Product Specification/

Specification

Frame zero(A)63010001280128012801280Rade invalation voltage (U)(0004/L/AC V)660660Rade invalation voltage (U)(0004/L/AC V)660660Rade invalation voltage (U)(0004/L/AC V)860760UBI2800 catagory(V)(V)760760EMC envolument condition envolument condition envolument are relation envolument condition envolument are relation envolument e			Туре			AE630-SW	AE1000-SW	AE1250-SW	AE1600-SW					
Read or pute structure of long (Un) (000000/000000000000000000000000000000	Frame size				(A)	630	1000	1250	1600					
Read or pute structure of long (Un) (000000/000000000000000000000000000000	· · · ·						1000							
Read mydle withstand outling (Ump) (W) 12 Pollution dayse 3 ECC anvironment condition (environment A or B) (Note 19) A Number of poles 3, 4 Read current in (CT raing) (A) 800 (Note 5) Current setting 'r (A) (400°) (M) 15645 507 400°, 500 500°,							690							
Ullization category B EVC environment condition (environment A or B) (Note 14) A Number of policy A Bated current In (CT rating) (WS) (WS) (environment A or B) (Note 14) A Current reling adjustable (Current reling adjustable) (A) 630 (Note 5) 1000 1026275 / 703 412.5 90000 4000 (00.10) Current reling adjustable (Current reling adjustable) (A) 630 (Note 5) 0000 / 800 400 (00.10) 1125 1187.5 / 1220 (10.00) 1140 e1 k = 300 Raded current of neutral pole (A) 630 (Note 5) 0000 / 1250 1000 e1 k = 1000 Raded current of neutral pole (A) 630 (Note 5) 0000 e1 k = 1000 1000 e1 k = 1000 Raded current of neutral pole (A) 630 (Note 5) 0000 e1 k = 1000 1000 e1 k = 1000 Raded current of neutral pole (A) 630 (Note 5) 0000 k = 1 k = 1000 1000 e1 k = 1100 Raded current of neutral pole (A) 630 (Note 5) 0000 k = 1 k = 1000 1000 k = 1 k = 1000 Raded current of neutral pole (A) 630 (Note 5) 0000 k = 1 k = 1000 1000 k = 1 k = 1000 Raded c														
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Bated ourient In (CT rating) (A) 650 (More 9) 1000 250 1600 Current setting Ir (A) (470') (MSI [WSI mile 0 milestable) 0.556.057.400.556.574.000.55 0055.690.755.000.575.000.100.57 1725.1725.01 1725.010.200.1200.1200.1200.1200.1200.1200			(environment A or	b) (Note 14)										
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Current satisfy adjustable (Current rating adjustab	Rated current II	n (CT rating)			(A)	630 (Note 5)	1000	1250	1600					
Current a atting ir (A) (40°) (10,5 to 10, k in 0,6 5 step) (67,586 5-63) (Note 5) 900-80-1000 1125-1187,5-1250 1440-1500-1600 Rated current of neutral por (Durrent raining fixed 10) (A) (40°) ± r. 630 1000 1250 1000 ± r. 1250														
Base of the with stand time with stand														
$ $ 00 \ e \ Ir a \ Current raining $ $ 000 \ e \ Current raining $ $ $ $ $ $ 000 \ e \ Current raining $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $$	Current setting I	r (A) (40°C)	0.5 10 1.0	0 × 111 0.05 S	ieh	567-598.5-630 (Note 5)	900-950-1000	1125-1187.5-1250	1440-1520-1600					
Rated current of neutral policy (A) 630 1000 1250 1600 Rated current of neutral policy 690V AC 65				or protection	use	160 18 600	400 Jr 1000	000 1050	1000 1 1000					
Ite control is a second seco			(Current rat	ing fixed) (N	ote 10)	100 ≤ 11 ≤ 030	400 ≤ II ≤ 1000	000 ≤ 11 ≤ 1250	1000 ≤ 11 ≤ 1600					
Hitmate breaking capacity (kf km) 600 V AC 65 240-500 V AC 65 680 V AC 65 680 V AC 65 240-500 V AC 65 880 + AC 65 Bar + 690 V AC 65 Bar + 690 V AC 25 (Note 1) External relay 500 V AC 100% JIS C 2501 - 143 100% Rate device treaking capacity 690 V AC 143 690 V AC 143 143 240-500 V AC 143 143 880 V AC 143 143 690 V AC 143 143 240-500 V AC 143 143 880 V AC 52.5 143 880 V AC 52.5 143 15 65 143 16 500 V AC 52.5 80 60 143 17 28 60 18 65 140 (Note 6) 100 (K Arms) 40 (Note 6)	Rated current c	of neutral pole			(A)	630	1000	1250	1600					
Hitmate breaking capacity (kf km) 600 V AC 65 240-500 V AC 65 680 V AC 65 680 V AC 65 240-500 V AC 65 880 + AC 65 Bar + 690 V AC 65 Bar + 690 V AC 25 (Note 1) External relay 500 V AC 100% JIS C 2501 - 143 100% Rate device treaking capacity 690 V AC 143 690 V AC 143 143 240-500 V AC 143 143 880 V AC 143 143 690 V AC 143 143 240-500 V AC 143 143 880 V AC 52.5 143 880 V AC 52.5 143 15 65 143 16 500 V AC 52.5 80 60 143 17 28 60 18 65 140 (Note 6) 100 (K Arms) 40 (Note 6)				690	V AC			65						
