

Modular DIN Rail

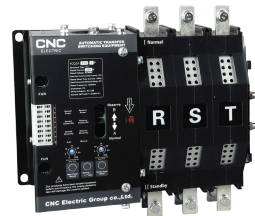
YCQ1F series excitation type Automatic Transfer Switch (ATS)



YCQ1F-63/2P



YCQ1F-63/3P



YCQ1F-250/3P



YCQ1F-630/4P

General

The YCQ1F series automatic transfer switch consists of a load isolation switch (without overload and short-circuit protection mechanism) and an intelligent controller. The switch adopts an excitation type transfer mechanism, which provides faster switching speed. It also employs a new microcomputer control system for intelligent monitoring and control, strong electromagnetic compatibility, long-term continuous operation, and stability and reliability. The split-type product can be equipped with an LCD display controller, which is easy to operate, has clear indications, and provides a user-friendly human-machine interface.

The YCQ1F series automatic transfer switch is suitable for single-phase two-wire/three-phase four-wire dual power supply networks with AC 230V/AC 400V rated operating voltage and rated current up to 630A. It is used to disconnect the load circuit from one power source and connect it to another power source. The transfer switch has self-action and optional manual operation features.

Standards: IEC 60947-6-1

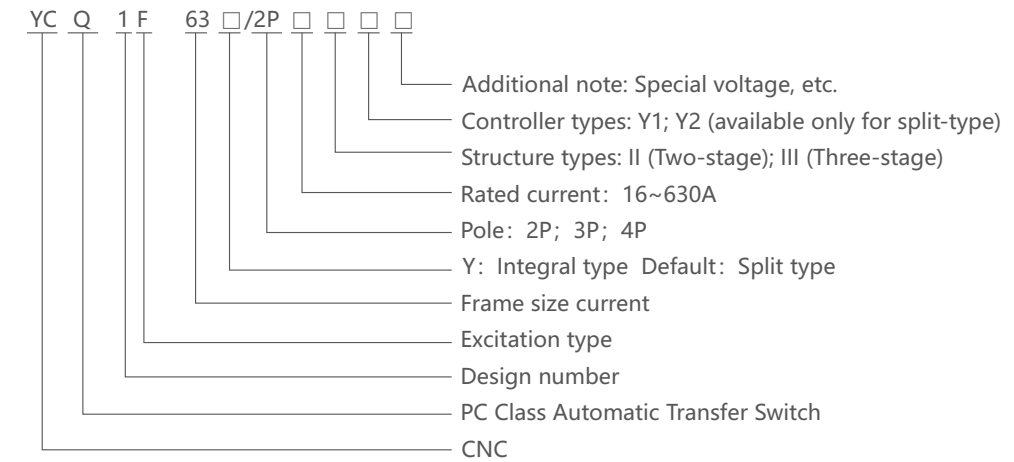
Features

The product consists of two parts: the switch body and the intelligent ATS controller. The switch body with an electrical and mechanical interlock. The product used solenoid actuate, double wire loop DC pulse operation, The operation power of the conversion controller adopts the line voltage 220V of main standby power supply.No additional control power.

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Type designation



Operating conditions

1.Ambient air temperature

Limit of temperature: -5°C~+40°C.

The average no more than +35°C within 24 hours.

2.Transportation and storage

Limit of temperature: -25°C~+60°C,

The temperature can be up to +70°C within 24 hours.

3.Altitude ≤ 2000m

4.Atmospheric condition

When the temperature is +40°C, the air relative humidity should not exceed 50%, only under lower temperature can allow for higher relative humidity. If the temperature is 20°C, the air relative humidity could up to 90%, Special measures should be taken for occasional condensation due to humidity changes.

