

# DC Switch-Disconnectors

- Basic rating
  - Rated voltage: 1500Vdc (DDV type), 1200Vdc (DDH type)
  - Rated current: 800 ~ 4000A - I<sub>cw</sub> = 100kA / 1s
  - Utilization Category: DC-23A
- Electrical endurance:
  - 10,000 operations (1600A @ 1500Vdc)
  - 2,000 operations (4000A @ 1500Vdc)
- Optional Short-Busbar considering temperature performance
- Compatible with existing Susol ACB
  - Accessories including closing and trip coils
  - Physical sizes for installation
- Applicable standards and tests: IEC 60947-3, DEKRA CB, UL listed certification



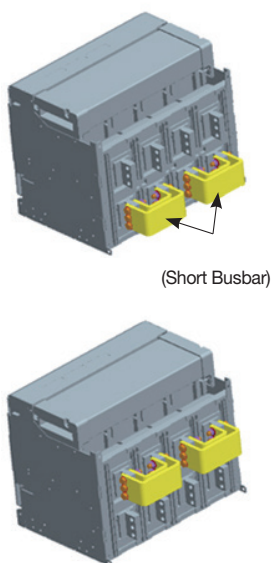
## Type and ratings

Specification		Electrical characteristics																
		DDH/DDV-20D								DDH/DDV-40E								
Rated insulation voltage (U <sub>i</sub> )	(Vdc)	1500																
Rated impulse withstand voltage (U <sub>imp</sub> )	(kV)	12																
Rated short-time withstand current (I <sub>cw</sub> )	(kA/1s)	100 <sup>1)</sup>								100								
	(kA/0.4s)	100																
Rated making capacity (I <sub>cm</sub> )	(kA, peak)	100																
Operation time (ms)	Opening	Less than 25ms under I <sub>cw</sub> /Less than 75ms over I <sub>cw</sub>																
	Closing	80ms under																
Version	Draw-out type	●																
	Fixed type	●																
Standard certification		DEKRA CB certification according to IEC 60947-3																
DC1200V		DDH								DDH								
Type		DDH-08D	DDH-10D	DDH-13D	DDH-16D	DDH-20D			DDH-08E	DDH-10E	DDH-13E	DDH-16E	DDH-20E	DDH-25E	DDH-32E	DDH-40E		
Frame size (AF)		800	1000	1250	1600	2000			800	1000	1250	1600	2000	2500	3200	4000		
Rated operational voltage (U <sub>e</sub> )	3Pole (V DC)	750								750								
	4Pole (V DC)	1200								1200								
Utilization category (according to IEC 60947-3) <sup>4)</sup>		DC-22A								DC-22A								
Endurance (times) (Without maintenance)	Mechanical	20,000																
	Electrical Time const 2ms	6,000	5,000	2,500	1,500	1,000			3,000				2,000		1,000			
DC1500V		DDV								DDV								
Type		DDV-08D	DDV-10D	DDV-13D	DDV-16D	DDV-20D	DDV-25D		DDV-08E	DDV-10E	DDV-13E	DDV-16E	DDV-20E	DDV-25E	DDV-32E	DDV-40E		
Frame size (AF)		800	1000	1250	1600	2000	2500		800	1000	1250	1600	2000	2500	3200	4000		
Rated operational voltage (U <sub>e</sub> )	3Pole (V DC)	1000 (1200V) <sup>2)</sup>								1000 (1200V) <sup>2)</sup>								
	4Pole (V DC)	1500								1500								
Utilization category (according to IEC 60947-3)		DC-23A								DC-23A								
Endurance (times) (Without maintenance)	Mechanical	20,000																
	Electrical <sup>3)</sup>	Time const 7.5ms	-	-	-	-	-	-		5,000				4,000	2,500	1,500	1,000	
		Time const 2ms	9,000	6,000	4,000	2,000	1,500	1,000		10,000				8,000	5,000	3,000	2,000	
Demension and weight																		
Weight (3P/4P)	Without cradle	Draw-out type	(kg)				34/42				37/45				43/53			
	With cradle		(kg)				63/74				70/85				87/103			
	Fixed type		(kg)				34/44				38/47				44/55			
External dimensions (H×W×D)	Draw-out type	(mm)	430×334(419)×375								430×412(527)×375							
	Fixed type	(mm)	300×300(385)×295								300×378(493)×295							

1) DDH/DDV-20D is 100kA/0.4s  
 2) DDV 3Pole models can be used up to DC 1200V, but if the voltage exceeds DC 1000V, please contact us.  
 3) Electrical endurance is reduced to 50% at time constant exceeding 2ms.  
 4) Since Utilization category DC-22A is applied, it can not be used for DC circuit with time constant exceeding 2ms.

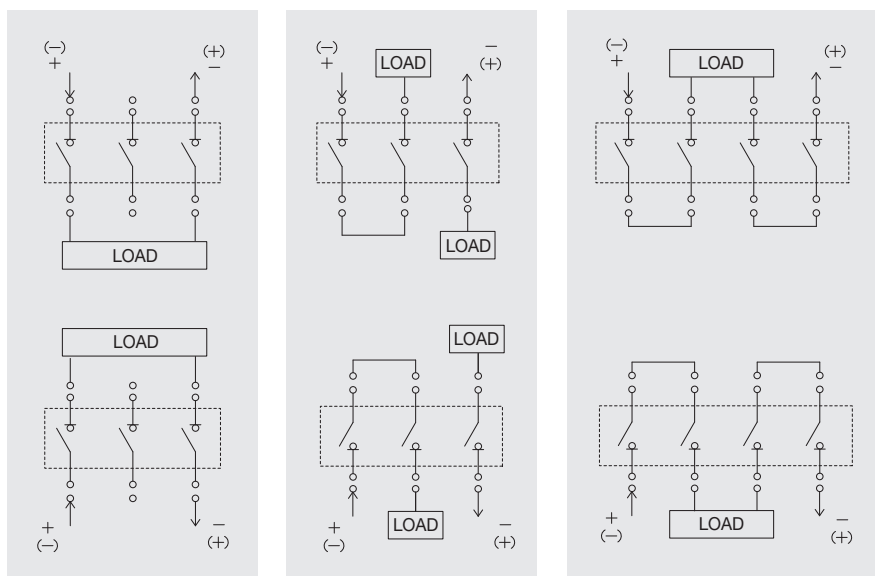
## Connection diagram of DC ACB

<b>DDH</b>	500V	750V	1200V
<b>DDV</b>	500V	1000V	1500V



Upper supply

Lower supply



※ Refer to the following page for product dimensions with short busbar.