Icc (kA ms) 240-500V AC 65 with MCR 660V AC 65 Bare + 600V AC 25 (Nole 1) Bare + 600V AC 25 (Nole 1) Bare + 600V AC 143 Fated service breaking capacity (5 (KA ms) %cu 100% Bare of Bare , Gapacity (6 (KA ms) %cu 143 (mit A peak) (2 apacity (2000 AC 143 (mit A peak) (2 apacity (2000 AC 143 240-500V AC 143 240-500V AC 143 Bare or Bare + 660V AC 15 600 Bare or Bare + 660V AC 15 60 Maximum closing time (mit hated current (mit hated curent (mit hated current (mit h														
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kink kink 600 / AC 65 Bare + External rely 600 / AC 0 25 (Nole 1) Bare + External rely 500 / AC 25 (Nole 1)														
IECC0047-2 ENG047.2 US C 8201-2-1 JS C 8201-2-2 JS C 8201-2-2 J			with MCR											
Bare + Extend relay 690V AC 500V AC 25 (Note 1) Rated service preaking capacity Ion (KA peak) 800V AC 143 Rated service preaking capacity Ion (KA peak) 600V AC 143 With MCR 600V AC 143 With MCR 600V AC 143 Bare or Bare + Ion (KA peak) 600V AC 143 Bare or Bare + Ion (KA peak) 600V AC 143 Bare or Bare + Ion (KA mms) 600V AC 143 Bare or Bare + Ion (KA mms) 600V AC 143 Bare or Bare + Ion (KA mms) 600V AC 52.5 Retad short time withstand current Ion (KA mms) 15 65 Bare or Bare + Ion (KA mms) 500V AC 52.5 Retad short time withstand current Ion (KA mms) 15 65 Maximum total breaking time (ms) 3e 60 Number of operating (voles (Internina) 600V AC In (Note 16) 5,000 0 Vertical terminal 600V AC In (Note 17) 25,000 (Note 4) 0 Outline dimension (mm) (Note 10) Vertical termina! 0 0														
$ \begin{array}{c c c c c c } \mbox{Extensin relay} & 500 \lor AC & 25 (Note 1) \\ \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$														
LECOGY / 2 BEOGRAF / 2 JJS C 8201 / 2:1 Rated service breaking capacity form (KA peak) Solution (KA mask) % and (KA								. ,						
JIS C 8201-2-1 Imm (kA peak) Baled making capacity mm (kA peak) 680V AC 143 Fated making capacity mm (kA peak) 680V AC 143 Pated making capacity mm ACR 680V AC 143 With MCR 680V AC 143 Bare or Bare + External relay 680V AC 143 Bare or Bare + External relay 680V AC 143 SOUV AC 143			-	5 500 V										
Rate darking capacity form (kA peak) 000 VAC 143 600 VAC 143 240-500 VAC 143 with MCR 600 VAC 143 600 VAC 143 with MCR 600 VAC 143 600 VAC 143 240-500 VAC 143 600 VAC 143 600 VAC 143 600 VAC 143 600 VAC 52.5 Sternal relay 500 VAC 1\$ 65 Maximum tolal breaking time 1\$ Virk Arms) 1\$ 1\$ 60 Maximum tola breaking time (mit hat det attrimine) 0 5.000 Maximum tola breaking time 600 VAC in (Note 10) (Note 2) (Note 10) 690 VAC in (Note 17) (Note 2) (Note 10) 690 VAC in (Note 17) (Note 2) (Note 10) 690 VAC in (Note 17) (Note 2) (Note 11) 600 VAC in (Note 17) (Note 2) (Note 11) 600 VAC in (Note 17) (Note 2) (Note 12) 4-pole		Rated service	ce breaking capaci					100%						
km (kA peak) 600V AC 143 240-500V AC 143 with MCR 690V AC 143 690V AC 143 Bar or Bare + 600V AC 52.5 Bar or Bare + 500V AC 52.5 Kith MCR 500V AC 66 28 60 500V AC Maximum total breaking time (ms) 40 (Note 6) Maximum total breaking time (ms) 40 (Note 6) Maximum total breaking time (ms) 5000 Maximum total breaking time (ms) 5000 (Note 2) (Note 15) With rated 500V AC In (Note 16) 5.000 Connecting terminal 690V AC In (Note 17) 25.000 (Note 4) Connecting terminal Horizontal terminal Vertical terminal 3-pole 35 35 Outine dimension (mm) Fixed type 3-pole	515 0 0201-2-1	Rated makin	na canacity				143							
Intermal 				600V AC		143								
with MCR $600 \lor AC 143 Bare or Bare +Extensi relay 600 \lor AC 143 Bare or Bare +Extensi relay 600 \lor AC 52.5 Status 600 \lor AC 52.5 Rated short time withstand timefor (Arms) 1s 65 Maximum total breaking timefor (Arms) 15 65 Maximum total breaking timefor (Arms) (Min rate) 690 \lor AC 500 Maximum total breaking time(with or operatingorgels (With ratedfor (Arms) 690 \lor AC in (Note 16) 5000 Mumber of operatingorgels (With ratedfor (Arms) 690 \lor AC in (Note 16) 5000 690 \lor AC Mumber of operatingorgels (With ratedfor (Arms) 690 \lor AC in (Note 16) 5000 690 \lor AC Connecting terminal(Note 2) (Note 15) With ratedfor (Arms) 690 \lor AC in (Note 17) 25,000 (Note 4) 400 \land 300 \land 375 Connecting terminal(Note 11) Fixed type 3-pole 410 \times 340 \times 290 410 \times 425 \times 290 Verifiel 3-pole 4-pole 3-pole 40 \times 430 \times 308 \times 375 Weight (Kg)(without Accessory) $				240-50	DOV AC	143								
