



# NH40SZ

## Automatic Changeover Switch

### 1. General

NH40SZ automatic changeover switch disconnecter integrates electrical and mechanical interlocking systems to guarantee safe transfer operation.

It is applicable for the three-phase four-wire power supply system of AC 50Hz, rated voltage AC 380V ,rated current up to 3150A.

It can realize automatic and manual changeover between normal and back up power supply power, and stop power supplying to load when changeover process of power supply is carried out.

The switch is applicable for two circuits power supply and in the condition which requires high quality power supply.

Standard: IEC 60947-6-1

### 2. Type designation

N

H

40

- □ / □

SZ

L □ X F □ H

With box

Y:Liquid crystal display

Split type

Fire function

Without any words means normal type, automatic change and recovery

A means normal type, automatic change but not automatic recovery

I : Mains supply-mains supply, mutual standby, phase loss protection; overvoltageand undervoltage protection;

II : Mains supply-mains supply, automatic change and automatic recovery, phase loss protection, overvoltage and undervoltage protection;

III : Mains supply-oil engine, automatic change and automatic recovery, phase loss protection, overvoltage and undervoltage protection;

The terminal is 2 input and 1 output wiring

Dual-power supply automatic transfer

"3" represents three poles

"4" represents four poles

Rated operational current

Design sequence No.

Isolating switch

Company code

### 3. Technical data

| Conventional thermal current (A)   |         | 16               | 32 | 40 | 63 | 80 | 100 | 125   | 160 | 200    | 250 | 315    | 400 | 630 | 800 | 1000    | 1250 | 1600 | 2000 | 2500    | 3150 |
|------------------------------------|---------|------------------|----|----|----|----|-----|-------|-----|--------|-----|--------|-----|-----|-----|---------|------|------|------|---------|------|
| Ie (A)                             |         | 16               | 32 | 40 | 63 | 80 | 100 | 125   | 160 | 200    | 250 | 315    | 400 | 630 | 800 | 1000    | 1250 | 1600 | 2000 | 2500    | 3150 |
| Ui(V)                              |         | 1000             |    |    |    |    |     |       |     |        |     |        |     |     |     | 1000    |      |      |      |         |      |
| Uimp(V)                            |         | 8                |    |    |    |    |     |       |     |        |     |        |     |     |     | 12      |      |      |      |         |      |
| Ue, Us                             |         | Ue=400V; Us=220V |    |    |    |    |     |       |     |        |     |        |     |     |     |         |      |      |      |         |      |
| Rated making and breaking capacity |         | 6Ie              |    |    |    |    |     |       |     |        |     |        |     |     |     |         |      |      |      |         |      |
| Icw(KA)                            |         | 5                |    |    |    |    |     | 10    |     |        |     | 12.6   |     |     |     | 50      |      |      |      | 50      |      |
| Converting time (S)                |         | ≤2s              |    |    |    |    |     |       |     |        |     |        |     |     |     | ≤3s     |      |      |      |         |      |
| Rated controlling capacity (W)     | Startup | 300              |    |    |    |    |     | 325   |     |        |     | 355    |     |     |     | 400     |      |      |      | 600     |      |
|                                    | Natural | 55               |    |    |    |    |     | 62    |     |        |     | 74     |     |     |     | 90      |      |      |      | 120     |      |
| Operation force (N)                |         | 30~50            |    |    |    |    |     | 40~60 |     | 65~100 |     | 75~120 |     |     |     | 200~300 |      |      |      | 250~400 |      |

## 4. Control characteristics and product structure

### 4.1 Control characteristics:

There are two types of switch products, three-pole and four-pole (three poles + switchable neutral pole).

Four control types (common type, I, II, III), usually it is common type.

Control characteristics of common type switch:

- a. This switch applies to the automatic change and automatic recovery of main power supply-standby power supply (including manual oil generator; Note: Manual oil generator does not have to be used with type III switches) systems. Power supply I precedes. When power supply I is normal, it is switched on; when power supply I fails and power supply II is normal, the switch changes to power supply II; when power supply I resumes, the switch automatically changes to power supply I.

Control characteristics of type I switch:

- a. This switch applies to the mutual standby of mains supply systems. When the switch is in the "0" position, power supply I precedes. When power supply I fails and power supply II is normal, the switch changes to power supply II; when power supply II is on and power supply I resumes, the switch does not automatically change to power supply I, it will change to power supply I only when power supply II fails. The main power supply changes to the standby power supply (the delay continuously adjustable between 1 ~ 999s), the standby power supply changes to the main power supply (the delay continuously adjustable between 1 ~ 999s).
- b. Phase loss detection protection function, overvoltage, undervoltage protection functions.

### 4.2 Product structure

#### Control characteristics of type II switch:

- a. This switch applies to the automatic change and automatic recovery of mains supply-mains supply systems. Power supply I precedes. When power supply I is normal, it is switched on; when power supply I fails and power supply II is normal, the switch changes to power supply II; when power supply I resumes, the switch automatically changes to power supply I. The main power supply changes to the standby power supply (the delay continuously adjustable between 1 ~ 999s), the standby power supply changes to the main power supply (the delay continuously adjustable between 1 ~ 999s).
- b. Three-phase overvoltage, undervoltage and phase loss detection protection functions.

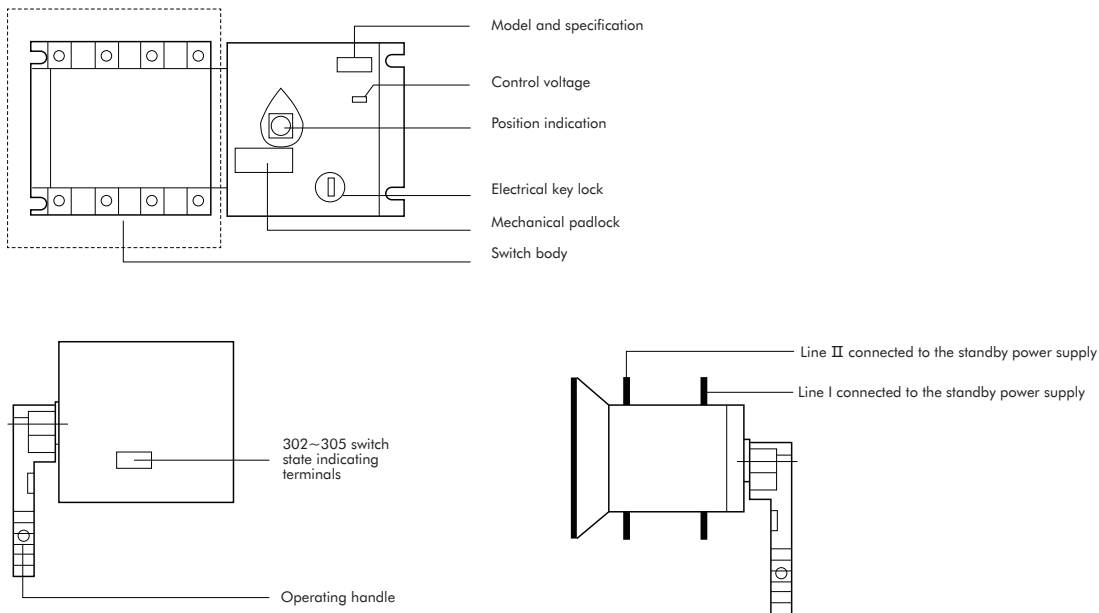
#### Control characteristics of type III switch:

- a. This switch applies to the mutual standby or automatic change and automatic recovery of mains supply-oil generator (automatic oil generator with signals) systems. Power supply I (the mains supply) precedes. When power supply I fails, the switch gives a signal to start the oil generator. The oil generator has warm-up delay (continuously adjustable between 0 ~ 180s) function. After the oil generator has started, the switch changes to power supply II (the oil generator). When power supply I resumes, the switch automatically changes to power supply I, the oil generator automatically stops after a cooling delay (continuously adjustable between 0 ~ 180s).
- b. Three-phase overvoltage and undervoltage protection functions for mains supply and oil generator.

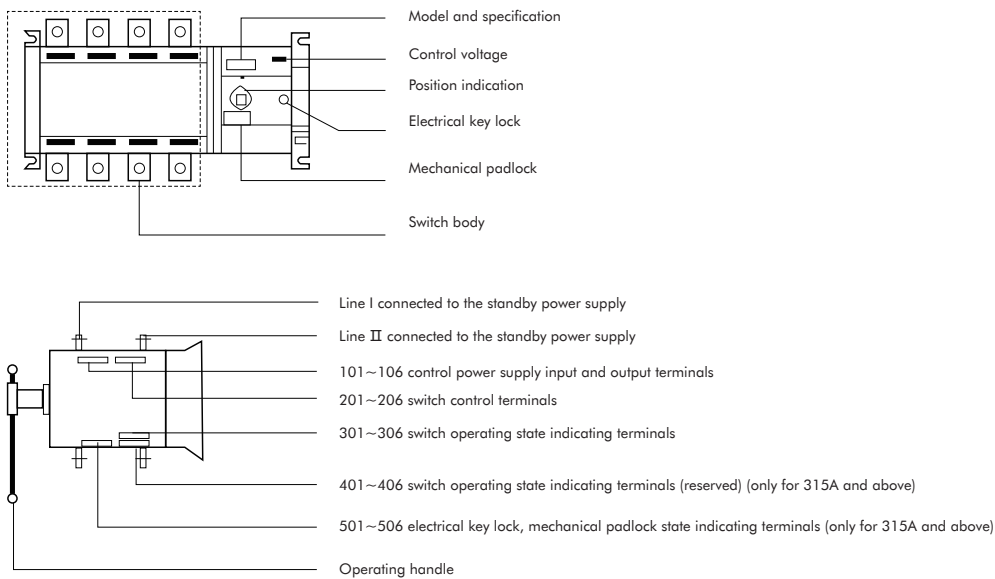
#### Type I, type II and type III switches have:

- 1) Automatic, remote and manual control functions
- 2) A 0.5s delay of the detection signal, to prevent misoperation.
- 3) A remote control "0" position in automatic state.
- 4) A key switch for the selection of operation mode.