## Composition of short busbar

1. Short busbars can be ordered as shown in the table below, or customer have to make short busbars in accordance with the specified short busbars according to AF.
2. The tightening torque for assembling short busbars is 40~50N.m

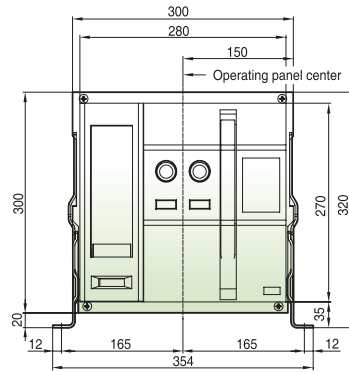
Type	AF	Qty. of code	Aspects	Parts (3P)
<b>DDH</b> <b>DDV</b>	E : 800-3200AF	70223464603 3P : 1ea 4P : 2ea		Short busbars : 75mm×10T×2ea Bolt : M12×60, 6ea Nut : M12, 6ea Spring washer, Plain washer
<b>DDH</b> <b>DDV</b>	E : 4000AF	70223464604 3P : 1ea 4P : 2ea		Short busbars : 125mm×10T×3ea Bolt : M12×80, 6ea Nut : M12, 6ea Spring washer, Plain washer
<b>DDH</b> <b>DDV</b>	D : 1600AF	70223461600 3P : 1ea 4P : 2ea		Short busbars : 135mm×100mm×10T×1ea (L type) Bolt : M12×45, 4ea Nut : M12, 4ea Spring washer, Plain washer
<b>DDH</b> <b>DDV</b>	D : 2000AF	70223461601 3P : 1ea 4P : 2ea		Short busbars : 135mm×100mm×10T×1ea (L type) Bolt : M12×45, 4ea Nut : M12, 4ea Spring washer, Plain washer, Heat sink
<b>DDV</b>	D : 2500AF	70223461602 3P : 1ea 4P : 2ea		Short busbars : 125mm×10T×1ea Bolt : M12×45, 6ea Nut : M12, 6ea Spring washer, Plain washer, Heat sink

# Dimensions

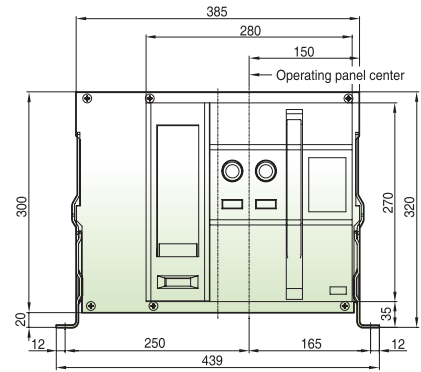
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(Unit : mm)

### Front view

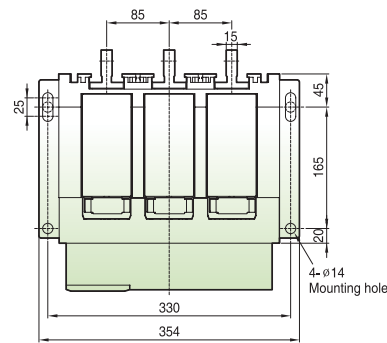


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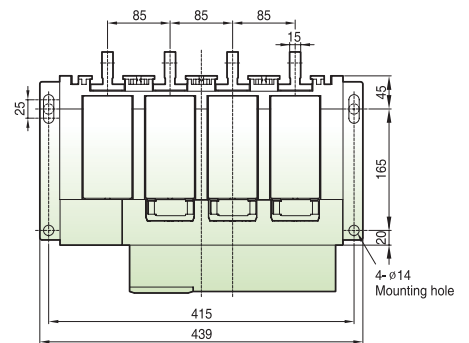


4P

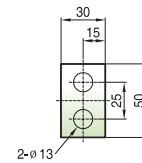
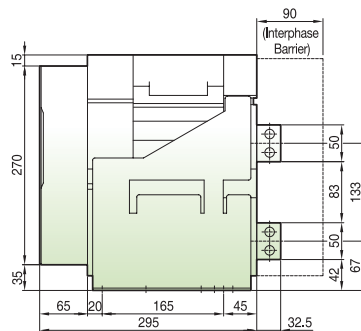
### Vertical type



3P



4P

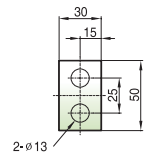
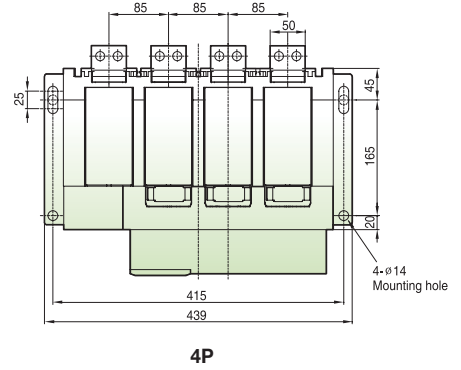
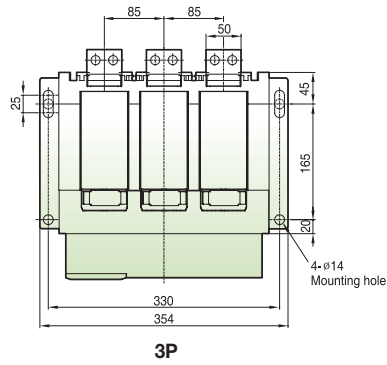


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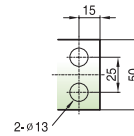
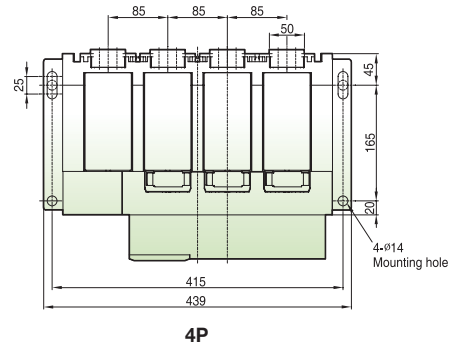
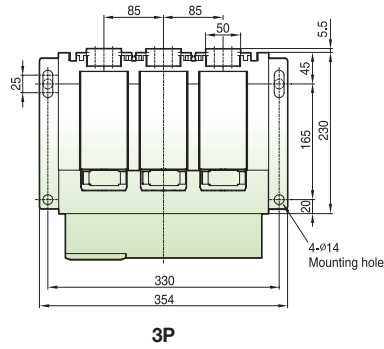
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(Unit : mm)

