electrical installation can result in fire, electric shock, or explosion that is likely to be fatal. Only qualified electricians are allowed to install or modify electrical installations.
- It is recommended that fibers be installed in a temperature higher than  $-20^{\circ}\text{C}$ .
- Switch off transmitting antennas, or reduce their output power to a safe level when working with, or staying near, these antennas.

## Installation Precautions

- Never open the hermetic seal before or after the installation.
- The RRU body is applied with antirust coating. Make sure that the coating is not damaged during transportation and installation.
- Do not install the device with interfaces facing upwards.
- Do not install the device horizontally.



## Space Requirement



Note: For mounting multiple RRUs on a pole or centralized mounting, the spacing between RRUs depends on the mounting components.

## Hoisting

The information provided in this section is used for reference when it is necessary to hoist the RRU.

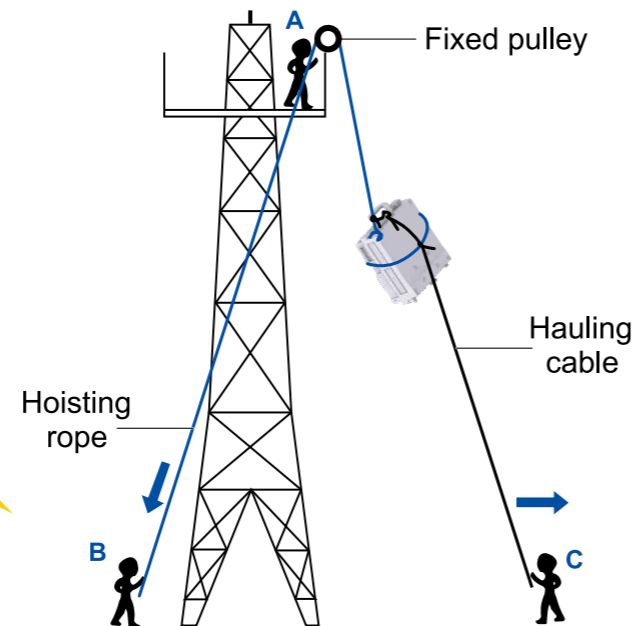
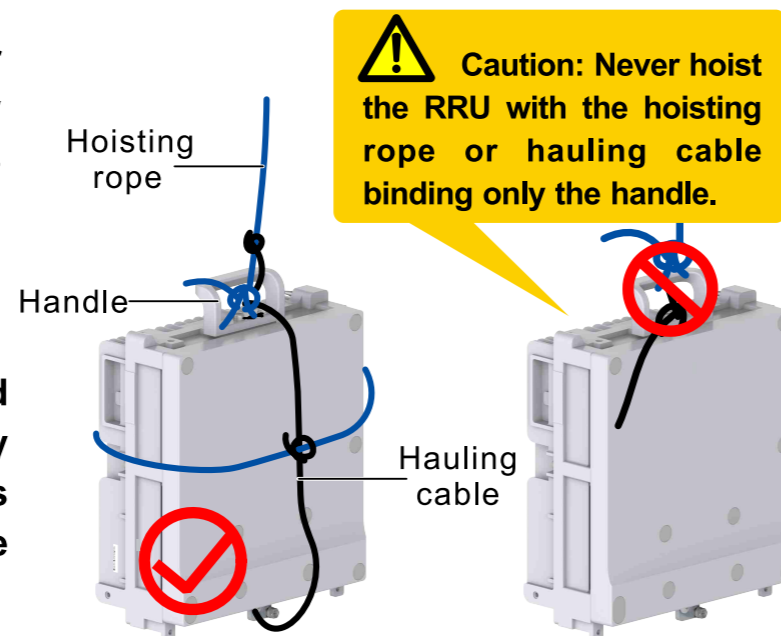
| Operation     | Tools         |
|---------------|---------------|
| Hoist the RRU | Safety helmet |
|               | Life belt     |
|               | Fixed pulley  |
|               | Hoisting rope |
|               | Hauling cable |

**1** Installer A on the tower secures the fixed pulley on the tower, and passes the hoisting rope down to the ground through the fixed pulley.