16A-100A/4(Common type)



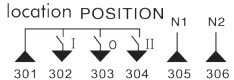
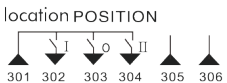
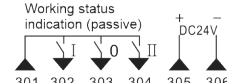
100A/3 common type; 100A/3, 4 type I , type II , type III ; 125A-3200A/3, 4 common type, type I, type II , type III



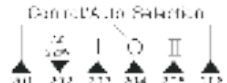
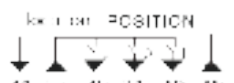
- Electrical key lock: It controls the power supply of the internal control circuit of the switch. When the electrical lock is in the "Automatic" position, the switch can be operated automatically or remotely. When the electrical lock is in the "Manual" position, the switch can only be operated manually;
- Operating handle: When operating the switch with the operating handle, the electrical lock must be in the "Manual" position;
- Mechanical padlock: Before maintenance, put the switch to the 0 position with the operating handle, pull up the padlock structure and lock the padlock. (Pulling up the mechanical padlock switches off the internal control power supply of the switch so that it cannot be operated electrically or manually);
- Position indication: It indicates the operating position (I; 0; II ) of the switch;
- Control voltage: The control voltage class of the switch is 220VAC;
- Switch body: The front part is line I, which is connected to the "Normal power supply"; the rear part is line II , which is connected to the "Standby power supply".

#### 4.3 Connection terminal of control circuit

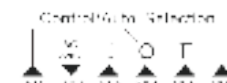
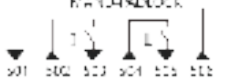
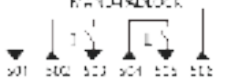
### Common type/Fire type (24V)16-250A

|                       |                                                                                                                                |                       |                                                                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Connection terminal 3 |  <p>(Ordinary three-pole switch)</p>          | Connection terminal 3 |  <p>(16-100A ordinary four-pole switch)</p>        |
|                       |  <p>(125-250A ordinary four-pole switch)</p> | Connection terminal 3 |  <p>(Ordinary fire-fighting four-pole switch)</p> |

### Common type/Fire type 315-3150A

|                       |                                                                                                                                                         |                       |                                                                                                                                          |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Connection terminal 1 |  <p>(Only for ordinary three-pole switch)</p>                        | Connection terminal 2 |  <p>(Only for 16-100A ordinary four-pole switch)</p> |
| Connection terminal 3 |  <p>(Only ordinary four-pole switch with fire-fighting function)</p> | Connection terminal 3 |  <p>(Only for 16-100A ordinary four-pole switch)</p> |
| Connection terminal 4 |  <p>(Only for 16-100A ordinary four-pole switch)</p>                 | Connection terminal 4 |  <p>(Only for 16-100A ordinary four-pole switch)</p> |

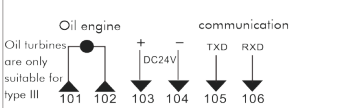
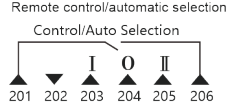
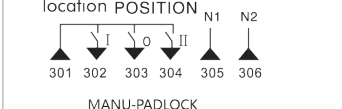
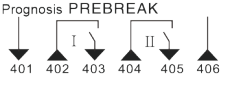
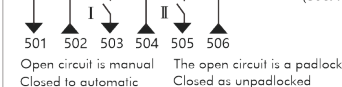
### Common type/Fire type 315-3150A

|                       |                                                                                                                                                         |                       |                                                                                                                                          |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Connection terminal 1 |  <p>(Only for ordinary three-pole switch)</p>                        | Connection terminal 2 |  <p>(Only for 16-100A ordinary four-pole switch)</p> |
| Connection terminal 2 |  <p>(Only ordinary four-pole switch with fire-fighting function)</p> | Connection terminal 3 |  <p>(Only for 16-100A ordinary four-pole switch)</p> |
| Connection terminal 3 |  <p>(Only for 16-100A ordinary four-pole switch)</p>                 | Connection terminal 4 |  <p>(Only for 16-100A ordinary four-pole switch)</p> |

I II III control circuit terminal block 16-250A

|                       |                                                                                   |                       |  |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------|--|
| Connection terminal 1 |  | Connection terminal 2 |  |
| Connection terminal 3 |  | Connection terminal 4 |  |

I II III control circuit terminal 315-3150A

|                       |                                                                                                                                                                                                        |                       |                                                                                                                                                                                                                       |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection terminal 1 |                                                                                                                       | Connection terminal 2 |  <p>The open circuit is automatic<br/>Closed for remote control<br/>(The LED controller split type does not have this terminal)</p> |
| Connection terminal 3 |                                                                                                                       | Connection terminal 4 |                                                                                                                                     |
| Connection terminal 5 |  <p>Open circuit is manual<br/>Closed to automatic</p> <p>The open circuit is a padlock<br/>Closed as unpadlocked</p> |                       |                                                                                                                                                                                                                       |

General type: control circuit terminal blocks

|                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| terminal blocks 1                                                                                                                                                                                                              | terminal blocks 2<br>202-203- I remote control closing switch<br>202, 204-0 remote control closing switch<br>202, 205— II Road Remote Control Close Switch<br>201, 206— automatic control for disconnection and remote control for short circuit. |
| terminal blocks 3<br>302, 303— I signal indication<br>302, 304—0 signal indication<br>302, 305— II signal indication                                                                                                           | terminal blocks 4<br>402, 403— I reserved working status indicator switch<br>404, 405- II reserved working status indicator switch<br>401, 406— These two ports are redundant.                                                                    |
| terminal blocks 5<br>52, 503— Electric key indicates automatic and manual operation modes.<br>04, 505— Padlock indicates whether the lock has been hung at any position (I, O, II).<br>01, 506— These two ports are redundant. |                                                                                                                                                                                                                                                   |

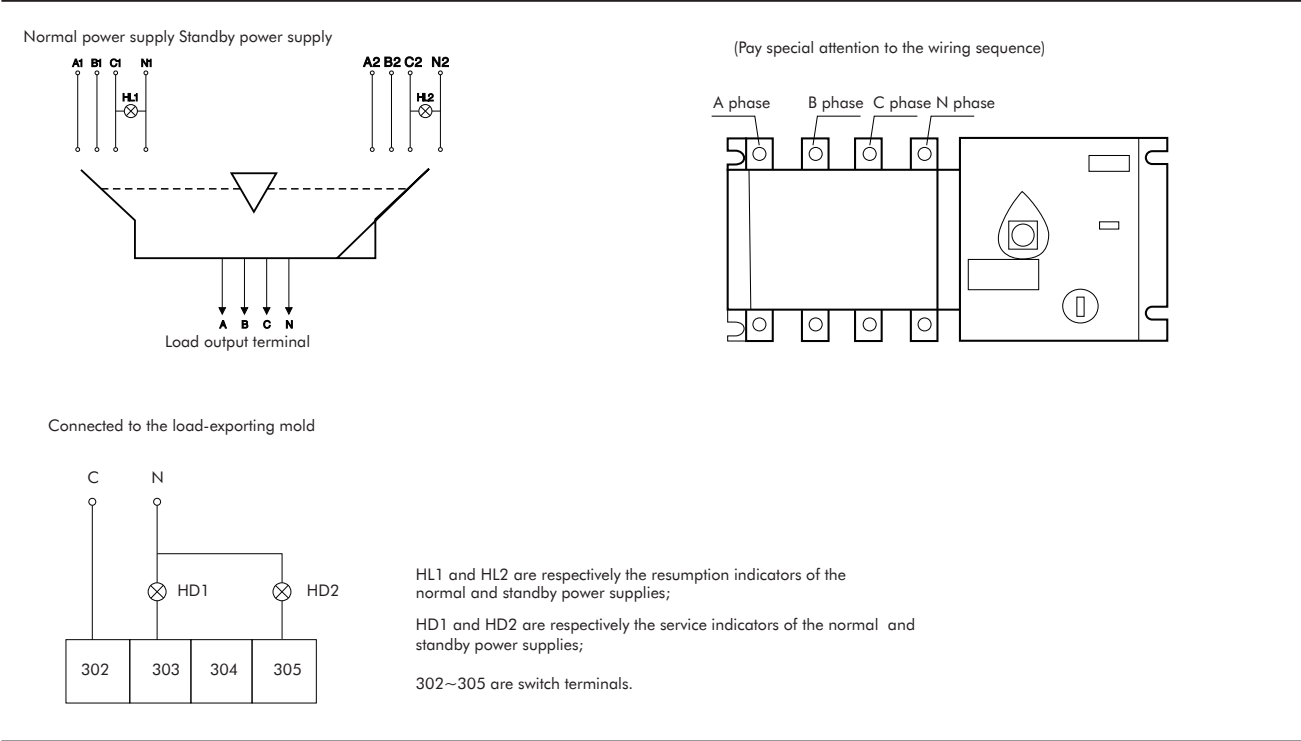
Ordinary+fire 24V; Control circuit terminal blocks

|                                                                                                                                                                                    |                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| terminal blocks 1                                                                                                                                                                  | terminal blocks 2<br>202-203- I remote control closing switch<br>202, 204-0 remote control closing switch<br>202, 205— II Road Remote Control Close Switch<br>201, 206— automatic control for disconnection and remote control for short circuit. |
| terminal blocks 3<br>301, 302— I signal indication<br>301, 303—0 signal indication<br>301, 304— II signal indication<br>305, 306— Forced "zero" function of fire protection (24V). |                                                                                                                                                                                                                                                   |

