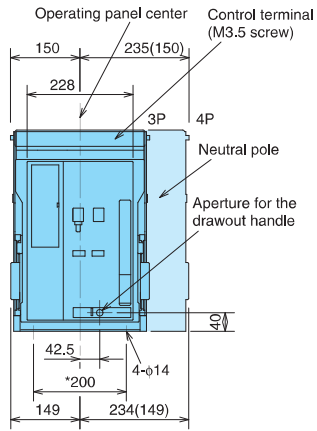


Outline dimensions

Drawout type AE630-SW, AE1000-SW, AE1250-SW, AE1600-SW

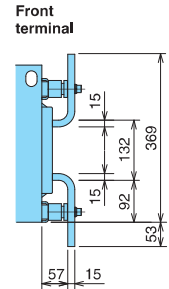
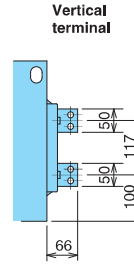
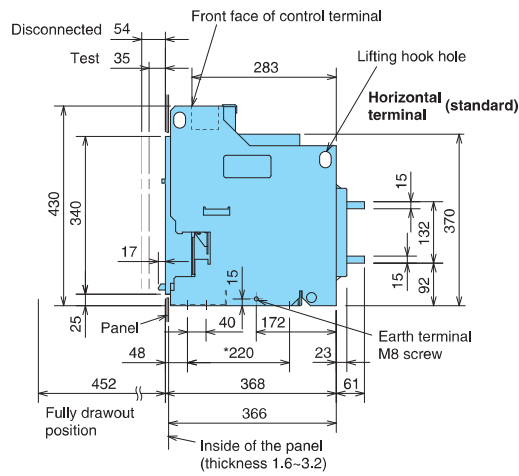
(mm)

Front view

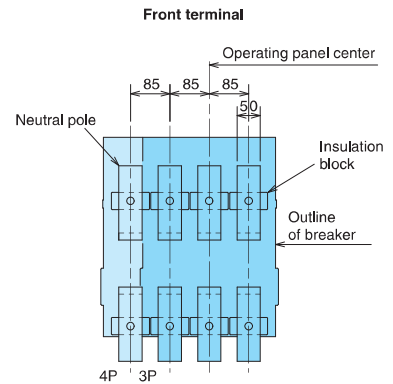
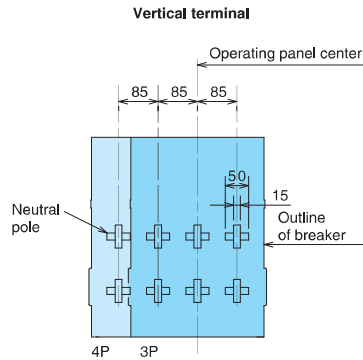
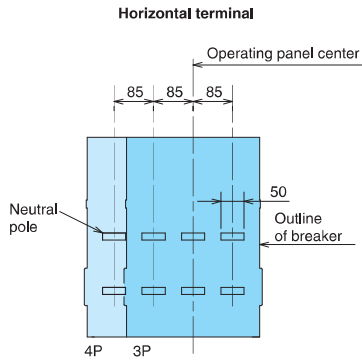


* : Mounting pitch
The numerals shown in parentheses are for 3 poles.

Side view

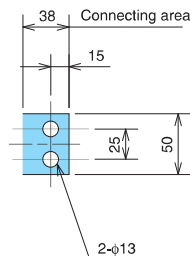


Rear view



Main circuit terminal dimension

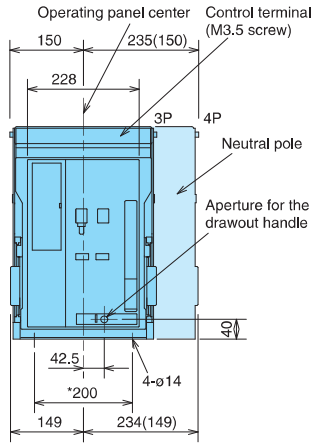
Horizontal terminal (standard)
Vertical terminal
Front terminal



Drawout type AE2000-SWA

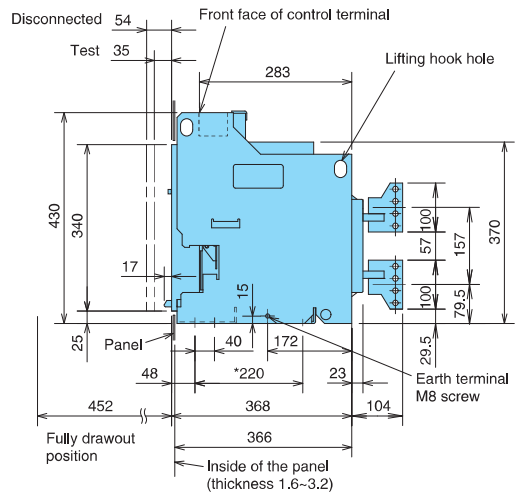
(mm)

Front view

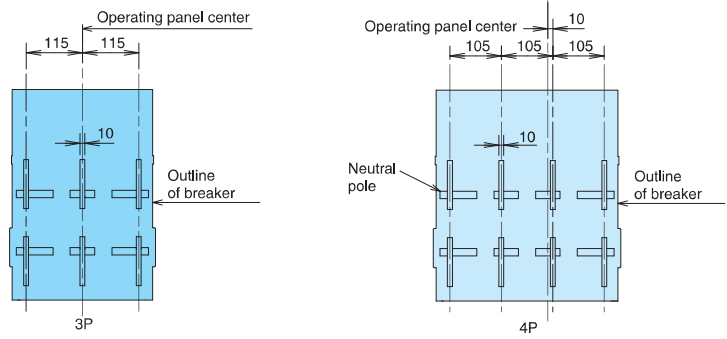


* : Mounting pitch
The numerals shown in parentheses are for 3 poles.

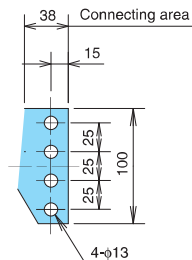
Side view



Rear view



Main circuit terminal dimension

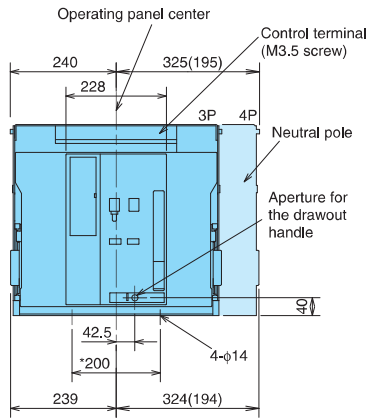


Outline dimensions

Drawout type AE2000-SW, AE2500-SW, AE3200-SW

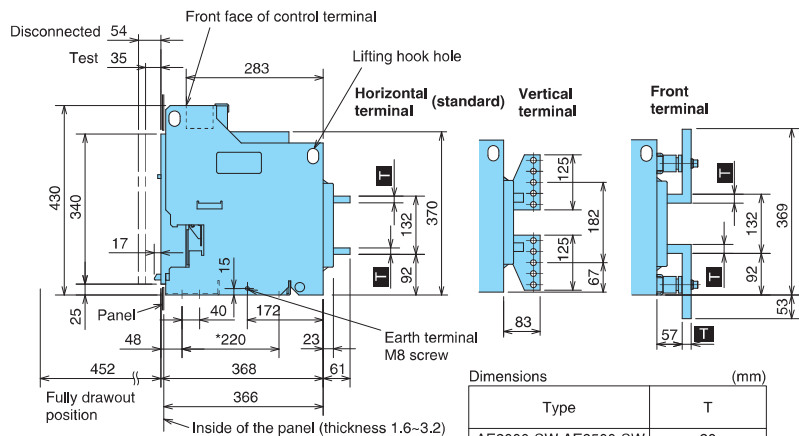
(mm)

Front view



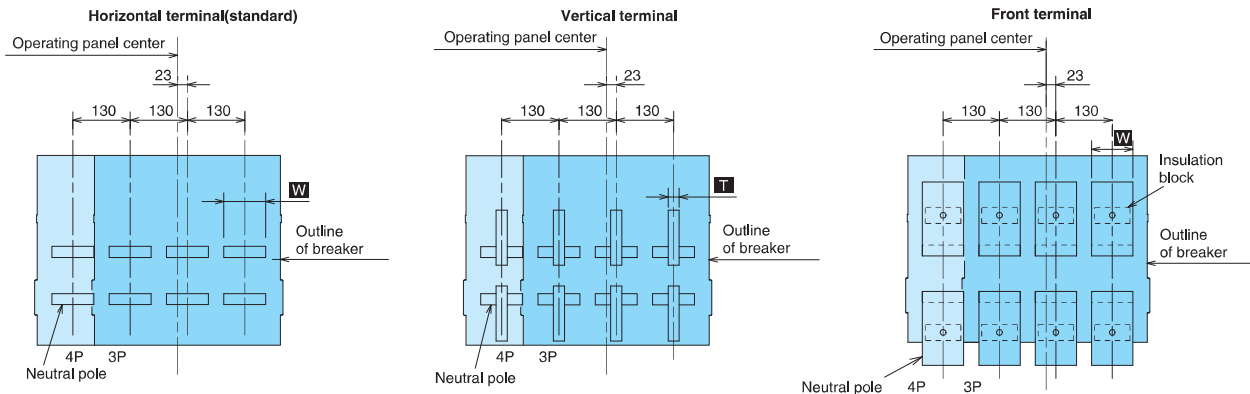
* : Mounting pitch
The numerals shown in parentheses are for 3 poles.