**2** Installer C on the ground bundles the RRU tightly with a cross tie and passes the rope through the handle.

**3** Installer B on the ground drags the hoisting rope downwards. Meanwhile, installer C pulls the dragline outwards to protect the device from colliding with the tower when the device reaches the installation platform.

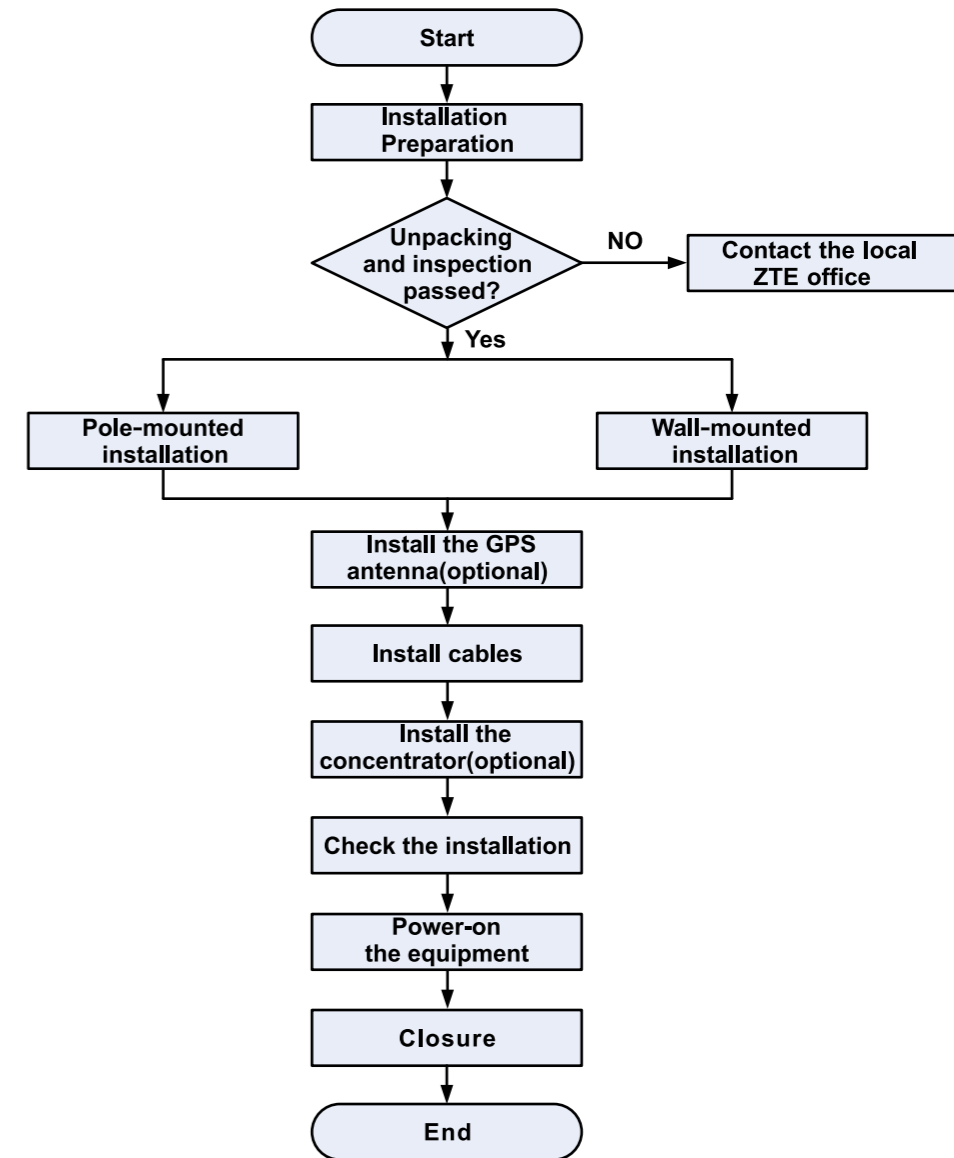
**Caution:** Installer A on the tower cannot loosen the fixed rope until he confirms that the device is securely placed on the tower platform.