### Horizontal type



### Front connection type

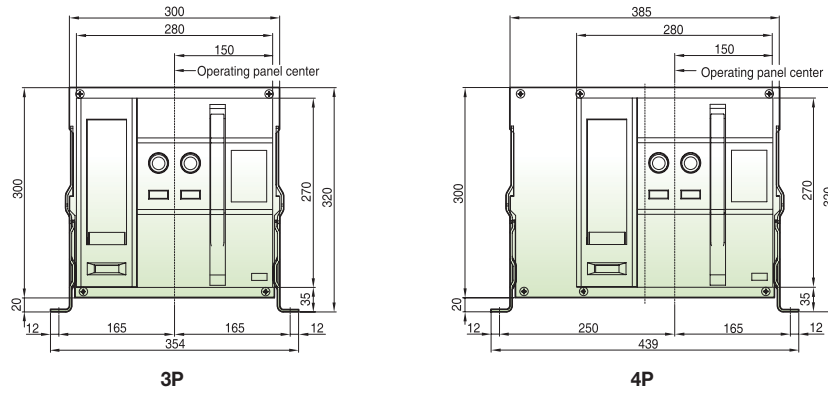


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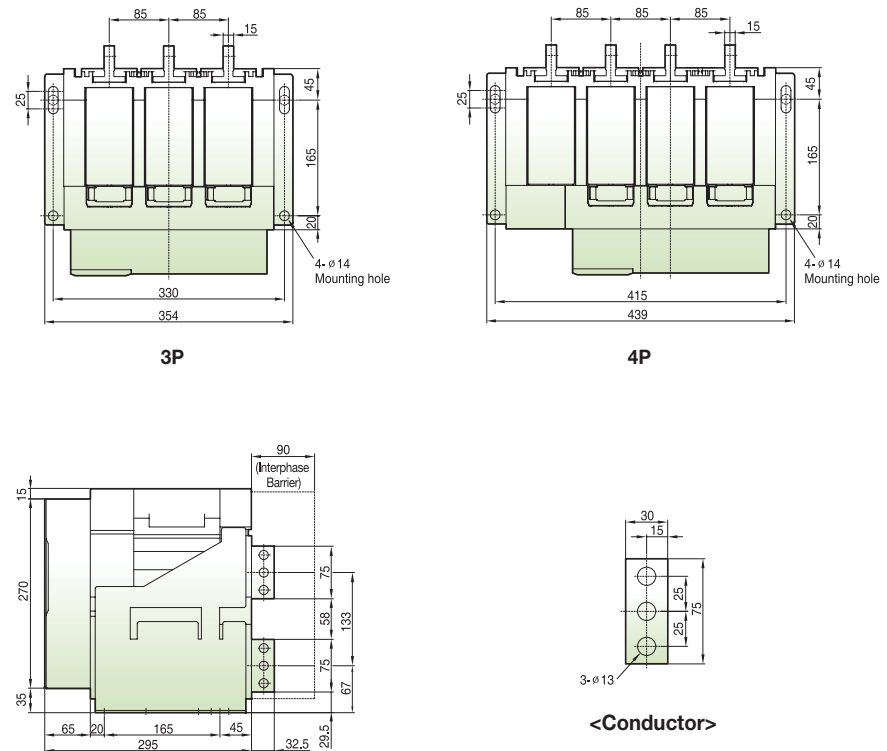
## Fixed type (DDH/DDV-25D)

(Unit : mm)

### Front view



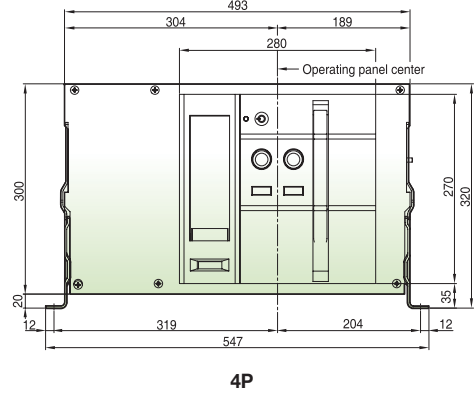
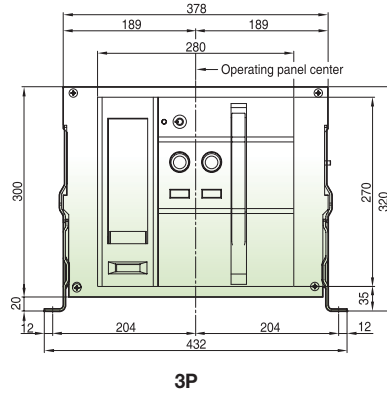
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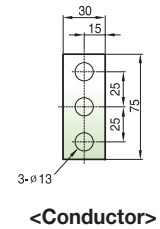
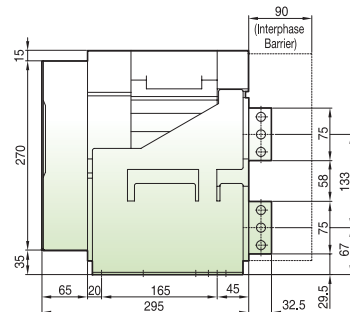
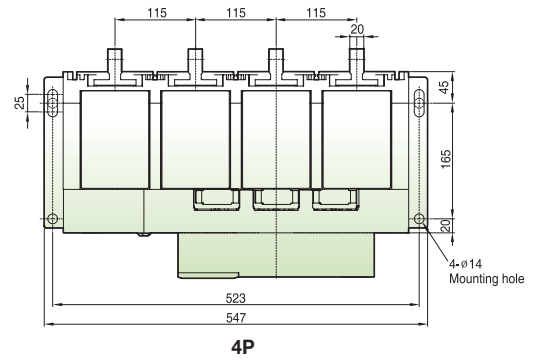
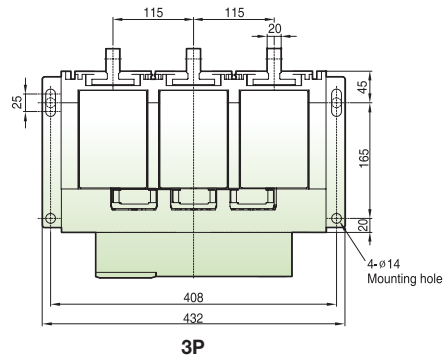
**Fixed type  
(ADH/ADV-08~25E, DDH/DDV-08~32E)**

(Unit: mm)