$ \ \ \ \ \ \ \ \ \ \ \ \ \$				690V AC		143								
$\begin{tabular}{ c c c } \hline \hline Pirce Pirce$			with MCR	600V AC		143								
External relay500 V AC 52.5 Source of Section				240-500V AC										
kternal relay500 V AC 52.5 Sector S			Bare or Bare +	690V AC										
1s 65 kg karms kg karms <th co<="" td=""><td></td><td></td><td></td><td colspan="2"></td><td colspan="8"></td></th>	<td></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="8"></td>													
$ \begin{array}{c c c c c c } \mbox{line with stand current low (kA rms)} & 2s & 60 \\ \hline 3s & 50 \\ \hline 50 \\ \hline 40 \\ line aproval ($\can car car car car car car car car car car$														
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Number of operating cycles With rated current 690 V AC ln (Note 16) 5,000 Image: constraint of the state of t	<u> </u>				. ,									
ourent 690V AC ln (Note 17) 10,000 (Note 2) (Note 15) Without rated ourrent (Note 17) 25,000 (Note 4) Connecting terminal Horizontal terminal Vertical terminal Vertical terminal (Note 11) Front terminal 3-pole Outline dimension (mm) Fixed type 3-pole HxWxD Fixed type 3-pole Weight (kg) Fixed type 3-pole (without Accessory) Fixed type 3-pole (Note 12) Orawout type 3-pole 35 35 35 (without Accessory) Fixed type 3-pole 56 56 (note 12) Orawout type 3-pole 24 (note 12) Gradle only 3-pole<		-	With rated	,										
		ailiy												
$ \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	•	2) (Note 15)												
$\begin{tabular}{ c c c } \hline \hline Vertical terminal & & & & & & & & & & & & & & & & & & &$														
$ \begin{array}{ c c \hline \line \mbox{(Note 11)} \hline \mbox{Front terminal} \\ \hline \mbox{Outline dimension (mm)} \\ H \times W \times D \\ \hline \mbox{H} \times W \times U \\ \hline \m$														
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HxWxDImage: here of the second s														
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$ \begin{array}{ c c c } \hline \end{picture} \hline \end{picture} \hline \end{picture} \hline \end{picture} \hline \end{picture} \end{picture} \end{picture} \end{picture} \end{picture} \end{picture} \hline \end{picture} \hline \end{picture} \hline \end{picture} \hline \end{picture} \hline \end{picture} \hline \end{picture} \hline \end{picture} p$	HXWXD				-	410×425×290								
$ \begin{array}{ c c c } \mbox{Weight (kg)} \\ (without Accessory) & \end{tabular} & \end{tabular} \\ \hline \mbox{Weight (kg)} \\ (without Accessory) & \end{tabular} & tab$			Drawout type		3-pole	430×300×375								
Image: Cell of the system Im					4-pole									
(without Accessory) 4-pole 42 42 43 43 43 Drawout type (including cradle) 3-pole 56					3-pole	35		35	35					
Drawout type (including cradle) 3-pole 56 56 56 6 (note 12) Cradle only 3-pole 70					4-pole	42	42	43	43					
(including cradle) 4-pole 70 70 70 Cradle only 3-pole 24 1 4-pole 24 1 1 Marking:CE/UKCA 28 1 1 1 CCC recognition (☆:Certified) 5 5 1 1 Marking approval (☆:Certified) 1 1 1 1			Drawout type		3-pole	56	Ę	56						
Cradle only 3-pole 24 (Note 12) 4-pole 28 Marking:CE/UKCA 28 28 CCC recognition (☆:Certified) Self-declaration CCC recognition (☆:Certified) ☆ Marine approval (☆:Certified) ☆ (NK, LR, DNV(DNV GL), BV, ABS, CCS)					-	70 70 70 70								
(Note 12) 4-pole 28 Marking:CE/UKCA Self-declaration CCC recognition (☆:Certified) ☆ Marking approval (☆:Certified) ☆(NK, LR, DNV(DNV GL), BV, ABS, CCS)			Cradle only 3-p											
Marking:CE/UKCA Self-declaration CCC recognition (☆:Certified) ☆ Marine approval (☆:Certified) ☆ (NK, LR, DNV(DNV GL), BV, ABS, CCS)		(Note 12)												
CCC recognition (☆:Certified) ☆ Marine approval (☆:Certified) ☆(NK, LR, DNV(DNV GL), BV, ABS, CCS)	Marking CE/UK				1 000									
Marine approval (☆:Certified) ☆(NK, LR, DNV(DNV GL), BV, ABS, CCS)			d)											
Automatic inpping device Electronic (effective value detection)			1)											
	Automatic trippi	ing device												