**5**

**4** Lift the properly-packed engineering materials used for tower mounting onto the tower in the manner mentioned above. Never lift the engineering materials by binding them directly to the hoisting rope.

## Installation Flow




## Installation Preparation

### Tools and Instruments






Illustrates the tools and instruments required for the installation:

**6**

|   |   |   |  |   |   |
|---|---|---|--|---|---|
|    |    |    |    |    |    |
| claw hammer   | snap-off knife  | safety glove  | safety helmet  | tape measure  | level ruler   |
|    |    |    |    |    |    |
| rope  | pulley  | Safety harness  | marker pen   | percussion drill  | vacuum cleaner  |
|    |    |    |    |    |    |
| power strip   | cross screwdriver   | flathead screwdriver  | open-end wrench  | adjustable wrench   | pliers  |
|  |  |  |  |  |  |
| diagonal pliers   | slip joint pliers   | multifunctional press pliers  | hydraulic crimper  | hot-air blower  | coaxial cable stripper  |
|  |  |  |  |  |  |
| hacksaw   | file  | pipe wrench   | scissors   | Ethernet cable crystal-connector crimper  | cable tie   |
|  |  |  |  |  |  |
| waterproof tape   | insulating tape   | network tester  | grounding resistance tester  | multimeter  | VSWR tester   |

## Installation Accessories

Illustrates the installation accessories.

| Name  | Angle adjustment installation component   | Clamp (used in pole-mounted installation mode)                                      | Expansion bolt (used in wall-mounted installation mode)                             | GPS antenna installation component (optional)                                       | Power cable crimping tool   |
|-------|---|---|---|---|---|
| Image |  |  |  |  |  |

## Unpacking and Inspection

### Counting Goods

The packing boxes for the ZXSDR BS8922 include crates and cartons.

### Step

1. Verify that the packing boxes are in good condition. If any is broken, contact the transportation company immediately.
2. Unpack the packing boxes and verify that the goods are consistent with the packing list.

### Checking Goods

Check the ZXSDR BS8922 and verify that:

1. There are no dents, bumps, peeling, scratches, foaming, paint stripping, or blots on the case.
  2. The case surface is in good condition, without problems such as lacquer flaking off and scoring.
  3. All captive screws are tightly secured without dislocation.
  4. The accessories required for the installation are correct and complete.
- Arrange the inspected goods in accordance with categories.

### Equipment Handover

1. After the goods are inspected, the project supervisor and the customer representative must approve and sign the Unpacking Acceptance Report.
2. Each party keeps one copy of the Unpacking Acceptance Report. The project supervisor should, within seven days, send the Unpacking Acceptance Report to the local ZTE office for filing.



Caution: In case of goods shortage, overplus, damage, in arrears, or wrong distribution, installation personnel must stop unpacking immediately, fill in the Unpacking Acceptance Feedback Table, and contact the local ZTE office immediately for proper handling.

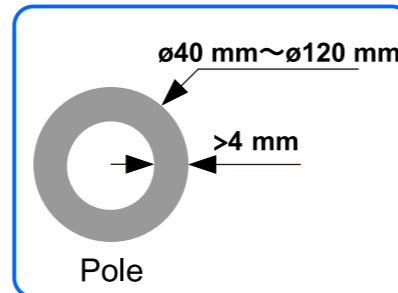
### Media Requirement

### RRU Installation Modes

Illustrates the ZXSDR BS8922 installation modes.

| Installation Mode | Pole-mounted installation | Wall-mounted installation |
|-------------------|---------------------------|---------------------------|
| Image             |                           |                           |