**Front view**



**Vertical type**

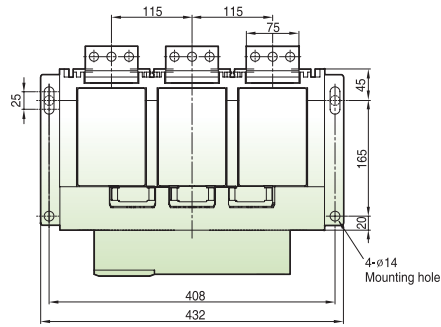


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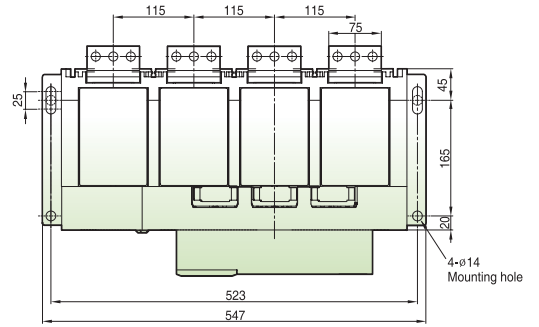
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(Unit : mm)

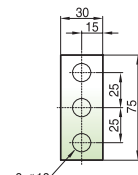
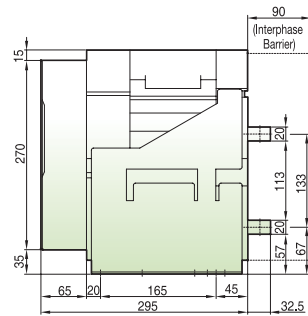
### Horizontal type



3P



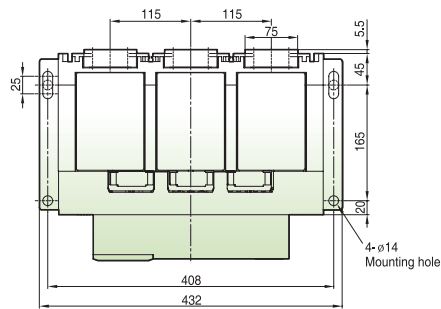
4P



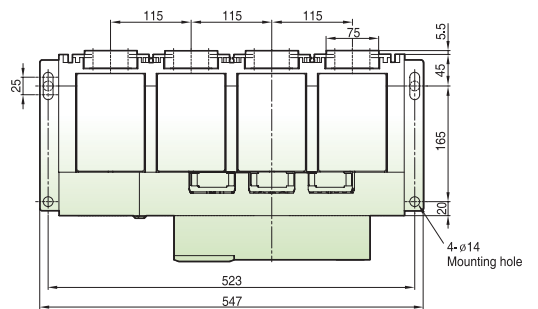
3-ø13

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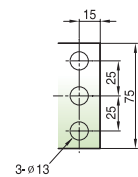
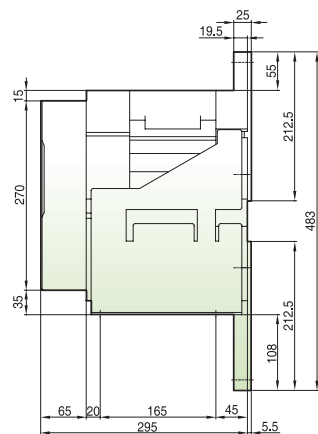
### Front connection type



3P



4P



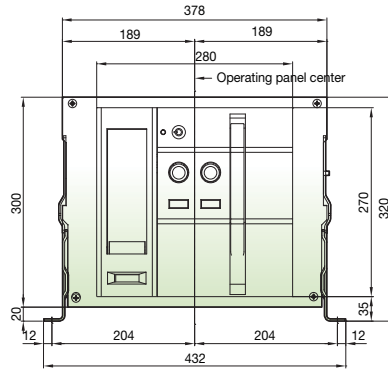
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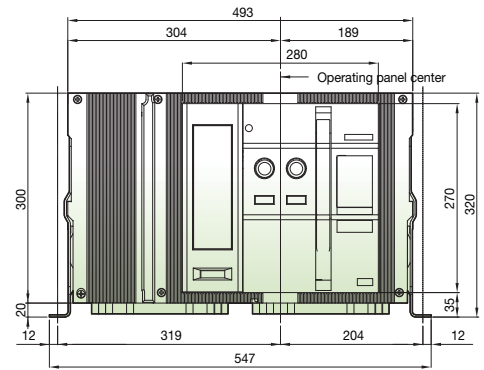
## Fixed type (ADH/ADV-32E)

(Unit : mm)

### Front view

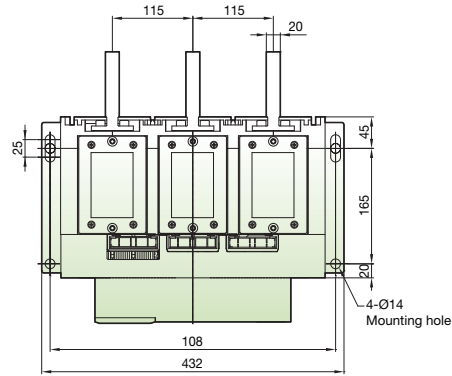


3P

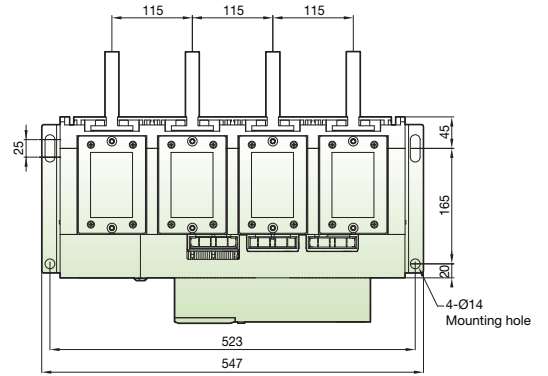


4P

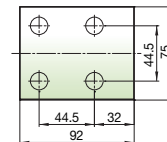
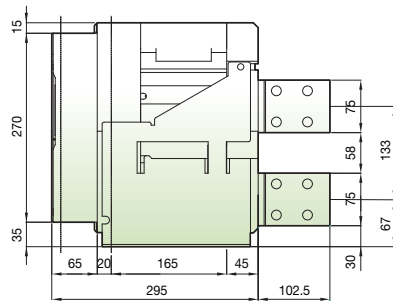
### Vertical type