5.Pollution level: Grade 3

6.Electromagnetic compatibility: Environment B

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Technical data

| Type | YCQ1F-63 | YCQ1F-125 | YCQ1F-250 | YCQ1F-400 | YCQ1F-630 | |
|--|--|------------|-----------------------------|---------------------|-------------|-------|
| Positions | II | | | | | |
| Insulation Voltage(V) | AC690V | | | | | |
| Rated voltage Ue(V) | AC400V | | | | | |
| Structure Type | Y: Integral type Default: Split type | | | | | |
| Pole | 2P/3P/4P | | | | | |
| Rated current(A) | 16,20,25,32,40,50,63 | 80,100,125 | 125,140,160,180,200,225,250 | 225,250,315,350,400 | 400,500,630 | |
| Rated control current (A) | 5 | | 7 | | | |
| Control power voltage (V) | AC120V/AC230V | | | | | |
| Rated short circuit current (kA) | 10 | | | | | |
| The rated impulse withstand voltage (kV) | 8 | | | | | |
| Contact transfer time (ms) | ≤50 | | | | | |
| Operating transfer time (ms) | 300-500 | | | | | |
| Usingzation Category | AC33B | | | | | |
| Auxiliary switch | I, IIpower:2normalopen;2normalclosed;Capacity:10A/AC250V | | | | | |
| Service life | Mechanical | 20000 | 20000 | 17000 | 17000 | 17000 |
| | Electric | 6000 | 6000 | 6000 | 6000 | 6000 |

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Technical data

| Type | YCQ1F-63 | YCQ1F-125 | YCQ1F-250 | YCQ1F-400 | YCQ1F-630 | YCQ1F-63 | YCQ1F-125 | YCQ1F-250 | YCQ1F-400 | YCQ1F-630 | |
|---|--|------------|-----------------------------|---------------------|-------------|--|------------|-----------------------------|---------------------|-------------|------|
| Positions | III | | | | | III | | | | | |
| Insulation Voltage(V) | AC690V | | | | | AC690V | | | | | |
| Rated voltage Ue(V) | AC400V | | | | | AC400V | | | | | |
| Structure Type | Y: Integral type | | | | | Default: Split type | | | | | |
| Pole | 2P/3P/4P | | | | | 2P/3P/4P | | | | | |
| Rated current(A) | 16,20,25,32,40,50,63 | 80,100,125 | 125,140,160,180,200,225,250 | 225,250,315,350,400 | 400,500,630 | 16,20,25,32,40,50,63 | 80,100,125 | 125,140,160,180,200,225,250 | 225,250,315,350,400 | 400,500,630 | |
| Rated control current(A) | 6 | | | 8 | | 6 | | | 8 | | |
| Control power voltage(V) | AC120V/AC230V | | | | | AC120V/AC230V | | | | | |
| Rated short circuit current (kA) | 10 | | 12.6 | | | 5 | 10 | | 12.6 | | |
| The rated impulse withstand voltage(kV) | 8 | | | | | 8 | | | | | |
| Contact transfer time(ms) | ≤150 | | | | | ≤150 | | | | | |
| Operating transfer time (ms) | 300-500 | | | | | 300-500 | | | | | |
| Usingzation Category | AC33iB | | | | | AC33iB | | | | | |
| Auxiliary switch | I, IIpower:2normalopen&2normalclosed;Capacity:10A/AC250V | | | | | I, IIpower:2normalopen&2normalclosed;Capacity:10A/AC250V | | | | | |
| Service life | Mechanical | 20000 | 20000 | 20000 | 4000 | 4000 | 20000 | 20000 | 20000 | 4000 | 4000 |
| | Electric | 6000 | 6000 | 6000 | 1000 | 1000 | 6000 | 6000 | 6000 | 1000 | 1000 |

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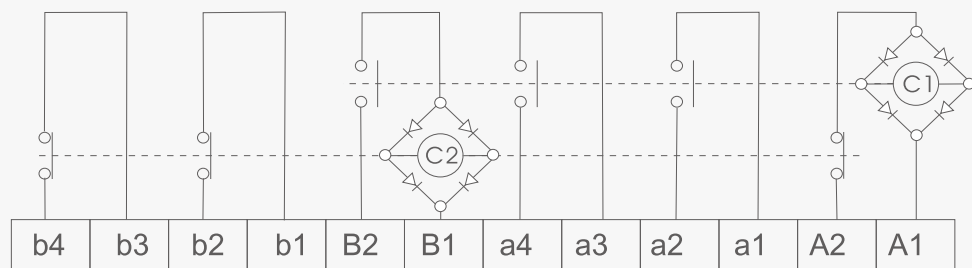
YCQ1F series excitation type Automatic Transfer Switch (ATS)