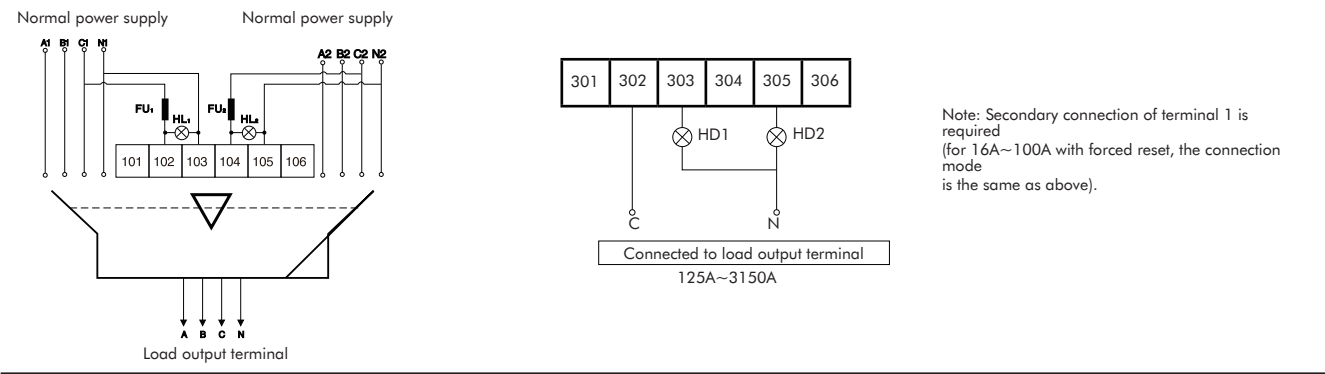
| I II III (protection type): control circuit terminal blocks                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>terminal blocks 1</p> <p>01, 102— signal output of starting oil engine (note: only applicable to Type III )</p> <p>103, 104— Fire-fighting (24V) input, forcing the "zero" two-way switch to be completely off.</p> <p>05, 106— These two ports are redundant (unable to meet the communication requirements).</p> | <p>terminal blocks 2</p> <p>202-203- I remote control closing switch 202, 204-0 remote control closing switch</p> <p>202, 205— II Road Remote Control Close Switch</p> <p>201, 206— automatic disconnection and remote control for short circuit.</p> |
| <p>terminal blocks 3</p> <p>301, 302— I signal indication</p> <p>301, 303-"0" signal indication</p> <p>301, 304— II signal indication</p> <p>305— "N1 "Switch I Neutral Line Control (only applicable to Level 3)</p> <p>306— "N2 "Switch II Zero Line Control (only applicable to Level 3)</p>                       | <p>terminal blocks 4</p> <p>402, 403— I reserved working status indicator switch</p> <p>404, 405- II reserved working status indicator switch</p> <p>401, 406— These two ports are redundant.</p>                                                     |
| <p>terminal blocks 5</p> <p>52, 503— Electric key indicates automatic and manual operation modes.</p> <p>04, 505— Padlock indicates whether the lock is hung at any position (I, 0, II).</p> <p>01, 506— These two ports are redundant.</p>                                                                           |                                                                                                                                                                                                                                                       |

## 5. wiring diagram

### 5.1 16A~100A 4-pole ordinary main switch wiring diagram



5.2 125A~3150A Wiring Diagram of Ordinary Main Switch



5.3 According to different working modes, the specific wiring methods of Terminal 2 are as follows:

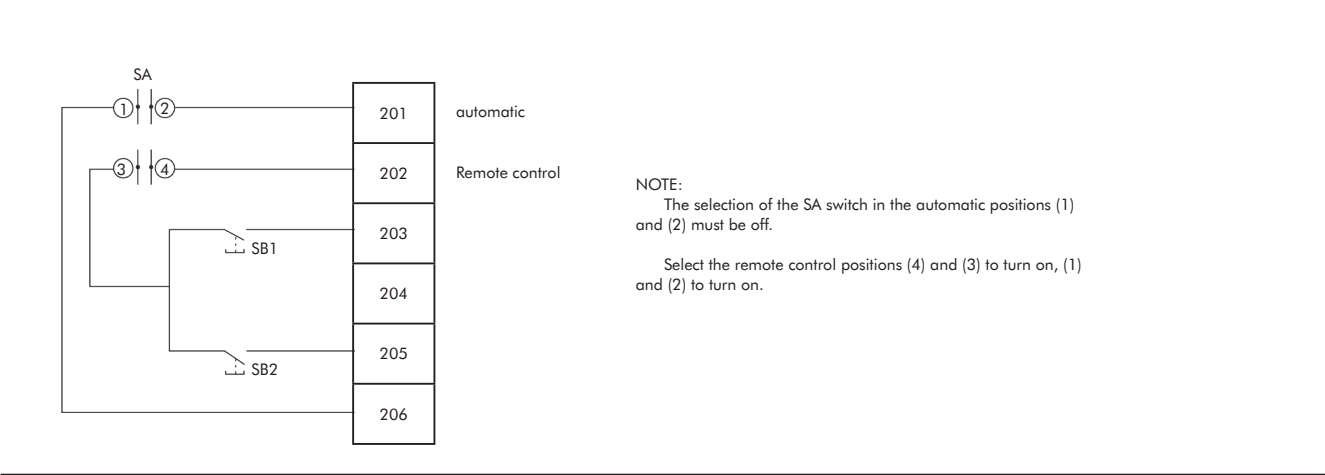
a. Fully automatic connection mode



b. Remote control and "O" (both power supplies are disconnected) wiring mode



C. Automatic+remote control wiring mode (note: SB1 and SB2 are external button switches)

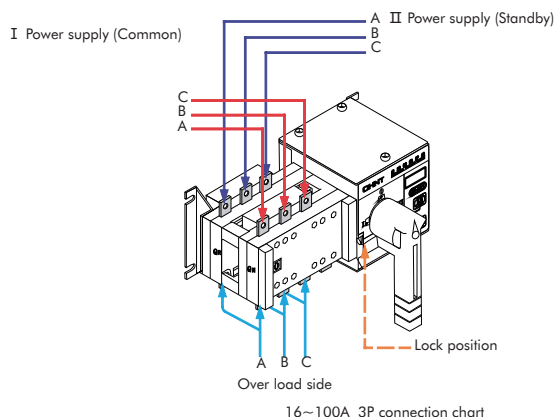


## 5. Connection diagram

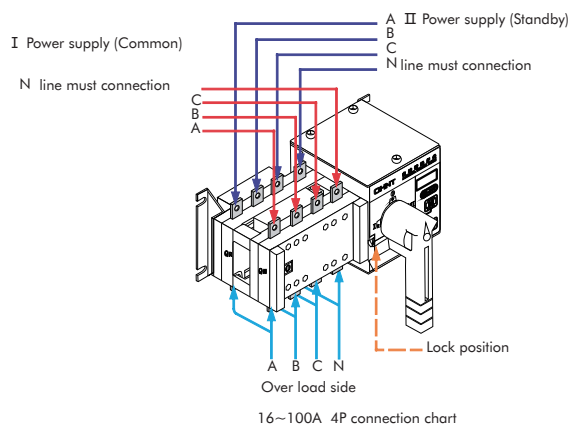
### 5.5 Connection diagram

NH40-16~100

16~100A 3P connection chart



16~100A 4P connection chart

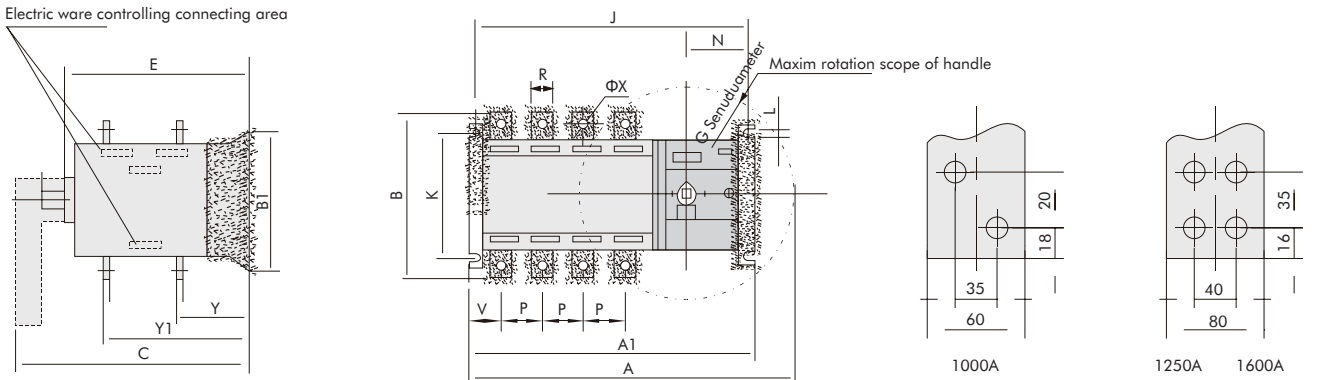


Correct mounting of the switch:

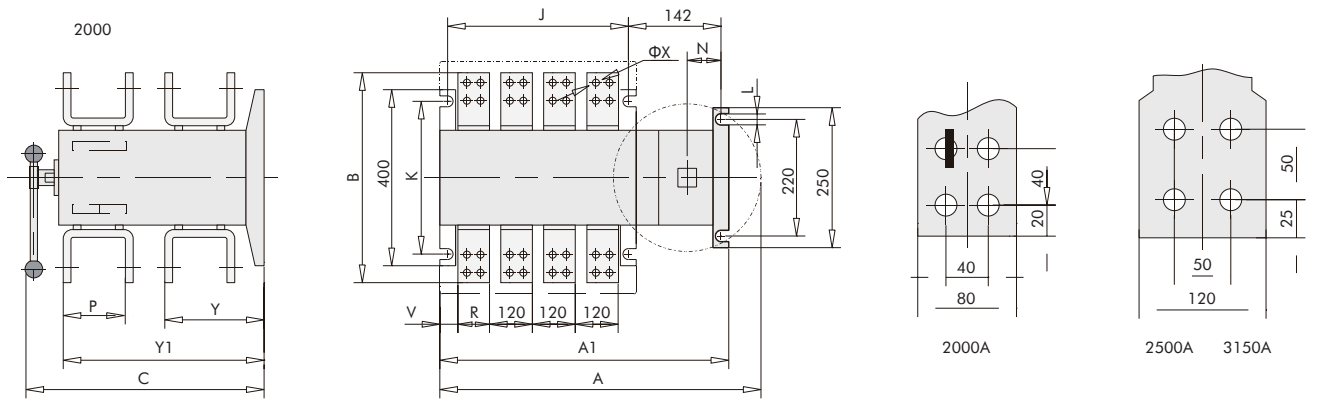
- Copper busbars I and II are respectively connected to phases R, S, T, N of the normal (front) and standby (rear) power supplies from left to right.
- The control power supplies are obtained respectively from phases T and N of the normal and standby power supplies.
- AC220V control power supplies I and II are respectively connected to terminals 102~103 and 104~105, among which 102 and 104 are respectively the live wires of the normal and standby power supplies.
- Terminals 1.1 and 106 are only used as the control power supplies of the signal lamps. Note: They should not be connected to any other lines.
- When upper (lower) incoming line is used, phases R, S, T, N of the lower (upper) lines I and II are respectively connected with copper busbars or conductors as the output.