3P



4P



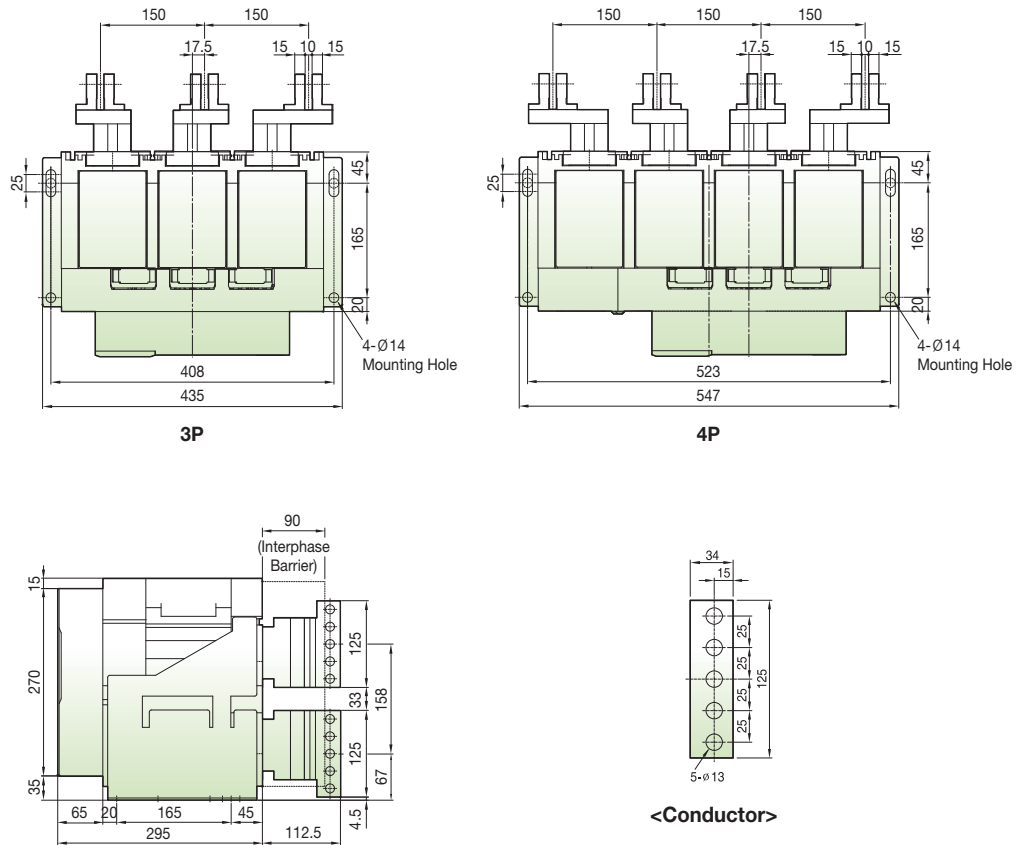
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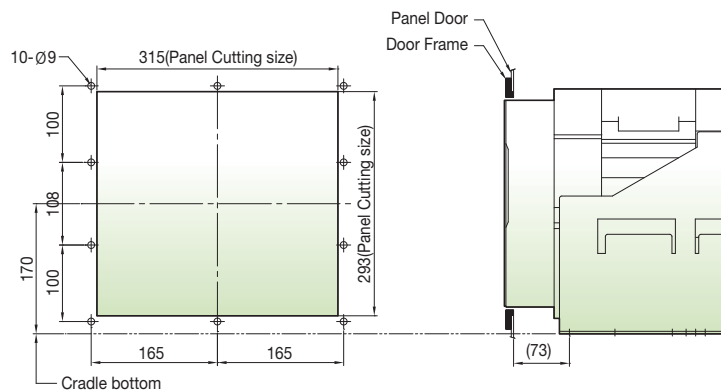
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(Unit : mm)

### Vertical type



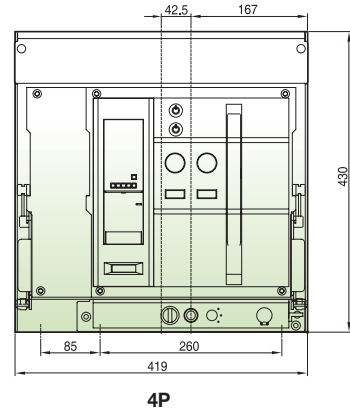
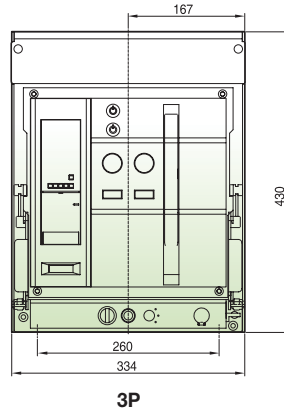
### Door Frame



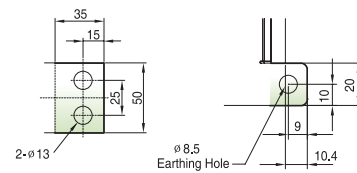
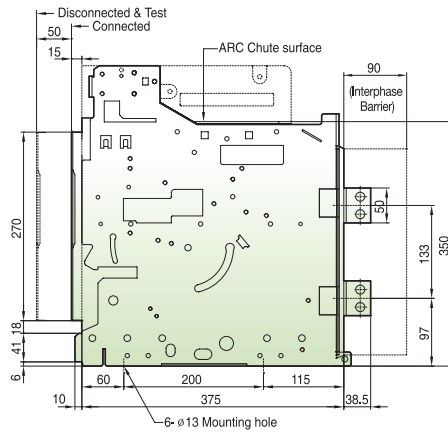
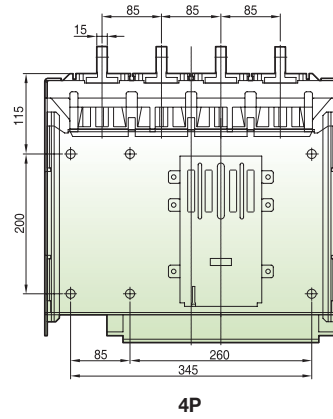
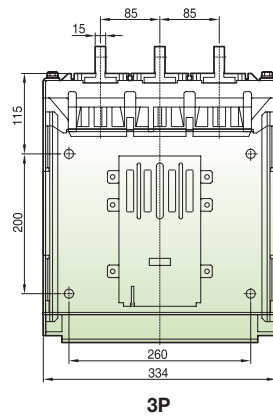
## Draw-out type (DDH/DDV-08~20D)

(Unit : mm)