Controller function

| Product's Type | Y1 | Y2 |
|--|---|--------------|
| Installation method | Split type | |
| Display mode | Indicator light | Display mode |
| Rated duty | Uninterruptd duty | |
| Self-input and self restore | ■ | ■ |
| Self-input and without self restore | ■ | ■ |
| Normal port and standby port share to each other | ■ | ■ |
| Generator auto-start function | ■ | ■ |
| Normal power detect | Four-phase lacking phase detection,three-phase over-voltage/under-voltage detection | |
| Standby power detect | | |
| Passive fire protection input | ■ | ■ |
| Active fire protection input(DC9-36V) | ■ | ■ |
| Active fire control input | ■ | ■ |
| Voltage real-time display | □ | ■ |
| Normal power and standby power indication | ■ | ■ |
| Normal power and standby power over-voltage/under-voltage adrustable | ■ | ■ |
| Generator start and stop time adjustable | ■ | ■ (F/F1) |
| Programmable output | □ | ■ |
| RS485 communicating function | □ | ■ |

Wiring diagram

II Split type

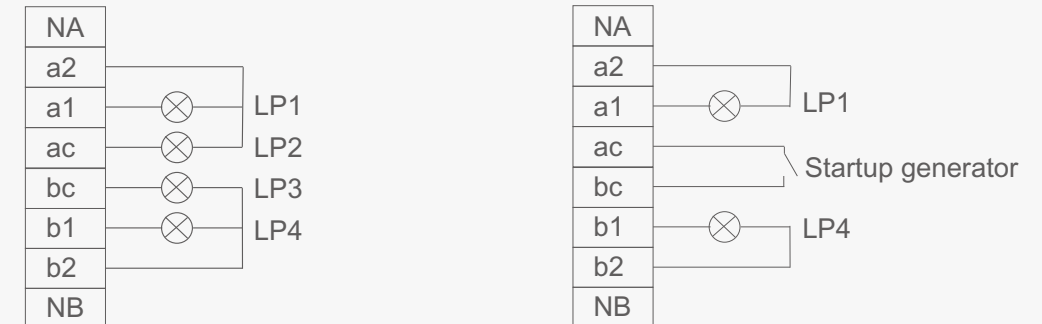


Note: In the absence of a dedicated ATS controller, the two power sources in the controller circuit can not be simultaneously energized.

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II Integral type

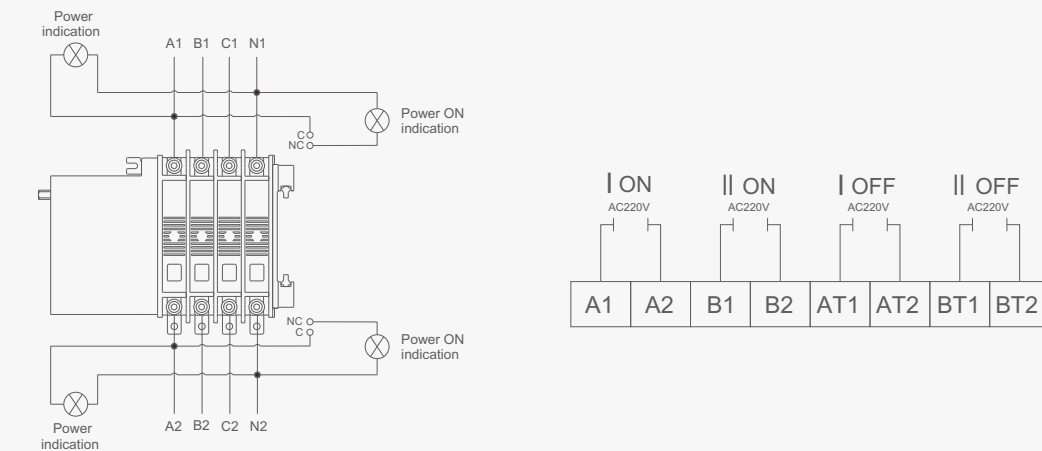


a:Power grids to Power grids

b :Power grids to generator

- ① NA:It is neutral terminal of normal power for 3poles ATS;
- ② LP1:Normal Power supply indicator light;
- ③ LP2:Normal Power indicator light;
- ④ LP3:Standby Power indicator light;
- ⑤ LP4:Standby Power supply indicator light;
- ⑥ NB:It is neutral terminal of standby power for 3 poles ATS;

