

B1 Vacuum Circuit Breakers

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Vacuum Circuit Breakers

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Vacuum Circuit Breakers

7.2kV~36kV(IEC Std.)/4.76kV~38kV(IEEE Std.)



It provides a product with an integrated technology, qualified atomic energy and various voltage ranges.

- It is a product incorporated with an accumulated vacuum technology, operating device design and insulation design.
- It is developed conforming to IEC international standards as well as IEEE (ANSI).
- It is a product that can be used at various voltage settings including 7.2kV, 17.5kV, 24/25.8kV, 4.76kV, 8.25kV, 12/15kV, 27kV and 36/38kV.
- V-CHECK MARK Certification(VIDER VCB)

It ensures the stability by self-manufacturing the vacuum interrupters.

- We are manufacturing the vacuum interrupters for the first time in Korea, accumulating the technologies on vacuum and vacuum applications.
- We provide the optimal arc extinguishing medium with high-vacuum, high arc extinguishing capability.

The product stability and life is greatly improved due to the solid insulation by applying molding to the interruption part.

- A core part of the interruption part, VI is molded and solid-insulated to improve the stability and life of the product.
- We are fully prepared for the surface discharge of vacuum circuit breaker by enhancing the insulation performance through the solid insulation.

It is easy to perform maintenance and compatible with new and old products.

- It uses the accumulated design data to display outstanding compatibility with old/new products.
- It is designed to enable easier maintenance and CB can be inspected by simply checking the contact consumption and control circuits.
- A cover made up of an insulation material is adopted to maximize the safety of operators
- It reflects the trend of electric equipment by applying nice design.

Class1E Vacuum Circuit Breakers For Nuclear Power Plant



It is well-known throughout the world as it passed Class 1E VCB performance test.

Class 1E VCB for nuclear power plants is manufactured based on the nuclear power certification system and it has completed the development test complying with KEPIC, EED 1100-2005.

Its quality improved greatly with the superior breaking function.

The breaking time and arc time is shorter than that of other CBs, and it can be used under unfavorable conditions such as under gas and ion emission without any severe impacts on circuit switching, ground fault, high-speed reclosing and Capacitor bank switching.

It completed the seismic test, acquiring GENERIC Class.

It completed the seismic test based on Broadband Generic Spectra of IEEE C37.98 and meets the seismic standards of all nuclear power plants around the world.

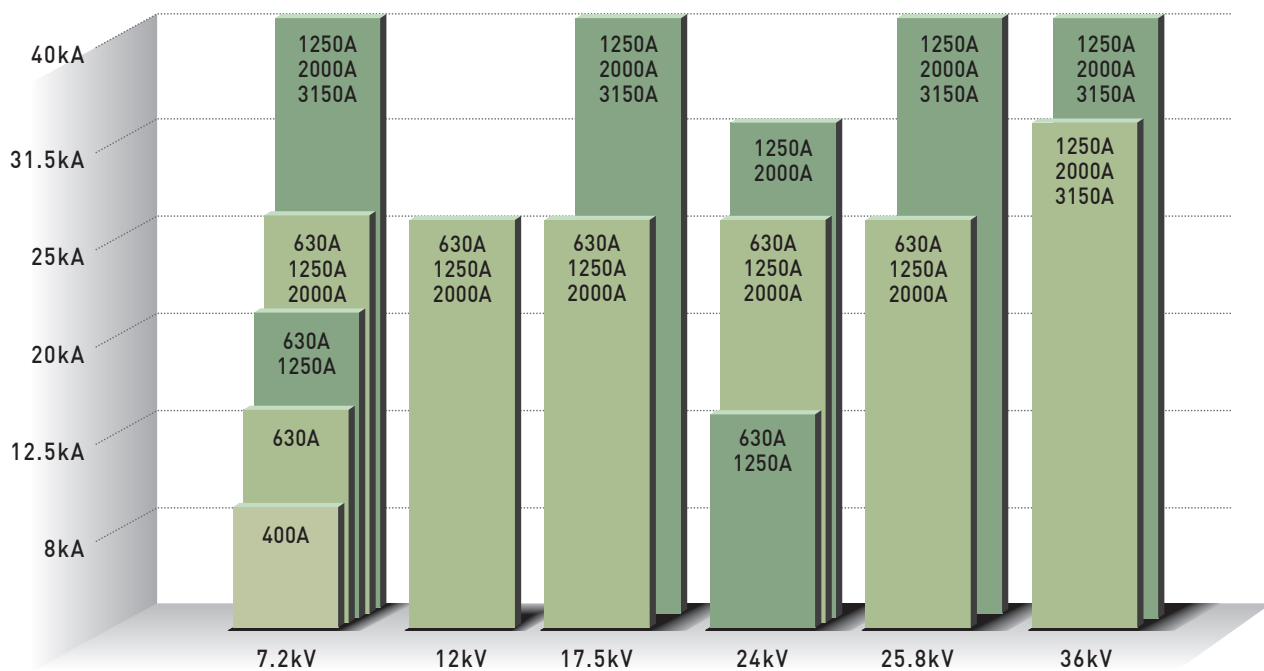
Product Line-Up

The full line up, various options to choose from!



For Nuclear Power Plant

IEC Standard



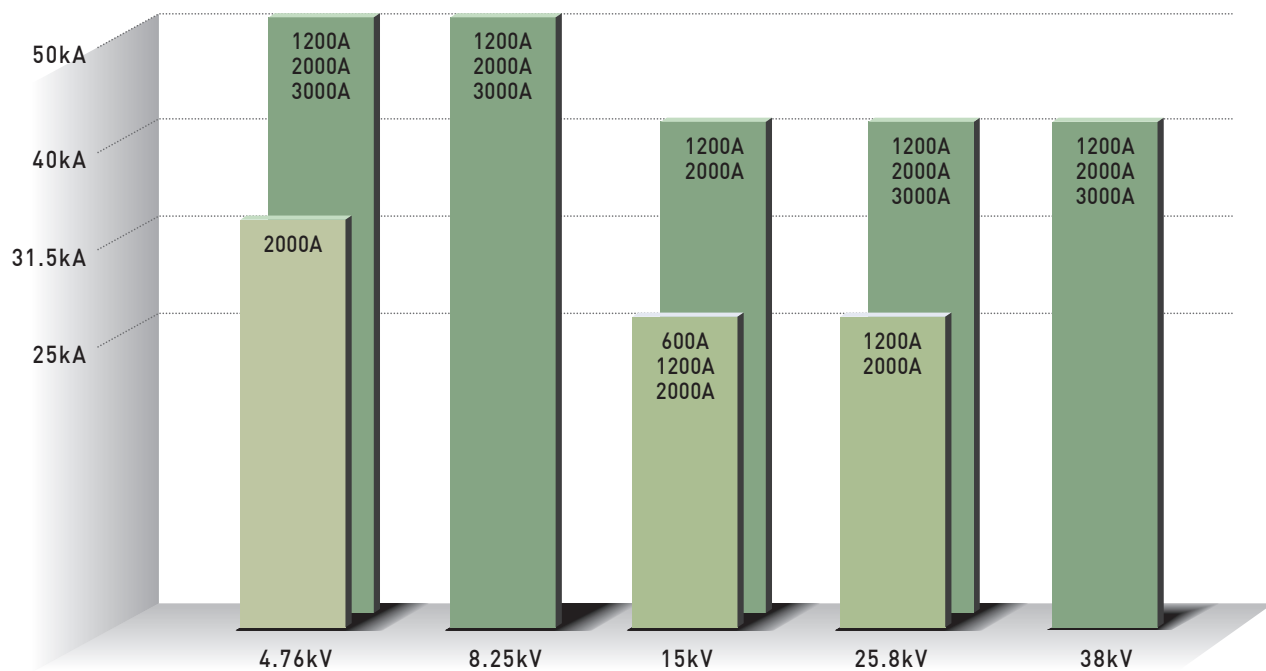


Overseas IEEE (ANSI) Applied/
For Use Indoors



Outdoor

IEEE Standard



Ratings

Small Capacity (7.2kV)

Type	VVB□-07408S	VVB□-07612S	VVB□-07620S	VVB□-07120S	VVB□-07625S
Rated Voltage (kV)	7.2	7.2	7.2	7.2	7.2
Rated Current (A)	400	630	630	1250	630
Rated Breaking Current (kA)	8	12.5	20	20	25
Rated Frequency (Hz)	60	60	60	60	60
Rated Short Time Withstand Current (kA/3sec)	8	12.5	20	20	25
Rated Breaking Capacity (MVA)	100	160	250	250	320
Rated Making Current (kAp)	20.8	32.5	52	52	65
Rated Breaking Time (Cycle)	3	3	3	3	3
Withstand Voltage Power Frequency (1min) (kV/1min)	20	20	20	20	20
Withstand Voltage Lightning Impulse (1.2×50μs) (BIL)	60	60	60	60	60
Operating Sequence	O-0.3s-CO-3min-CO				
Closing Operation Method	Motor-Spring Charge Type				
Trip Control Method	Shunt release				
Making Voltage (V)	*DC24, 48, 110, 220 / AC 110, 220				
Standard Auxiliary Contact	4NO 4NC	4NO 4NC	4NO 4NC	4NO 4NC	6NO 6NC
Rated Opening Time (sec)	0.03	0.03	0.03	0.03	0.03
No-load Closing Time (sec)	0.05	0.05	0.05	0.05	0.05
Installation Method (Fixed (N), Drawout (E, F, G))	N, E, F, *G	N, E, F, *G	N, E, F, *G	N, E, F, *G	N, E, F, *G
Body Weight (kg)	38	38	42	45	45
Applicable Standard	IEC 62271-100				

* To be released in 2018

Type	VVB□-07125S	VVB□-6225M	VVB□-07140M	VVB□-07240M	VVB□-07340M
Rated Voltage (kV)	7.2	7.2	7.2	7.2	7.2
Rated Current (A)	1250	2000	1200/1250	2000	3000/3150
Rated Breaking Current (kA)	25	25	40	40	40
Rated Frequency (Hz)	60	60	60	60	60
Rated Short Time Withstand Current (kA/3sec)	25	25	40 (2sec)	40 (2sec)	40 (2sec)
Rated Breaking Capacity (MVA)	320	-	500	500	500
Rated Making Current (kAp)	65	65	104	104	104
Rated Breaking Time (Cycle)	3	3	3	3	3
Withstand Voltage Power Frequency (1min) (kV/1min)	20	20	20	20	20
Withstand Voltage Lightning Impulse (1.2×50μs) (BIL)	60	60	60	60	60
Operating Sequence	O-0.3s-CO-3min-CO				
Closing Operation Method	Motor-Spring Charge Type				
Trip Control Method	Shunt release				
Making Voltage (V)	*DC24, 48, 110, 220 / AC 110, 220				
Standard Auxiliary Contact	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC
Rated Opening Time (sec)	0.03	0.03	0.03	0.03	0.03
No-load Closing Time (sec)	0.05	0.05	0.05	0.05	0.05
Installation Method (Fixed (N), Drawout (E, F, G))	N, E, F, *G	N, E, F, G	N, E, F, G	N, E, F, G	N, E, F, G
Body Weight (kg)	45	145	270	285	310
Applicable Standard	IEC 62271-100				