Side view

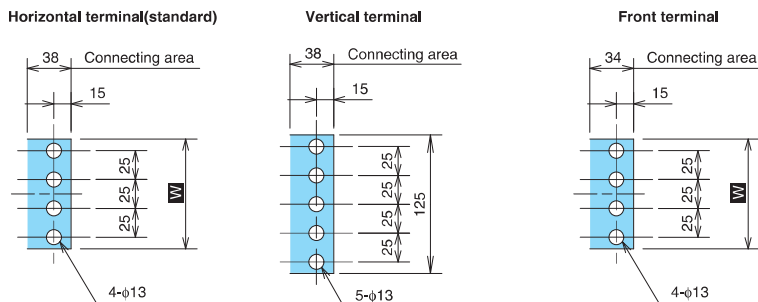


Dimensions (mm)	
Type	T
AE2000-SW AE2500-SW	20
AE3200-SW	25

Rear view



Main circuit terminal dimensions

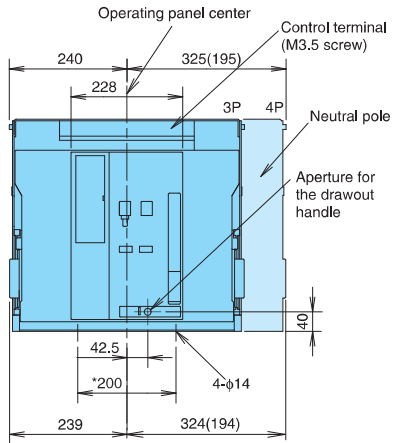


Dimensions (mm)	
Type	W
AE2000-SW AE2500-SW	95
AE3200-SW	103

Drawout type AE4000-SWA

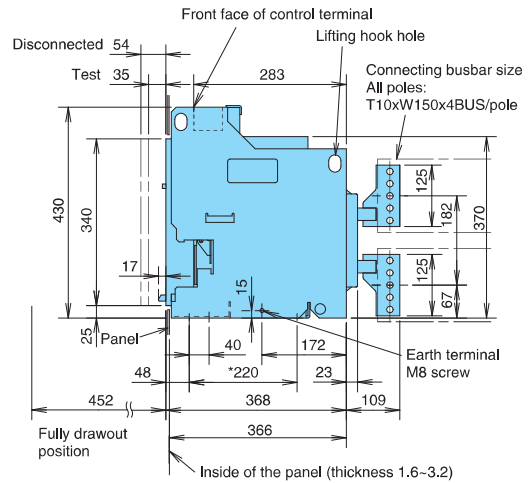
(mm)

Front view

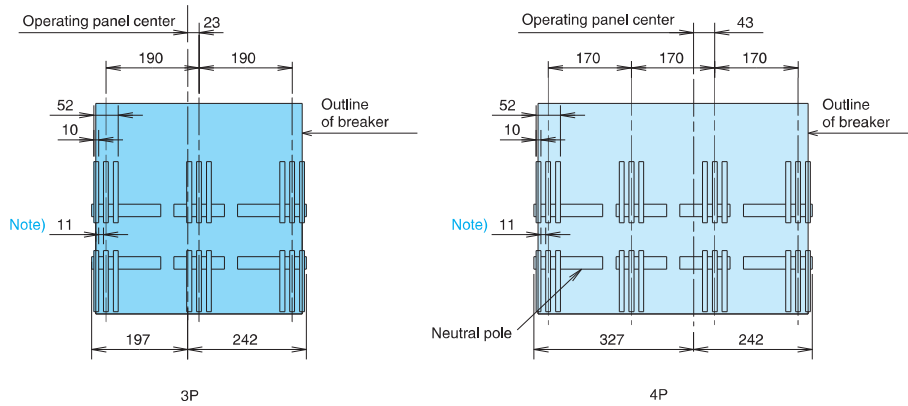


* : Mounting pitch
The numerals shown in parentheses are for 3 poles.

Side view

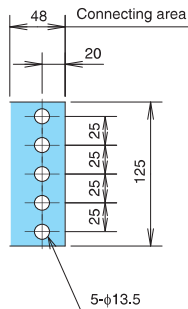


Rear view



Note) Spacers are not required when fastening connecting conductors (T10). The necessary contact area can be obtained with ACB terminal bent by tightening the screw.

Main circuit terminal dimension

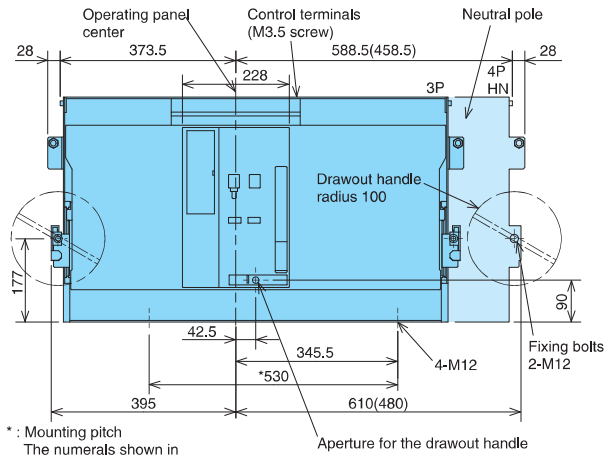


Outline dimensions

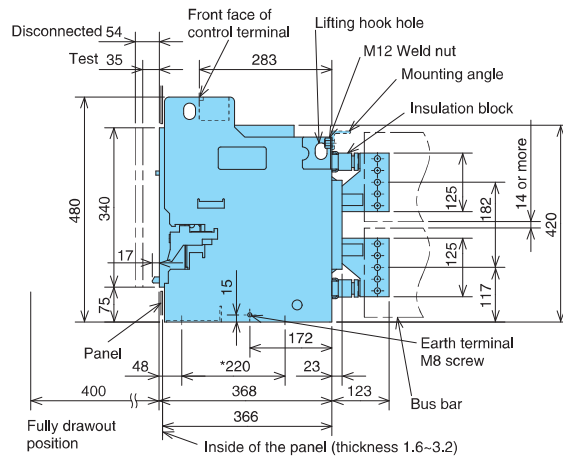
Drawout type AE4000-SW, AE5000-SW, AE6300-SW

(mm)

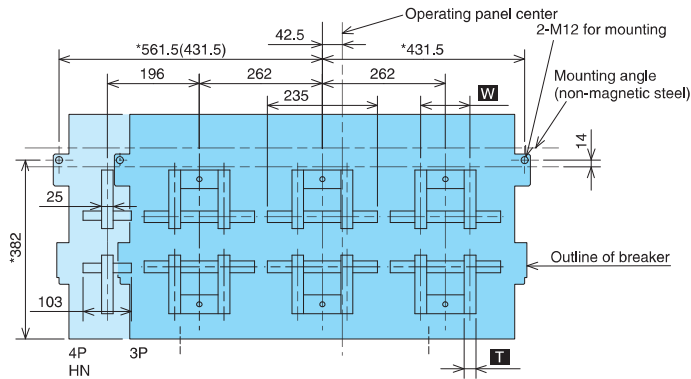
Front view



Side view

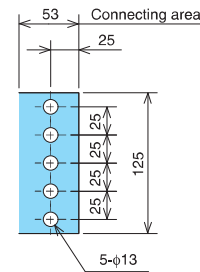


Rear view



The mounting angle should be prepared by the customer.