6. Mounting dimension of NH40SZ automatic changeover switch disconnecter

16 ~ 1600A

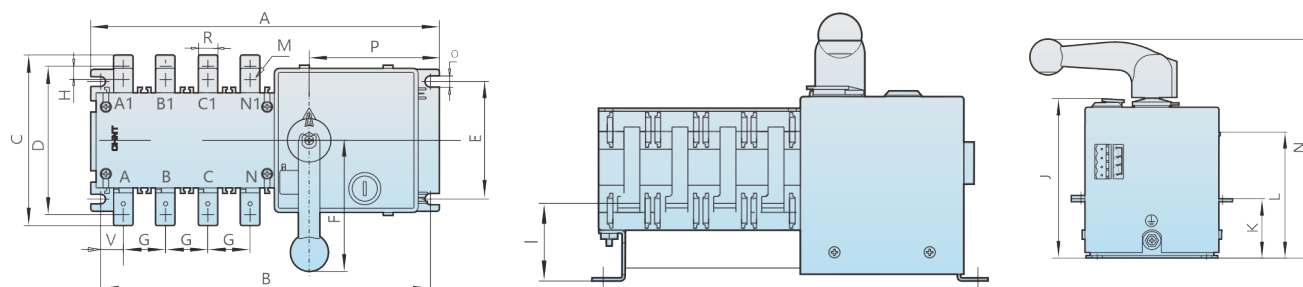


2000 ~ 3150A



## Changeover Switch

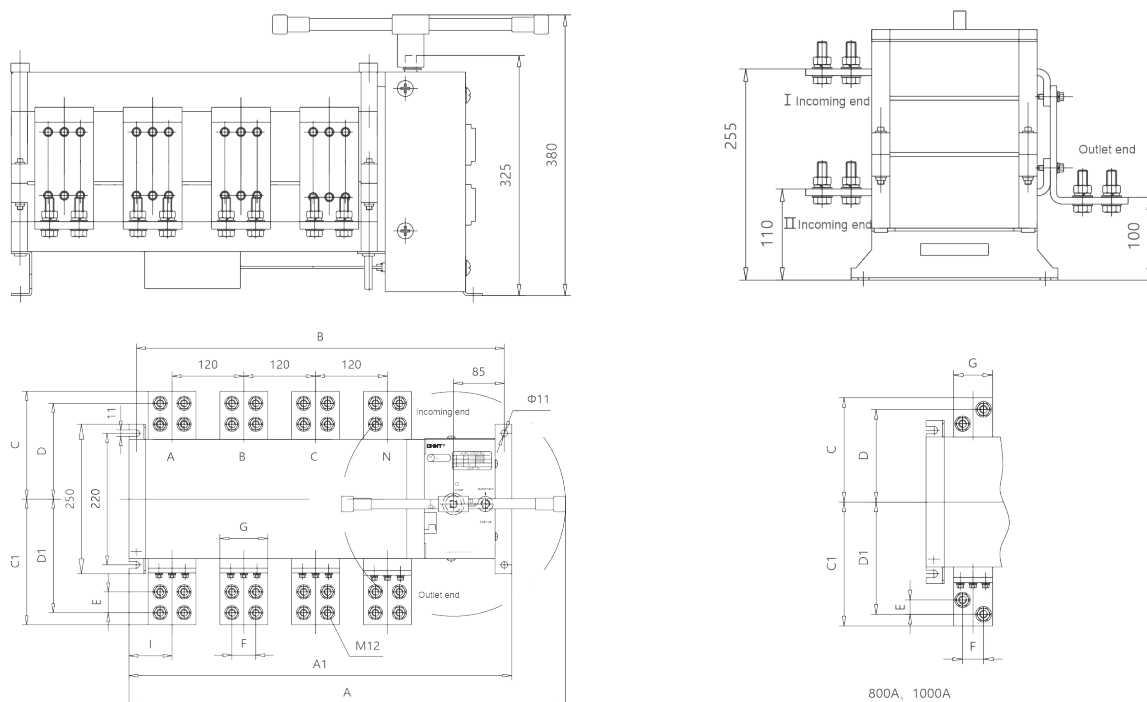
### 6.1 NH40-16~630/SZL shape and installation size



| Model specification          | A   | B   | C   | D   | E   | F   | G  | H  | I    | J   | K  | L   | M  | N   | O  | P   | R  | V    |
|------------------------------|-----|-----|-----|-----|-----|-----|----|----|------|-----|----|-----|----|-----|----|-----|----|------|
| NH40-16-100/3SZL             | 252 | 236 | 117 | 100 | 84  | 95  | 30 | 5  | 46.5 | 123 | 44 | 94  | 6  | 170 | 8  | 102 | 14 | 17   |
| NH40-16-100/4SZL             | 252 | 236 | 117 | 100 | 84  | 95  | 30 | 5  | 46.5 | 123 | 44 | 94  | 6  | 170 | 8  | 102 | 14 | 17   |
| NH40-125-160/3SZL            | 296 | 276 | 155 | 133 | 108 | 125 | 35 | 9  | 60   | 160 | 56 | 119 | 8  | 205 | 8  | 112 | 20 | 31   |
| NH40-125-160/4SZL            | 325 | 305 | 155 | 133 | 108 | 125 | 35 | 9  | 60   | 160 | 56 | 119 | 8  | 205 | 8  | 112 | 20 | 29   |
| NH40-200~250/3SZL            | 348 | 330 | 180 | 154 | 108 | 125 | 50 | 5  | 71   | 185 | 68 | 147 | 10 | 240 | 8  | 117 | 24 | 37   |
| NH40-200-250/4SZL            | 398 | 380 | 180 | 154 | 108 | 125 | 50 | 5  | 71   | 185 | 68 | 147 | 10 | 240 | 8  | 117 | 24 | 37   |
| NH40-315-400/3SZL            | 415 | 387 | 275 | 236 | 170 | 165 | 65 | 15 | 90   | 250 | 85 | 195 | 12 | 320 | 11 | 120 | 35 | 48.5 |
| NH40-315-400/4ZL             | 475 | 447 | 275 | 236 | 170 | 165 | 65 | 15 | 90   | 250 | 85 | 195 | 12 | 320 | 11 | 120 | 35 | 48.5 |
| NH40-630/3SZL                | 415 | 387 | 280 | 240 | 170 | 165 | 65 | 10 | 90   | 250 | 85 | 195 | 12 | 320 | 11 | 120 | 40 | 50   |
| NH40-630/4SZL                | 475 | 447 | 280 | 240 | 170 | 165 | 65 | 10 | 90   | 250 | 85 | 195 | 12 | 320 | 11 | 120 | 40 | 50   |
| NH40-16-100/3SZL( I II III ) | 260 | 245 | 117 | 100 | 84  | 95  | 30 | 5  | 46.5 | 123 | 44 | 94  | 6  | 170 | 8  | 110 | 14 | 17   |
| NH40-16-100/4SZL( I II III ) | 260 | 245 | 117 | 100 | 84  | 95  | 30 | 5  | 46.5 | 123 | 44 | 94  | 6  | 170 | 8  | 110 | 14 | 17   |

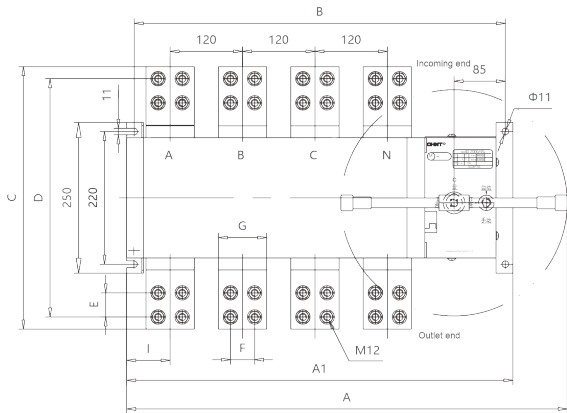
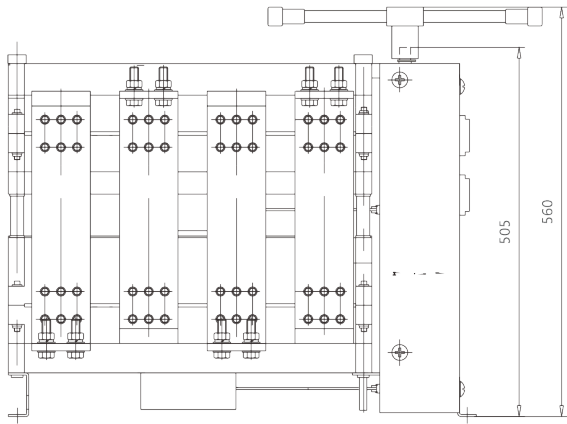
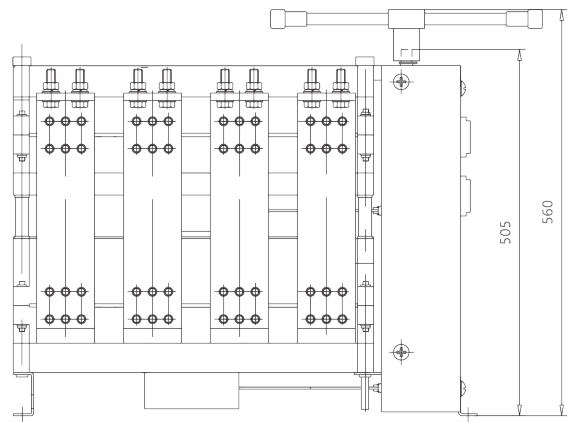
Note: Except (NH40-16~100/4SZL) is different from the size of protective I, II and dishes, the other switches are the same size as the protective ones.