* To be released in 2018

Medium Capacity(12kV~17kV)

Type	WVB□-12625S	WVB□-12125S	KVA□-12225M	WVB□-12140S	WVB□-12240S	WVB□-12340S	KVA□-15625M
Rated Voltage (kV)	12	12	12	12	12	12	15
Rated Current (A)	630	1250	2000	1250	2000	3150	600
Rated Breaking Current (kA)	20/25	20/25	20/25	40	40	40	20/25
Rated Frequency (Hz)	50/60	50/60	50/60	60	60	60	50/60
Rated Short Time Withstand Current (kA/3sec)	25	25	25	40	40	40	25
Rated Breaking Capacity (MVA)	520	520	520	520	520	520	650
Rated Making Current (kAp)	65	65	65	104	104	104	65
Rated Breaking Time (Cycle)	3	3	3	3	3	3	3
Withstand Voltage Power Frequency (1min) (kV/1min)	28	28	28	28	28	28	36
Withstand Voltage Lightning Impulse (1.2×50μs) (BIL)	75	75	75	75	75	75	95
Operating Sequence	0-0.3s-CO-3min-CO						
Closing Operation Method	Motor-Spring Charge Type						
Trip Control Method	Shunt release						
Making Voltage (V)	*DC24, 48, 110, 220 / AC 110, 220						
Standard Auxiliary Contact	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC
Rated Opening Time (sec)	0.03	0.03	0.03	0.03	0.03	0.03	0.03
No-load Closing Time (sec)	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Installation Method (Fixed (N), Drawout (E, F, G))	N, E, F, G	N, E, F, G	N, E, F, *G	N, E, F, *G	N, E, F, *G	N, E, F, *G	N, E, F, *G
Body Weight (kg)	42	45	130	208	218	249	130
Applicable Standard	IEC 62271-100		IEC 60056	IEC 62271-100			ANSI C37.09

* To be released in 2018

Type	KVA□-15125M	KVA□-15225M	WVB□-17625S	WVB□-17125S	WVB□-17140S	WVB□-17240S	WVB□-17340S
Rated Voltage (kV)	15	15	17.5	17.5	17.5	17.5	17.5
Rated Current (A)	1200	2000	630	1250	1250	2000	3150
Rated Breaking Current (kA)	20/25	20/25	20/25	20/25	40	40	40
Rated Frequency (Hz)	50/60	50/60	50/60	50/60	60	60	60
Rated Short Time Withstand Current (kA/3sec)	25	25	25	25	40	40	40
Rated Breaking Capacity (MVA)	650	650	750	750	750	750	750
Rated Making Current (kAp)	65	65	65	65	104	104	104
Rated Breaking Time (Cycle)	3	3	3	3	3	3	3
Withstand Voltage Power Frequency (1min) (kV/1min)	36	36	38	38	38	38	38
Withstand Voltage Lightning Impulse (1.2×50μs) (BIL)	95	95	95	95	95	95	95
Operating Sequence	0-0.3s-CO-3min-CO						
Closing Operation Method	Motor-Spring Charge Type						
Trip Control Method	Shunt release						
Making Voltage (V)	*DC24, 48, 110, 220 / AC 110, 220						
Standard Auxiliary Contact	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC
Rated Opening Time (sec)	0.03	0.03	0.03	0.03	0.03	0.03	0.03
No-load Closing Time (sec)	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Installation Method (Fixed (N), Drawout (E, F, G))	N, E, F, *G	N, E, F, G	N, E, F, G	N, E, F, G	N, E, F, G	N, E, F, G	N, E, F, G
Body Weight (kg)	130	130	42	45	208	218	249
Applicable Standard	ANSI C37.09		IEC 62271-100				

* To be released in 2018

Ratings

Large Capacity (24kV~38kV)

Type	WB□-24613S	WB□-24113S	WB□-24625S	WB□-24125S	WB□-2225M	WB□-25625S	WB□-25125S	WB□-2225M
Rated Voltage (kV)	24	24	24	24	24	25.8	25.8	25.8
Rated Current (A)	630	1250	630	1250	2000	630	1250	2000
Rated Breaking Current (kA)	12.5	12.5	25	25	25	25	25	25
Rated Frequency (Hz)	60	60	60	60	60	60	60	60
Rated Short Time Withstand Current (kA/3sec)	12.5	12.5	25	25	25	25	25	25
Rated Breaking Capacity (MVA)	520	520	1040	1040	1040	1120	1120	1120
Rated Making Current (kAp)	32.5	32.5	65	65	63	65	65	63
Rated Breaking Time (Cycle)	3	3	3	3	3	3	3	3
Withstand Voltage Power Frequency (1min) (kV/1min)	50	50	50	50	50	50	50	50
Withstand Voltage Lightning Impulse (1.2×50μs) (BIL)	125	125	125	125	125	125	125	125
Operating Sequence	O-0.3s-CO-3min-CO							
Closing Operation Method	Motor-Spring Charge Type							
Trip Control Method	Shunt release							
Making Voltage (V)	*DC24, 48, 110, 220 / AC 110, 220							
Standard Auxiliary Contact	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	6NO 6NC	8NO 8NC	8NO 8NC	8NO 8NC
Rated Opening Time (sec)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
No-load Closing Time (sec)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Installation Method (Fixed (N), Drawout (E, F, G))	N, *E, *F, *G	N, *E, *F, *G	N, *E, *F, *G	N, *E, *F, *G	N, E, F, G	N, *E, *F, *G	N, *E, *F, *G	N, E, F, G
Body Weight (kg)	90	90	90	90	180	90	95	180
Applicable Standard	IEC 62271-100				IEC60056	IEC 62271-100		IEC60056

Type	KVA□-2140M	KVA□-2240M	KVA□-2340M	KVA□-3131M	KVA□-3231M	VVA□-38140M	VVA□-38240M	VVA□-38340M
Rated Voltage(kV)	25.8	25.8	25.8	36/38	36/38	38	38	38
Rated Current(A)	1250	2000	3150	1200	2000	1200	2000	3000
Rated Breaking Current(kA)	40	40	40	31.5	31.5	40	40	40
Rated Frequency(Hz)	60	60	60	60	60	60	60	60
Rated Short Time Withstand Current(kA/3sec)	40	40	40	31.5	31.5	40	40	40
Rated Breaking Capacity(MVA)	1800	1800	1800	2070	2070	2630	2630	2630
Rated Making Current(kAp)	104	104	104	82	82	104	104	104
Rated Breaking Time(Cycle)	5	5	5	3	3	3	3	3
Withstand Voltage Power Frequency(1min)(kV/1min)	60	60	60	80	80	80	80	80
Withstand Voltage Lightning Impulse(1.2×50μs)(BIL)	150	150	150	170	170	150	150	150
Operating Sequence	O-0.3s-CO-3min-CO			O-0.3s-CO-3min-CO, CO-15S-CO		O-0.3s-CO-3min-CO		
Closing Operation Method	Motor-Spring Charge Type							
Trip Control Method	Shunt release							
Making Voltage(V)	*DC24, 48, 110, 220 / AC 110, 220							
Standard Auxiliary Contact	8NO 8NC	8NO 8NC	8NO 8NC	8NO 8NC	8NO 8NC	6NO 6NC	6NO 6NC	6NO 6NC
Rated Opening Time(sec)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
No-load Closing Time(sec)	0.05	0.05	0.05	0.1	0.1	0.05	0.05	0.05
Installation Method (Fixed(N), Drawout(E, F, G))	N, E, F, G	N, E, F, G	N, E, F, G	N, E, F, G	N, E, F, G	N, G	N, G	N, G
Body Weight(kg)	350	370	370	530	550	530	550	580
Applicable Standard	IEC 60056			IEEE C37.09				

For Use Outdoors (25.8kV~36kV)

Type	KVAX-2625M	KVAX-2125M	KVAX-2225M
Rated Voltage (kV)	25.8(Outdoor)	25.8(Outdoor)	25.8(Outdoor)
Rated Current (A)	600	1200	2000
Rated Breaking Current (kA)	25	25	25
Rated Frequency (Hz)	60	60	60
Rated Short Time Withstand Current (kA/3sec)	25	25	25
Rated Breaking Capacity (MVA)	1120	1120	1120
Rated Making Current (kAp)	63	63	63
Rated Breaking Time (Cycle)	5	5	5
Withstand Voltage Power Frequency (1min) (kV/1min)	60	60	60
Withstand Voltage Lightning Impulse (1.2×50μs) (BIL)	150	150	150
Operating Sequence	0-0.3s-CO-3min-CO, CO-15S-CO		
Closing Operation Method	Motor-Spring Charge Type		
Trip Control Method	Shunt release		
Making Voltage (V)	Default: DC125 SCADA Option Voltage: DC24, DC125V		
Standard Auxiliary Contact	10NO 10NC	10NO 10NC	10NO 10NC
Rated Opening Time (sec)	0.05	0.05	0.05
No-load Closing Time (sec)	0.1	0.1	0.1
Installation Method (Fixed (N), Drawout (E, F, G))	For Outdoor	For Outdoor	For Outdoor
Body Weight (kg)	1000	1020	1060
Applicable Standard	GS5925-0025(2007), IEC60056		

Type	VVBX-25640M	VVBX-25140M	VVBX-25240M	VVBX-25340M	VVBX-36125M
Rated Voltage (kV)	25.8(Outdoor)	25.8(Outdoor)	25.8(Outdoor)	25.8(Outdoor)	36(Outdoor)
Rated Current (A)	600	1200	2000	3000	1250
Rated Breaking Current (kA)	40	40	40	40	25
Rated Frequency (Hz)	60	60	60	60	50/60
Rated Short Time Withstand Current (kA/3sec)	40	40	40	40	25
Rated Breaking Capacity (MVA)	1800	1800	1800	1800	1560
Rated Making Current (kAp)	104	104	104	104	65
Rated Breaking Time (Cycle)	5	5	5	5	3
Withstand Voltage Power Frequency (1min) (kV/1min)	60	60	60	60	70
Withstand Voltage Lightning Impulse (1.2×50μs) (BIL)	165	165	165	165	170
Operating Sequence	0-0.3s-CO-3min-CO, CO-15S-CO				0-0.3s-CO-3min-CO
Closing Operation Method	Motor-Spring Charge Type				
Trip Control Method	Shunt release				
Making Voltage (V)	Default : DC125 SCADA Option Voltage : DC24, DC125V				
Standard Auxiliary Contact	10NO 10NC	10NO 10NC	10NO 10NC	10NO 10NC	10NO 10NC
Rated Opening Time (sec)	0.05	0.05	0.05	0.05	0.03
No-load Closing Time (sec)	0.1	0.1	0.1	0.1	0.05
Installation Method (Fixed (N), Drawout (E, F, G))	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Body Weight (kg)	1750	1800	1900	2000	1290
Applicable Standard	Item exempted from ES-5925-0001 certification				IEC62271-100, 200