III Splie type

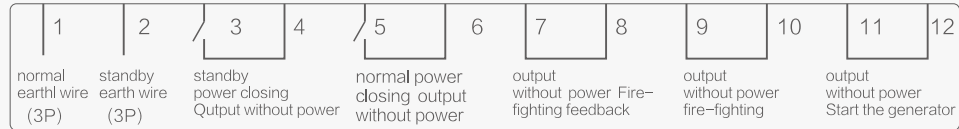


Connection diagram of power indication and power ON indication

Modular DIN Rail

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III Integral type



- ① Start generator: when fault occurs in the normal power, this port will connect after delaying some time.
- ② Fire-fighting: Connect the fire-fighting port, double disconnecting light is on, the ATS double disconnect. Remove the connection, push the automatic/manual pushbutton to reset.
- ③ Fire-fighting feedback: When ATS is in double-disconnecting state, the fire-fighting port connects.
- ④ Normal close: When the normal power of ATS is in closing state, closing signal without power is output from this port.
- ⑤ Standby close: When the standby power of ATS is in closing state, closing signal without power is output from this port.
- ⑥ Normal earth wire: When ATS are 3 phases, the normal earth wire is connected into this port.
- ⑦ Standby earth wire: When ATS are 3 phases, the standby earth wire is connected into this port.

Remark: The normal earth wire and standby earth wire is just suitable for ATS of 3 phases.

Overall and mounting dimensions(mm)

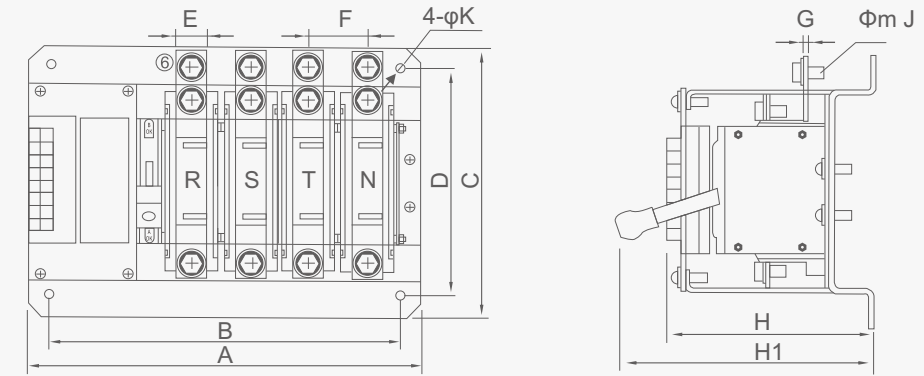
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Overall and mounting dimensions(mm)

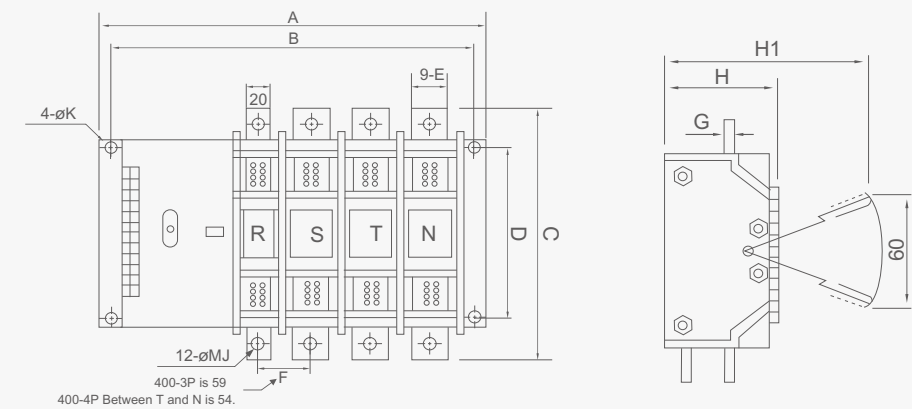
II Split type

63A、125A Product Installation Dimension



| Dimensions Specification | A | | | B | | | C | D | E | F | G | H | H1 | J | K |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|-----|-----|---|---|
| | 2P | 3P | 4P | 2P | 3P | 4P | | | | | | | | | |
| 63A | 170 | 197 | 224 | 150 | 177 | 204 | 184 | 167 | 12 | 27 | 3 | 110 | 155 | 5 | 9 |
| 125A | 191 | 228 | 265 | 171 | 208 | 245 | 184 | 167 | 20 | 37 | 3 | 110 | 155 | 8 | 9 |