## 6.2 NH40-800~1 600/SZL shape and installation size

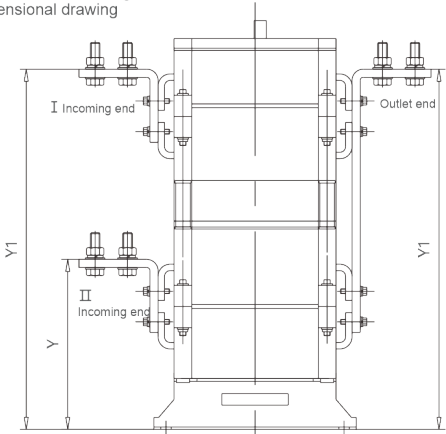


| Model specification | A   | A1  | B   | C   | C1  | D   | D1  | E  | F  | I    | G  |
|---------------------|-----|-----|-----|-----|-----|-----|-----|----|----|------|----|
| NH40-800/3SZL       | 700 | 526 | 500 | 160 | 190 | 142 | 172 | 22 | 32 | 72   | 60 |
| NH40-1000/3SZ1      | 700 | 526 | 500 | 160 | 190 | 142 | 172 | 22 | 32 | 72   | 60 |
| NH40-1250/3SZL      | 700 | 526 | 500 | 180 | 200 | 160 | 180 | 35 | 34 | 72   | 70 |
| NH40-1600/3SZL      | 700 | 526 | 500 | 180 | 210 | 160 | 190 | 35 | 40 | 72   | 80 |
| NH40-800/4SZL       | 810 | 640 | 614 | 160 | 190 | 142 | 172 | 22 | 32 | 70.5 | 60 |
| NH40-1000/4SZL      | 810 | 640 | 614 | 160 | 190 | 142 | 172 | 22 | 32 | 70.5 | 60 |
| NH40-1250/4SZL      | 810 | 640 | 614 | 180 | 200 | 160 | 180 | 35 | 34 | 70.5 | 70 |
| NH40-1600/4SZL      | 810 | 640 | 614 | 180 | 210 | 160 | 190 | 35 | 40 | 70.5 | 80 |

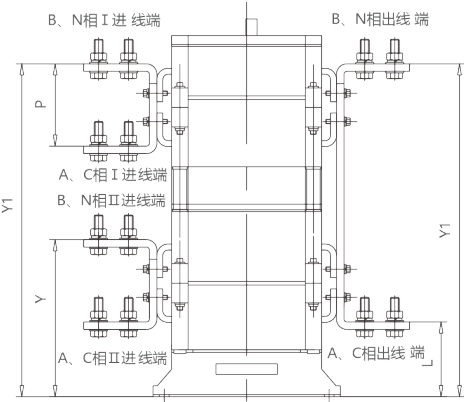
6.3 NH40-2000~3150/SZL shape and installation size



2000A switch standing dimensional drawing

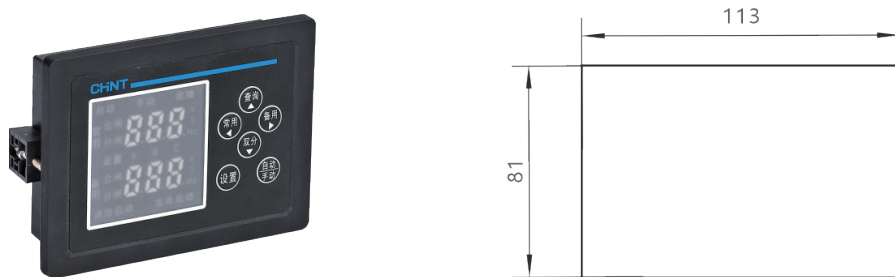


2500A,3150A switch standing dimensional drawing

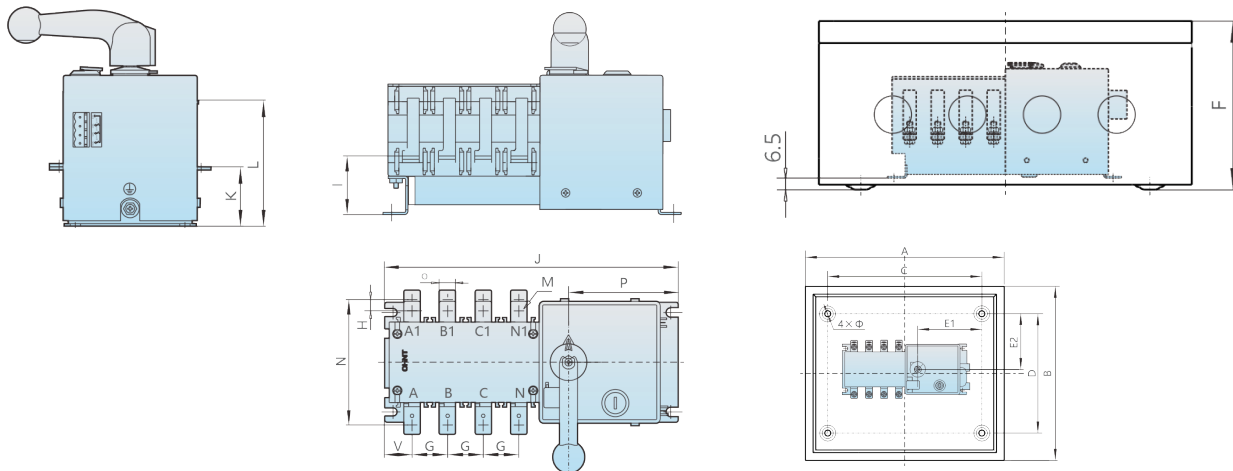


| Model specification | A   | A1  | B   | C   | D   | E  | F  | I    | G   | L   | P   | Y   | Y1  |
|---------------------|-----|-----|-----|-----|-----|----|----|------|-----|-----|-----|-----|-----|
| NH40-2000/3SZL      | 700 | 526 | 500 | 435 | 395 | 40 | 40 | 72   | 80  | -   | -   | 210 | 445 |
| NH40-2500/3SZL      | 700 | 526 | 500 | 435 | 395 | 40 | 40 | 72   | 80  | 100 | 110 | 210 | 445 |
| NH40-3150/3SZL      | 700 | 526 | 500 | 510 | 460 | 50 | 50 | 72   | 120 | 100 | 112 | 212 | 447 |
| NH40-2000/4SZL      | 810 | 640 | 614 | 435 | 395 | 40 | 40 | 70.5 | 80  | -   | -   | 210 | 445 |
| NH40-2500/4SZL      | 810 | 640 | 614 | 435 | 395 | 40 | 40 | 70.5 | 80  | 100 | 110 | 210 | 445 |
| NH40-3150/4SZL      | 810 | 640 | 614 | 510 | 460 | 50 | 50 | 70.5 | 120 | 100 | 112 | 212 | 447 |

### 6.5 Opening size of split LED controller



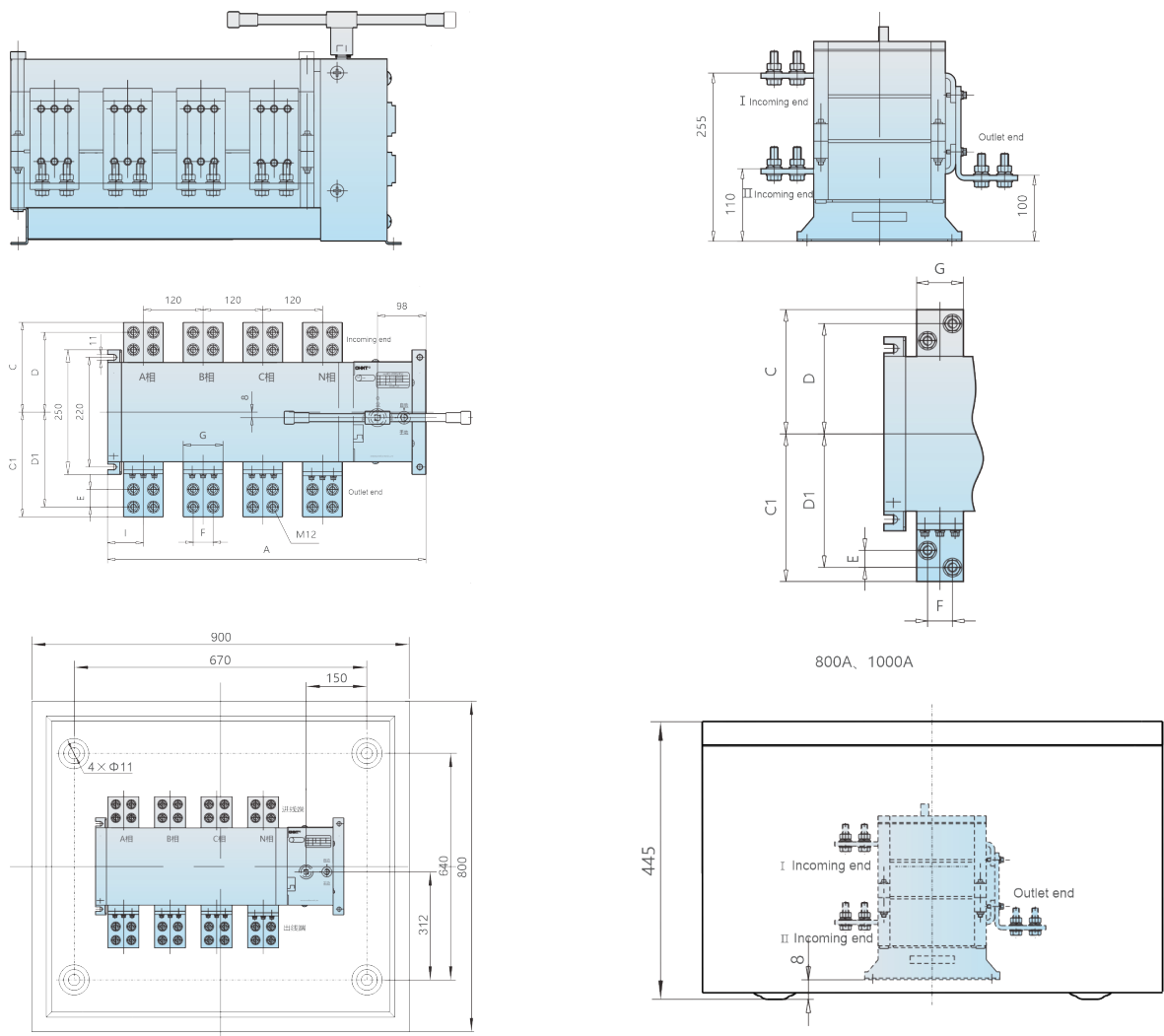
### 6.6 Installation Dimensions of NH40-16~630/SZH Switch Body and Box