Ratings / Ordering Information

For Nuclear Power Plants

Type Name	KVAH 7□50M	KVAH 6□50M	KVAH 1□40M
Max Rated Voltage	4.76 kV	8.25 kV	15 kV
Rated Current	1200A / 2000A / 3000A	1200A / 2000A / 3000A	1200A / 2000A
Rated Frequency	60 Hz	60 Hz	60 Hz
Constant (K)	1.0	1.0	1.0
Rated Breaking Current	50 kA rms	50 kA rms	40 kA rms
Rated Breaking Capacity	410 MVA	710 MVA	1040 MVA
Rated Short Time Withstand Current (3S)	50 kA rms	50 kA rms	40 kA rms
Rated Making Current	130 kA p	130 kA p	104 kA p
Rated Breaking Time	5 cycle	5 cycle	5 cycle
Power Frequency Withstand Voltage	19 kV	36 kV	36 kV
Impulse Withstand Voltage (1.2×50μs)	60 kVp	95 kVp	95 kVp
Nuclear Power Electrical Class	Class 1E	Class 1E	Non Class 1E
Nuclear Power Quality Class	Q	Q	S
Rated Operating Seq.	0-0.3S-CO-3min-CO		
Life (Rated Current Input)	5,000 times		
Operation Mode	Spring Operation Mode		
Rated Operating Voltage (For Motor)	DC 125V		
Rated Operating Current (For Motor)	Inrush 8.5A, steady state 1.5A		
Rated Operating Voltage / Current (For Coil)	DC 125V, 5A		
Rated Spring Reduction Time	< 15 sec		
Rated Making Time	< 0.06 sec		
Rated Opening Time	< 0.05 sec		
Auxiliary Contact	2NO + 2NC		
MOC Number of Contacts / TOC Number of Contacts	5NO + 5NC / 3NO + 3NC		
CB Weight (body)	288 kg / 318 kg / 318 kg	288 kg / 318 kg / 318 kg	285 kg / 318 kg / 318 kg
Certificate & Approval	EED1100(2005) / IEEE Std C37.09(1999) / IEEE Std C37.09a(2005)		

Ordering Information

□□□		N	07	4	08	M
Applied Standards		Rated Voltage		Rated Current		Operation Method
VVB	IEC 62271-100	07	7.2kV	4	400A	M Motor Drive Operation
WA	IEEE C37.09	12	12kV	6	600/630A	MA Permanent Magnet Operation
KVA	IEC60056 IEEEC 37.09	15	15kV	1	1200/1250A	S Reduction Gear Drive Operation
Installing Method		17	17.5kV	2	2000/2500A	
		24	24kV	3	3000/3150A	
		25	25.8kV			
		38	36/38kV			
		1	12/15kV			
		2	24/25.8kV			
N	Fixed Type	4	4.76kV			
E	Draw-Out Type	6	7.2kV			
F	Draw-Out Type (ShutterType,F2)					
G(H)	Draw-Out Type (Shutter, Bushing Type)					
X	For Outdoors					
				Rated Breaking Current		
				08	8 kA	
				13(12)	12.5 kA	
				20	20 kA	
				25	25 kA	
				31	31.5 kA	
				40	40 kA	
				50	50 kA	

Designation parameters for order

- Quantity
- Type Name
- Applied Standards
- Rated Voltage (kV)
- Rated Current (A)
- Rated Breaking Current (kA)
- Standard Frequency(Hz)
- Installation Method
- Operation Method
- Operating Voltage (AC/DC)
- Control Voltage (AC/DC)
- BCT used or not & specifications
- Number of auxiliary contacts
- Standard parts
- Designated parts
- Name plate
- Designated spare parts
- Usage (Purpose)
- Delivery Due

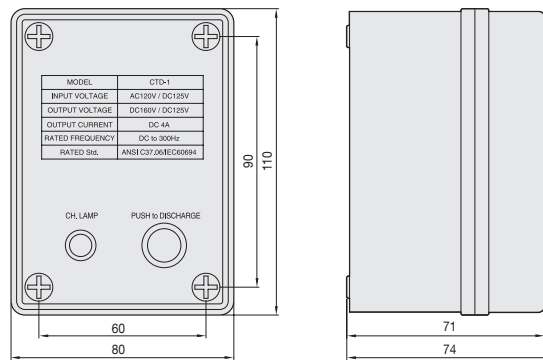
Accessories / Dimensions

Capacitor Trip Device (CTD)

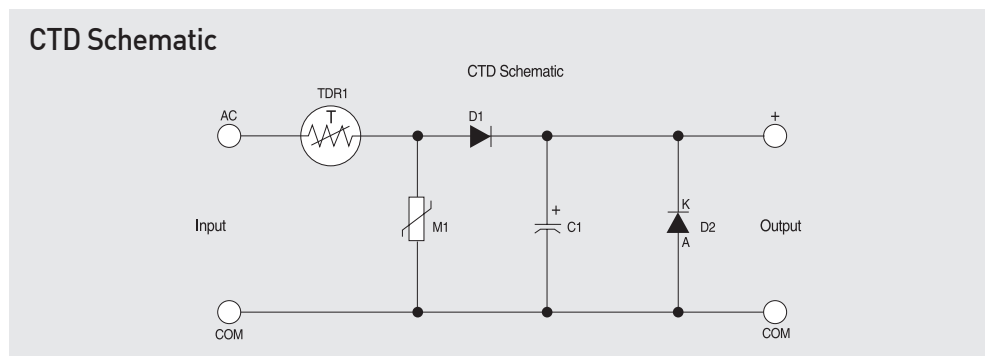
The operating and control power of our VCB is DC power in standard but AC power can also be used depending on the composition of load equipment and conditions. A Capacitor Trip Device can be installed in addition in order to control the VCB even when there is a commercial power failure.

Type	CTD-1	CTD-2
Rated Input Voltage	AC 100 / 120V	AC 200 / 220V
Rated Output Voltage	DC 130 / 150V	DC 240 / 260V
Max. Discharge Holding Time	5 min	5 min

External Dimensions



Connection Diagram



Position Display Switch

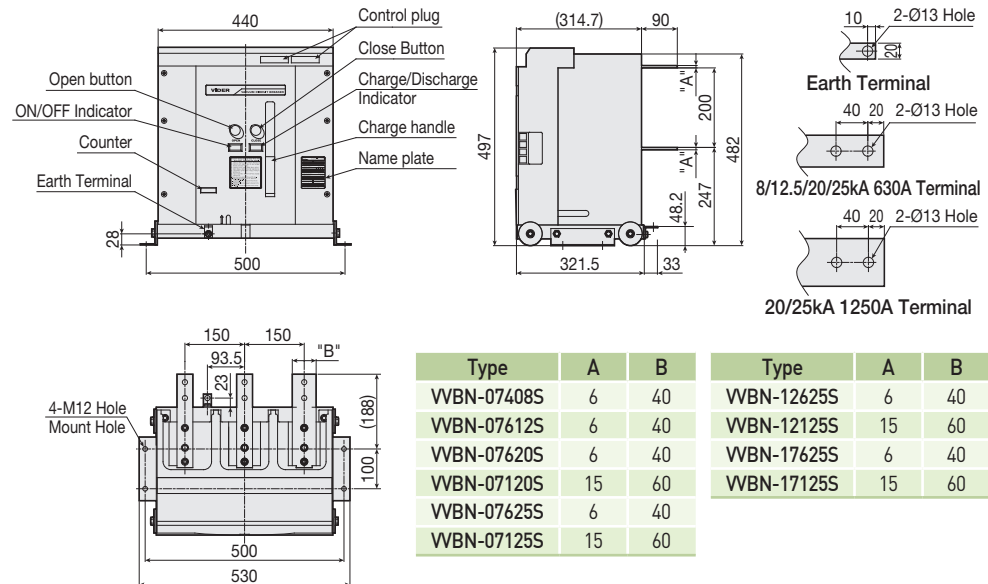
It is a switch to indicate whether a draw-out type VCB that uses a draw-out unit is in the connecting position or test position in remote and this is installed in the draw-out unit of the VCB.

Standard Auxiliaries

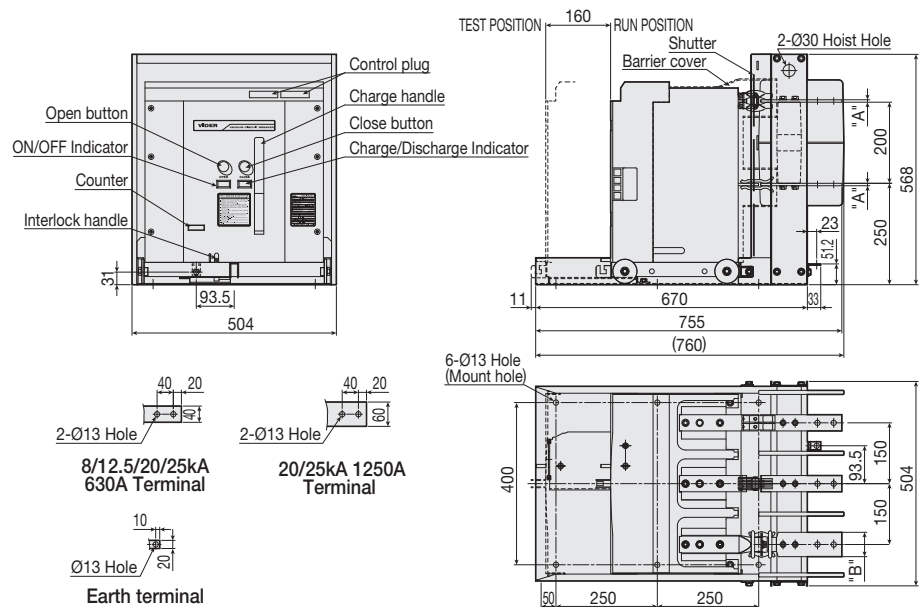
Type	Fixing Device	Charging Handle	Draw-In/Out Handle	Control Circuit Connecting Cable	Remarks
Fixed Type(N)	1 set	1	1	1	Connecting cable is 1.5m long, standard type
Draw-Out Type (E, F, G(H))	-	1	1	1	

7.2kV
8/12.5kA
7.2/12/17.5kV
20/25kA
(VVB□-xxxxS)

Fixed Type (N)



Draw-Out Type (E/F)



* However, Shutter Part is not applied to E-Class
* 7.2kV 8/12.5kA Barrier Cover does not apply

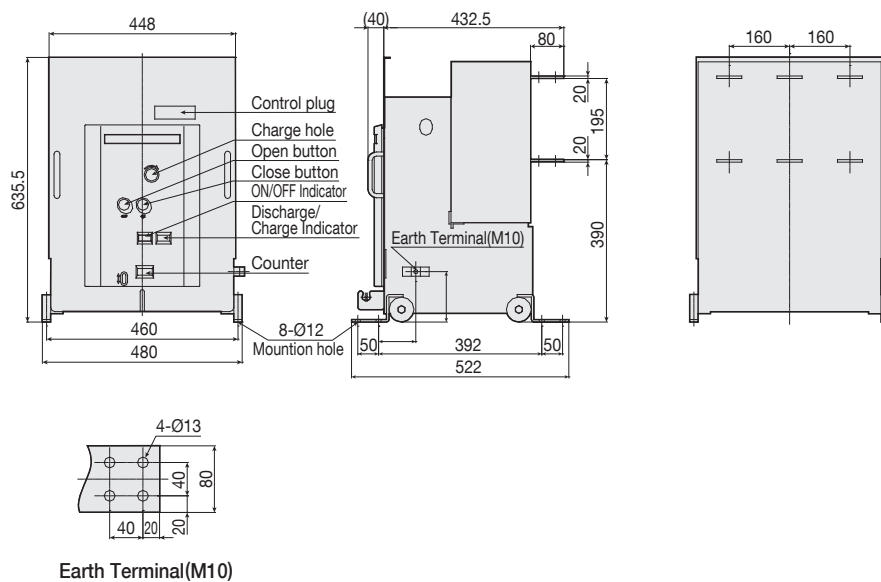
Type	A	B	Type	A	B
VBN-07408S	6	40	VBN-12625S	6	40
VBN-07612S	6	40	VBN-12125S	15	60
VBN-07620S	6	40	VBN-17625S	6	40
VBN-07120S	15	60	VBN-17125S	15	60
VBN-07625S	6	40			
VBN-07125S	15	60			

Note: G (Bushing type) will be released in 2018.

