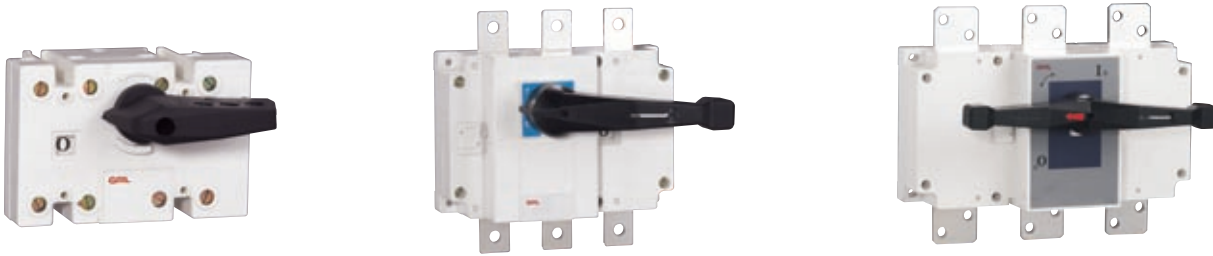


## HGL Series



### Model & Meaning

**H GL □ - □A / □ JK □ B H**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- ① Code of company.
- ② Code of load isolation switch.
- ③ Conventional thermal current.  
Z stands for change-over load isolation switch  
(Z1-outlet, Z2-inlet)  
C stands for side operated load isolation switch.
- ④ Number of poles:  
3 poles, 4 poles (3 poles+on and off neutral pole)
- ⑤ Operation outside, no note for front operation.
- ⑥ The window for direct observing the contact, do not mark without need.
- ⑦ Functional code of auxiliary contact (as show in the table), do not mark without need.
- ⑧ The connection behind the board. Connection in front of board is not marked.
- ⑨ Operation behind the board, do not mark without need.

|               |     |           |
|---------------|-----|-----------|
| One NO One NC | F11 | F1NO+F1NC |
| Two NO Two NC | F12 | F2NO+F2NC |

### Application scope

HGL series load isolation switch mainly suitable for AC 50Hz, rated voltage to 660V, DC rated voltage up to 440V, rated current up to 3,150A. The switch is used in the infrequent making and breaking circuit.

### Example of model selection

HGLZ2-160A/4Z<sub>2</sub>JF<sub>11</sub>~380V In 125A

Change over load isolation switch, inlet, AC rated voltage 380V, Conventional thermal current 160A, rated current 125A, 4 poles, operation outside the board, auxiliary contact NO+NC.

### Characteristics of products

- ※ The elastic-accumulating accelerating mechanism for instant release realizes the rapid making and breaking (13.8m/s), having no relation ship with the speed of the operating handle, and increasing greatly the capability of extinguishing electric arc.
- ※ The shell made of unsaturated polyester resin reinforced by glass fibre possesses excellent performance of flame resistant, dielectric performance, safe operation, resist carbonic performance and resist impact performance.
- ※ Parallel double gap contact possesses self cleaning functions.
- ※ All the contact materials are copper alloy plated with silver, and possess two separation contact surfaces. Large clearance of insulation.
- ※ Be on "O", the products can lock the handle with three locks at the same time and thus can avoid error operation.