250A、400A、630A Product Installation Dimension

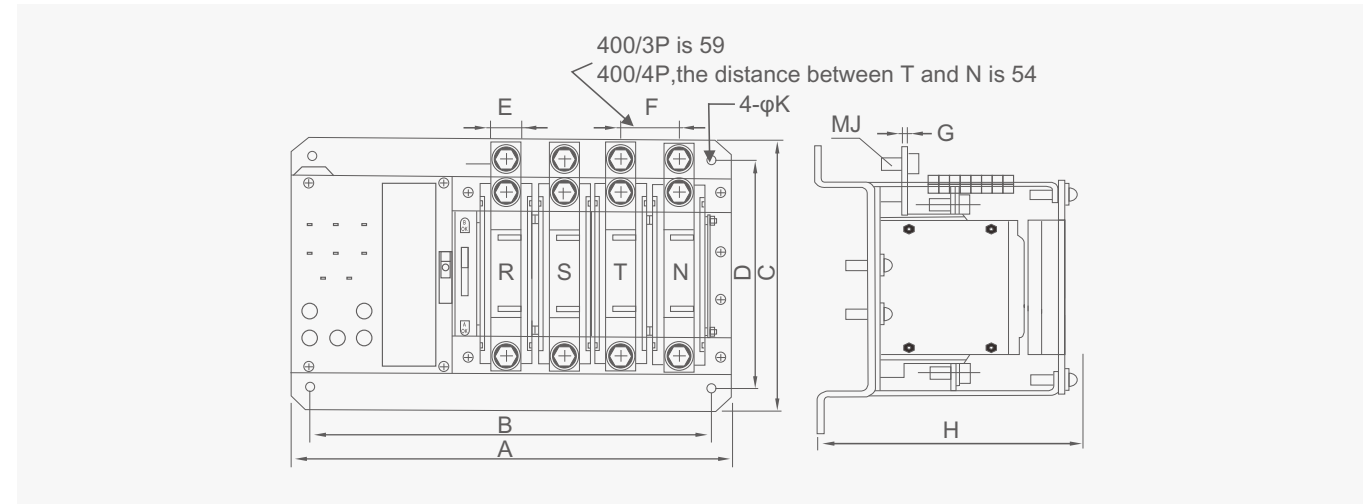


| Dimensions Specification | A | | B | | C | D | E | F | G | H | H1 | J | K |
|-----------------------------|-----|-----|-----|-----|-----|-----|----|----|---|-----|-----|----|----|
| | 3P | 4P | 3P | 4P | | | | | | | | | |
| 250A | 352 | 372 | 302 | 352 | 294 | 200 | 20 | 49 | 5 | 146 | 295 | 8 | 10 |
| 400A | 352 | 402 | 302 | 382 | 294 | 200 | 30 | 59 | 6 | 146 | 295 | 10 | 10 |
| 630A | 352 | 412 | 302 | 392 | 294 | 200 | 35 | 59 | 6 | 146 | 295 | 12 | 10 |