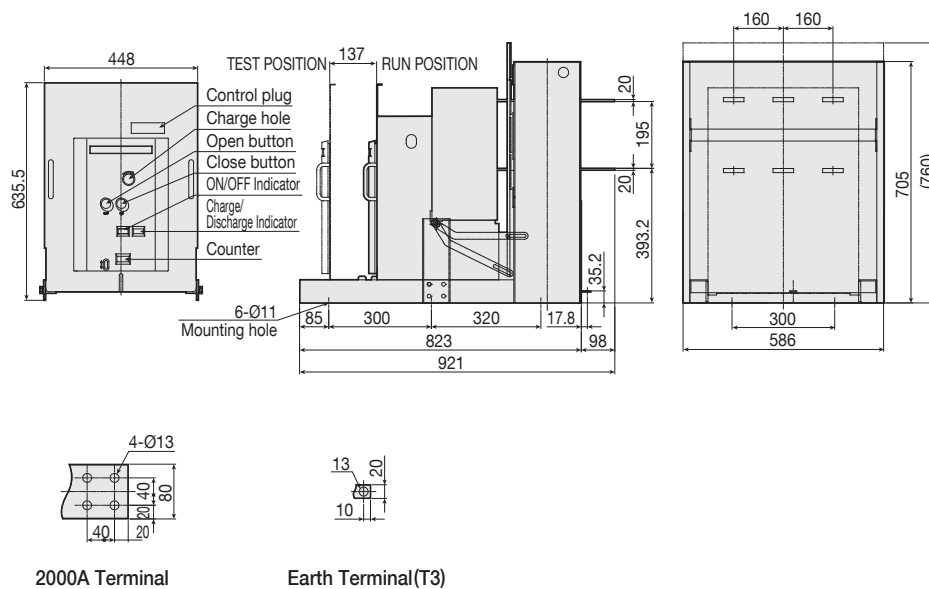
Dimensions

7.2kV
25kA 2000A
(VVBN-xxxxM)

Fixed Type (N)



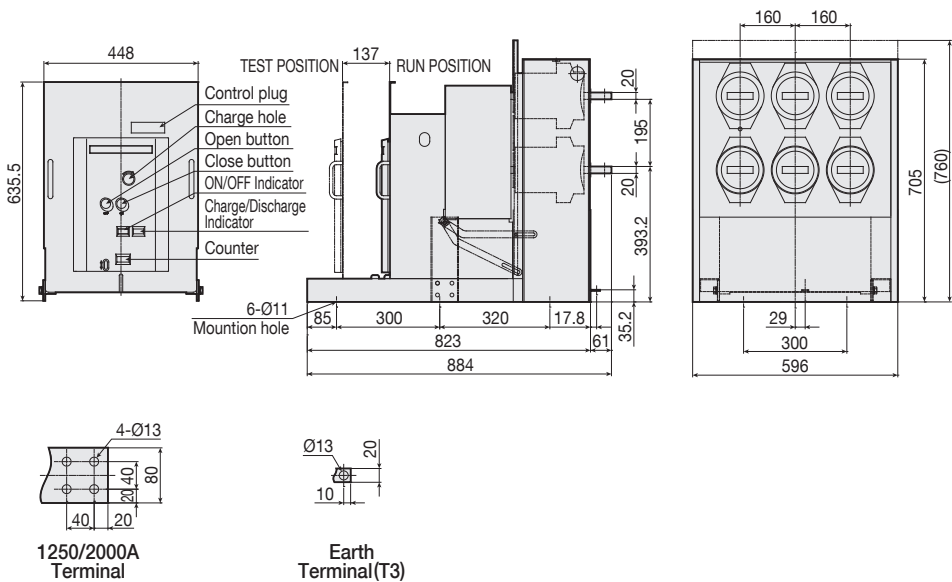
Draw-Out Type (E/F)



* However, Shutter Part is not applied to E-Class

7.2kV
25kA 2000A
(VVBG-xxxxM)

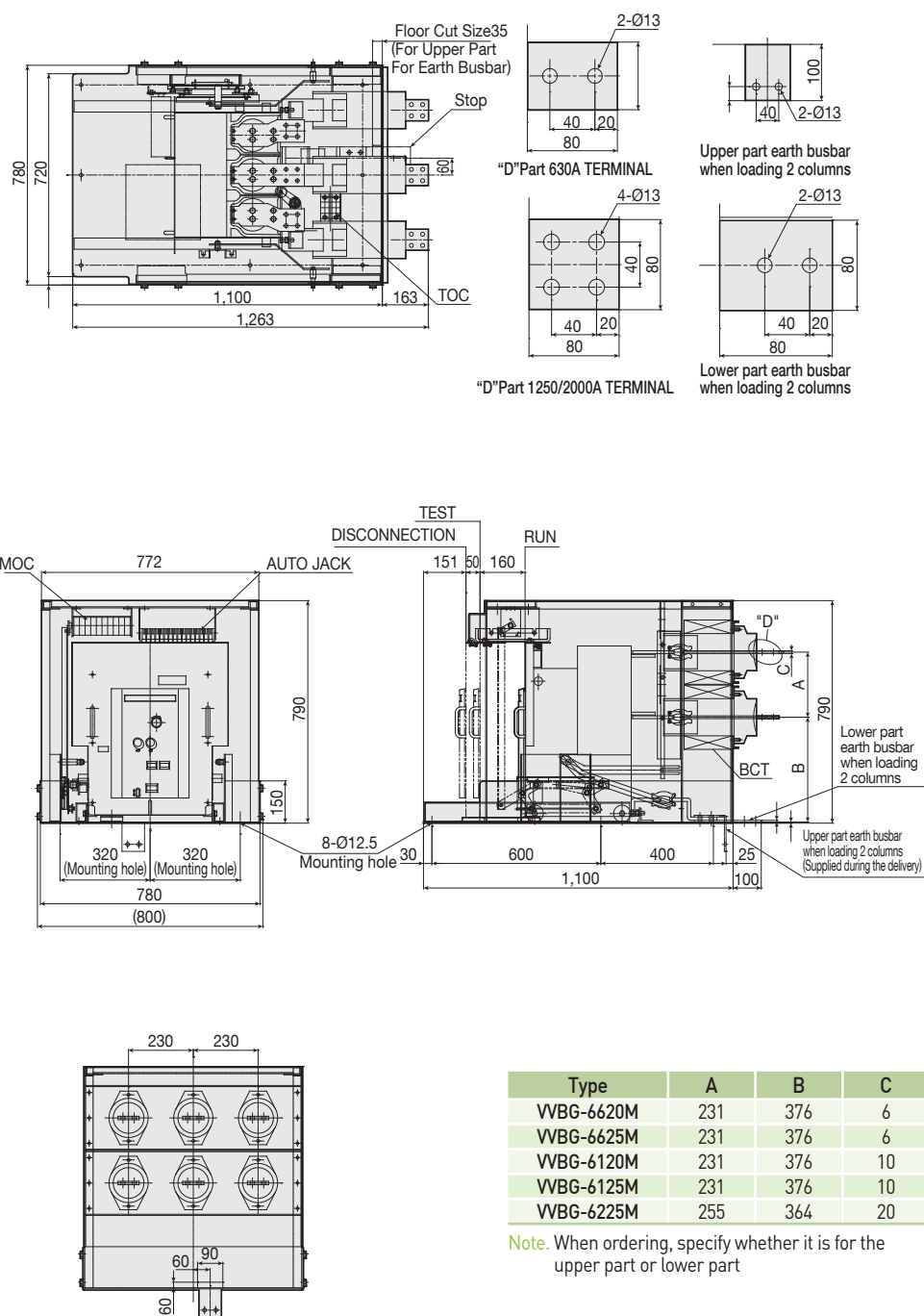
Bushing Type (G)



Dimensions

7.2kV 20/25kA
(VVB□-xxxxM)

Unit Type (G Class+MOC / TOC+CT mount in Front)

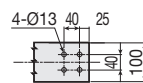
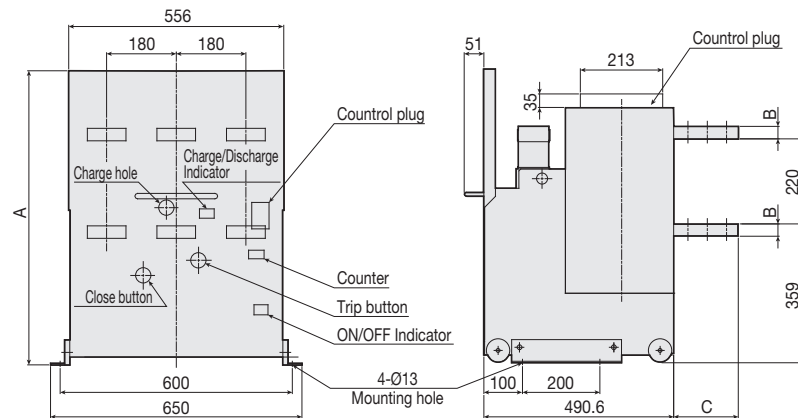


Type	A	B	C
VVBG-6620M	231	376	6
VVBG-6625M	231	376	6
VVBG-6120M	231	376	10
VVBG-6125M	231	376	10
VVBG-6225M	255	364	20

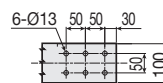
Note. When ordering, specify whether it is for the upper part or lower part

7.2kV 40kA
(VVB□-xxxxM)

Fixed Type (N)



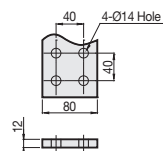
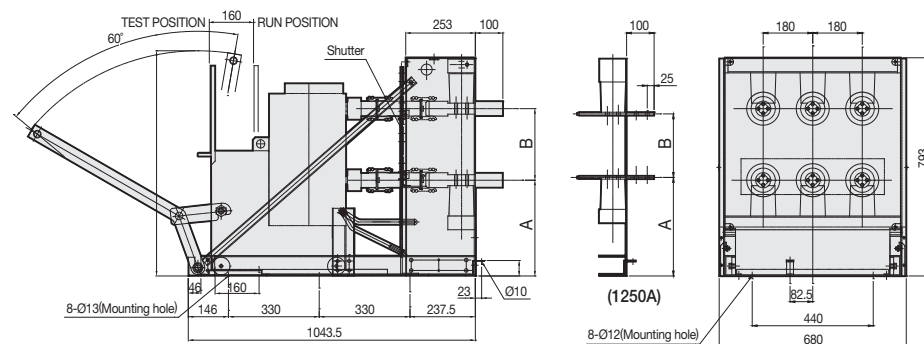
1250 / 2000A Terminal