| Model specification          | A   | B   | C   | D   | E1  | E2  | F   | G  | H  | I    | J   | K  | L   | M  | N   | O  | P   | V    | Φ  |
|------------------------------|-----|-----|-----|-----|-----|-----|-----|----|----|------|-----|----|-----|----|-----|----|-----|------|----|
| NH40-16~100/3SZH             | 400 | 350 | 310 | 240 | 129 | 120 | 180 | 30 | 5  | 46.5 | 252 | 44 | 94  | 6  | 100 | 14 | 102 | 25   | 7  |
| NH40-16~100/4SZH             | 400 | 350 | 310 | 240 | 129 | 120 | 180 | 30 | 5  | 46.5 | 252 | 44 | 94  | 6  | 100 | 14 | 102 | 25   | 7  |
| NH40-125~160/3SZH            | 490 | 400 | 390 | 280 | 123 | 132 | 235 | 35 | 9  | 60   | 296 | 56 | 119 | 8  | 133 | 20 | 112 | 41   | 7  |
| NH40-125~160/4SZH            | 490 | 400 | 390 | 280 | 123 | 132 | 235 | 35 | 9  | 60   | 325 | 56 | 119 | 8  | 133 | 20 | 112 | 39   | 7  |
| NH40-200~250/3SZH            | 490 | 400 | 390 | 280 | 138 | 134 | 235 | 50 | 5  | 71   | 348 | 68 | 147 | 10 | 154 | 24 | 117 | 46   | 7  |
| NH40-200~250/4SZH            | 490 | 400 | 390 | 280 | 138 | 134 | 235 | 50 | 5  | 71   | 398 | 68 | 147 | 10 | 154 | 24 | 117 | 46   | 7  |
| NH40-315~400/3SZH            | 600 | 650 | 500 | 540 | 143 | 272 | 305 | 65 | 15 | 90   | 415 | 85 | 195 | 12 | 236 | 35 | 120 | 62.5 | 11 |
| NH40-315~400/4SZH            | 600 | 650 | 500 | 540 | 143 | 272 | 305 | 65 | 15 | 90   | 475 | 85 | 195 | 12 | 236 | 35 | 120 | 62.5 | 11 |
| NH40-630/3SZH                | 600 | 650 | 500 | 540 | 143 | 272 | 305 | 65 | 10 | 90   | 415 | 85 | 195 | 12 | 240 | 40 | 120 | 64   | 11 |
| NH40-630/4SZH                | 600 | 650 | 500 | 540 | 143 | 272 | 305 | 65 | 10 | 90   | 475 | 85 | 195 | 12 | 240 | 40 | 120 | 64   | 11 |
| NH40-16~100/3SZH( I II III ) | 400 | 350 | 310 | 240 | 129 | 120 | 180 | 30 | 5  | 46.5 | 260 | 44 | 94  | 6  | 100 | 14 | 110 | 25   | 7  |
| NH40-16~100/4SZH( I II III ) | 400 | 350 | 310 | 240 | 129 | 120 | 180 | 30 | 5  | 46.5 | 260 | 44 | 94  | 6  | 100 | 14 | 110 | 25   | 7  |

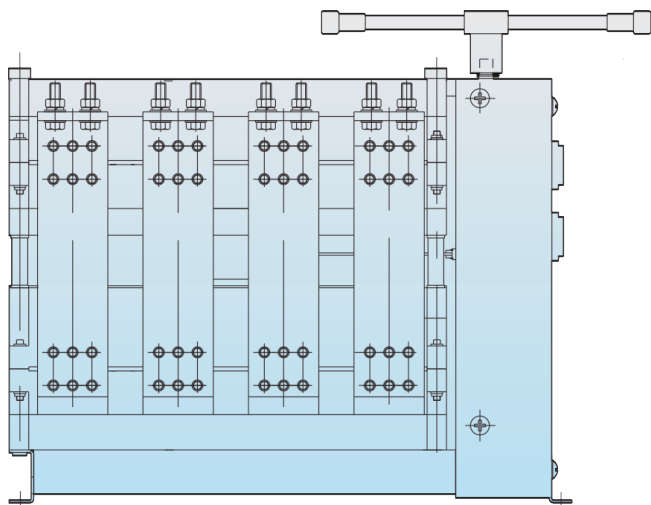
Note: Except that the size of (NH40-16~100/4SZ) body is different from that of protective I, II and dishes, the size of other switch bodies is the same as that of protective type.

6.7 Installation Dimensions of NH40-800~1600/SZH Switch Body and Box

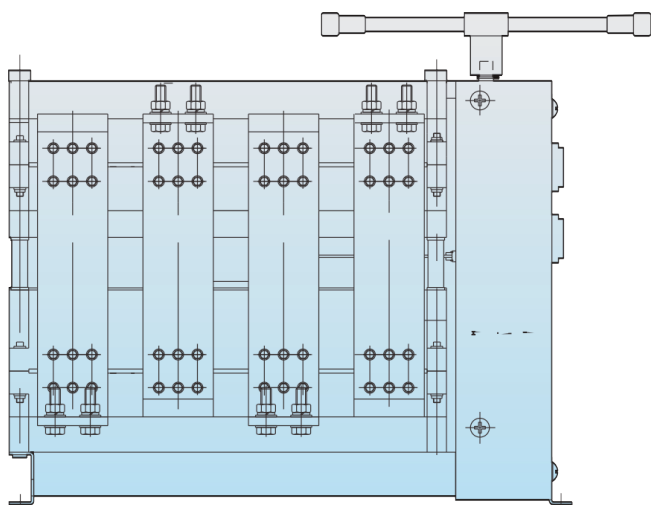
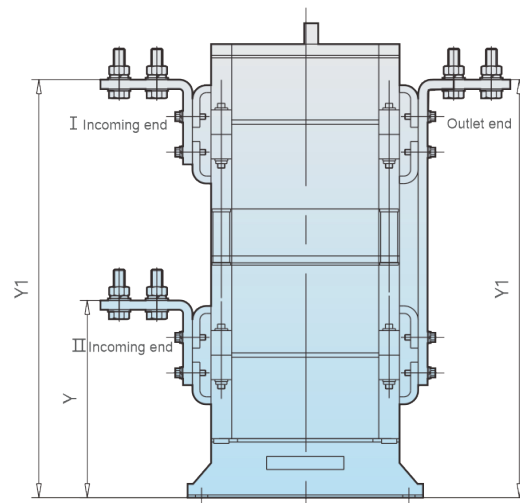


| Model specification | A   | C   | C1  | D   | D1  | E  | F  | I    | G  |
|---------------------|-----|-----|-----|-----|-----|----|----|------|----|
| NH40-800~1000/3SZH  | 526 | 160 | 190 | 142 | 172 | 22 | 32 | 72   | 60 |
| NH40-1250/3SZH      | 526 | 180 | 200 | 160 | 180 | 35 | 34 | 72   | 70 |
| NH40-1600/3SZH      | 526 | 180 | 210 | 160 | 190 | 35 | 40 | 72   | 80 |
| Nh40-800~1000/4SZH  | 640 | 160 | 190 | 142 | 172 | 22 | 32 | 70.5 | 60 |
| NH40-1250/4SZH      | 640 | 180 | 200 | 160 | 180 | 35 | 34 | 70.5 | 70 |
| NH40-1600/4SZH      | 640 | 180 | 210 | 160 | 90  | 35 | 40 | 70.5 | 80 |

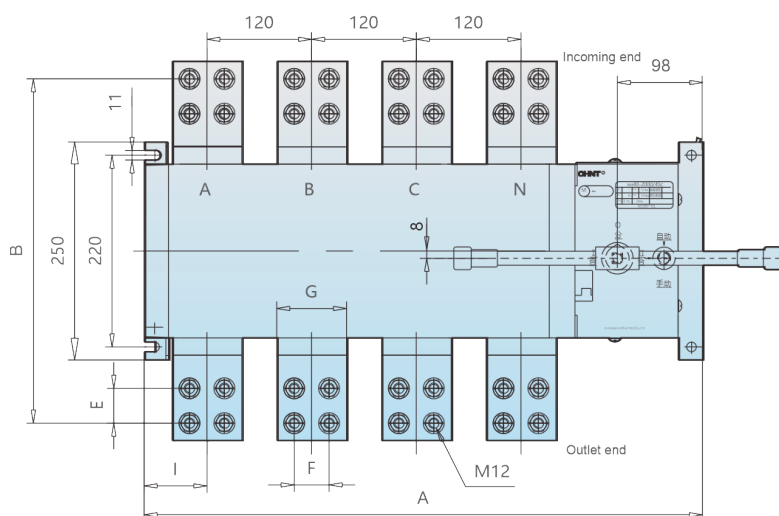
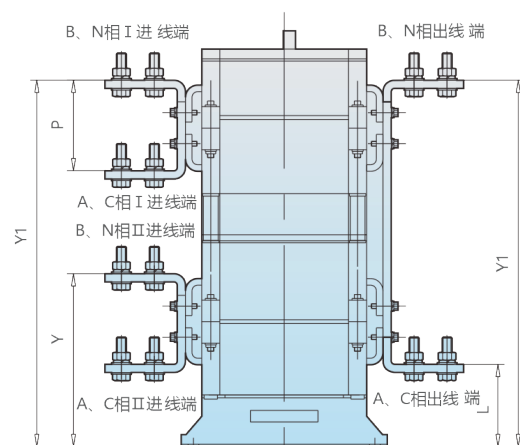
6.8 Installation dimensions of NH40-2000 ~ 3150/SZH switch body and box