## HGL Series

## Principal technical parameter

Table 1

| Conventional thermal current Ith (A)                          |         |        | 63A  |      | 100A |      | 160A |      | 250A |      |
|---------------------------------------------------------------|---------|--------|------|------|------|------|------|------|------|------|
| Rated current In (A)                                          |         |        | 40   | 63   | 80   | 100  | 125  | 160  | 200  | 250  |
| Rated insulation voltage Ui (V) (installation type IV)        |         |        | 690  | 690  | 690  | 690  | 690  | 690  | 690  | 690  |
| Dielectric strength (V)                                       |         |        | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Rated surge-resistant voltage Uimp kV (installed category IV) |         |        | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Rated working current Ie (A)                                  | 380V    | AC-21B | 40   | 63   | 80   | 80   | 125  | 160  | 200  | 250  |
|                                                               |         | AC-22B | 40   | 63   | 80   | 80   | 125  | 160  | 200  | 250  |
|                                                               |         | AC-23B | 40   | 50   | 80   | 80   | 125  | 160  | 200  | 250  |
|                                                               | 660V    | AC-21B | 40   | 50   | 80   | 80   | 125  | 160  | 200  | 250  |
|                                                               |         | AC-22B | 32   | 32   | 50   | 50   | 125  | 160  | 160  | 160  |
|                                                               |         | AC-23B | 25   | 25   | 40   | 40   | 80   | 80   | 100  | 125  |
| Motor power P (kW)                                            | 380V    | 18.5   | 25   | 40   | 40   | 63   | 80   | 100  | 132  |      |
|                                                               | 660V    | 22     | 22   | 33   | 33   | 75   | 75   | 90   | 110  |      |
| Rated short-time withstand current Icw ( kA Rms ) 0.1s/1s     |         |        | 2    | 2    | 2    | 2    | 8    | 8    | 12   | 12   |
| Rated breaking capability Icn (A Rms) AC23 380V               |         |        | 320  | 504  | 640  | 800  | 1000 | 1000 | 1600 | 1600 |
| Rated making capability Icm (A Rms) AC23 380V                 |         |        | 400  | 630  | 800  | 1000 | 1250 | 1600 | 2000 | 2500 |
| Rated short-current making capability Icm (kA peak value)     |         |        | 2.84 | 2.84 | 2.84 | 2.84 | 13.6 | 13.6 | 17   | 17   |
| Mechanical durability 380V                                    |         |        | 1700 | 1700 | 1700 | 1700 | 1400 | 1400 | 1400 | 1400 |
| Electrical curability 380V                                    |         |        | 300  | 300  | 300  | 300  | 200  | 200  | 200  | 200  |
| Operation moment (Nm)                                         |         |        | 1.2  | 1.2  | 1.2  | 1.2  | 6.5  | 6.5  | 10   | 10   |
| Weight (kg)                                                   | 3 poles |        | 0.37 | 0.37 | 0.37 | 0.37 | 1.3  | 1.3  | 2.2  | 2.2  |
|                                                               | 4 poles |        | 0.41 | 0.41 | 0.41 | 0.41 | 1.5  | 1.5  | 2.6  | 2.6  |