### Front view



### Vertical type



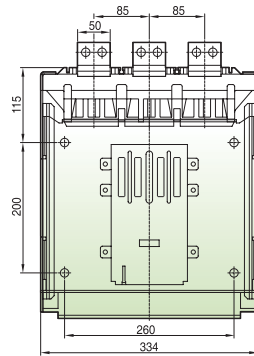
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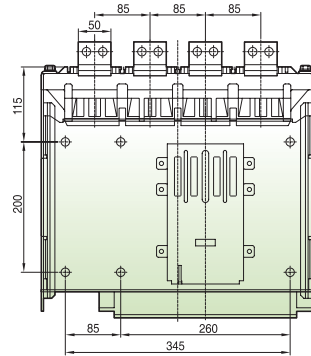
## Draw-out type (DDH/DDV-08~20D)

(Unit : mm)

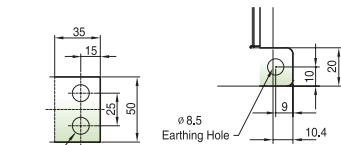
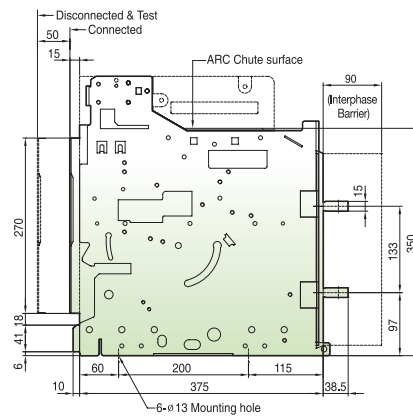
### Horizontal type



3P

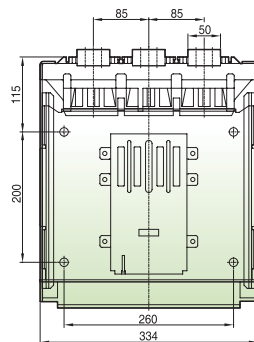


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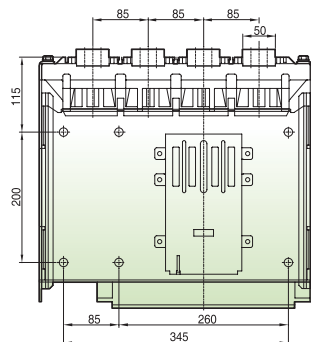


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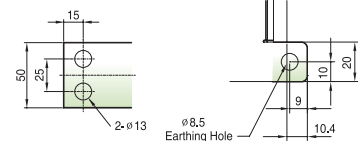
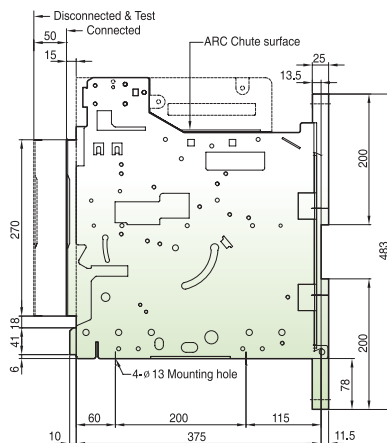
### Front connection type



3P



4P

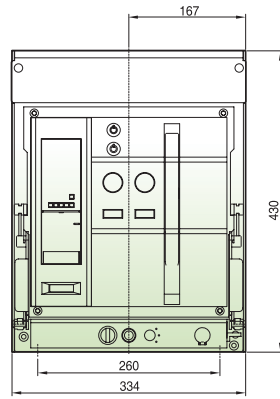


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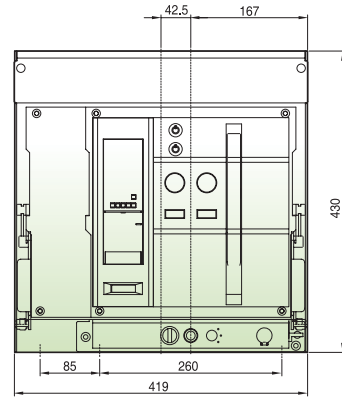
## Draw-out type (DDH/DDV-25D)

(Unit : mm)

### Front view

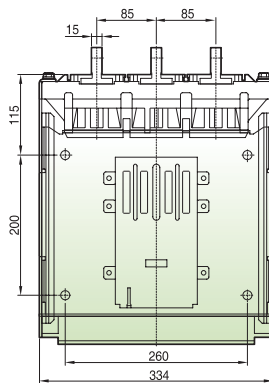


3P

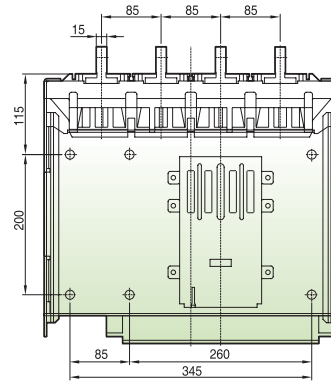


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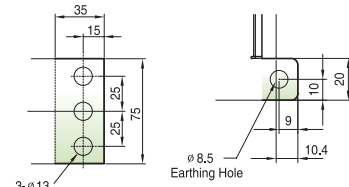
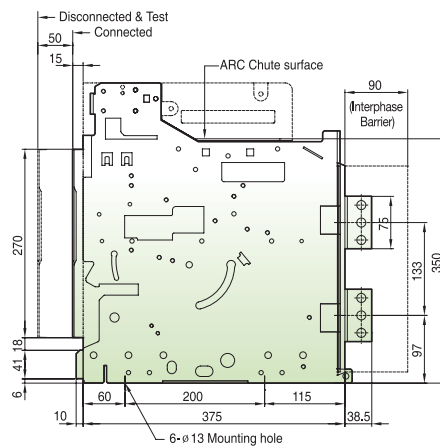
### Vertical type



3P



4P



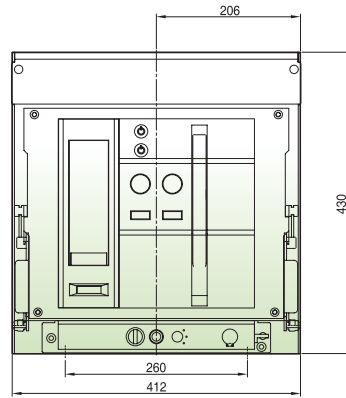
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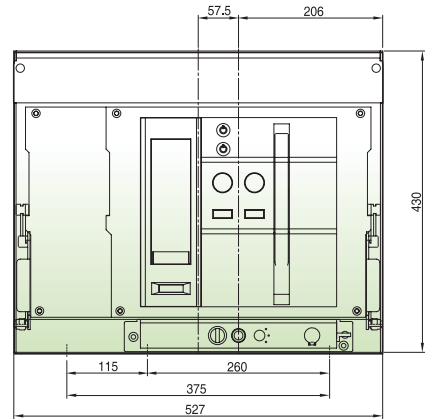
## Draw-out type (ADH/ADV-08~25E, DDH/DDV-08~32E)