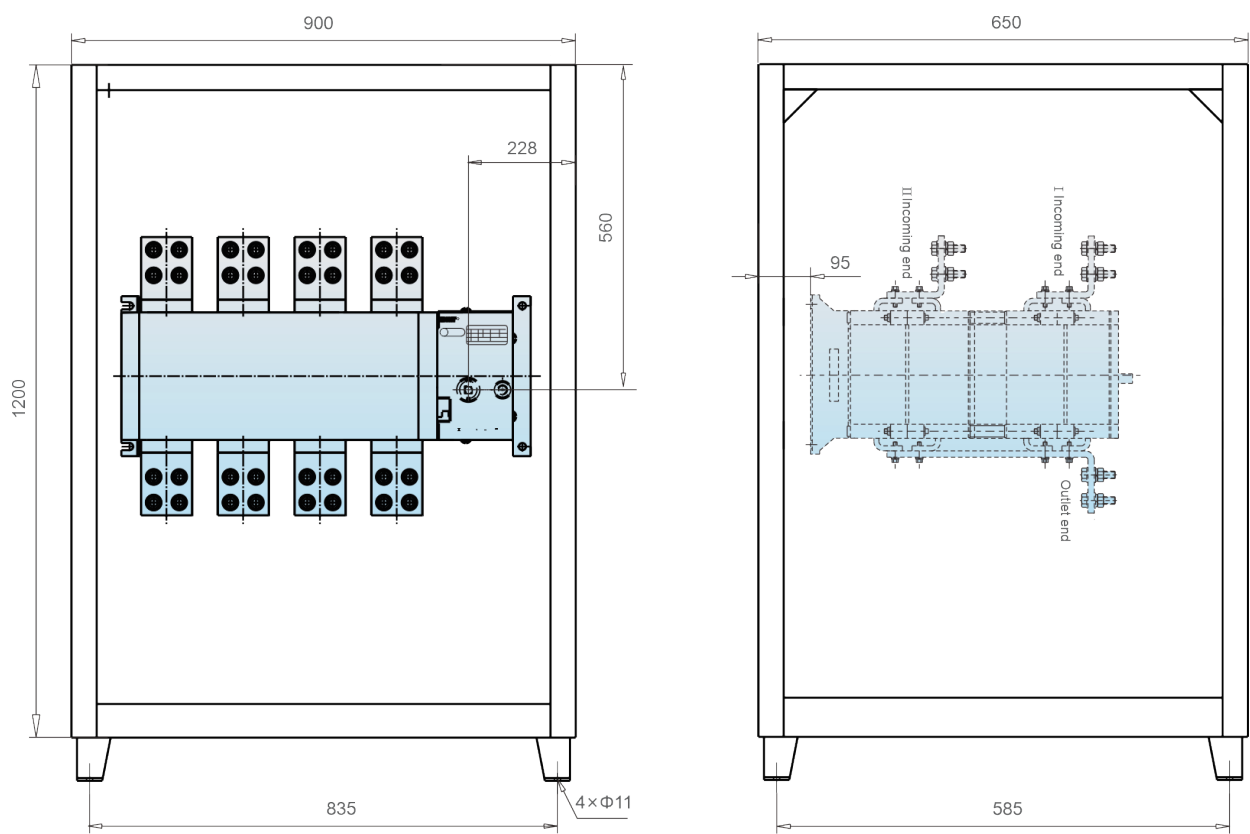


Standing size drawing of 2000A switch



Standing size drawing of 2500A and 3150A switches

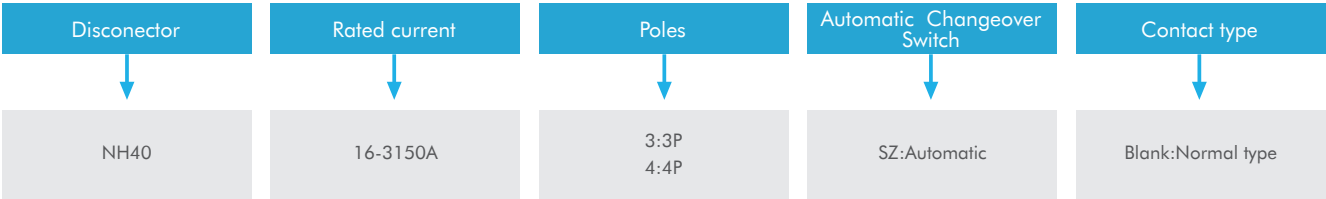




| Model specification | A   | B   | E  | F  | I    | G   | L   | P   | Y   | Y1  |
|---------------------|-----|-----|----|----|------|-----|-----|-----|-----|-----|
| NH40-2000/3SZH      | 526 | 395 | 40 | 40 | 72   | 80  | -   | -   | 210 | 445 |
| NH40-2500/3SZH      | 526 | 395 | 40 | 40 | 72   | 80  | 100 | 110 | 210 | 445 |
| NH40-3150/3SZH      | 526 | 460 | 50 | 50 | 72   | 120 | 100 | 112 | 212 | 447 |
| NH40-2000/4SZH      | 640 | 395 | 40 | 40 | 70.5 | 80  | -   | -   | 210 | 445 |
| NH40-2500/4SZH      | 640 | 395 | 40 | 40 | 70.5 | 80  | 100 | 110 | 210 | 445 |
| NH40-3150/4SZH      | 640 | 460 | 50 | 50 | 70.5 | 120 | 100 | 112 | 212 | 447 |

## 5. Connection diagram

| Specification | NH40SZ Mounting dimensions |     |     |     |     |     |        |    |    |     |     |      |    |     |     |
|---------------|----------------------------|-----|-----|-----|-----|-----|--------|----|----|-----|-----|------|----|-----|-----|
| ltH/Poles     | A                          | A1  | B   | C   | E   | J   | K      | L  | N  | P   | R   | V    | ΦX | Y   | Y1  |
| 16A/3, 4      | 305                        | 245 | 106 | 170 | 133 | 234 | 84     | 7  | 75 | 30  | 14  | 10.5 | 6  | 36  | 86  |
| 32A/3, 4      | 305                        | 245 | 106 | 170 | 133 | 234 | 84     | 7  | 75 | 30  | 14  | 10.5 | 6  | 36  | 86  |
| 40A/3, 4      | 305                        | 245 | 106 | 170 | 133 | 234 | 84     | 7  | 75 | 30  | 14  | 10.5 | 6  | 36  | 86  |
| 63A/3, 4      | 305                        | 245 | 106 | 170 | 133 | 234 | 84     | 7  | 75 | 30  | 14  | 10.5 | 6  | 36  | 86  |
| 80A/3, 4      | 305                        | 245 | 106 | 170 | 133 | 234 | 84     | 7  | 75 | 30  | 14  | 10.5 | 6  | 36  | 86  |
| 100A/3, 4     | 305                        | 245 | 106 | 170 | 133 | 234 | 84     | 7  | 75 | 30  | 14  | 10.5 | 6  | 36  | 86  |
| 125A/3        | 380                        | 292 | 135 | 240 | 208 | 275 | 78/108 | 7  | 87 | 36  | 20  | 20   | 9  | 58  | 135 |
| 160A/3        | 380                        | 292 | 135 | 240 | 208 | 275 | 78/108 | 7  | 87 | 36  | 20  | 20   | 9  | 58  | 135 |
| 125A/4        | 410                        | 320 | 135 | 240 | 208 | 312 | 78/108 | 7  | 87 | 36  | 20  | 20   | 9  | 58  | 135 |
| 160A/4        | 410                        | 320 | 135 | 240 | 208 | 312 | 78/108 | 7  | 87 | 36  | 20  | 20   | 9  | 58  | 135 |
| 200A/3        | 420                        | 330 | 170 | 240 | 208 | 312 | 78/108 | 7  | 87 | 50  | 25  | 27   | 11 | 60  | 140 |
| 250A/3        | 420                        | 330 | 170 | 240 | 208 | 312 | 78/108 | 7  | 87 | 50  | 25  | 27   | 11 | 60  | 140 |
| 200A/4        | 470                        | 380 | 170 | 240 | 208 | 358 | 78/108 | 7  | 87 | 50  | 25  | 27   | 11 | 60  | 140 |
| 250A/4        | 470                        | 380 | 170 | 240 | 208 | 358 | 78/108 | 11 | 87 | 50  | 25  | 27   | 11 | 60  | 140 |
| 315A/3        | 455                        | 382 | 240 | 315 | 270 | 365 | 180    | 11 | 95 | 65  | 32  | 37.5 | 11 | 84  | 195 |
| 400A/3        | 455                        | 382 | 240 | 315 | 270 | 365 | 180    | 11 | 95 | 65  | 32  | 37.5 | 11 | 84  | 195 |
| 630A/3        | 455                        | 382 | 260 | 315 | 270 | 365 | 180    | 11 | 95 | 65  | 40  | 37.5 | 13 | 84  | 195 |
| 315A/4        | 515                        | 450 | 240 | 315 | 270 | 430 | 180    | 11 | 95 | 65  | 32  | 37.5 | 11 | 84  | 195 |
| 400A/4        | 515                        | 450 | 240 | 315 | 270 | 430 | 180    | 11 | 95 | 65  | 32  | 37.5 | 11 | 84  | 195 |
| 630A/4        | 515                        | 450 | 260 | 315 | 270 | 430 | 180    | 11 | 95 | 65  | 40  | 37.5 | 13 | 84  | 195 |
| 800A/3        | 900                        | 520 | 310 | 368 | 320 | 500 | 220    | 11 | 85 | 120 | 60  | 60.5 | 13 | 108 | 252 |
| 1000A/3       | 900                        | 520 | 310 | 368 | 320 | 500 | 220    | 11 | 85 | 120 | 60  | 60.5 | 13 | 108 | 252 |
| 1250A/3       | 900                        | 520 | 360 | 368 | 320 | 500 | 220    | 11 | 85 | 120 | 70  | 60.5 | 13 | 108 | 252 |
| 1600A/3       | 900                        | 520 | 360 | 368 | 320 | 500 | 220    | 11 | 85 | 120 | 80  | 60.5 | 13 | 108 | 252 |
| 800A/4        | 1010                       | 635 | 310 | 368 | 320 | 610 | 220    | 11 | 85 | 120 | 60  | 60.5 | 13 | 108 | 252 |
| 1000A/4       | 1010                       | 635 | 310 | 368 | 320 | 610 | 220    | 11 | 85 | 120 | 60  | 60.5 | 13 | 108 | 252 |
| 1250A/4       | 1010                       | 635 | 360 | 368 | 320 | 610 | 220    | 11 | 85 | 120 | 70  | 60.5 | 13 | 108 | 252 |
| 1600A/4       | 1010                       | 635 | 360 | 368 | 320 | 610 | 220    | 11 | 85 | 120 | 80  | 60.5 | 13 | 108 | 252 |
| 2000A/3       | 900                        | 520 | 455 | 562 | 495 | 500 | 220    | 11 | 85 | 137 | 80  | 33   | 13 | 226 | 457 |
| 2000A/4       | 1010                       | 635 | 455 | 562 | 495 | 610 | 220    | 11 | 85 | 137 | 80  | 33   | 13 | 226 | 457 |
| 2500A/3       | 900                        | 520 | 455 | 562 | 495 | 500 | 220    | 11 | 85 | 137 | 80  | 33   | 13 | 226 | 457 |
| 2500A/4       | 1010                       | 635 | 455 | 562 | 495 | 610 | 220    | 11 | 85 | 137 | 80  | 33   | 13 | 226 | 457 |
| 3150A/3       | 900                        | 520 | 505 | 562 | 495 | 500 | 220    | 11 | 85 | 142 | 120 | 13   | 13 | 230 | 462 |
| 3150A/4       | 1010                       | 635 | 505 | 562 | 495 | 610 | 220    | 11 | 85 | 142 | 120 | 13   | 13 | 230 | 462 |