(Note 1) This is the Icu value when the bare main body and the external relay are combined.

(Note 2) The number of operating cycles without rated current also includes the number of operating cycles with rated current.

(Note 3) AE2000-SWA, AE4000-SWA and AE4000-SW~AE6300-SW apply for only vertical terminal of connecting terminal.

(Note 4) This value is max, operating cycle for just ACB body without any accessories. (The max, operating cycles for the accessories like AX, MD,CC, SHT and UVT are half of this value.)

(Note 5) Products with low rating types are available. For AE630-SW low rating types (250A, 315A, 500A), DP3 is not available.

AE 630-SW 3 kinds of products with low rating types are available.

250-275-300-325-350-375-400-425-450-475-500(CT 500A)

AE 2000-SW 2 kinds of products with low rating types are available.

· 125-137.5-150-162.5-175-187.5-200-212.5-225-237.5-250(CT 250A)

· 157.5-173.3-189-204.8-220.5-236.3-252-267.8-283.5-299.3-315(CT 315A)

· 800-880-960-1040-1120-1200-1280-1360-1440-1520-1600(CT 1600A) · 625-687.5-750-812.5-875-937.5-1000-1062.5-1125-1187.5-1250(CT 1250A)

Connections

Over view (AE630~1600-SW, AE2000~3200-SW)

Connections Type	Horizontal	Vertical (VT)	Front (FT)	Vertical terminal adapter (VTA)	Front terminal adapter (FTA)
Fixed type (FIX)				FIX-VTA	FIX-FTA
Drawout type (DR)		DR-VT	DR-FT	DR-VTA	DR-FTA

• Connection image : AE630~1600-SW, 3-pole type Over view (AE2000-SWA, AE4000-SWA, AE4000~6300-SW)

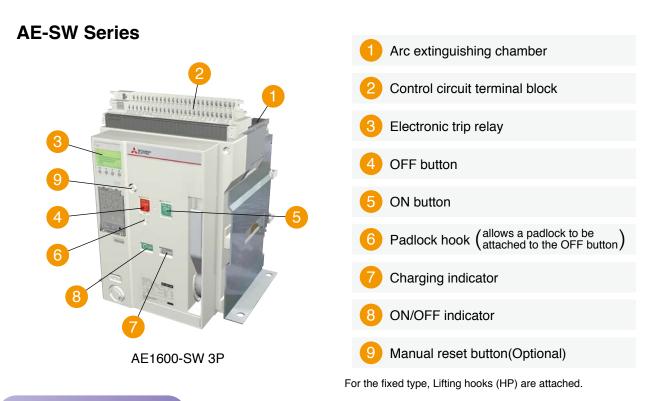
Connections Type	Vertical	Standard	
Туре	(VT)	Stanuaru	
Fixed type (FIX)	FIX-VT		
Drawout type (DR)	DR-VT		 Connection image : AE2000-SWA, 3-pole type For AE2000-SWA, AE4000-SWA, AE4000-SW, AE5000-SW and AE6300-SW models, vertical terminal only is available.

Available connections

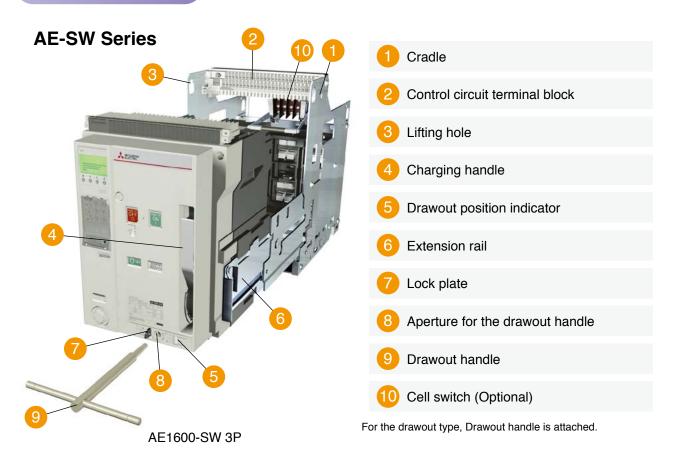
Connections	Breakers	AE630-SW	AE1000-SW	AE1250-SW	AE1600-SW	AE2000-SWA	AE2000-SW	AE2500-SW	AE3200-SW	AE4000-SWA	AE4000-SW	AE5000-SW	AE6300-SW
	Horizontal	0	0	0	0	-	0	0	0	-	-	-	-
Fixed type	FIX-VT	_	_	_	_	0	_	_	_	0	0	0	0
(FIX)	FIX-VTA	0	0	0	0	-	0	0	0	_	_	_	-
	FIX-FTA	0	0	0	0	_	0	0	0	_	_	_	_
	Horizontal	0	0	0	0	-	0	0	0	_	_	-	-
	DR-VT	0	0	0	0	0	0	0	0	0	0	0	0
Drawout type (DR)	DR-FT	0	0	0	0	_	0	0	0	_	_	_	_
	DR-VTA	0	0	0	0	-	0	0	0	_	_	-	_
	DR-FTA	0	0	0	0	-	0	0	0	_	_	_	_