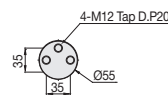
3150A Terminal

Type	A	B	C
VVBN-6140M	670	12	97
VVBN-6240M	670	25	97
VVBN-6340M	760	32	167

Draw-Out Type (E/F)



1250A

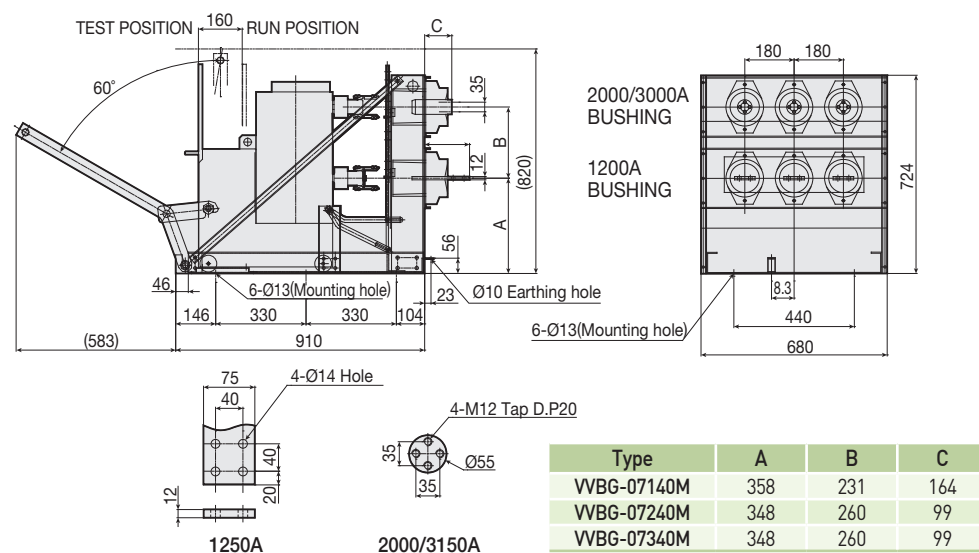


2000A/3150A

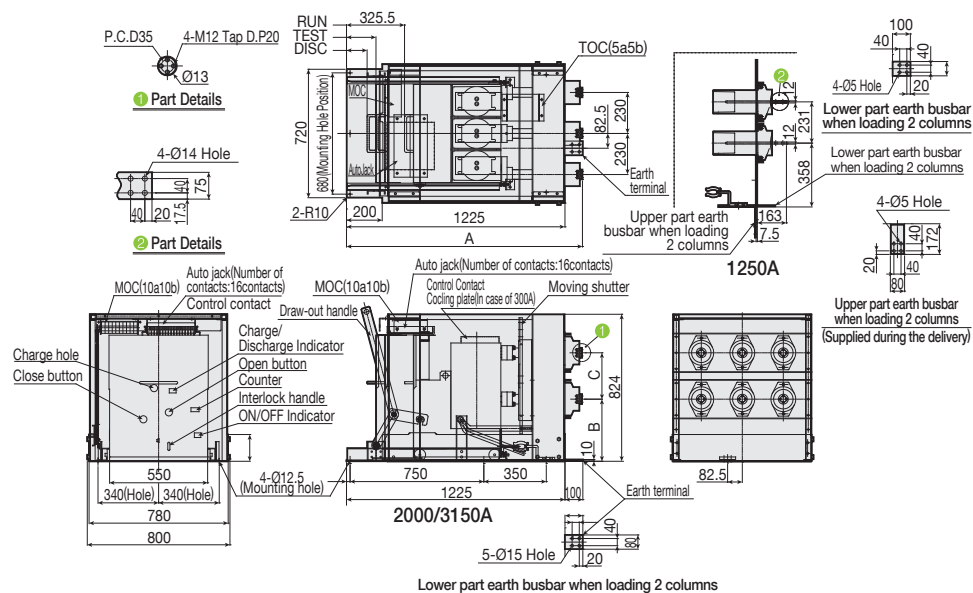
Type	A	B
WVB□-6140M	358	231
WVB□-6240M	358	260
WVB□-6340M	358	260

* However, Shutter Part is not applied to E-Class

Bushing Type (G)



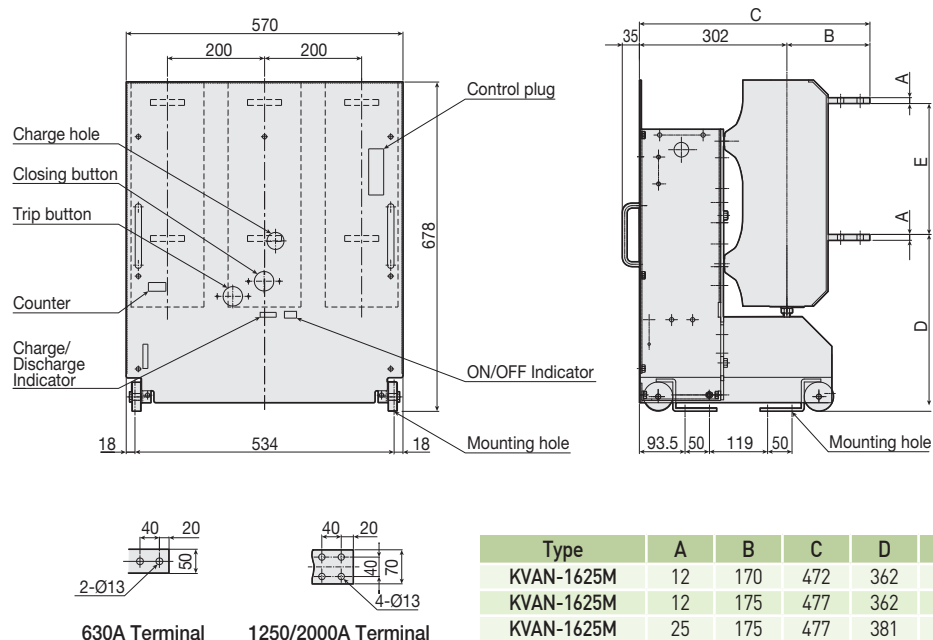
Unit Type (G Class+MOC / TOC+CT mount in Front)



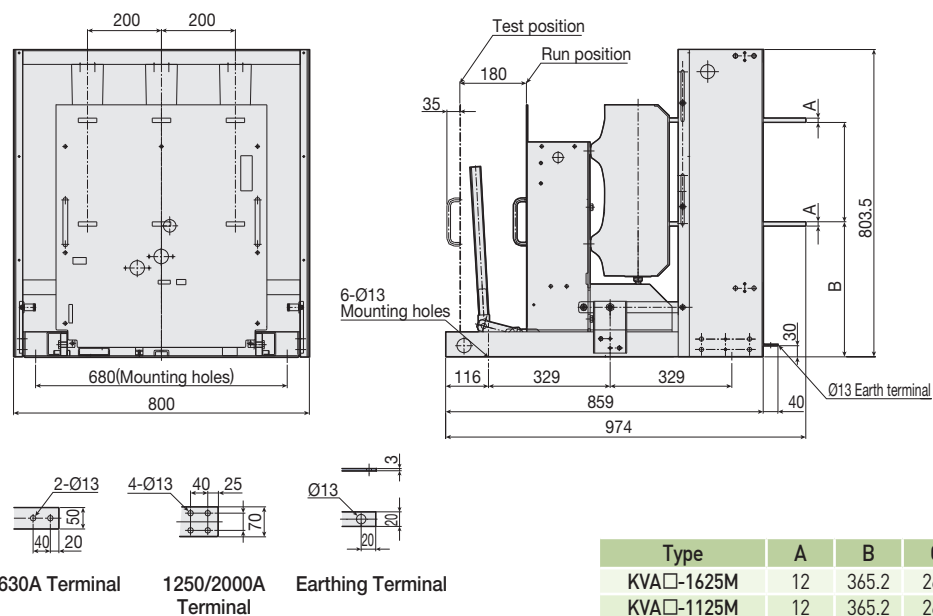
Type	A	B	C
WBG-07140M	1388	358	231
WBG-07240M	1323	348	260
WBG-07340M	1323	348	260

12/15kV 25kA
(KVA□-xxxxM)

Fixed Type (N)



Draw-Out Type (E/F)

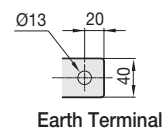
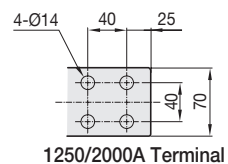
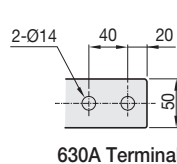
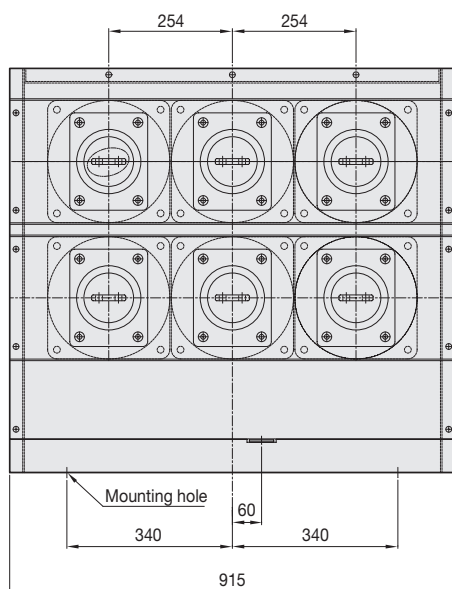
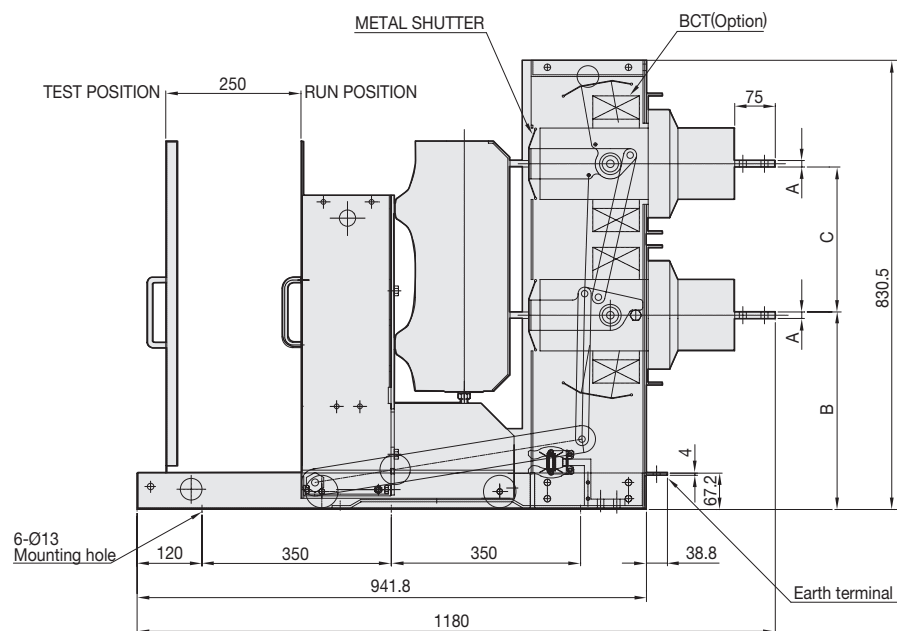