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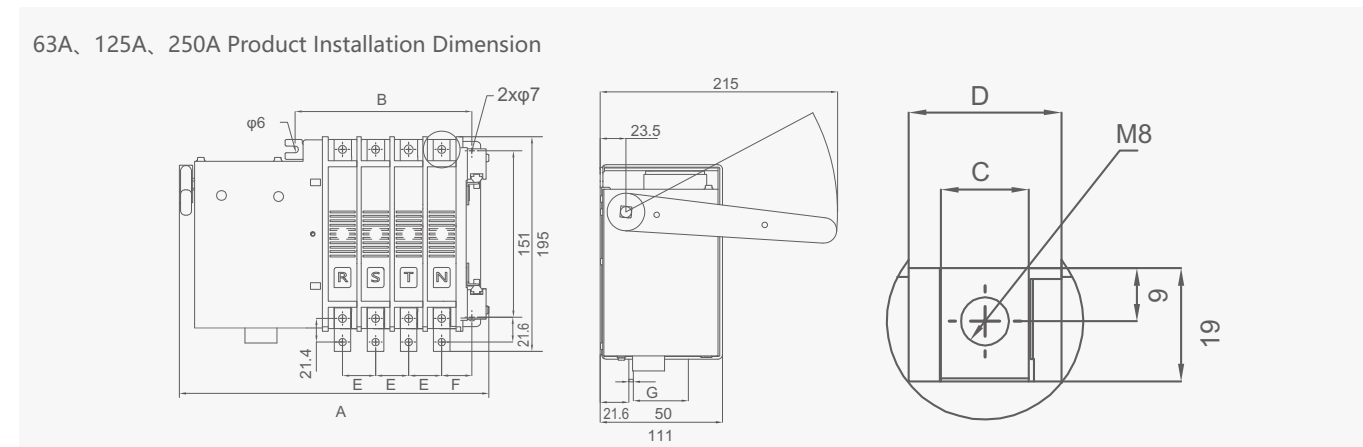
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II Integral type



| Specification | Dimensions A | | | Dimensions B | | | C | D | E | F | G | H | J | K |
|---------------|--------------|-----|-----|--------------|-----|-----|-----|-----|----|----|---|-----|----|----|
| | 2P | 3P | 4P | 2P | 3P | 4P | | | | | | | | |
| 63A | 216 | 243 | 243 | 196 | 223 | 250 | 184 | 167 | 12 | 27 | 3 | 110 | 5 | 9 |
| 125A | 237 | 274 | 311 | 217 | 254 | 291 | 184 | 167 | 20 | 37 | 3 | 110 | 8 | 9 |
| 250A | / | 322 | 372 | / | 302 | 352 | 290 | 200 | 20 | 49 | 5 | 146 | 8 | 10 |
| 400A | / | 352 | 402 | / | 332 | 382 | 294 | 200 | 30 | 59 | 6 | 146 | 10 | 10 |
| 630A | / | 352 | 412 | / | 332 | 382 | 294 | 200 | 35 | 59 | 6 | 146 | 12 | 10 |