**HGL Series**

Table 2

| Conventional thermal current Ith (A)                          |             | 630A |      |      |      | 1600A |       |       | 3150A |       |       |
|---------------------------------------------------------------|-------------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| Rated current In (A)                                          |             | 315  | 400  | 500  | 630  | 1000  | 1250  | 1600  | 2000  | 2500  | 3150  |
| Rated insulation voltage Ui (V) (installation type IV)        |             | 1000 | 1000 | 1000 | 1000 | 1000  | 1000  | 1000  | 1000  | 1000  | 1000  |
| Dielectric strength (V)                                       |             | 8000 | 8000 | 8000 | 8000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| Rated surge-resistant voltage Uimp kV (installed category IV) |             | 6    | 6    | 6    | 6    | 6     | 6     | 6     | 6     | 6     | 6     |
| Rated working current Ie (A)                                  | AC-21B      | 315  | 400  | 500  | 630  | 1000  | 1250  | 1600  | 2000  | 2500  | 3150  |
|                                                               | 380V AC-22B | 315  | 400  | 500  | 630  | 1000  | 1250  | 1600  | 2000  | 2500  | 3150  |
|                                                               | AC-23B      | 315  | 400  | 500  | 630  |       |       |       |       |       |       |
|                                                               | AC-21B      | 315  | 400  | 400  | 500  | 1000  | 1000  | 1600  | 2000  | 2500  | 2500  |
|                                                               | 660V AC-22B | 315  | 315  | 315  | 315  | 800   | 800   | 800   | 1000  | 1250  | 1600  |
|                                                               | AC-23B      |      |      |      |      |       |       |       |       |       |       |
| Motor power P (kW)                                            | 380V        | 160  | 220  | 280  | 315  | 560   | 560   | 560   | 710   | 710   | 710   |
|                                                               | 660V        | 185  | 185  | 185  | 185  | 475   | 475   | 475   | 750   | 750   | 750   |
| Rated short-time withstand current Icw ( kA Rms ) 0.1s/1s     |             | 25   | 25   | 25   | 25   | 50    | 50    | 50    | 50    | 50    | 50    |
| Rated breaking capability Icn (A Rms) AC23 380V               |             | 2520 | 3200 | 4000 | 5040 | 3000  | 3750  | 4800  | 6000  | 7500  | 9450  |
| Rated making capability Icm (A Rms) AC23 380V                 |             | 3150 | 4000 | 5000 | 6300 | 3000  | 3750  | 4800  | 6000  | 7500  | 9450  |
| Rated short-current making capability Icm (kA peak value)     |             | 40   | 40   | 40   | 40   | 70    | 70    | 70    | 105   | 105   | 105   |
| Mechanical durability (number of cyclic operation)            |             | 800  | 800  | 800  | 800  | 500   | 500   | 500   | 300   | 300   | 300   |
| Electrical curability 380V                                    |             | 200  | 200  | 200  | 200  | 100   | 100   | 100   | 100   | 100   | 100   |
| Operation moment (Nm)                                         |             | 14.5 | 14.5 | 14.5 | 14.5 | 37    | 37    | 60    | 60    | 60    | 60    |
| Weight (kg)                                                   | 3 poles     | 4.3  | 4.3  | 4.7  | 4.7  | 10.5  | 10.5  | 16    | 25.5  | 25.5  | 31    |
|                                                               | 4 poles     | 5.4  | 5.4  | 6    | 6    | 13    | 13    | 20    | 37.5  | 37.5  | 51.5  |

## HGL Series

### Conformed standard

International standard

IEC60947-1 (1998) 《Low-voltage switchgear and controlgear, part one: General Rules》.

IEC60947-3 (1999) 《Low-voltage switchgear and controlgear, switches, disconnectors, switch-disconnectors and fuse-combination units》.

National standard

GB/T14048.1-2000 《Low-voltage switchgear and controlgear, part one: general Rules》.

GB/T14048.3-2000 《Low-voltage switchgear and controlgear, switches, disconnectors, switch-disconnectors and fuse-combination units》.

### Normal work conditions and Installation conditions

※ Ambient temperature:  $-5^{\circ}\text{C} \sim 40^{\circ}\text{C}$ , relative humidity is not larger than 95%.

※ Altitude: shall not exceed 2000m.

※ No explosive dangerous medium environment.

※ No rain and snow attack environment.

Note: if the load isolation switch is expected to be used in the condition that the ambient temperature is higher than  $+40^{\circ}\text{C}$  or is lower than  $-5^{\circ}\text{C}$ , customers should inform to the manufactory.

### Load isolation switch of HGL-63~3150A

7 specifications of HGL load isolation switch from 63A to 3150A: Basic model of modularized design, 3 poles, 4 poles (3 poles+on and off neutral pole). It is suitable for the making and breaking operation of electric dircuit or electric isolation. Switches over 1000A are only suitable for electric isolation.

Mark window is set in the front side to indicate the on and off state of the contact.

Rear boservation window can bi provided according to the demand to observe directly the on and off state of the contact, for window pattem, refer to the back operational load isolation switch, HGL-63~1600A/H.