(Unit : mm)

### Front view

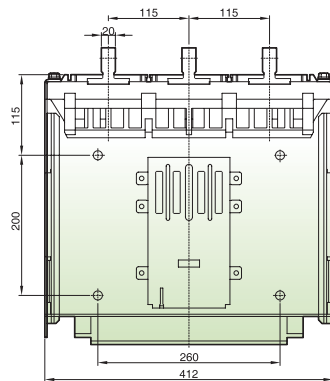


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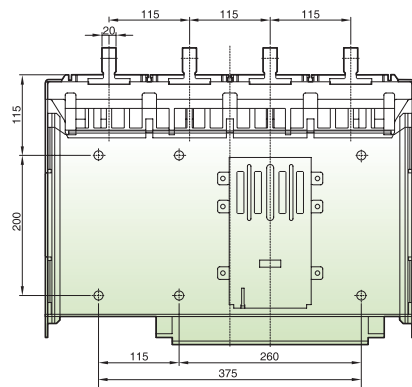


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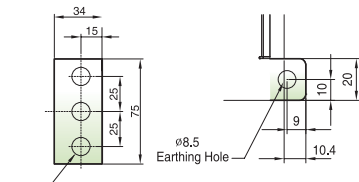
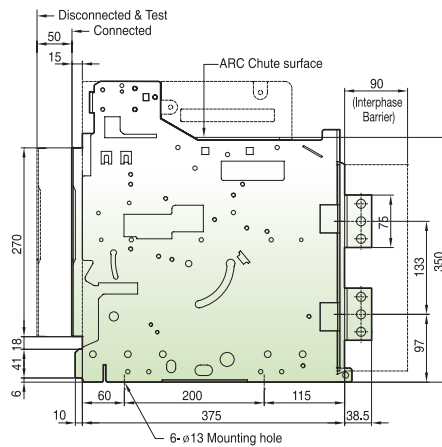
### Vertical type



3P



4P

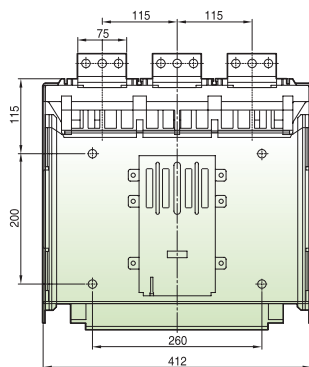


<Conductor>

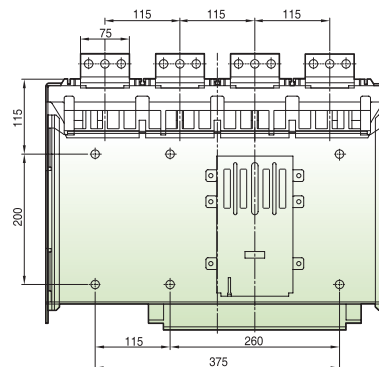
## Draw-out type (ADH/ADV-08~25E, DDH/DDV-08~32E)

(Unit : mm)

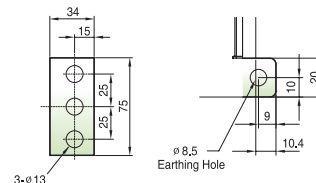
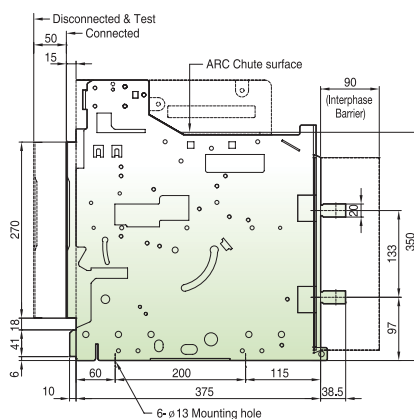
Horizontal  
type



3P

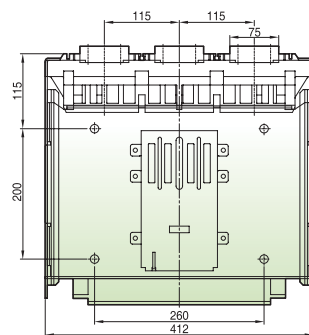


4P

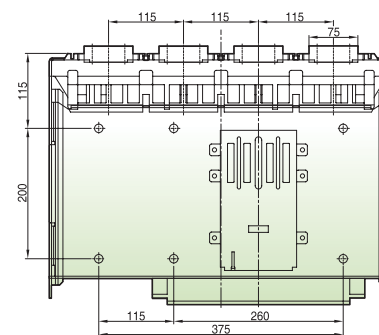


<Conductor>

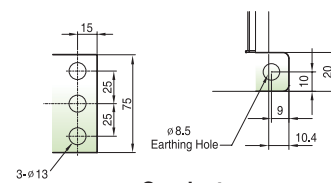
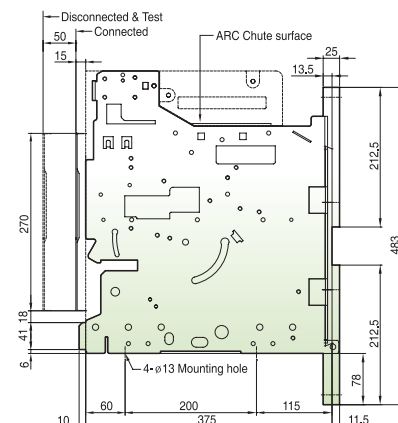
Front  
connection  
type



3P



4P



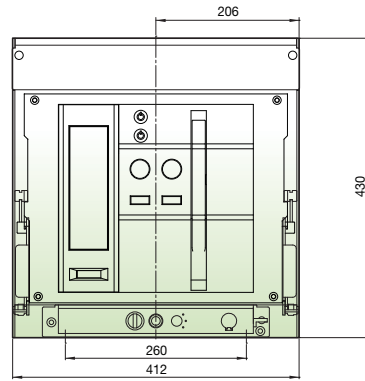
<Conductor>

# Dimensions

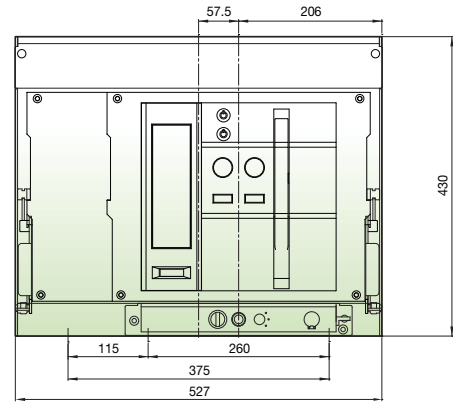
## Draw-out type (ADH/ADV-32E)