III Split type

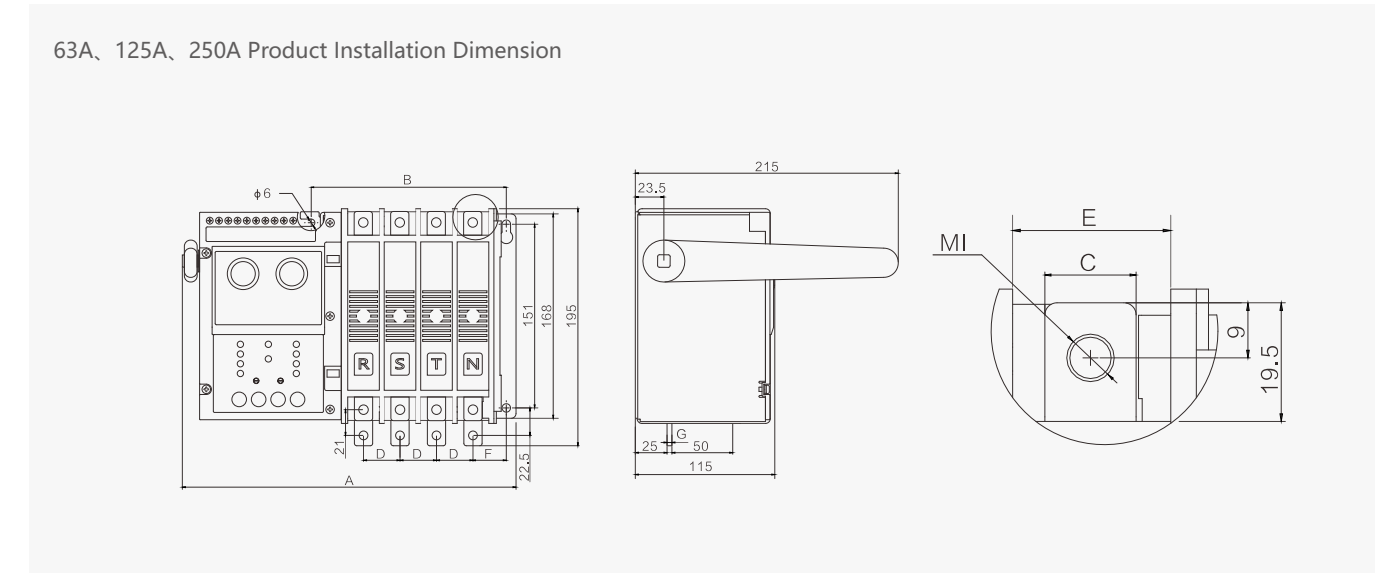


| Specification | Dimensions A | | | Dimensions B | | |
|---------------|--------------|------|-----|--------------|-----|-----|
| | 2P | 3P | 4P | 2P | 3P | 4P |
| 400A | 295 | 357 | 419 | 168 | 230 | 292 |
| 630A | 295 | 3537 | 419 | 168 | 230 | 292 |

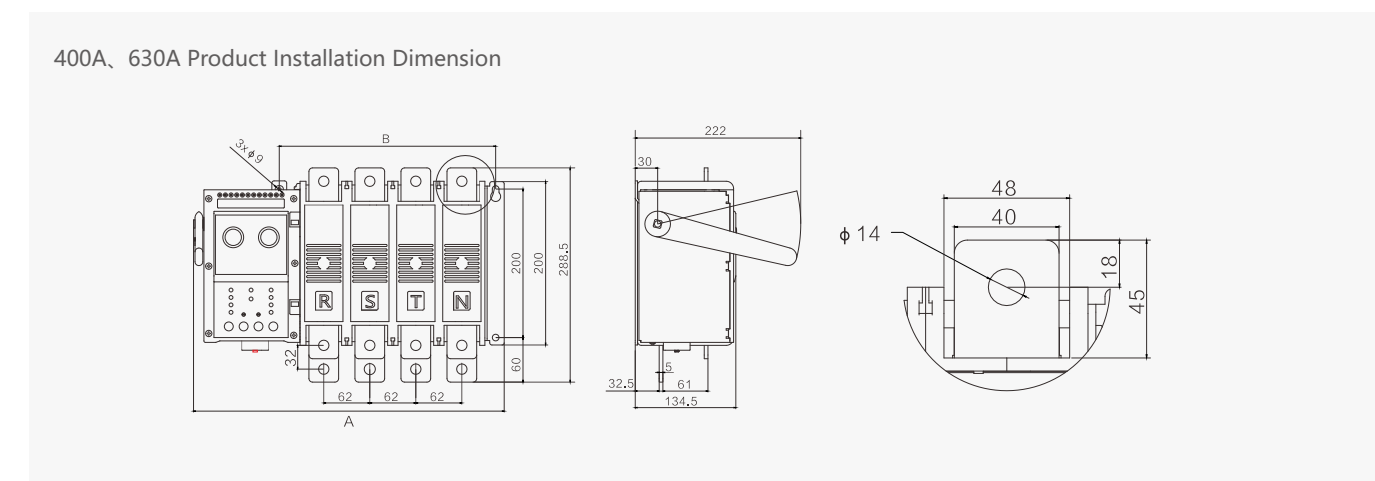
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YCQ1F series excitation type Automatic Transfer Switch (ATS)

III Integral type



| Specification | Dimensions A | | | Dimensions B | | | C | D | E | F | G | I |
|---------------|--------------|-----|-----|--------------|-----|-----|----|----|----|------|---|----|
| | 2P | 3P | 4P | 2P | 3P | 4P | | | | | | |
| 63A | 205 | 223 | 243 | 91 | 131 | 131 | 12 | 20 | 15 | 33.5 | 2 | M5 |
| 125A | 223 | 253 | 283 | 100 | 160 | 160 | 15 | 30 | 26 | 27.5 | 4 | M8 |
| 250A | 231 | 266 | 301 | 111 | 181 | 181 | 20 | 31 | 31 | 30 | 4 | M8 |



| Specification | Dimensions A | | | Dimensions B | | |
|---------------|--------------|------|-----|--------------|-----|-----|
| | 2P | 3P | 4P | 2P | 3P | 4P |
| 400A | 295 | 357 | 419 | 168 | 230 | 292 |
| 630A | 295 | 3537 | 419 | 168 | 230 | 292 |