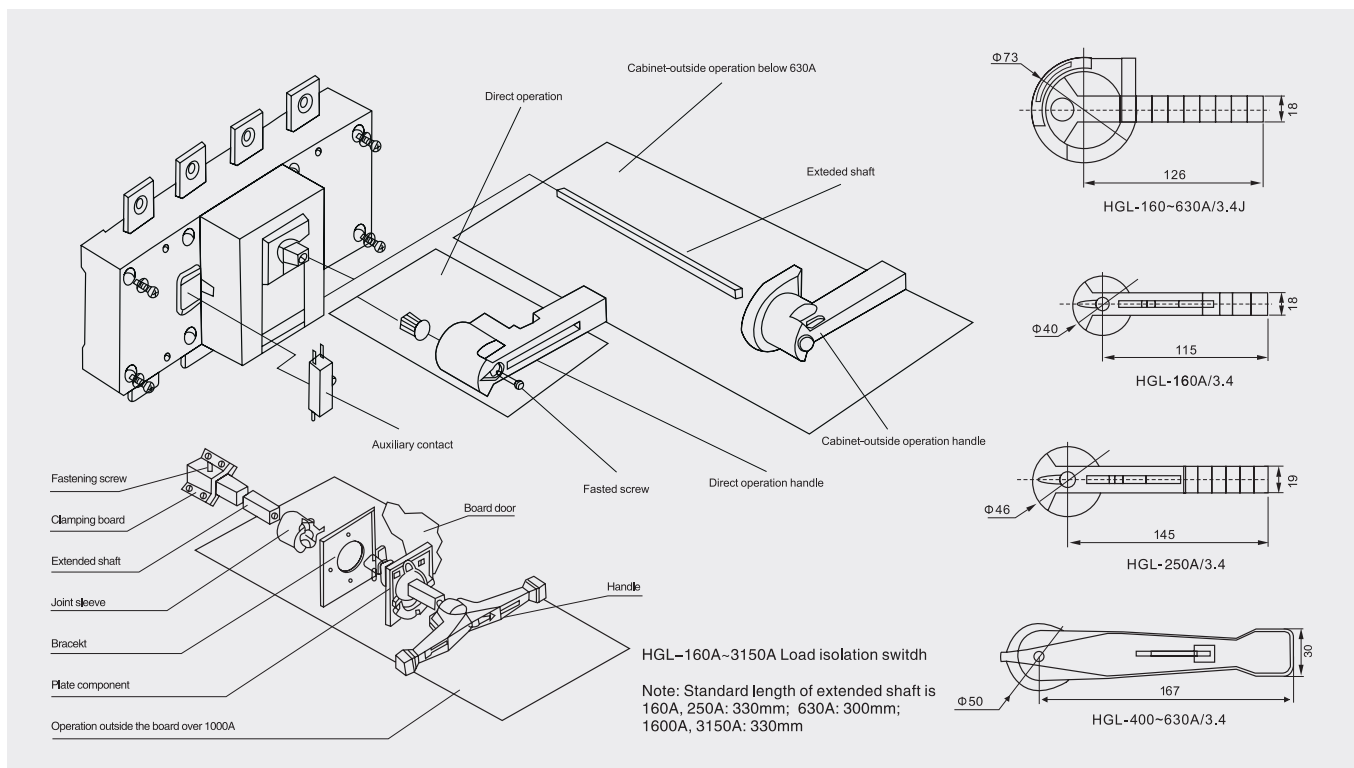
Two group of auxiliary contacts can be assembled.

The electric cable insulating cover can be assembled.

### Operation mode

※ Direct operation: The handle is installed in the middle of the switch.

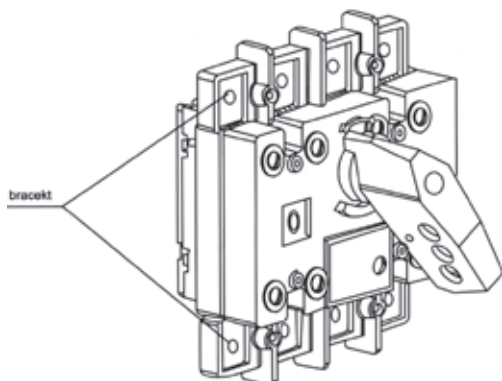
※ Operation outside the board: The handle is installed outside the door off distributing board.