(Unit : mm)

### Front view

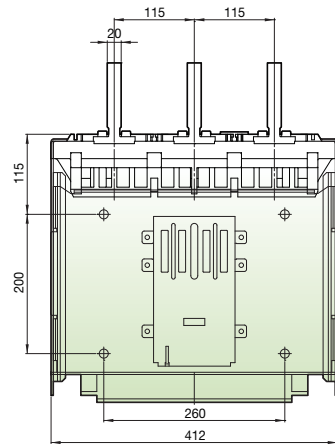


3P

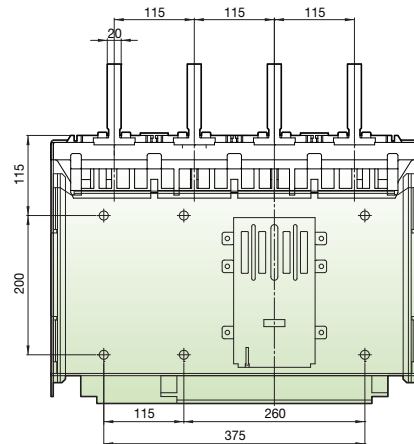


4P

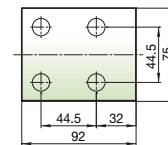
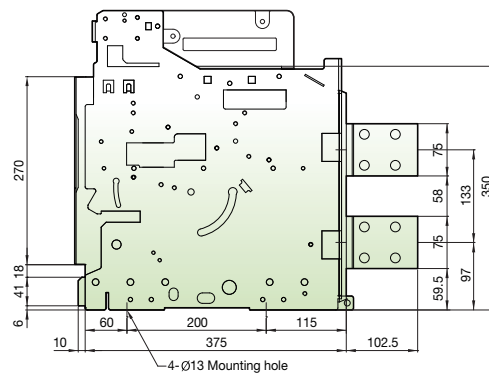
### Vertical type



3P



4P

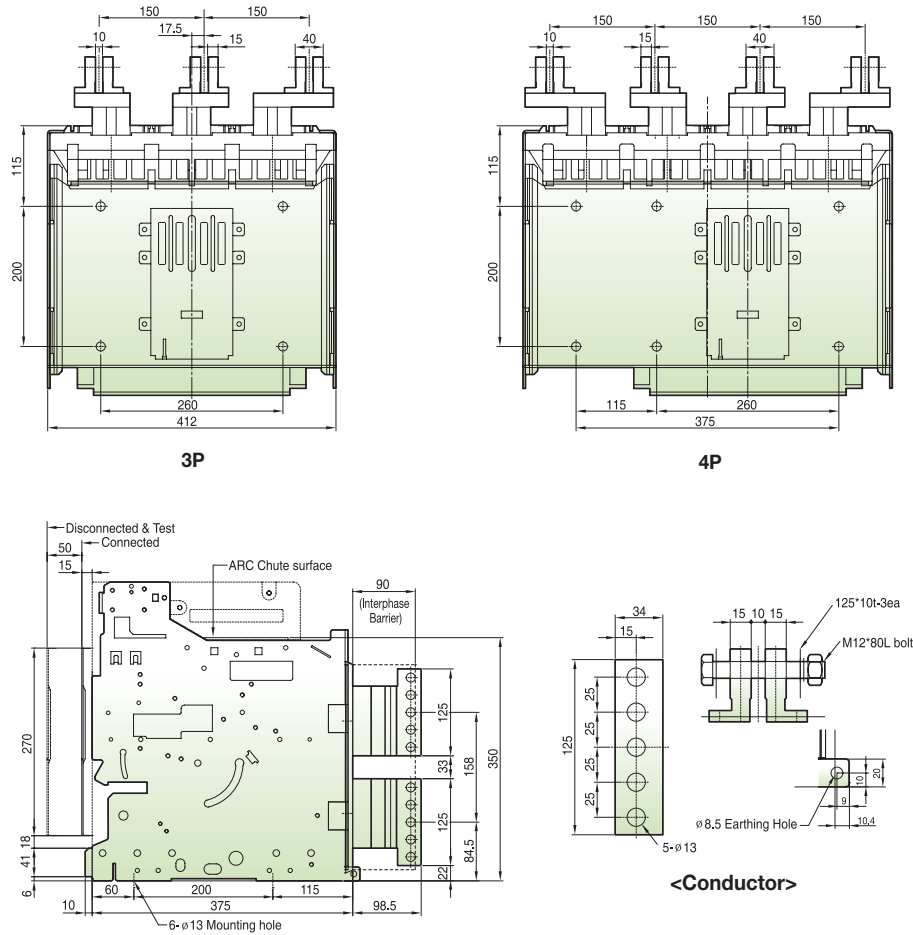


<Conductor>

## Draw-out type (DDH/DDV-40E)

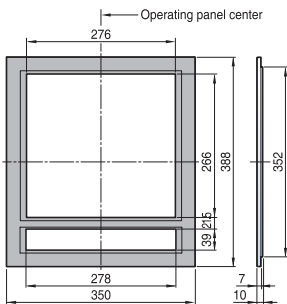
(Unit : mm)

### Vertical type

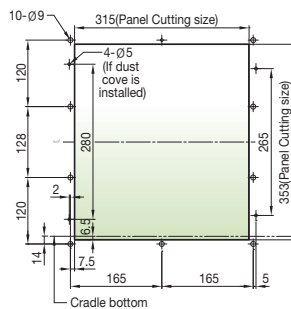


### Door Frame

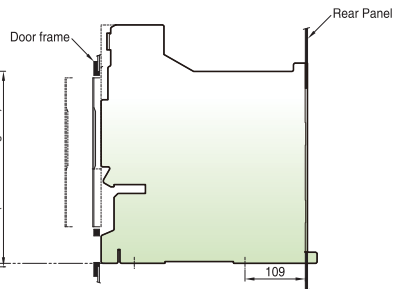
#### <Dimensions>



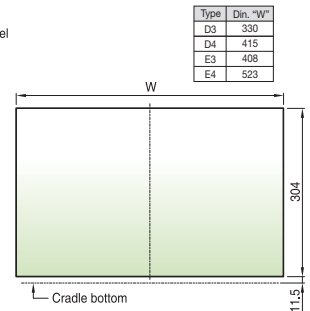
#### <Mounting hole>



#### <Side hole>



#### <Panel cutting>



Note) The dimensions are for drawout type.