

# U-Series Air Circuit Breakers

Instruction Manual



#### Type covered in this manual

- UAN Type : UAN06, UAN08, UAN10, UAN12, UAN16, UAN20, UAN25, UAN32, UAN40, UAN50
- UAS Type : UAS06, UAS08, UAS10, UAS12, UAS16, UAS20, UAS25, UAS32

#### Notice

- Read this instruction manual carefully before using this Air Circuit Breaker.
- This instruction manual does not include all information regarding installation and maintenance.
- For further information, please contact Hyundai Heavy Industries (HHI) or your local dealer.

## For Operational Safety of Air Circuit Breakers

### Safety Practices

This instruction manual applies only to U-Series air circuit breakers (ACB) regarding installation and maintenance procedures. Installing and maintaining these products improperly may result in serious personal injury, property damage, or even death. Therefore this instruction manual must be read and understood at any step in unpacking, assembly, operation, and maintenance of the breaker. Only qualified persons who are familiar with installing and maintaining circuit breakers are permitted to work on breakers, and this instruction manual should be accessible to those persons at any time.

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### Signal Words

Signal words used in this instruction manual are divided by DANGER, WARNING, and CAUTION depending on the situation.

#### DANGER

Indicates an imminently hazardous point that, if ignored, a serious accident causing death or severe injury could occur. This is the most dangerous point.

#### WARNING

Indicates a potentially hazardous point that, if ignored, a serious accident causing death or severe injury could occur.

#### CAUTION

Indicates a potentially hazardous point that, if ignored, minor or moderate injury could occur. This signal reminds operators to work safely.

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### Transportation Precaution

#### DANGER

Never lift the ACB over an area where there are people.  
**Naver stand under the ACB.**

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### OCR Field Test Precautions

#### CAUTION

- OCR field tests and setting changes must be performed by qualified personnel.
  - After completion of OCR tests, make sure to return the original values.
  - Failure to do may cause a fire or burnout.
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### Operation Precautions

#### DANGER

- Never touch live terminal parts.  
**There is a risk of electric shock.**
- Do not leave the ACB in the draw-out position.  
**Dropping the ACB cause serious injury.**

#### CAUTION

- If the ACB trips open automatically, remove the cause before closing the ACB.  
**Otherwise, a fire could occur.**
  - For the ACB with the fixing block, be sure to loosen the block screws before drawing out the ACB.  
**Otherwise, damage to the ACB may occur.**
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## Installation Precautions

### CAUTION

- Installation work must be performed by qualified personnel.
- Prior to commencing any installation work, open an upstream circuit breaker to shut off all sources of power.  
**Otherwise, electric shock may occur.**
- Tighten terminal bolt up securely to the specified torque.  
**Otherwise, a fire may occur.**
- Fix the draw-out cradle of the ACB firmly on a flat level surface using mounting screws.  
**Otherwise, draw-out operation may cause the ACB to fall.**
- To ensure adequate arc space (insulation distance), avoid blocking the arc gas vents of the ACB.  
**Otherwise a burn may result from high temperature arc gas.**
- Do not place the ACB in such as an area that is subject to high temperature, high humidity, dusty air, corrosive gas, vibration and shock, or other unusual conditions.  
**Mounting in such area could cause a fire, non-tripping, or malfunction.**
- Install the ACB to prevent dust, concrete powder, iron powder, and rainwater from entering the unit.  
**These materials could cause a fire or non-tripping.**
- For the ACB with four poles, connect the neutral wire of a 3-phase, 4-wire cable to the N-phase pole (on the right end).  
**Otherwise, an overcurrent may cause non-tripping resulting a fire.**

## Maintenance and Inspection Precautions

### CAUTION

- ACB maintenance, inspection and/or parts replacement must be performed by qualified personnel.
- Prior to commencing any work on the ACB, open an upstream breaker or the like to isolate all sources of power/voltage from both the primary and auxiliary circuits.  
**Otherwise, electric shock may result.**
- Prior to commencing ACB internal inspection, make sure that the ACB is open and the closing spring is released.  
**Otherwise, fingers or tools could be pinched in the internal mechanism, resulting injury.**
- Retighten the terminal screws periodically to the specified torque.  
**Otherwise, a fire could result.**
- Be sure to reinstall the arc chamber if removed.  
**Failure to do so or incorrect installation of the arc chamber may result in a fire or burn.**
- Do not touch ACB live parts (contacts in particular), or structural parts close to a live part immediately after opening the ACB to stop supplying power.  
**Otherwise, remaining heat may cause burn or residual charged voltage may cause electric shock.**
- Do not bring your hand or face close to the arc gas vent of the arc chute while the ACB is closed.  
**Otherwise, a burn may result from high-temperature arc gas blowing out of the arc gas vent when the ACB trips open.**