* However, Shutter Part is not applied to E-Class

Dimensions

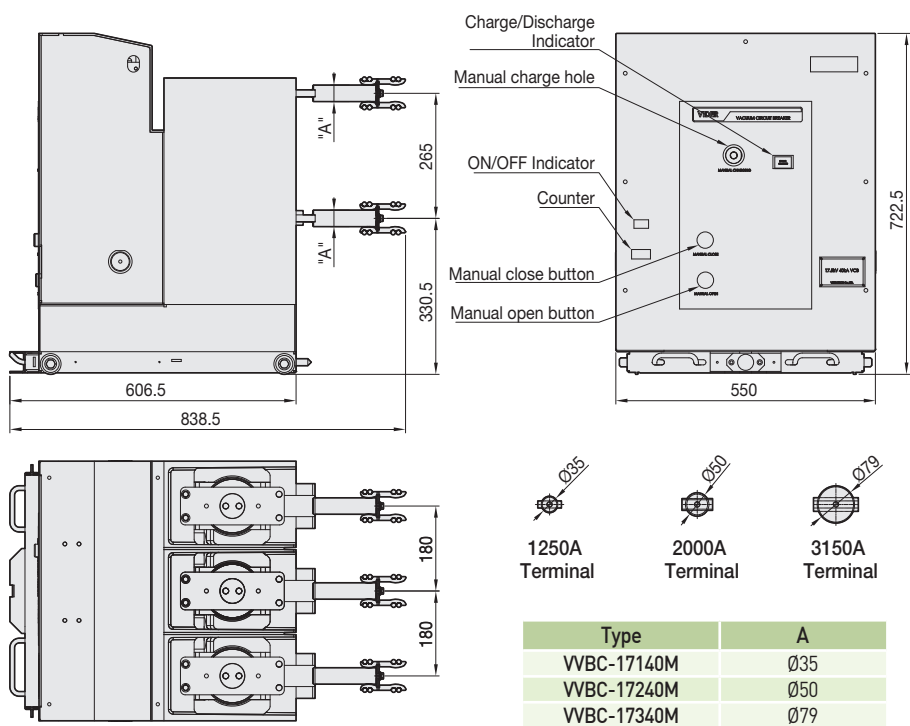
12/15kV 25kA
(KVAG-xxxxM)

Bushing Type(G)



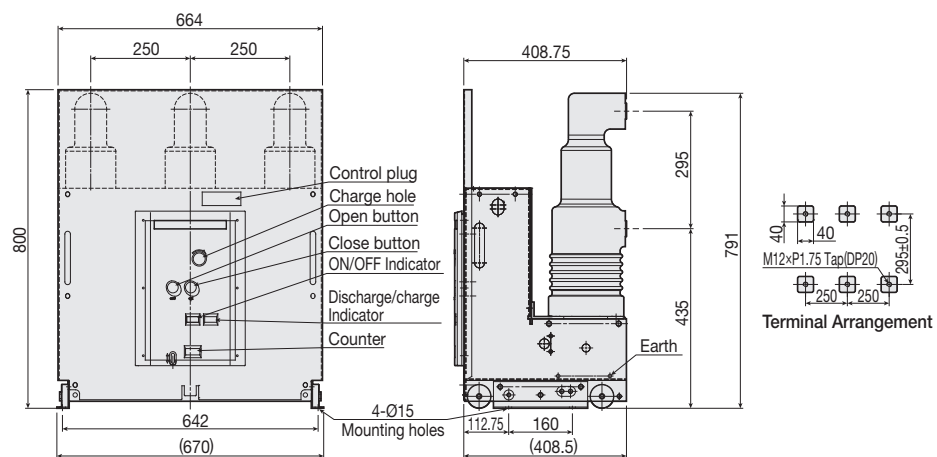
Type	A	B	C
630/1250A	12	365.2	268
2000A	15	384.2	249

12/17.5kV
40kA 1250A/
2000A/3150A
(VVBC-xxxxM)

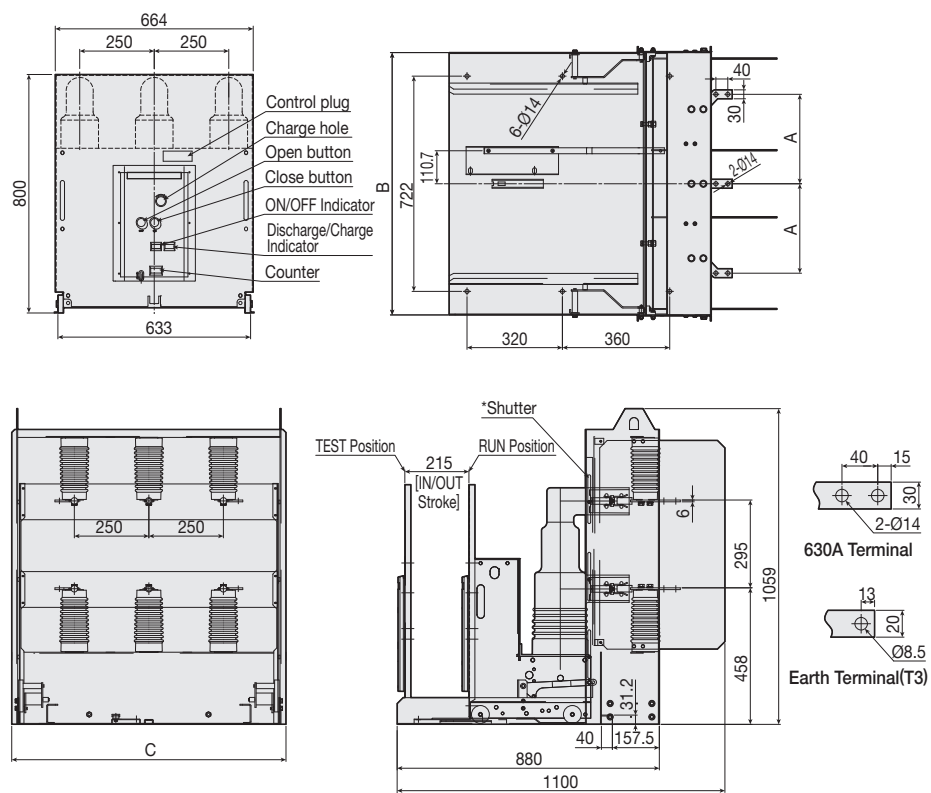


Note: C: MCSG Type

Fixed Type (N)



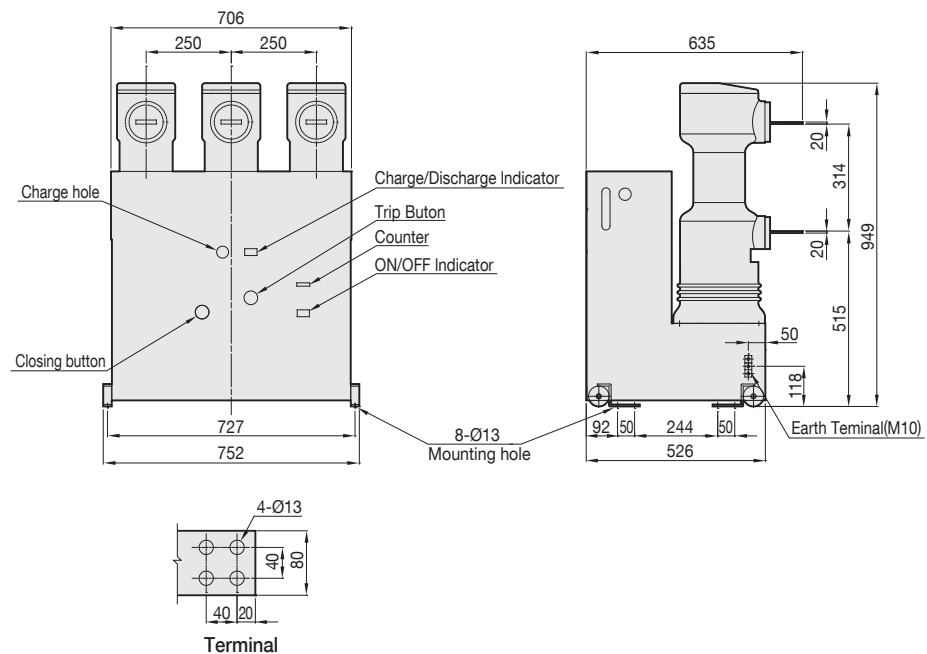
Draw-Out Type (E/F Class)



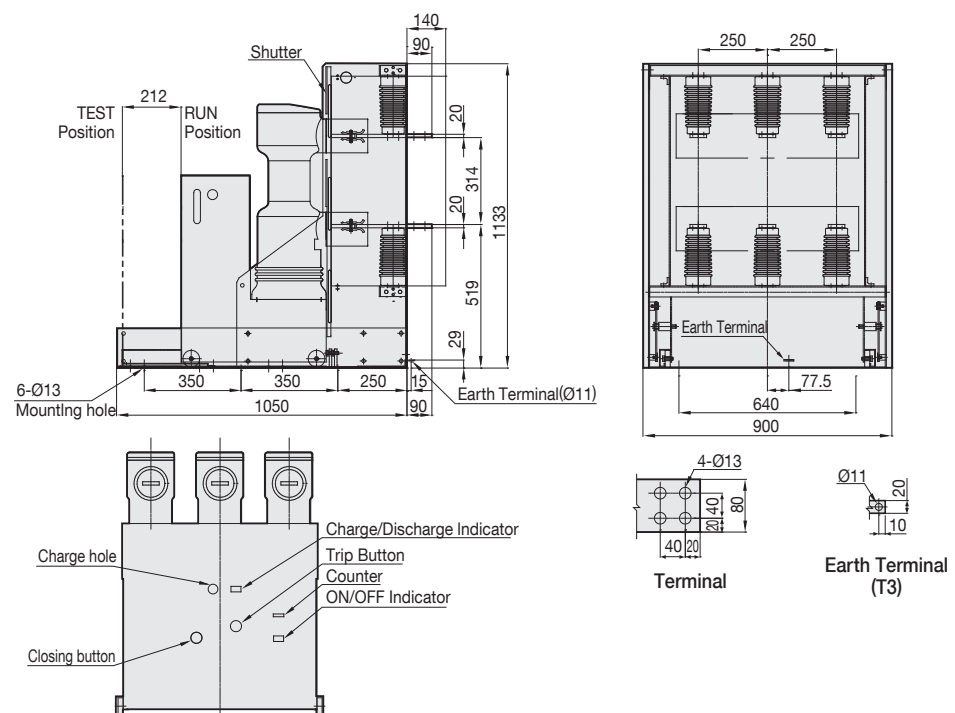
Type	A	B	C	Application
WB□-2613M	250	766	806	Switchboard phase distance : 250
	300	880	920	Switchboard phase distance : 300