Appearance and Product structure

Fixed type

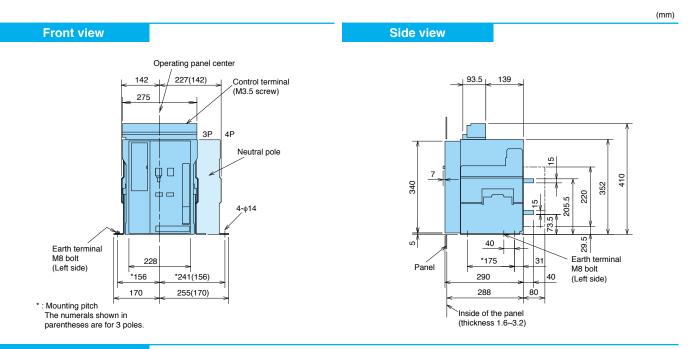


Drawout type

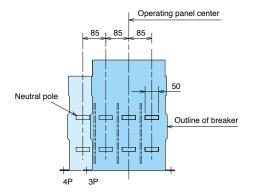




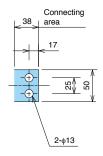
Fixed type AE630-SW, AE1000-SW, AE1250-SW, AE1600-SW



Rear view

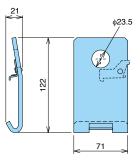


Main circuit terminal dimension



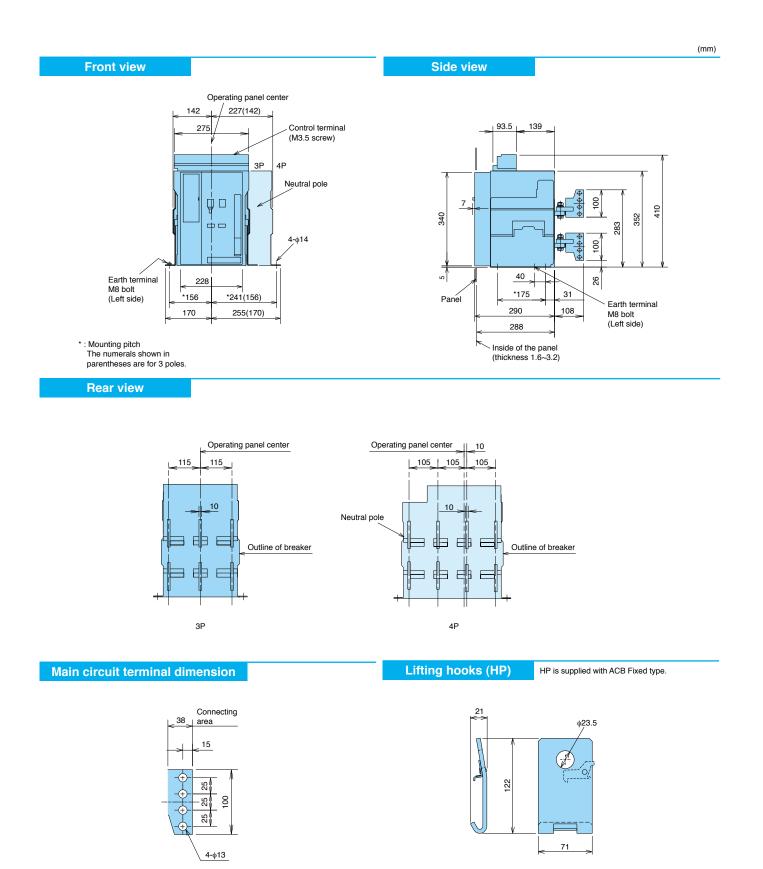
Lifting hooks (HP)

HP is supplied with ACB Fixed type.