#### Single-RRU Mounting



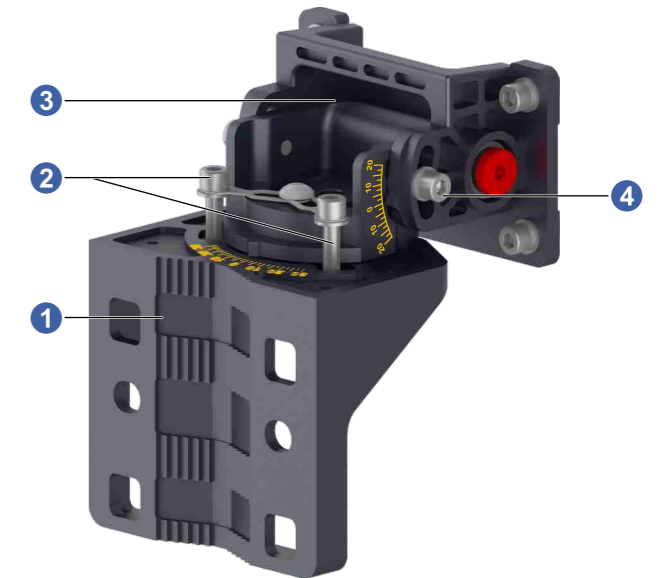
### Installing the ZXSDR BS8922 on a Pole

#### Installation Tools

| Operation   | Tool                         |
|---|------------------------------|
| Install the installation bracket on the ZXSDR BS8922. | M6 internal hexagonal wrench |
| Secure the vertical fastening screws.                 | M6 internal hexagonal wrench |
| Secure the bracket fastening screws.                  | M6 internal hexagonal wrench |

### Angle Adjustment installation Component

- ① Fixing clip
- ② Installation bracket and fastening screws
- ③ Installation bracket
- ④ Vertical fastening screws