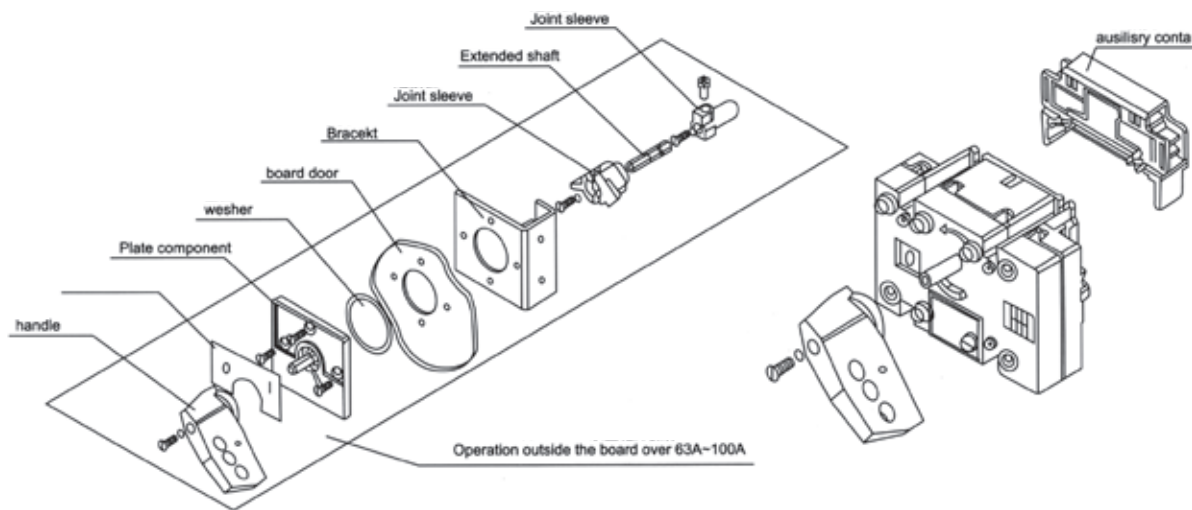
## HGL Series

### Load isolation switch of HGL-63A~100A

- ※ 63A~100A is suitable for the making and breaking of electrical isolation circuit or electric insulation.
- ※ 63A~100A possesses 3 poles, and 4 poles (3 poles+on of neutral pole).
- ※ Two sets of auxiliary contacts can be assembled according to demand.
- ※ Side operation, operation outside, the board can be assemble according to demand.



Note: It's HGL-100A~630A loading isolation switch which is no span

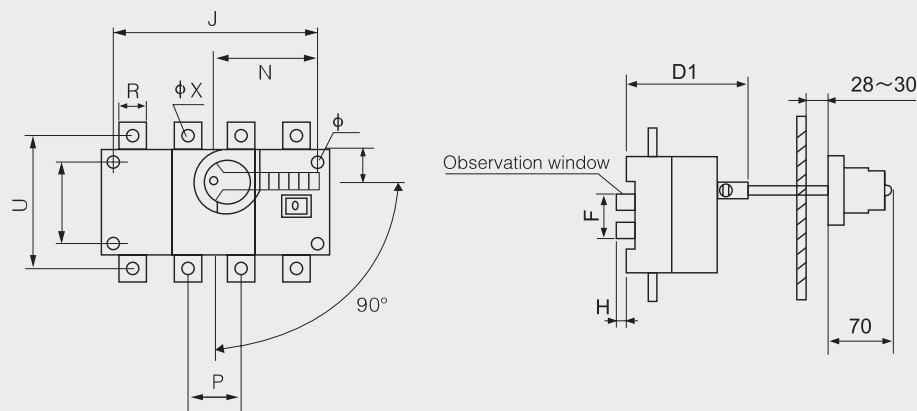


- ※ 63A~100A is suitable for the making and breaking of electrical isolation circuit or electric insulation. Two sets of auxiliary contacts can be assembled according to demand.
- ※ 63A~100A possesses three poles, and four poles (3 poles+on of neutral pole). Side operation, operation outside, the board can be assemble according to demand.