24kV 25kA
2000A
(VVB□-xxxxM)

Fixed Type (N)

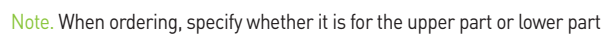


Draw-Out Type (E/F Class)



* However, Shutter Part is not applied to E-Class

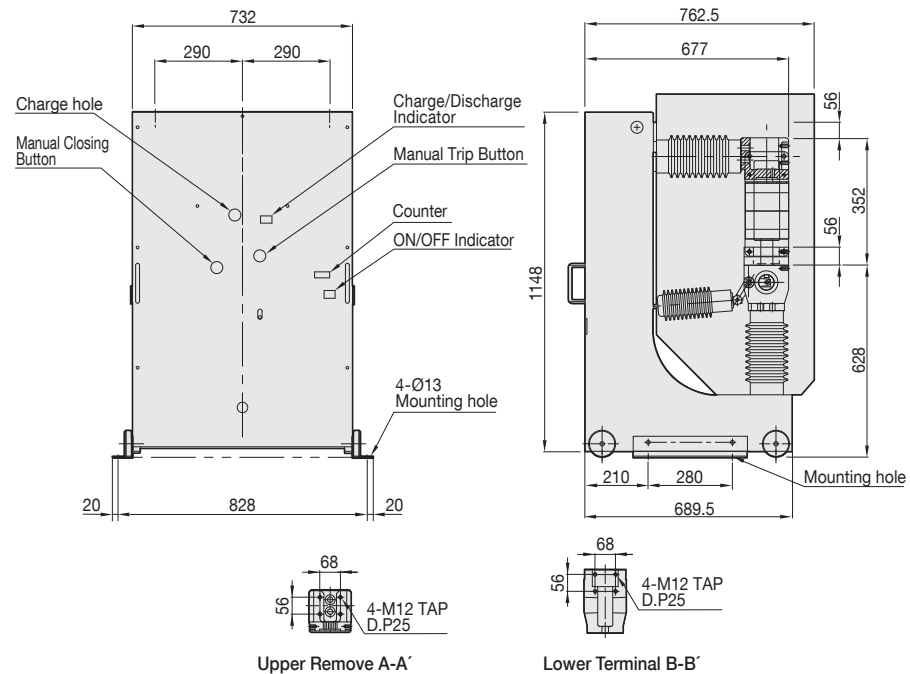
G Class Cradle



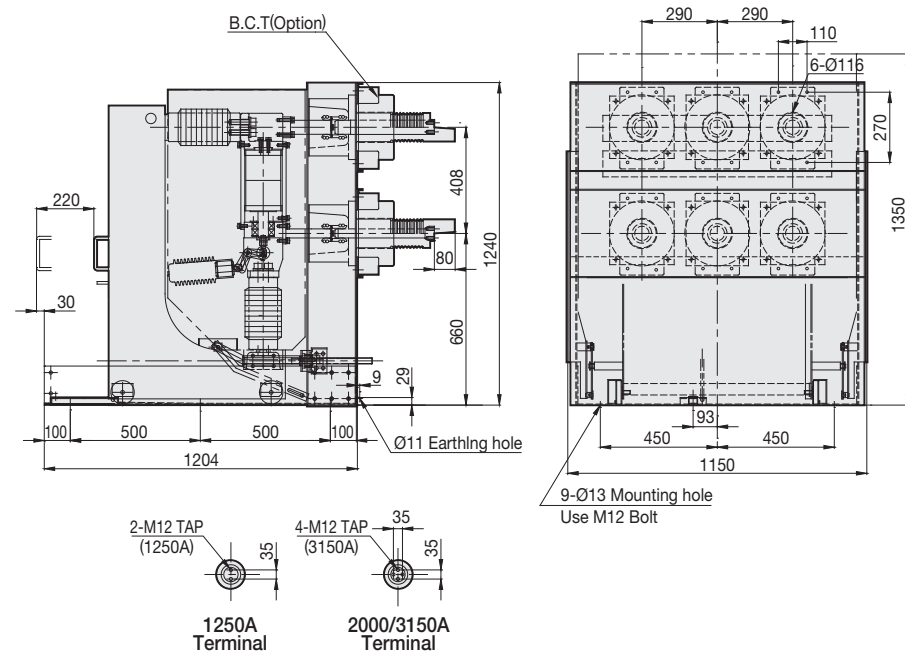
Note. When ordering, specify whether it is for the upper part or lower part

24kV 40kA,
1250/2000/3150A
(VVB□-xxxxM)

Fixed Type (N)



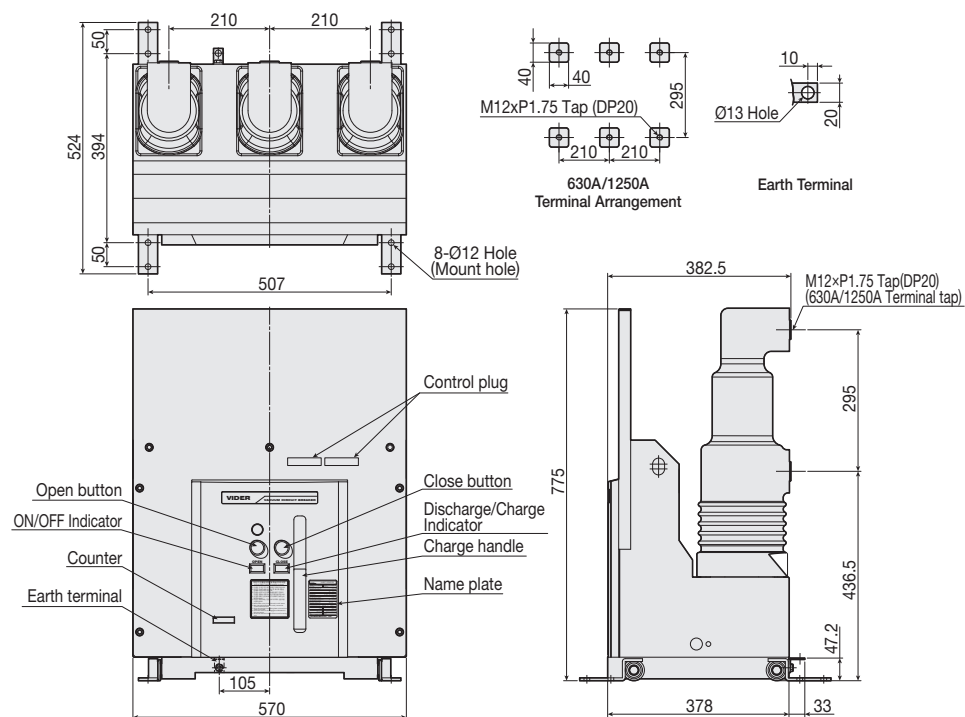
G Class Cradle



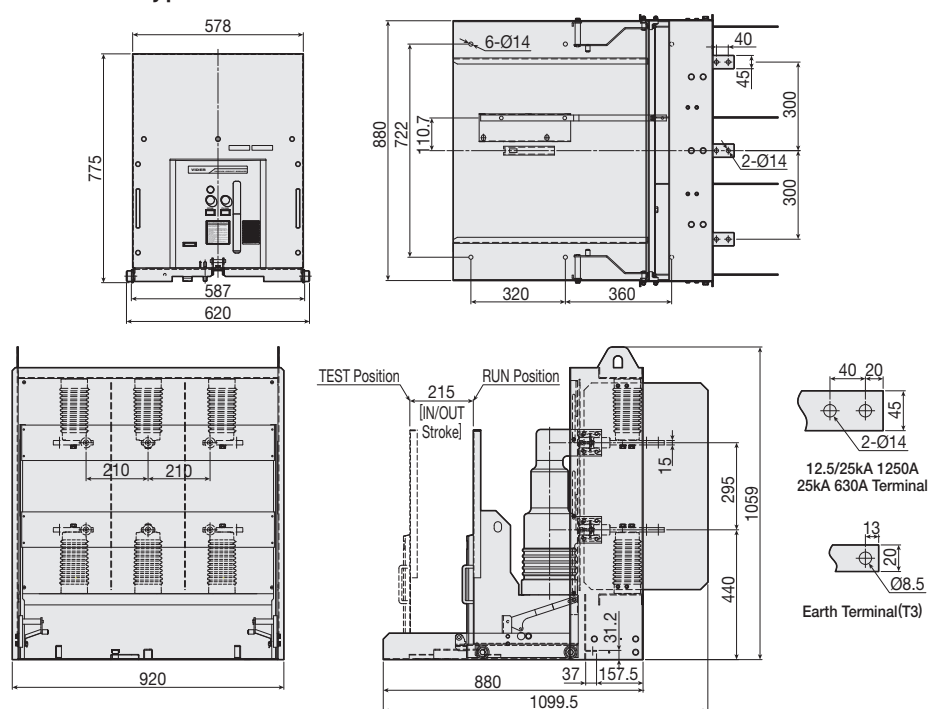
Dimensions

24/25.8kV
12.5/25kA
630/1250A
(VVB□-xxxxS)

Fixed Type (N)

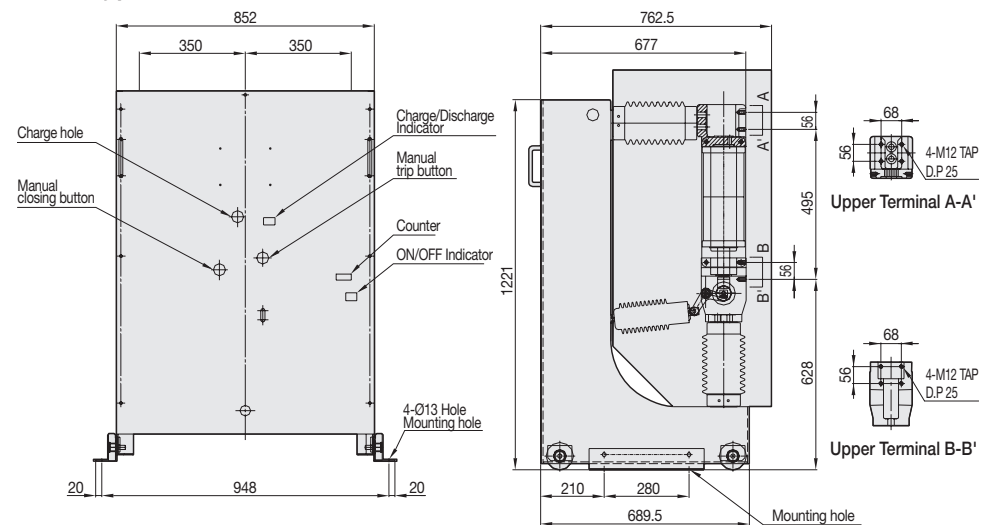


Draw-Out Type (E/F Class)