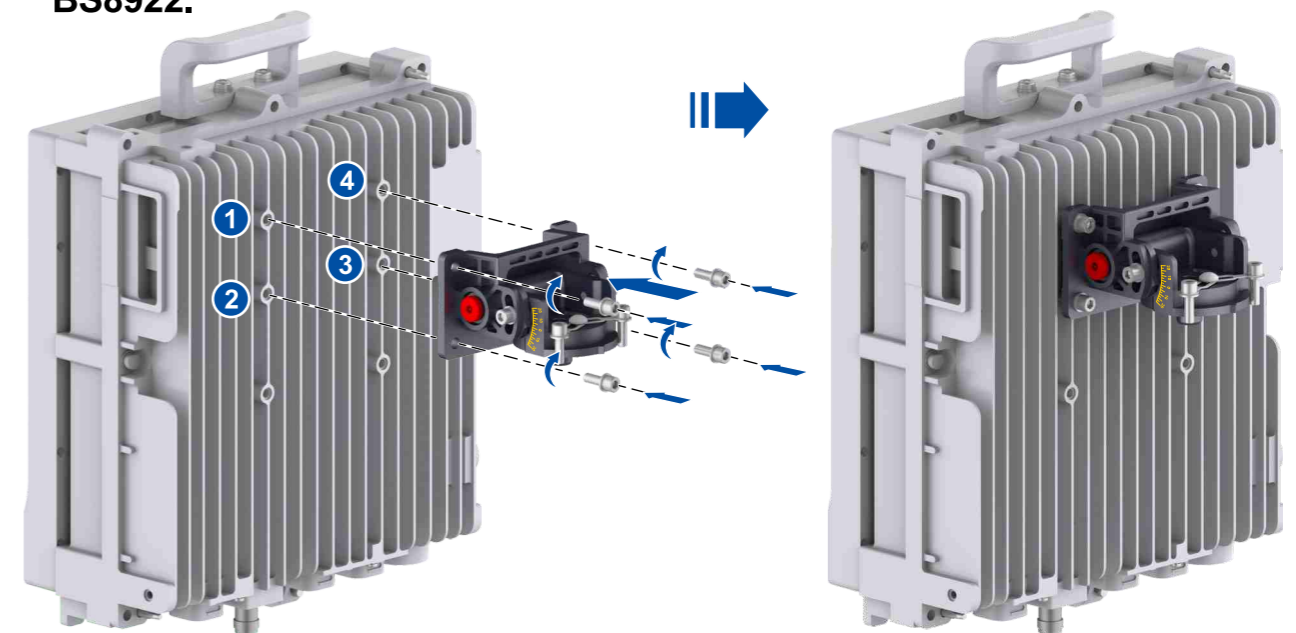


#### Steps



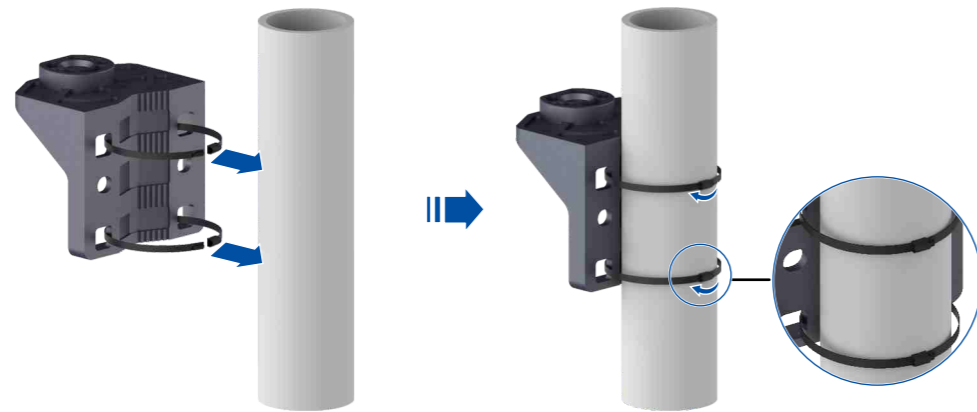
Clamps are used in pole-mounted installation mode. The pole diameter is between 40 mm and 120 mm.

**1** Use four M6×20 screws to install the installation bracket on the ZXSDR BS8922.

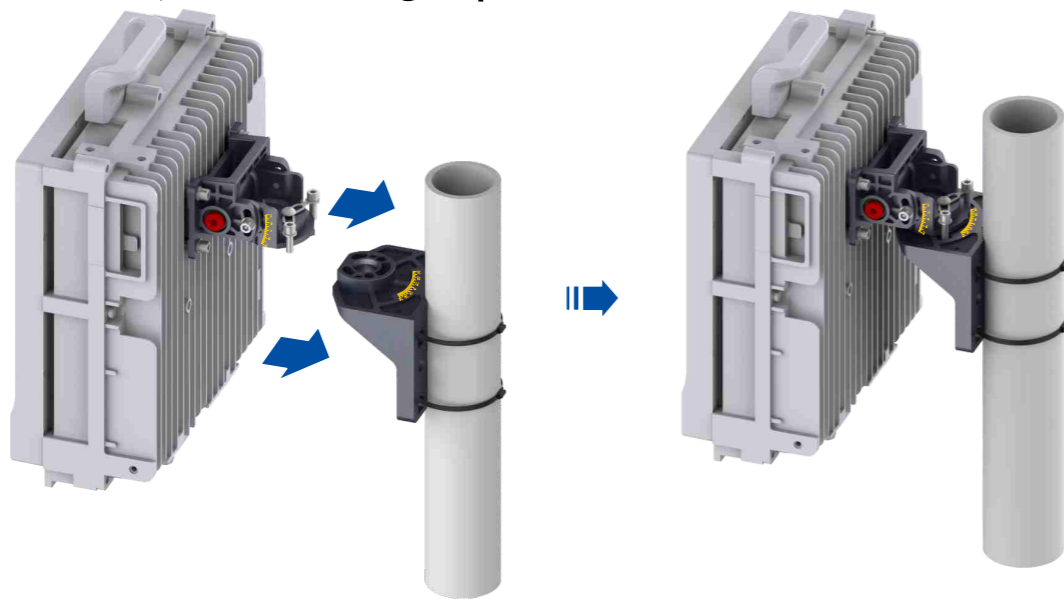


Note: When installing the M6×20 screws, first fasten the screws about 70% of the depth, then fasten the screws in accordance with the diagonal sequence.