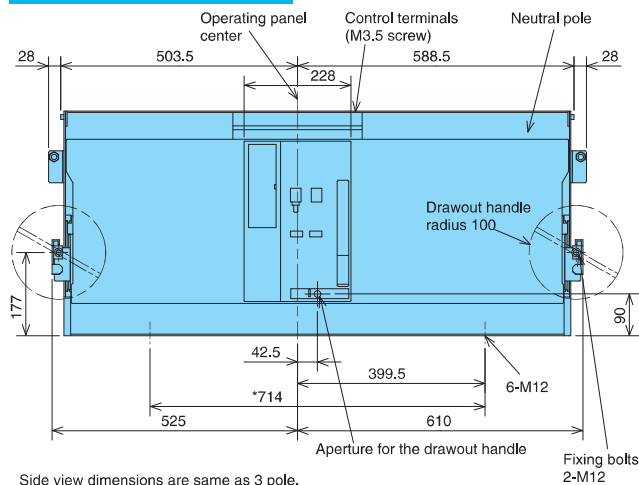
Main circuit terminal dimension



Type	W	T
AE4000-SW AE5000-SW	100	20
AE6300-SW	105	25

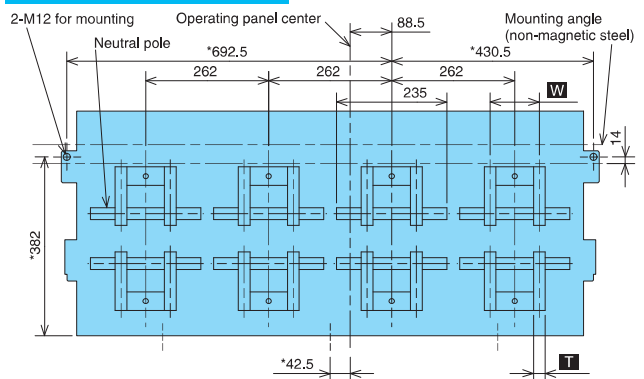
4P FN type

Front view



Side view dimensions are same as 3 pole.

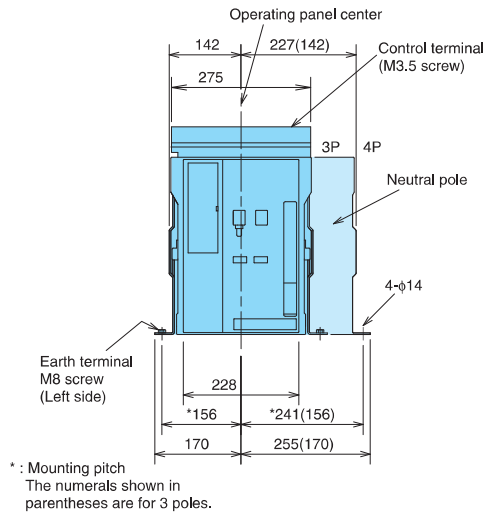
Rear view



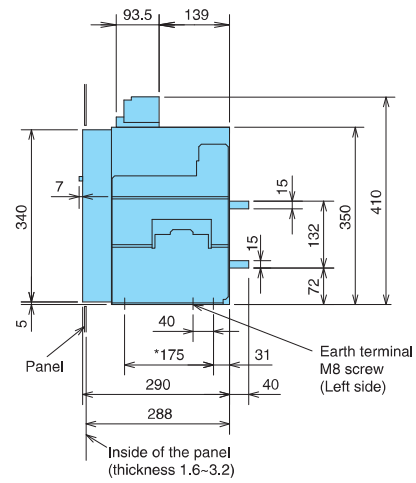
Fixed type AE630-SW, AE1000-SW, AE1250-SW, AE1600-SW

(mm)

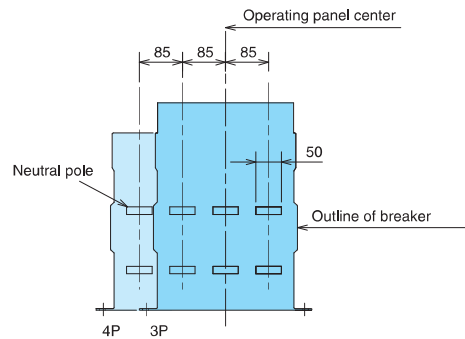
Front view



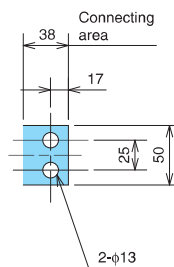
Side view



Rear view

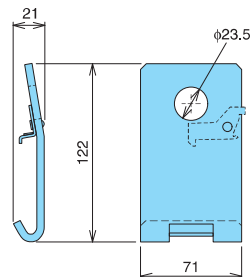


Main circuit terminal dimension



Lifting hooks (HP)

HP is supplied with ACB Fixed type.

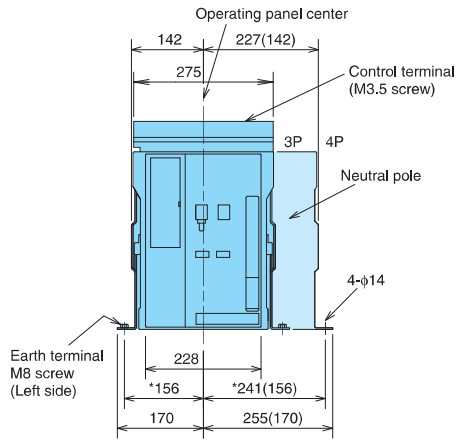


Outline dimensions

Fixed type AE2000-SWA

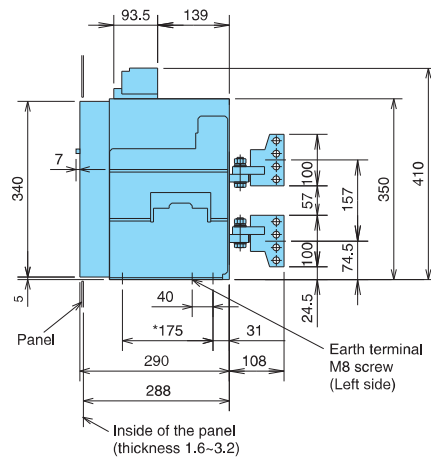
(mm)

Front view

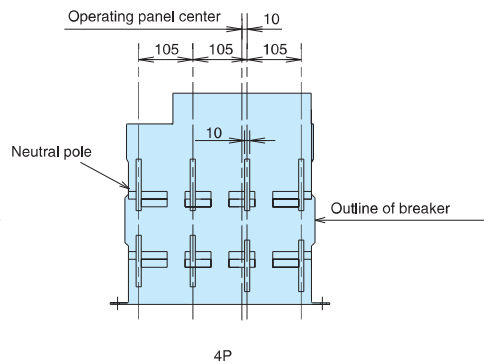
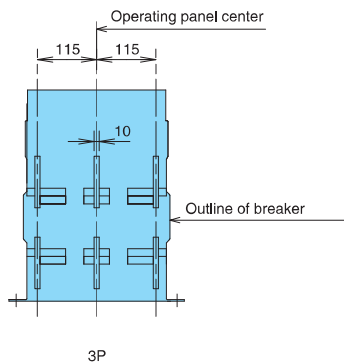


* : Mounting pitch
The numerals shown in parentheses are for 3 poles.

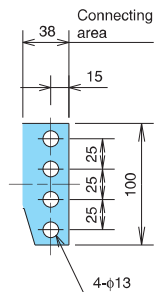
Side view



Rear view

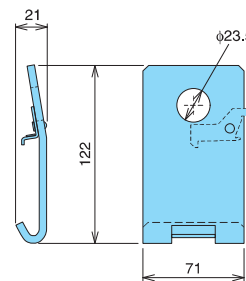


Main circuit terminal dimension



Lifting hooks (HP)

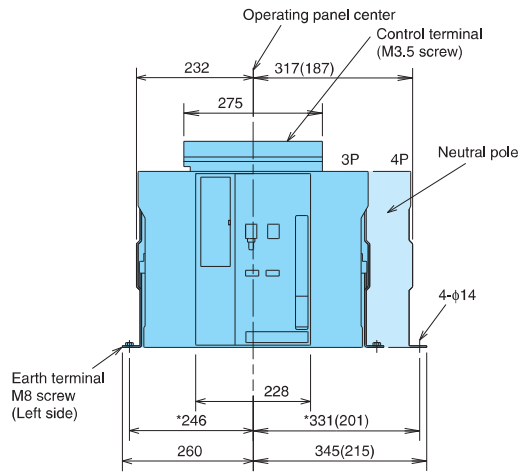
HP is supplied with ACB Fixed type.