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Operation outside HGL-160A~630A/JK

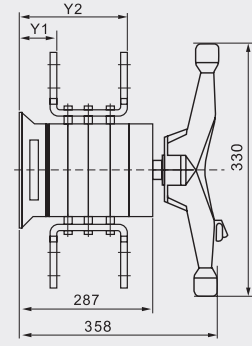
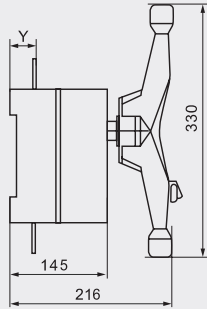
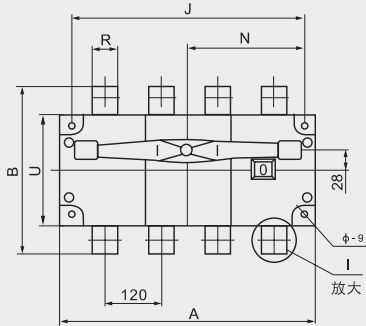


| In     | A   | B   | C   | D  | D1  | E   | $\phi L$ | J   | K   | N   | P  | R  | S  | U   | $\phi X$ | Y    | F  | H  |
|--------|-----|-----|-----|----|-----|-----|----------|-----|-----|-----|----|----|----|-----|----------|------|----|----|
| 125A/3 | 140 | 135 | 121 | 27 | 93  | 71  | 5.5      | 120 | 65  | 75  | 36 | 20 | 25 | 115 | 9        | 24   | 50 | 10 |
| 125A/4 | 170 | 135 | 121 | 27 | 93  | 71  | 5.5      | 150 | 65  | 75  | 36 | 20 | 25 | 115 | 9        | 24   | 50 | 10 |
| 160A/3 | 140 | 135 | 121 | 27 | 93  | 71  | 5.5      | 120 | 65  | 75  | 36 | 20 | 25 | 115 | 9        | 24   | 50 | 10 |
| 160A/4 | 170 | 135 | 121 | 27 | 93  | 71  | 5.5      | 150 | 65  | 75  | 36 | 20 | 25 | 115 | 9        | 24   | 50 | 10 |
| 200A/3 | 180 | 170 | 144 | 35 | 104 | 84  | 5.5      | 160 | 90  | 105 | 50 | 25 | 30 | 140 | 11       | 25   | 79 | 15 |
| 200A/4 | 230 | 170 | 144 | 35 | 104 | 84  | 5.5      | 210 | 90  | 105 | 50 | 25 | 30 | 140 | 11       | 25   | 79 | 15 |
| 250A/3 | 180 | 170 | 144 | 35 | 104 | 84  | 5.5      | 160 | 90  | 105 | 50 | 25 | 30 | 140 | 11       | 25   | 79 | 15 |
| 250A/4 | 230 | 170 | 144 | 35 | 104 | 84  | 5.5      | 210 | 90  | 105 | 50 | 25 | 30 | 140 | 11       | 25   | 79 | 15 |
| 315A/3 | 230 | 240 | 179 | 50 | 137 | 115 | 7        | 210 | 140 | 135 | 65 | 32 | 40 | 206 | 11       | 37   | 95 | 20 |
| 315A/4 | 290 | 240 | 179 | 50 | 137 | 115 | 7        | 270 | 140 | 135 | 65 | 32 | 40 | 206 | 11       | 37   | 95 | 20 |
| 400A/3 | 230 | 240 | 179 | 50 | 137 | 115 | 7        | 210 | 140 | 135 | 65 | 32 | 40 | 206 | 11       | 37   | 95 | 20 |
| 400A/4 | 290 | 240 | 179 | 50 | 137 | 115 | 7        | 270 | 140 | 135 | 65 | 32 | 40 | 206 | 11       | 37   | 95 | 20 |
| 500A/3 | 230 | 260 | 179 | 50 | 137 | 115 | 7        | 210 | 140 | 135 | 65 | 40 | 50 | 220 | 13       | 37.5 | 95 | 20 |
| 500A/4 | 290 | 260 | 179 | 50 | 137 | 115 | 7        | 270 | 140 | 135 | 65 | 40 | 50 | 220 | 13       | 37.5 | 95 | 20 |
| 630A/3 | 230 | 260 | 179 | 50 | 137 | 115 | 7        | 210 | 140 | 135 | 65 | 40 | 50 | 220 | 13       | 37.5 | 95 | 20 |
| 630A/4 | 290 | 260 | 179 | 50 | 137 | 115 | 7        | 270 | 140 | 135 | 65 | 40 | 50 | 220 | 13       | 37.5 | 95 | 20 |