**2** Use clamps to install the fixing clip on the pole.



**3** Mount the ZXSDR BS8922, on which the installation bracket is installed, on the fixing clip.



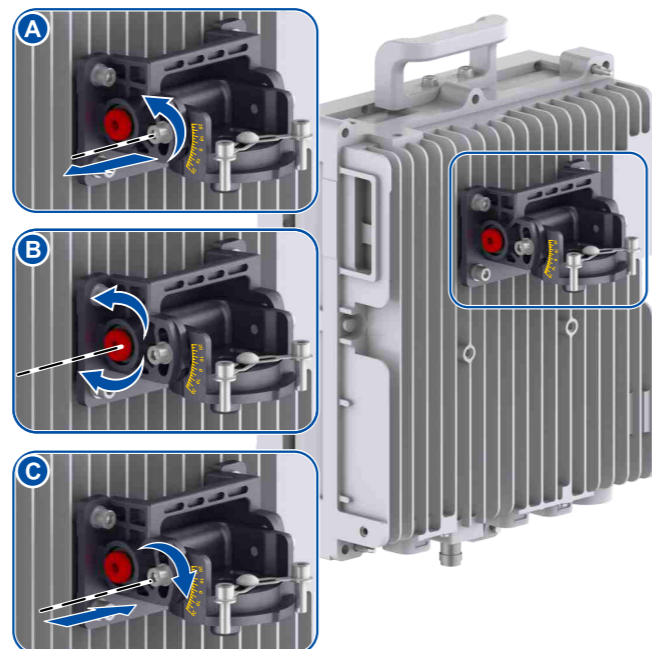
**4** Adjust the vertical angle of the ZXSDR BS8922.

Note: The angle between the ZXSDR BS8922 and the pole must be between 0° and 20°.

**a** Loosen the vertical fastening screws until the ZXSDR BS8922 can be adjusted vertically.

**b** Adjust the vertical angle of the ZXSDR BS8922.

**c** Secure the vertical fastening screws.



**5** Adjust the horizontal angle of the ZXSDR BS8922.



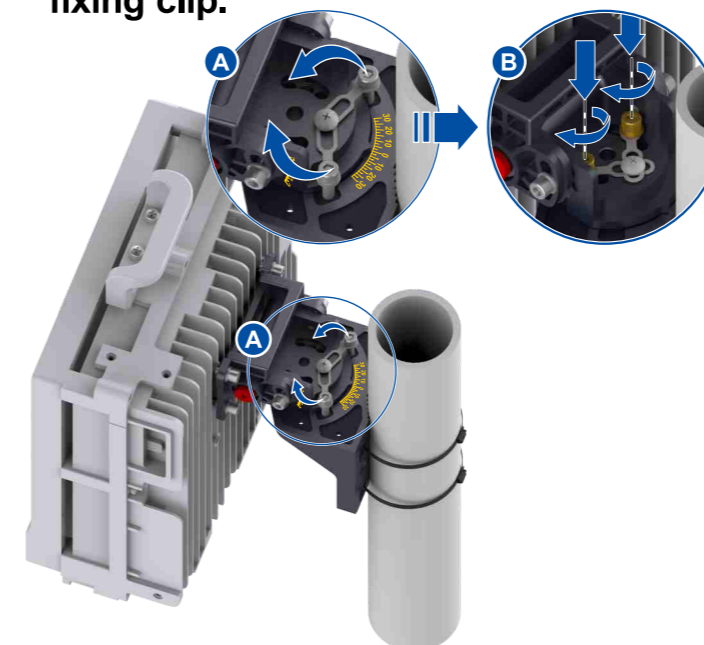
Note: The horizontal angle adjustment range for the ZXSDR BS8922 must be between -30° and 30°.

**a** Adjust the horizontal angle of the ZXSDR BS8922.



**b** Secure the two screws of the installation bracket on the fixing clip.

**6** ZXSDR BS8922 Installed on a Pole.



**Installing the ZXSDR BS8922 on the Wall**  
Installation Tools