Fixed type AE2000-SW, AE2500-SW, AE3200-SW

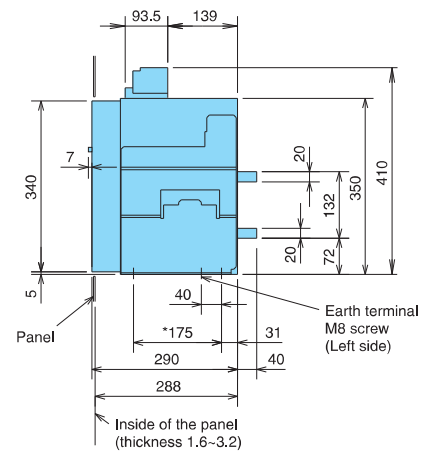
(mm)

Front view

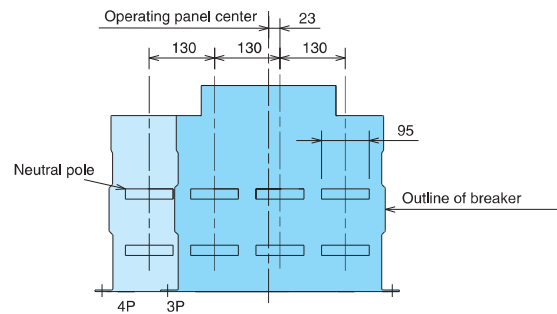


* : Mounting pitch
The numerals shown in parentheses are for 3 poles.

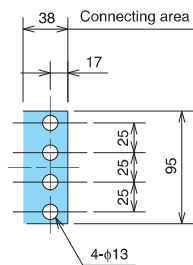
Side view



Rear view

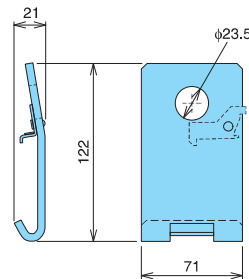


Main circuit terminal dimension



Lifting hooks (HP)

HP is supplied with ACB Fixed type.

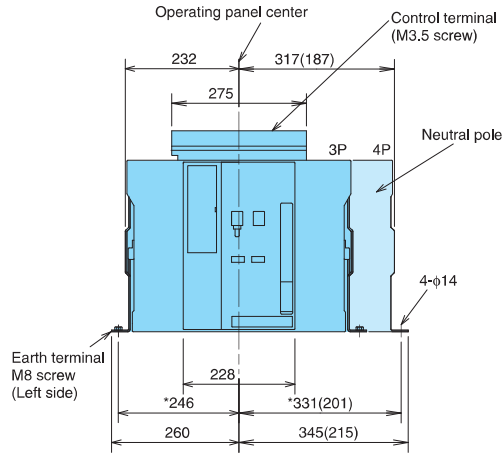


Outline dimensions

Fixed type AE400-SWA

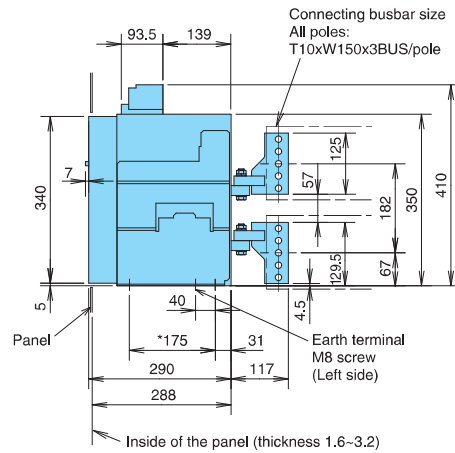
(mm)

Front view

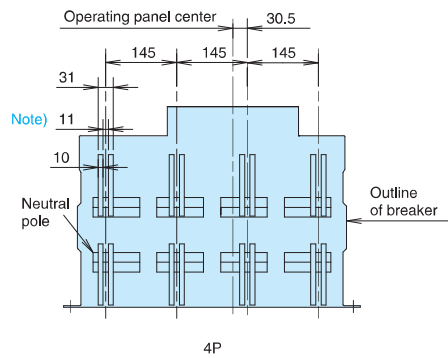
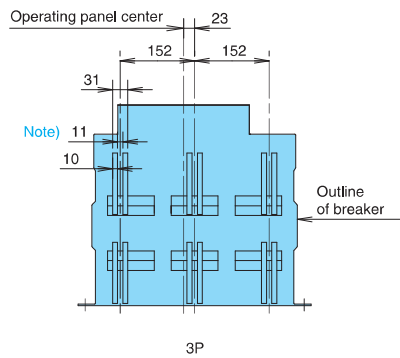


* : Mounting pitch
The numerals shown in parentheses are for 3 poles.

Side view

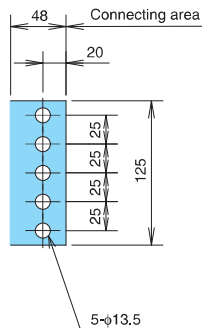


Rear view



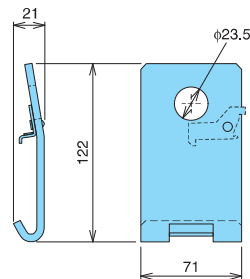
Note) Spacers are not required when fastening connecting conductors (T10). The necessary contact area can be obtained with ACB terminal bent by tightening the screw.

Main circuit terminal dimension



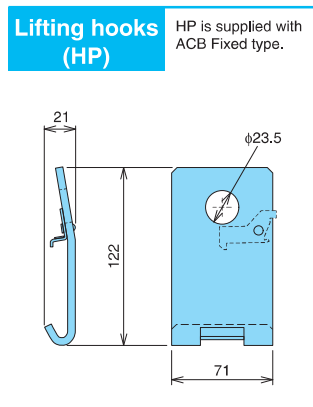
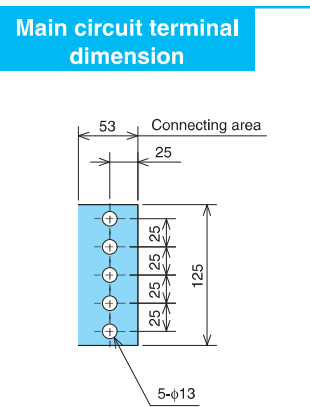
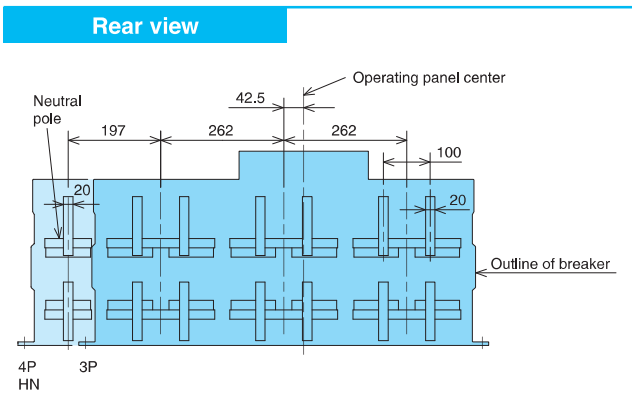
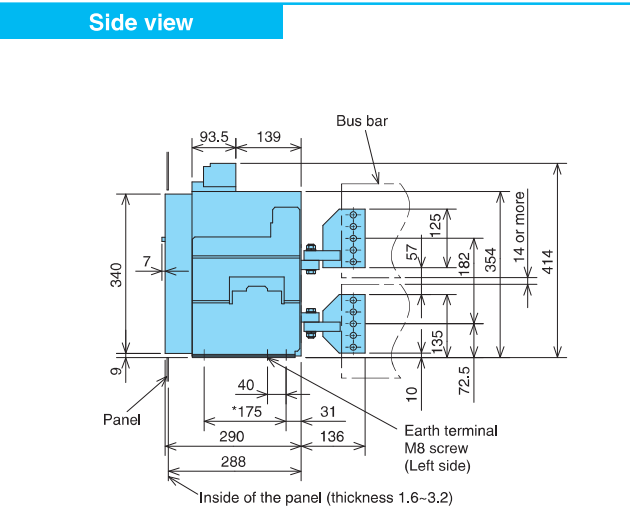
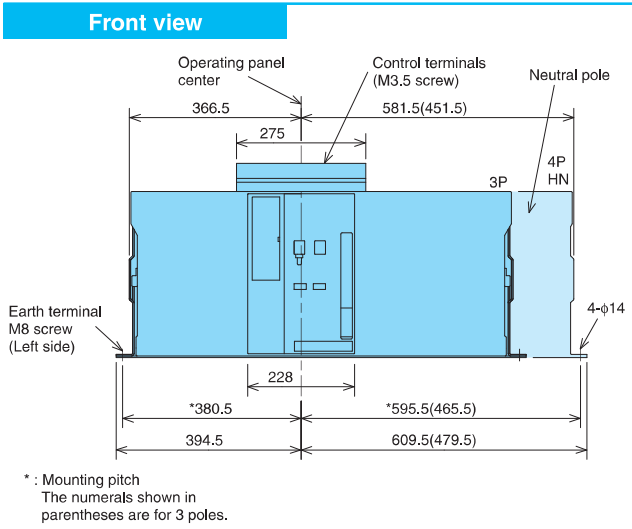
Lifting hooks (HP)

HP is supplied with ACB Fixed type.