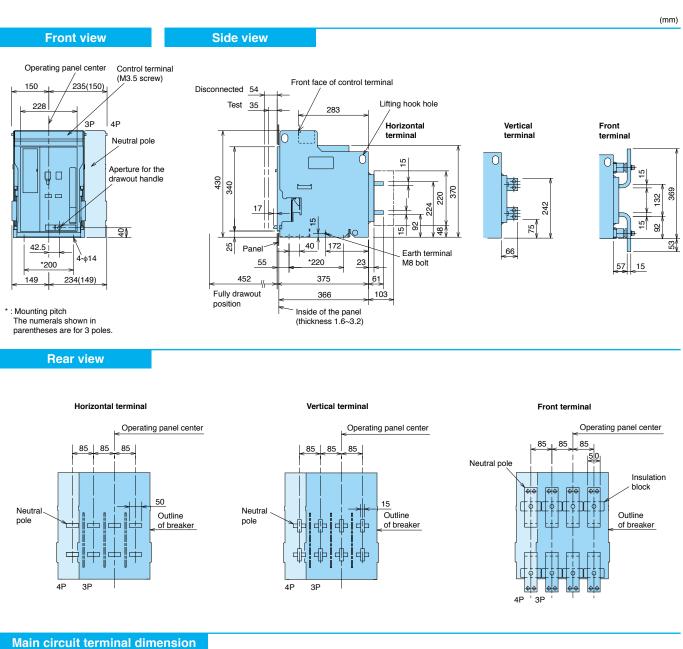
Outline dimensions

Fixed type AE2000-SWA

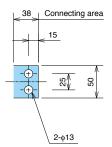


Outline dimensions

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

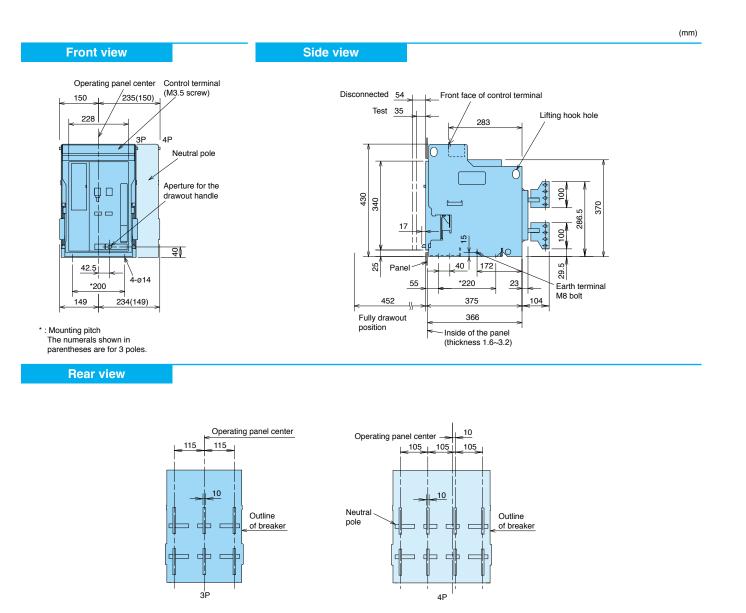




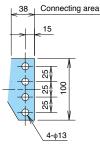




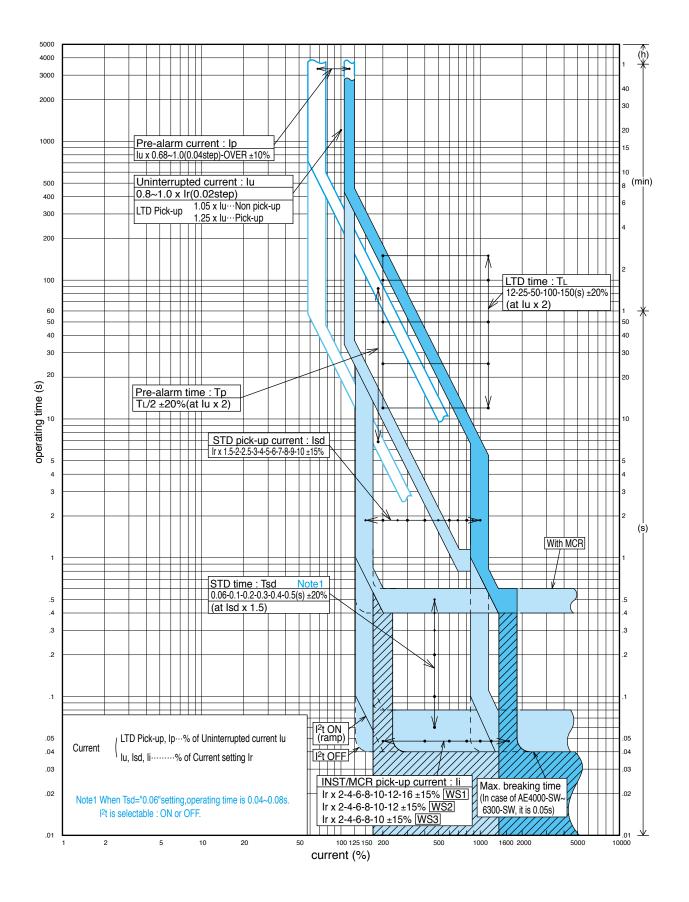
Drawout type AE2000-SWA



Main circuit terminal dimension

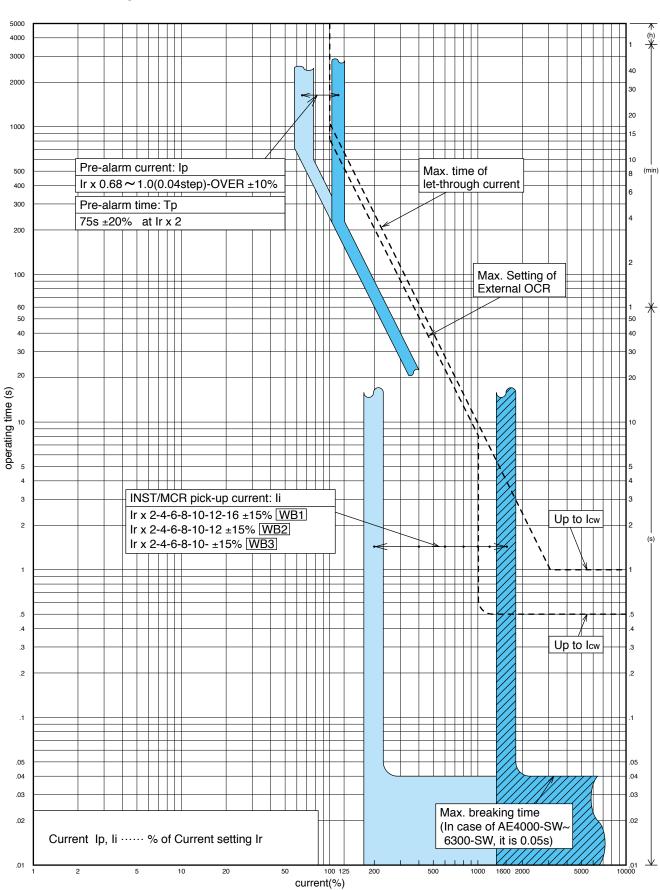