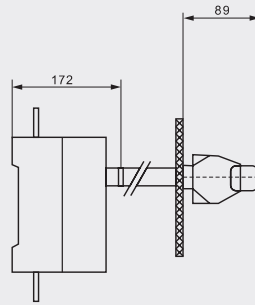
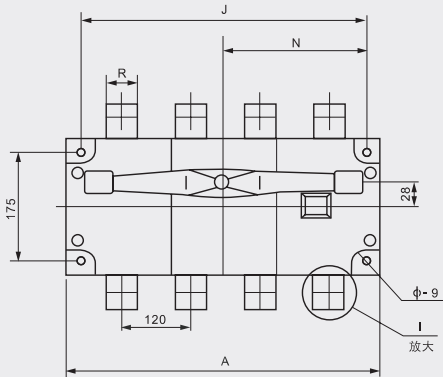
## HGL Series

Load isolation switch side operation load isolation switch of HGL-1600A~3150A

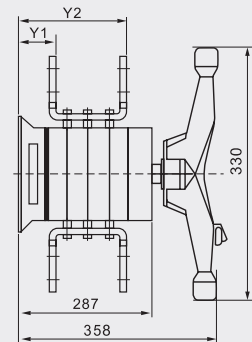
### Direct operation of HGL-1600A



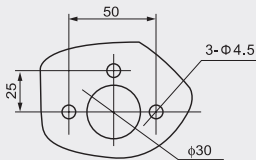
### Operation outside of HGL-1600A/JK



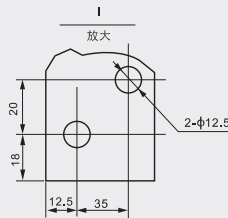
### Direct operation of HGL-1600A/JK (operation outside)



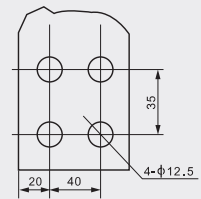
### Installation bottom plate for operation outside the board



### 1000A



### 1250A~1600A



| In      | A   | A1  | B   | J   | N   | R   | U   | Y  | Y1   | Y2    |
|---------|-----|-----|-----|-----|-----|-----|-----|----|------|-------|
| 1000A/3 | 378 | 105 | 310 | 353 | 171 | 60  | 200 | 48 |      |       |
| 1000A/4 | 498 | 105 | 310 | 473 | 231 | 60  | 200 | 48 |      |       |
| 1250A/3 | 378 | 105 | 336 | 353 | 171 | 80  | 200 | 48 |      |       |
| 1250A/4 | 498 | 105 | 336 | 473 | 231 | 80  | 200 | 48 |      |       |
| 1600A/3 | 378 | 105 | 336 | 353 | 171 | 80  | 200 | 49 |      |       |
| 1600A/4 | 498 | 105 | 336 | 473 | 231 | 80  | 200 | 49 |      |       |
| 2000A/3 | 378 |     | 455 | 353 | 171 | 80  | 200 |    | 78.5 | 225.5 |
| 2000A/4 | 498 |     | 455 | 473 | 231 | 80  | 200 |    | 78.5 | 225.5 |
| 2500A/3 | 378 |     | 455 | 353 | 171 | 80  | 200 |    | 78.5 | 225.5 |
| 2500A/4 | 498 |     | 455 | 473 | 231 | 80  | 200 |    | 78.5 | 225.5 |
| 3150A/3 | 378 |     | 505 | 353 | 171 | 120 | 200 |    | 78.5 | 227   |
| 3150A/4 | 498 |     | 505 | 473 | 231 | 120 | 200 |    | 78.5 | 227   |