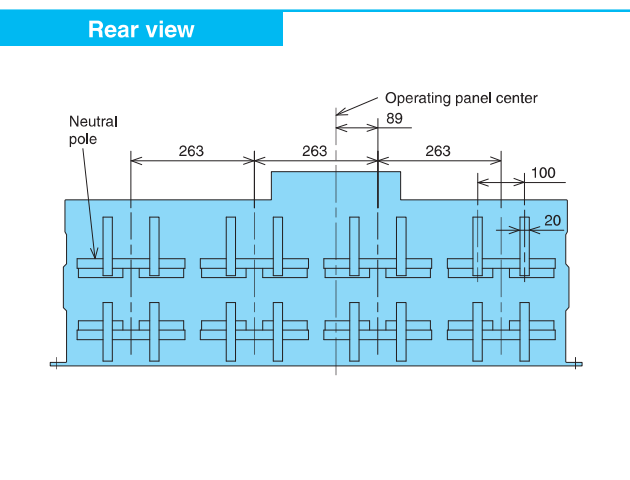
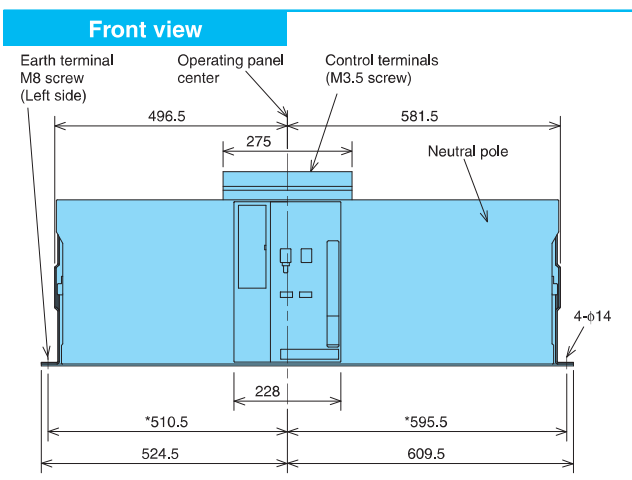


Fixed type AE4000-SW, AE5000-SW, AE6300-SW

(mm)



4P FN type



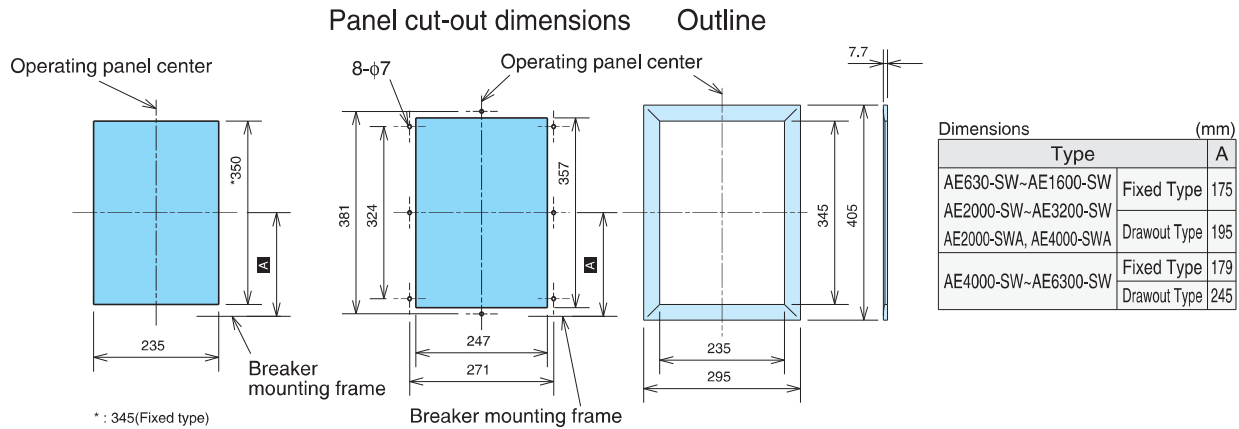
Side view dimensions are same as 3 pole.

Outline dimensions

Panel cut-out, Drawout handle, Terminal adapter, Condenser trip device

Panel cut-out dimensions

Door frame panel cut-out dimensions



Vertical terminal adapter

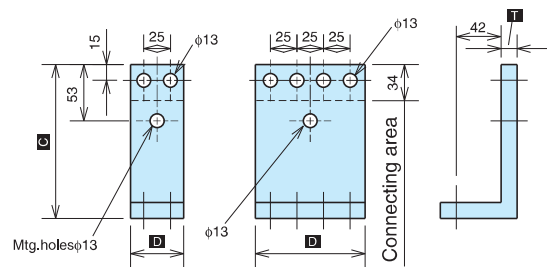
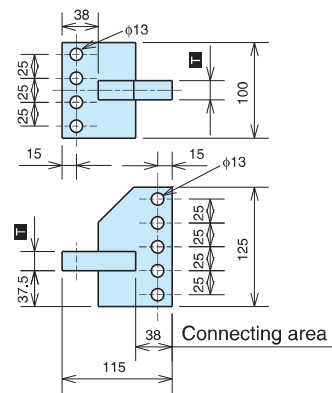
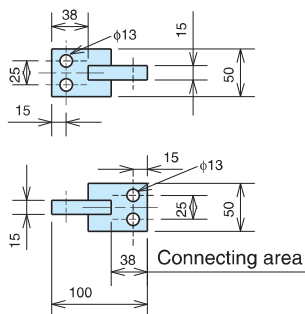
Front terminal adapter

AE630~1600-SW

AE2000~3200-SW

AE630~1600-SW

AE2000~3200-SW

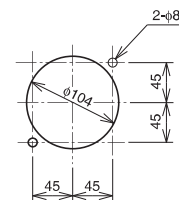
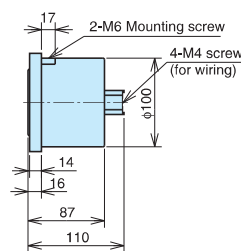
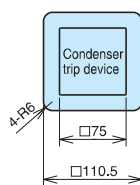
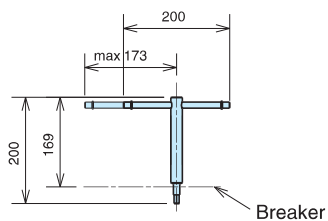


Dimensions		(mm)
Type	T	
AE2000-SW, 2500-SW	20	
AE3200-SW	25	

Dimensions		(mm)			
Type		C	D	T	
AE630-SW-1600-SW	Fixed type	Up side	258.5	50	15
		Down side	145	50	15
	Drawout type		145	50	15
AE2000-SW, 2500-SW	Fixed type	Up side	258.5	95	20
		Down side	145	95	20
	Drawout type		145	95	20
AE3200-SW	Fixed type	Up side	258.5	95	25
		Down side	145	95	25
	Drawout type		145	103	25

Drawout handle dimensions

Condenser trip device (COT)



Front view

Side view

Drilling plan

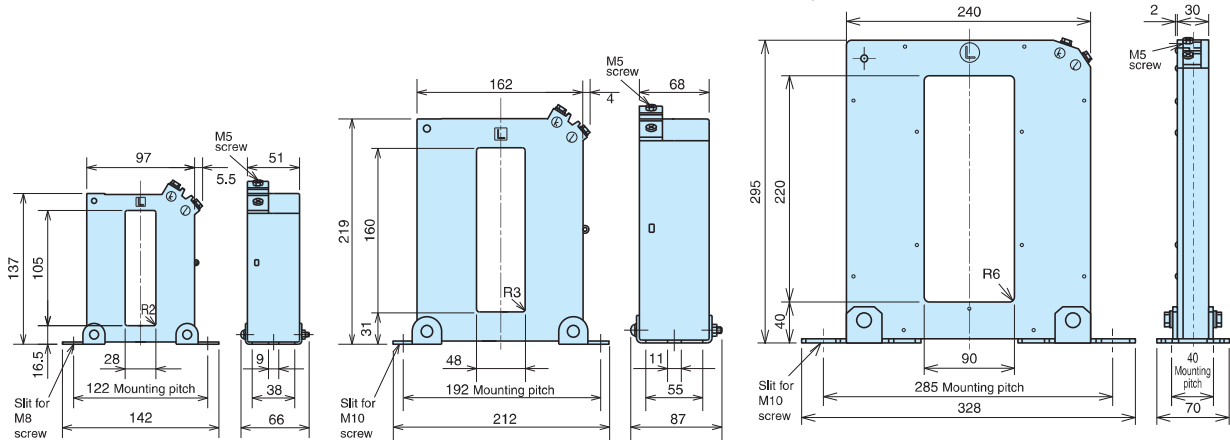
Neutral CT (NCT), External ZCT

Neutral CT (NCT)