■Operating characteristic curve (for general use : WS)



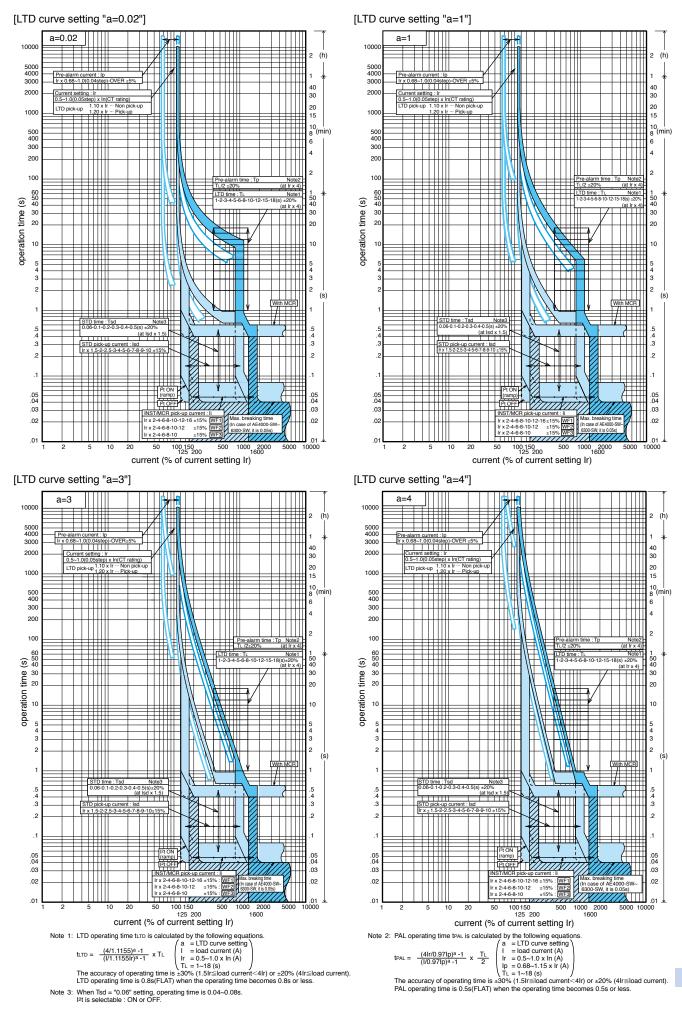


■Operating characteristic curve (for special use : WB)



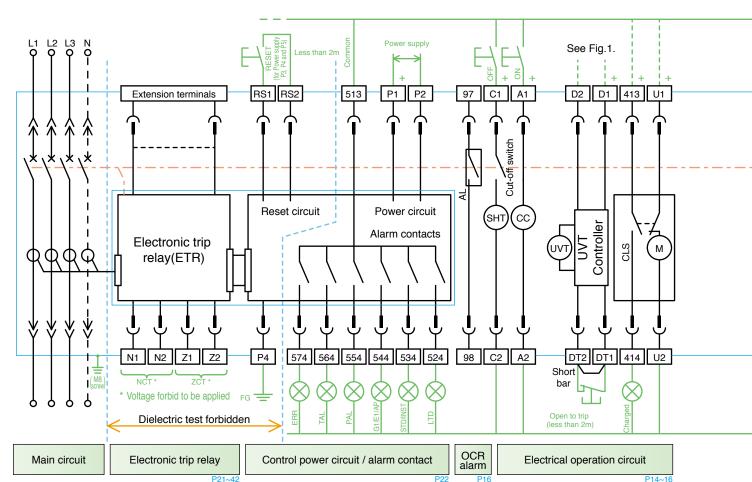
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■Operating characteristic curve (for protective coordination use : WF)



Wiring diagram

• The following diagram shows the case that accessories are fully equipped.