|    | Poles | In    | Description   | Code   | Price | QTY |
|----|-------|-------|---------------|--------|-------|-----|
| 3P | 3P    | 16A   | NH40-16/3SZ   | 420174 |       | 4   |
|    | 3P    | 20A   | NH40-20/3SZ   | 420083 |       | 4   |
|    | 3P    | 25A   | NH40-25/3SZ   | 420084 |       | 4   |
|    | 3P    | 32A   | NH40-32/3SZ   | 420085 |       | 4   |
|    | 3P    | 40A   | NH40-40/3SZ   | 420086 |       | 4   |
|    | 3P    | 63A   | NH40-63/3SZ   | 420087 |       | 4   |
|    | 3P    | 80A   | NH40-80/3SZ   | 420088 |       | 4   |
|    | 3P    | 100A  | NH40-100/3SZ  | 420089 |       | 4   |
|    | 3P    | 125A  | NH40-125/3SZ  | 420090 |       | 2   |
|    | 3P    | 160A  | NH40-160/3SZ  | 420091 |       | 1   |
|    | 3P    | 200A  | NH40-200/3SZ  | 420140 |       | 1   |
|    | 3P    | 250A  | NH40-250/3SZ  | 420092 |       | 1   |
|    | 3P    | 315A  | NH40-315/3SZ  | 420141 |       | 1   |
|    | 3P    | 400A  | NH40-400/3SZ  | 420093 |       | 1   |
|    | 3P    | 630A  | NH40-630/3SZ  | 420094 |       | 1   |
|    | 3P    | 800A  | NH40-800/3SZ  | 420142 |       | 1   |
|    | 3P    | 1000A | NH40-1000/3SZ | 420077 |       | 1   |
|    | 3P    | 1250A | NH40-1250/3SZ | 420078 |       | 1   |
|    | 3P    | 1600A | NH40-1600/3SZ | 420074 |       | 1   |
|    | 3P    | 2000A | NH40-2000/3SZ | 420143 |       | 1   |
| 4P | 3P    | 2500A | NH40-2500/3SZ | 420082 |       | 1   |
|    | 3P    | 3150A | NH40-3150/3SZ | 420144 |       | 1   |
|    | 4P    | 16A   | NH40-16/4SZ   | 420175 |       | 4   |
|    | 4P    | 20A   | NH40-20/4SZ   | 420095 |       | 4   |
|    | 4P    | 25A   | NH40-25/4SZ   | 420096 |       | 4   |
|    | 4P    | 32A   | NH40-32/4SZ   | 420097 |       | 4   |
|    | 4P    | 40A   | NH40-40/4SZ   | 420098 |       | 4   |
|    | 4P    | 63A   | NH40-63/4SZ   | 420099 |       | 4   |
|    | 4P    | 80A   | NH40-80/4SZ   | 420100 |       | 4   |
|    | 4P    | 100A  | NH40-100/4SZ  | 420101 |       | 4   |
|    | 4P    | 125A  | NH40-125/4SZ  | 420066 |       | 2   |
|    | 4P    | 160A  | NH40-160/4SZ  | 420067 |       | 2   |
|    | 4P    | 200A  | NH40-200/4SZ  | 420071 |       | 1   |
|    | 4P    | 250A  | NH40-250/4SZ  | 420068 |       | 1   |
|    | 4P    | 315A  | NH40-315/4SZ  | 420072 |       | 1   |
|    | 4P    | 400A  | NH40-400/4SZ  | 420069 |       | 1   |
|    | 4P    | 630A  | NH40-630/4SZ  | 420070 |       | 1   |

|    | Poles | In    | Description   | Code   | Price | QTY |
|----|-------|-------|---------------|--------|-------|-----|
| 4P |       | 800A  | NH40-800/4SZ  | 420102 |       | 1   |
|    |       | 1000A | NH40-1000/4SZ | 420079 |       | 1   |
|    |       | 1250A | NH40-1250/4SZ | 420080 |       | 1   |
|    |       | 1600A | NH40-1600/4SZ | 420073 |       | 1   |
|    |       | 2000A | NH40-2000/4SZ | 420103 |       | 1   |
|    |       | 2500A | NH40-2500/4SZ | 420104 |       | 1   |
|    |       | 3150A | NH40-3150/4SZ | 420139 |       | 1   |

|    | Poles | In    | Description    | Code   | Price | QTY |
|----|-------|-------|----------------|--------|-------|-----|
| 3P | 3P    | 16A   | NH40-16/3SZI   | 420284 |       | 4   |
|    | 3P    | 32A   | NH40-32/3SZI   | 420285 |       | 4   |
|    | 3P    | 63A   | NH40-63/3SZI   | 420286 |       | 4   |
|    | 3P    | 125A  | NH40-125/3SZI  | 420138 |       | 1   |
|    | 3P    | 160A  | NH40-160/3SZI  | 420137 |       | 1   |
|    | 3P    | 200A  | NH40-200/3SZI  | 420136 |       | 1   |
|    | 3P    | 250A  | NH40-250/3SZI  | 420135 |       | 1   |
|    | 3P    | 400A  | NH40-400/3SZI  | 420134 |       | 1   |
|    | 3P    | 630A  | NH40-630/3SZI  | 420133 |       | 1   |
|    | 3P    | 2000A | NH40-2000/3SZI | 420177 |       | 1   |
| 4P | 4P    | 125A  | NH40-125/4SZI  | 420132 |       | 1   |
|    | 4P    | 160A  | NH40-160/4SZI  | 420131 |       | 1   |
|    | 4P    | 200A  | NH40-200/4SZI  | 420130 |       | 1   |
|    | 4P    | 250A  | NH40-250/4SZI  | 420129 |       | 1   |
|    | 4P    | 400A  | NH40-400/4SZI  | 420128 |       | 1   |
|    | 4P    | 630A  | NH40-630/4SZI  | 420127 |       | 1   |
|    | 4P    | 1000A | NH40-1000/4SZI | 420171 |       | 1   |
|    | 4P    | 2000A | NH40-2000/4SZI | 420178 |       | 1   |

|    | Poles | In    | Description     | Code   | Price | QTY |
|----|-------|-------|-----------------|--------|-------|-----|
| 3P | 3P    | 125A  | NH40-125/3SZII  | 420126 |       | 1   |
|    | 3P    | 160A  | NH40-160/3SZII  | 420125 |       | 1   |
|    | 3P    | 200A  | NH40-200/3SZII  | 420124 |       | 1   |
|    | 3P    | 250A  | NH40-250/3SZII  | 420123 |       | 1   |
|    | 3P    | 400A  | NH40-400/3SZII  | 420122 |       | 1   |
|    | 3P    | 630A  | NH40-630/3SZII  | 420121 |       | 1   |
| 4P | 4P    | 100A  | NH40-100/4SZII  | 420310 |       | 4   |
|    | 4P    | 125A  | NH40-125/4SZII  | 420120 |       | 1   |
|    | 4P    | 160A  | NH40-160/4SZII  | 420119 |       | 1   |
|    | 4P    | 200A  | NH40-200/4SZII  | 420118 |       | 1   |
|    | 4P    | 250A  | NH40-250/4SZII  | 420117 |       | 1   |
|    | 4P    | 400A  | NH40-400/4SZII  | 420116 |       | 1   |
|    | 4P    | 630A  | NH40-630/4SZII  | 420115 |       | 1   |
|    | 4P    | 1000A | NH40-1000/4SZII | 420172 |       | 1   |

|    | Poles | In    | Description      | Code   | Price | QTY |
|----|-------|-------|------------------|--------|-------|-----|
| 3P | 3P    | 100A  | NH40-100/3SZIII  | 420224 |       | 4   |
|    | 3P    | 125A  | NH40-125/3SZIII  | 420109 |       | 1   |
|    | 3P    | 160A  | NH40-160/3SZIII  | 420108 |       | 1   |
|    | 3P    | 200A  | NH40-200/3SZIII  | 420107 |       | 1   |
|    | 3P    | 250A  | NH40-250/3SZIII  | 420106 |       | 1   |
|    | 3P    | 400A  | NH40-400/3SZIII  | 420105 |       | 1   |
|    | 3P    | 630A  | NH40-630/3SZIII  | 420075 |       | 1   |
|    | 3P    | 1000A | NH40-1000/3SZIII | 420225 |       | 1   |
| 4P | 4P    | 32A   | NH40-32/4SZIII   | 420329 |       | 4   |
|    | 4P    | 40A   | NH40-40/4SZIII   | 420294 |       | 4   |
|    | 4P    | 63A   | NH40-63/4SZIII   | 420287 |       | 4   |
|    | 4P    | 80A   | NH40-80/4SZIII   | 420273 |       | 4   |
|    | 4P    | 100A  | NH40-100/4SZIII  | 420283 |       | 4   |
|    | 4P    | 125A  | NH40-125/4SZIII  | 420114 |       | 2   |
|    | 4P    | 160A  | NH40-160/4SZIII  | 420113 |       | 2   |
|    | 4P    | 200A  | NH40-200/4SZIII  | 420112 |       | 1   |
|    | 4P    | 250A  | NH40-250/4SZIII  | 420111 |       | 1   |
|    | 4P    | 400A  | NH40-400/4SZIII  | 420110 |       | 1   |
|    | 4P    | 630A  | NH40-630/4SZIII  | 420076 |       | 1   |
|    | 4P    | 1000A | NH40-1000/4SZIII | 420173 |       | 1   |
|    | 4P    | 1250A | NH40-1250/4SZIII | 420328 |       | 1   |
|    | 4P    | 1600A | NH40-1600/4SZIII | 420293 |       | 1   |
|    | 4P    | 2000A | NH40-2000/4SZIII | 420311 |       | 1   |
|    | 4P    | 3150A | NH40-3150/4SZIII | 420288 |       | 1   |