630~2000A

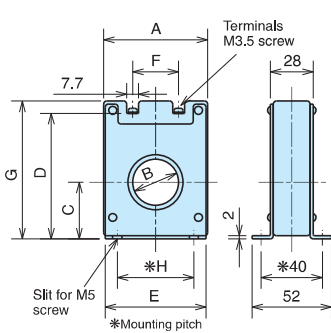
2500~4000A

5000, 6300A

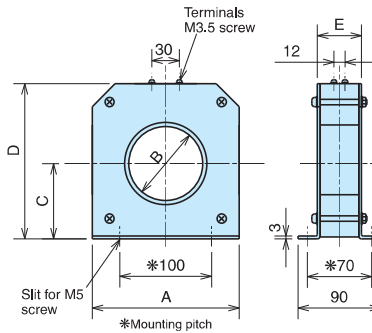


External ZCT for transformer ground wire

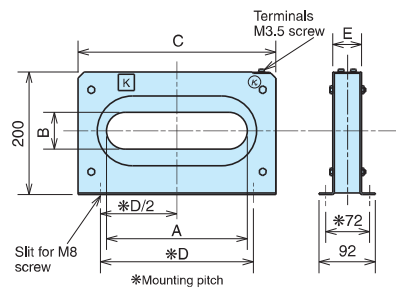
External ZCT for load circuits



Dimensions	A	B	C	D	E	F	G	H
ZT15B	48	15	29	62	46	15	70	25
ZT30B	68	30	37	82	66	30	90	50
ZT40B	85	40	43	92	81	40	100	50



Dimensions	A	B	C	D	E
ZT60B	140	60	73	150	46
ZT80B	160	80	82	169	48
ZT100B	185	100	93	190	50

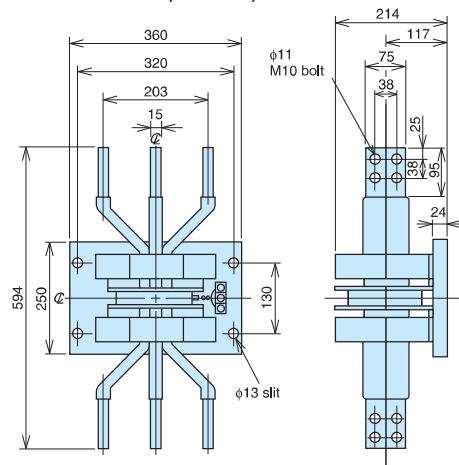
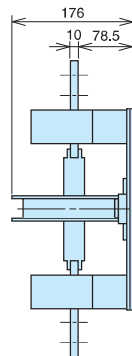
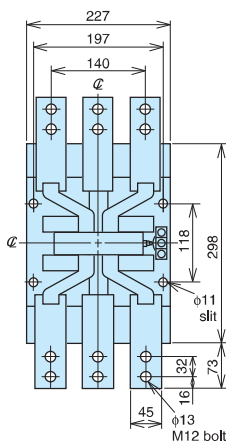


Dimensions	A	B	C	D	E
ZCT163	230	60	323	250	47
ZCT323	370	108	460	400	47
ZCT324	500	108	600	550	48

ZCT with primary conductors

ZTA1200A (1200A)

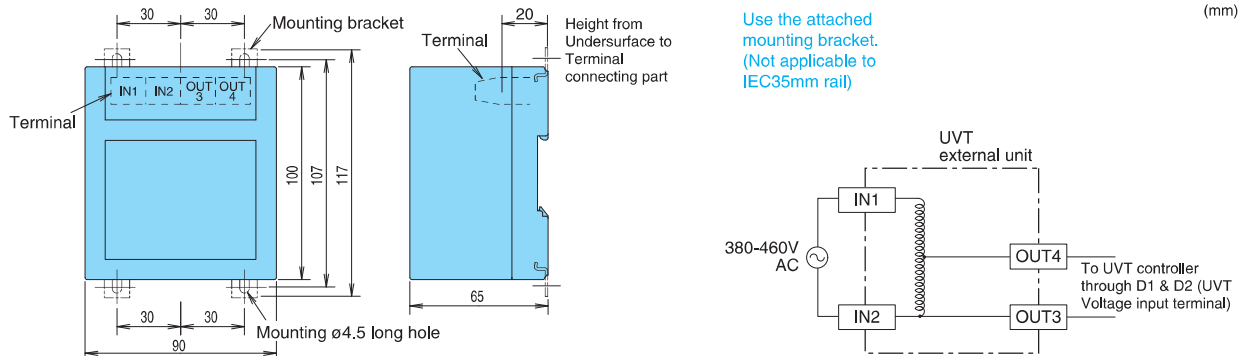
ZTA2000A (2000A)



Outline dimensions

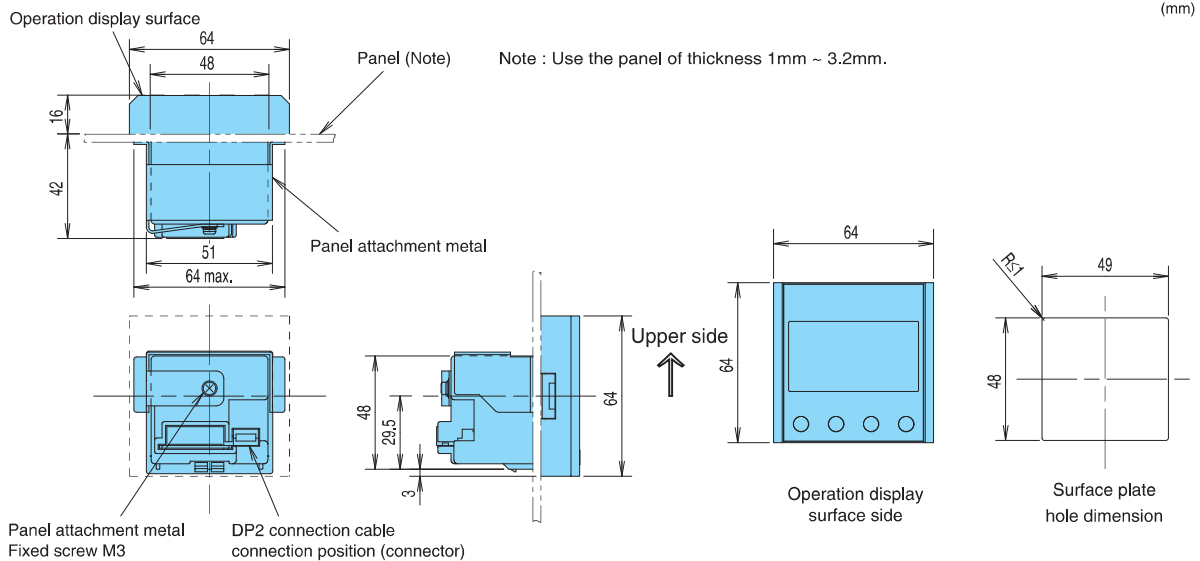
UVT external unit

UVT external unit (380 ~ 460V AC)