Terminal description

13 14 ~ 53 54	Auxiliary switch "a"						
11 12 ~ 51 52	Auxiliary switch "b"						
U1 U2	Motor charging						
413 414	Charged signal (Normal open)						
D1 D2	Voltage Input terminal of UVT						
DT1 DT2	Trip terminal of UVT (Remote trip)						
A1 A2	Closing coil						
C1 C2	Shunt trip						
97 98	OCR alarm						
P1 P2	Power supply for ETR						
P4	FG of power supply (FG:Frame Ground)						
RS1 RS2	Alarm reset (Trip cause LED, alarm contact)						
513 524	Alarm contact for LTD Trip						
513 534	Alarm contact for STD or INST Trips						
513 544	Alarm contact for Ground fault, Earth leakage trips or 2nd Pre-alarm contact						
513 554	Pre-alarm contact						
513 564	Temperature alarm contact						
513 574	Error alarm contact						
Z1 Z2	For external ZCT						
N1 N2	For Neutral CT (Note)						
	For external display DP2						
Extension terminals	For Interface unit						
	For VT unit						

Accessory Symbols

SHT	Shunt tripping device
CC	Closing coil
M	Motor(Motor charging device)
UVT	UVT coil
AX	Auxiliary switch
AL	OCR alarm switch
CLS	Charge limit switch
SBC	Shorting b-contact
CL	Cell switch

Internal wiring

External wiring (user's wiring)

Control circuit connecter (drawout type)



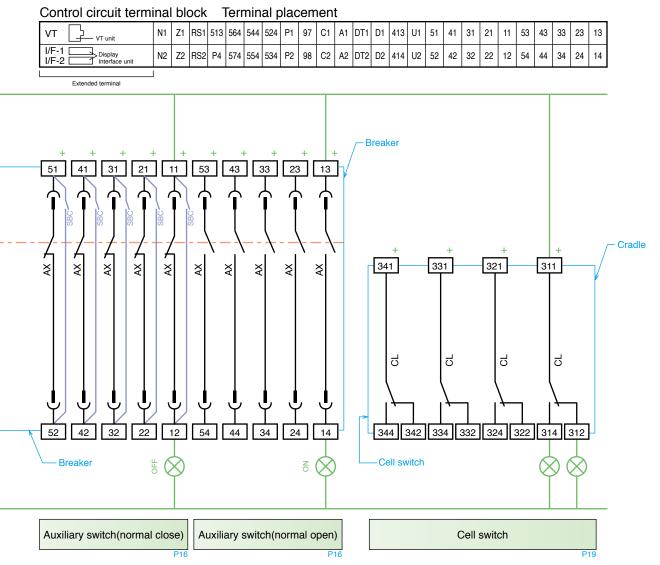
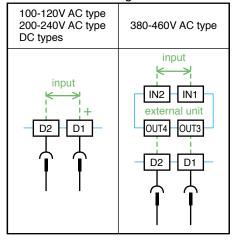


Fig.1

UVT controller wiring



Control circuit

Recommended crimp-type terminals



for M3.5 screw

(wire size 1.25mm²~2.0mm²)

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Max. 7.2mm

Note:

- For the drawout type, the cables should have the length which allow the control circuit terminal block to be moved to the left or right by 5mm.
- When a coil load is connected in the same control circuit as the ETR, surge absorbers are required to absorb the surge voltage.
- OCR alarm (AL)

The contact output of the OCR alarm (Standard type AL) is the one-pulse output and the output time is 30~50ms.

For this reason, this output needs self-holding circuit.

- For Power supply type P3 and P4, the high sensitive relay used in contact output may cause the chattering noise (wrong output of 1ms level) during ON and OFF operation, depending on the Panel placing condition. When it is used in the quick responsive sequence, the filter circuit of a few milli-second (ms) should be provided or the double reading sampling should be implemented.
- Closing coil (CC)

As CC is one-pulse driven, it is not necessary to insert AXb for burning prevention purposes. Inserting AXb will cause anti-pumping function to be ineffective.

- Under voltage trip device (UVT) Use the switch that can open and close 150V DC, 0.5A for remote trip. Remote trip terminal has short bar at shipment, so remove it before using this function. Disconnect the voltage input wires during dielectric testing of main circuit.
- Since some terminals are polarized, the wiring should be done correctly as the polarity shown in the wiring diagram when the control voltage is DC. Auxiliary switch (AX) Standard type has no polarity.
- Alarm reset (Terminal: RS1 and RS2) is available only for Power supply type P3, P4 and P5 For Power supply type P1 and P2, it can not be reset from the Control circuit terminal block (RS1 and RS2).
- Alarm contacts (Terminal : 513~574) are available only for power supply type P3, P4 and P5. For output contacts, refer to page 22 Note2.
- FG (Terminal: P4) is the protective earth for power supply (Terminal: P1, P2). It is recommended to use this terminal to reduce surge (M8 screw required).
- Shorting b-contact (SBC)

SBC can be provided for all AX b contacts. At the time of shipment from factory, SBC is already connected to control circuit terminal block. Only one more crimp terminal can be added on contact, overlapping with SBC's contact on Terminal: $11 \sim 51$.