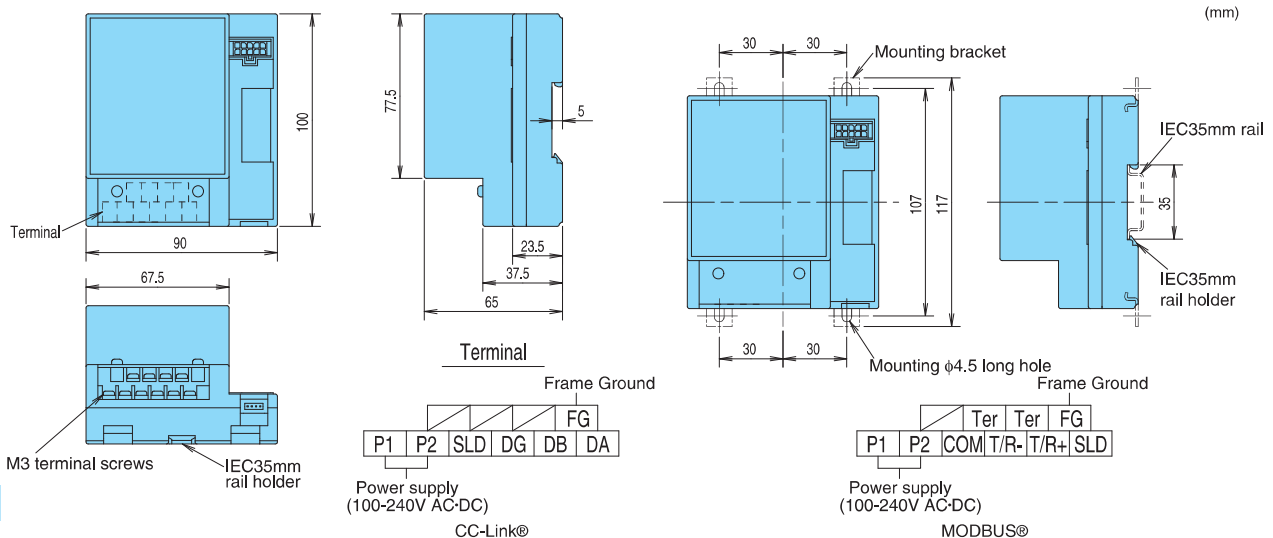


ETR external units

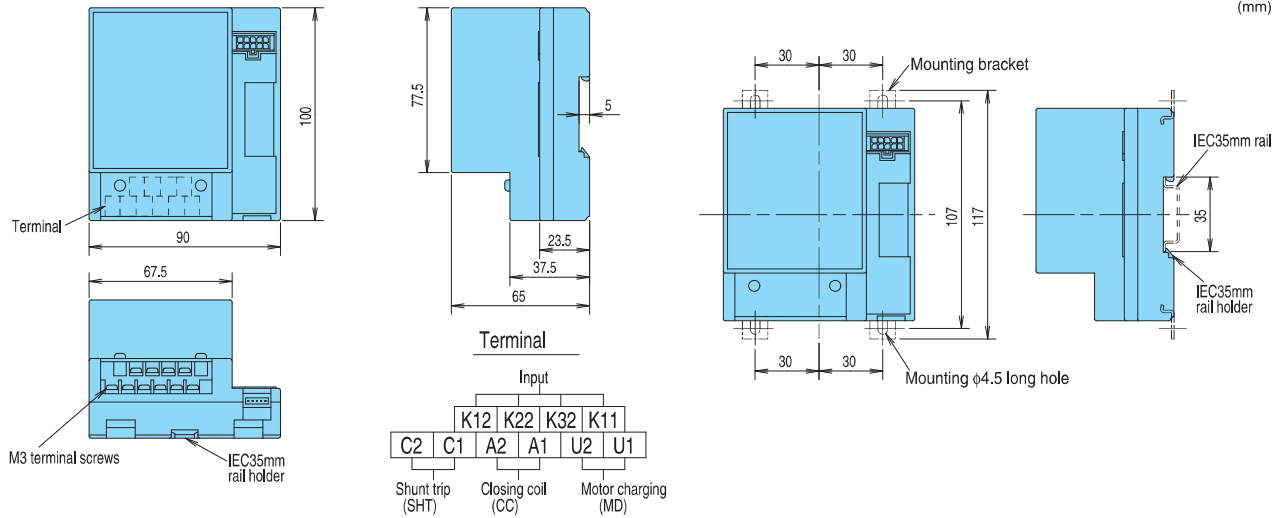
Display onto panel board (DP2)



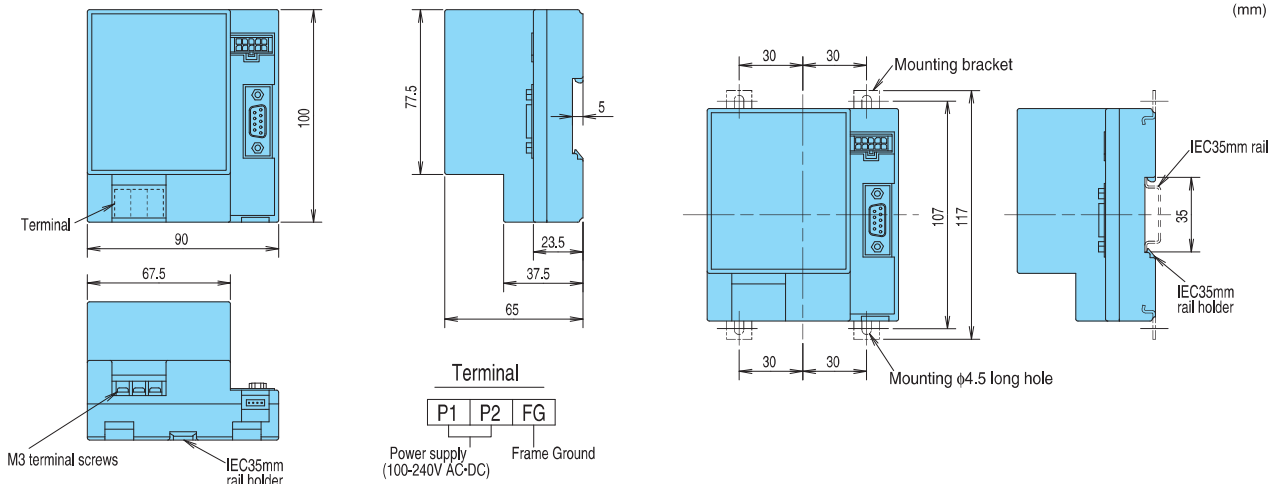
CC-Link®, MODBUS® interface unit (BIF-CC, BIF-MD)



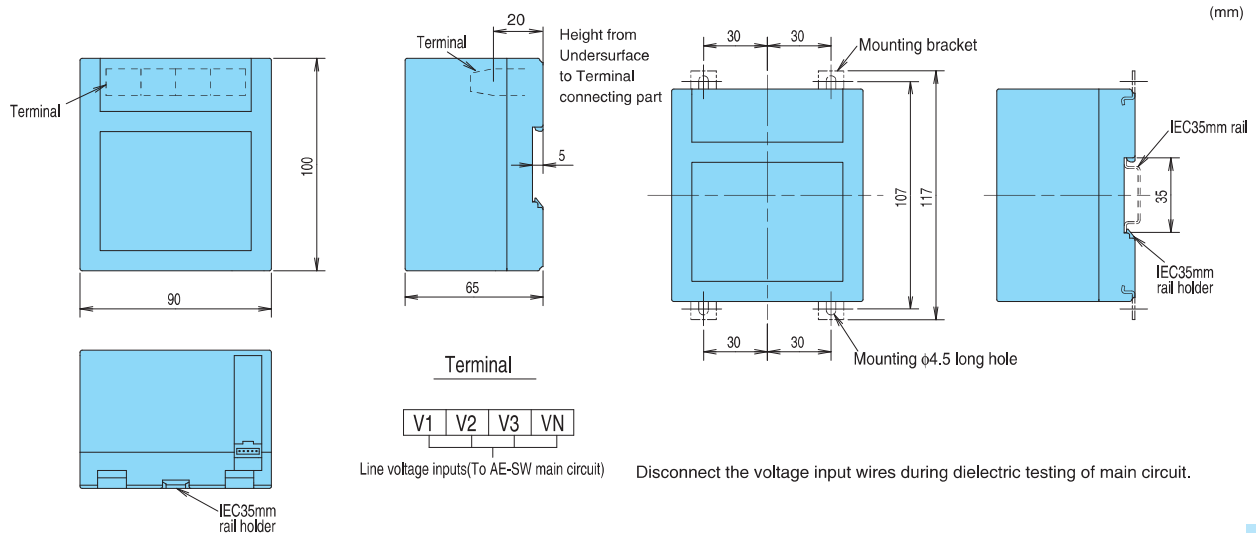
I/O unit (BIF-CON)



PROFIBUS-DP interface unit (BIF-PR)



VT unit (VT)

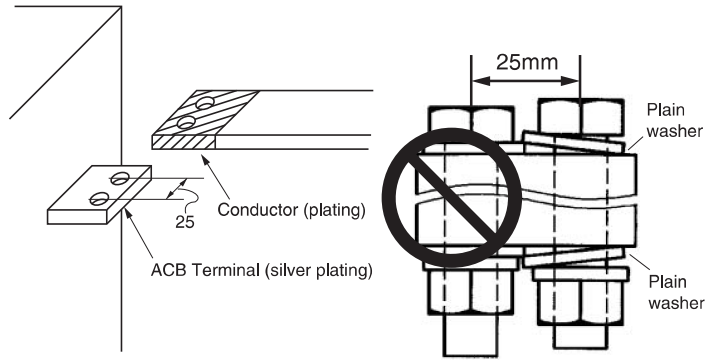


Pre-cautions when making connections

Use M12 bolts, plain washers, and spring lock washers to connect the conductor. There are various size plain washers, but use 24mm or smaller outside diameter washers. The washers may overlap if too large washers are used. It is recommended to apply silver plating on the contact surface of the conductor which is used to connect with the terminal of circuit breakers in order to prevent the increase of contact resistance due to moisture, etc. Tin plating or nickel plating may be applied, but quickly connect with the circuit breaker terminal if nickel plating is applied because nickel plating is less resistant to sulfur dioxide gas.

Clean the contact surface and securely tighten the bolts with a correct torque (M12: 40 to 50 N·m).

The terminal which is applicable to connect the conductor is different depending on the shape of the terminal. Refer to the outline dimensions of P.41 to P.50.



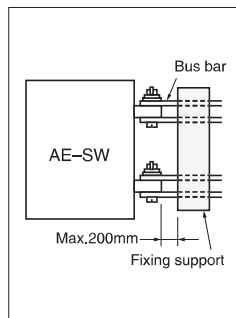
Standard tightening torque

Screw size	Tightening torque(N·m)
M12	40~50

Since fault current flowing through the conductors cause large electromagnetic forces, the conductors should be secured firmly, using the values in the below table as a reference. Max. distance between fixing support and ACB bus bar should be less than 200mm.

Electromagnetic force in N per 1m conductor
(in the case of three phase short circuit)

(N)



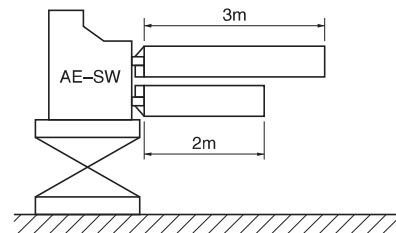
Type	AE630-SW- AE1600-SW	AE2000-SWA		AE2000-SW- AE3200-SW	AE4000-SWA				AE4000-SW- AE6300-SW
		3-Pole	4-Pole		Drawout type		Fixed type		
Conductor distance(mm)	85	115	105	130	190	170	152	145	262
Prospective fault current kA(pl)									
30(0.2)	7700	5700	6300	5100	3500	3900	4300	4500	2500
42(0.2)	15100	11200	12200	9900	6800	7600	8500	8900	5000
50(0.2)	21400	15800	17300	14000	9600	10700	12000	12600	7000
65(0.2)	36100	26700	29300	23600	16200	18100	20200	21200	11800
75(0.2)	-	-	-	31500	21500	24100	26900	28200	15800
85(0.2)	-	-	-	40400	27600	30900	34500	36200	20000
100(0.2)	-	-	-	-	-	-	-	-	27800
130(0.2)	-	-	-	-	-	-	-	-	47000

When selecting conductors to be connected to AE breakers, please ensure that they have a sufficient current capacity. Refer to the right table.

Conductor Size(IEC 60947-1; Ambient Temp. 40°C, Open air)

Rated current Max.(A)	Connecting conductors(copper bus bar)		
	Arrangement	Quantity	Conductor size(mm)
630	With long surface vertical	2	40 x 5
1000		2	60 x 5
1250		2	80 x 5
1600		2	100 x 5
2000		3	100 x 5
2500		4	100 x 5
3150(3200)*1		3	100 x 10
4000 (AE4000-SWA Drawout type)		4	150 x 10
4000 (AE4000-SWA Fixed type)		3	150 x 10
4000 (AE4000-SW)		4	100 x 10
5000		4	150 x 10
6300		4	200 x 10

The left table shows the suitable connecting conductor size based on IEC 60947-1, which is assured from the test under Ambient temp. 40°C, Open air and testing configuration as shown in the following drawing.

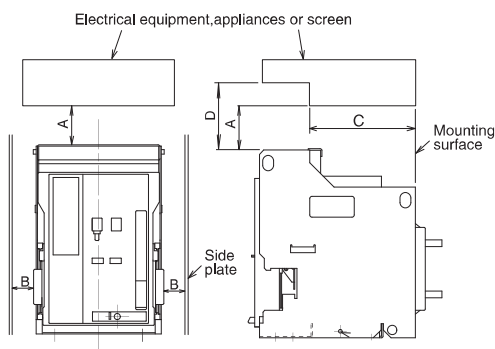


*1 The temperature rise of rated current 3200A conforms to the requirement of IEC 60947-1 for the connecting conductor size of a rated current 3150A. In case of more than 3200A, conductor sizes are not defined in IEC 60947-1.

Insulation distance

When a short-circuit current is interrupted, discharged hot gas blows out from the exhaust port of the arc extinguishing chamber, so provide a clearance as shown in the following table.

Note1: On the fixed type, maintenance is possible with following clearance.



Dimensions		(mm)		
Type		AE630-SW~AE3200-SW AE2000-SWA AE4000-SWA	AE4000-SW~ AE6300-SW	
Applicable voltage		600V AC or less	660V AC, 690V AC	690V AC or less
Fixed type	A	(Note 1) 0	(Note 1) 100	(Note 1) 200
	B	(Note 3) 50	(Note 3) 50	(Note 3) 50
	C	162	162	-
	D	(Note 2) 50	(Note 2) 50	200
Drawout type	A	0	100	200
	B	(Note 3) 50	(Note 3) 50	(Note 3) 50
	C	240	240	-
	D	(Note 2) 50	(Note 2) 50	(Note 2) 200

Note1: 300mm or more clearance is necessary to inspect the arc-extinguishing chamber and contacts.
 Note2: The wiring space required for the control terminal block.
 Note3: When using mechanical interlock, door interlock, etc., dimension B becomes larger.

Service conditions

1. Normal service condition

Under ordinary conditions the following normal working conditions are all satisfied, the AE Series air circuit breaker may be used unless otherwise specified.

1. Ambient temperature
A range of max. +40°C to min. -5°C is recommended, And the average over 24 hours must not exceed +35°C.
2. Altitude
2,000m(6,600 feet) or less
3. Environmental conditions
The air must be clean, and the relative humidity must be 85% or less at max. temp. +40°C. Do not use and store in atmospheres with sulfide gas and ammonia gas etc. (H₂S ≤ 0.01ppm, SO₂ ≤ 0.1ppm, NH₃ < a few ppm.)
4. Installation conditions
When installing the AE Series air circuit breaker, refer to the installation instructions in the catalogue and instruction manual.
5. Storage temperature
A range of max. +60°C to min. -20°C is recommended to be stored.
And the average over 24 hours must not exceed +35°C.

6. Guideline for replacement

Within approx. 15 years. Please refer to the instruction manual.

2. Special service conditions

In case of special service condition, service life may become shorter in some cases.

1. Special environmental conditions
High temperature and/or high humidity
Corrosive gas
2. High ambient temperature
If the ambient temperature exceeds +40°C, the uninterrupted current rating will be reduced. Since the derating value is different depending on the applicable standard, refer to P58.
3. High altitude
Since the heat radiation rate is reduced for use at the 2,000m or higher, accordingly the operating voltage, continuous current capacity and breaking capacity are derated. Moreover the insulation durability is also decreased owing to the atmospheric pressure.
Please inquire us for further detail.

Guarantee

1. Free guarantee period

The free guarantee period of the product is one year from the day of purchase.

2. Scope of guarantee

- (1) We will repair the product free of charge within the guarantee period on condition that it has been used under the standard working conditions in conformity with the operating conditions, operating procedures, environmental conditions and instructions specified in the catalogs, manuals and caution labels on the product body.
- (2) In the following cases, the product will be repaired at your expense even within the free guarantee period.
 - Failure caused by your improper storage or handling, carelessness or negligence

- Failure caused by inadequacies of installation
 - Failure caused by mis-operation or improper modification
 - Failure caused by external factors due to acts of God, such as fire and abnormal voltage, and natural disasters, such as earthquake, windstorm and flood
 - Failure caused by reasons that could not be foreseen on the level of science and technology at the time of delivery
- The term "guarantee" used in this section refers to the guarantee only of the delivered product. We are not liable to compensate for any damage induced by the failure of the delivered product.

3. Repair parts supplying period

The supply of the repair parts is warranted for 5 years after discontinuation of the production. The supply is terminated as soon as the repair parts run out after the 5 years.