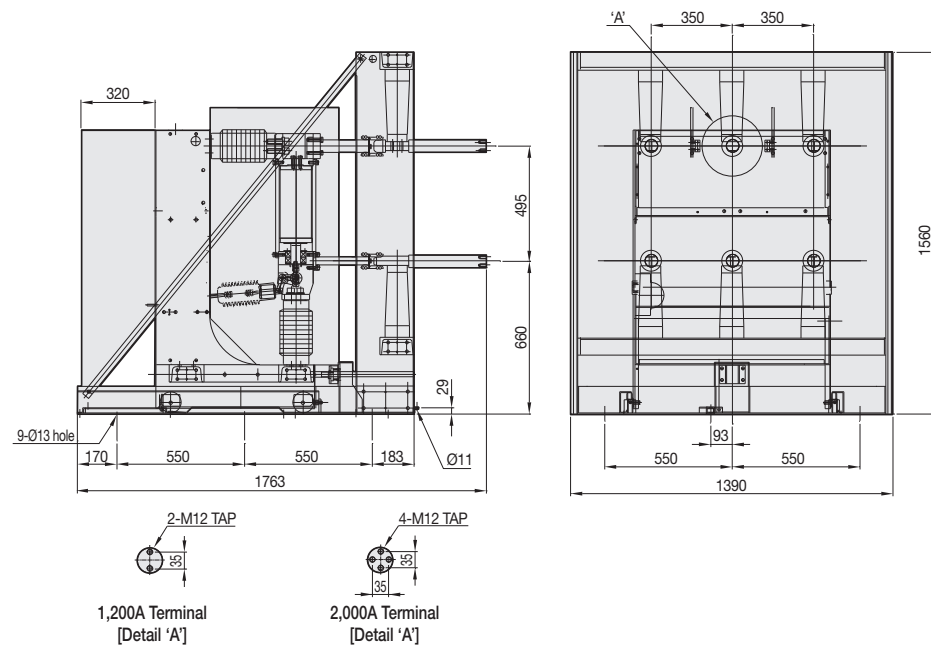


36/38kV
31.5/40kA
(VVB□-xxxxM)

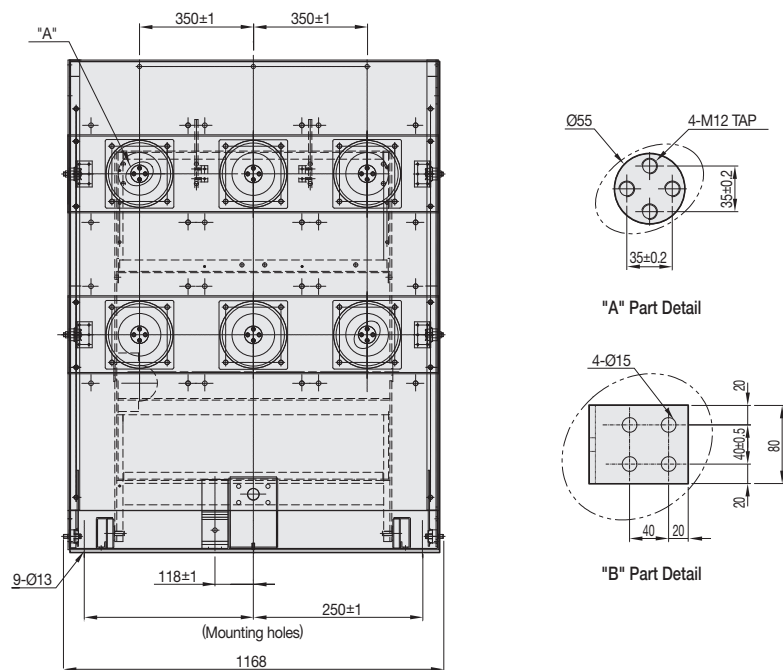
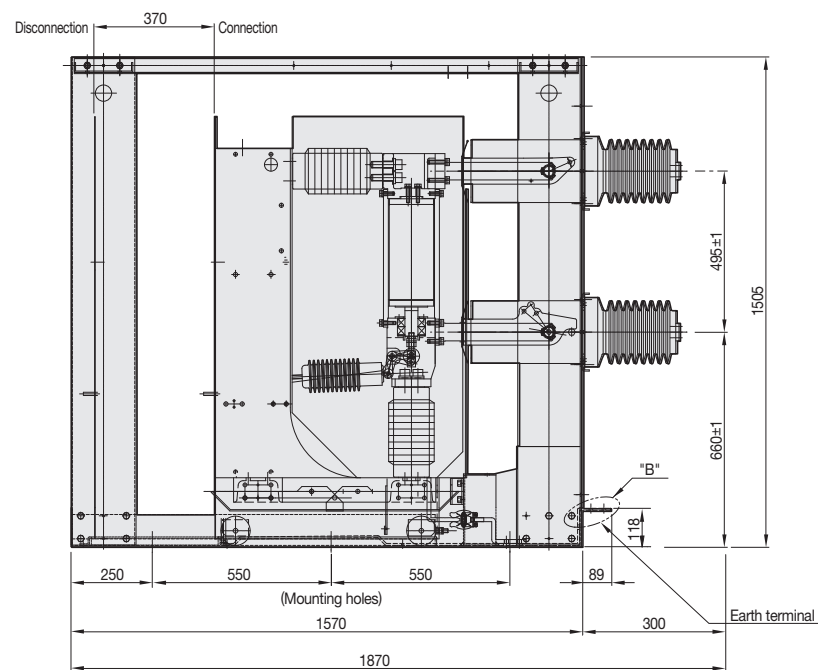
Fixed Type (N)



Draw-Out Type (E/F Class)

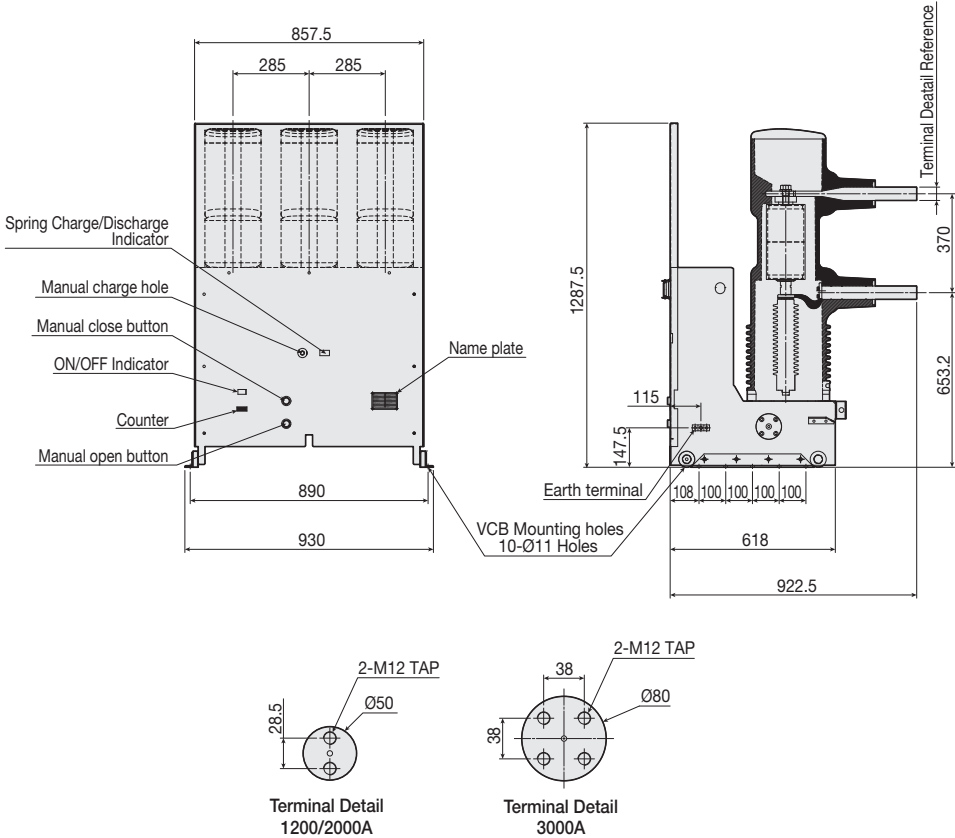


G Class Cradle



38kV 40kA
(VVAN-xxxxM)

Fixed Type (N)

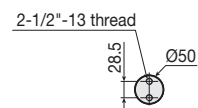
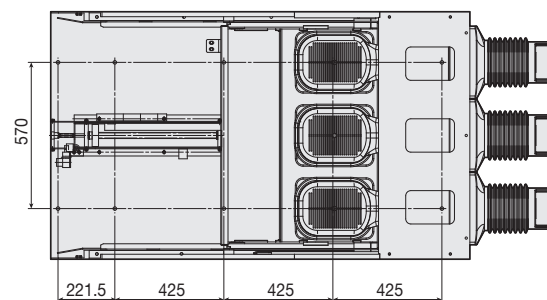


Type	Diameter
VVAN-38140M	Ø50
VVAN-38240M	Ø50
VVAN-38340M	Ø79

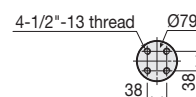
Dimensions

38kV 40kA
(VVAG-xxxxM)

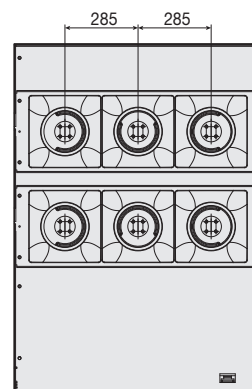
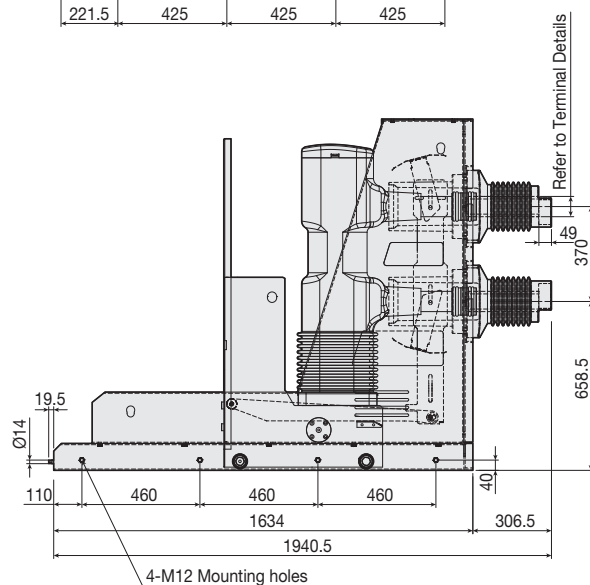
G Class Cradle



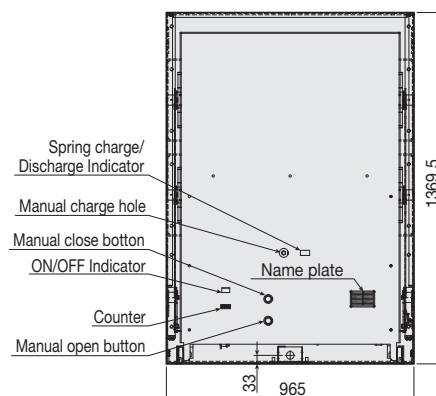
Terminal Detail
1200/2000A



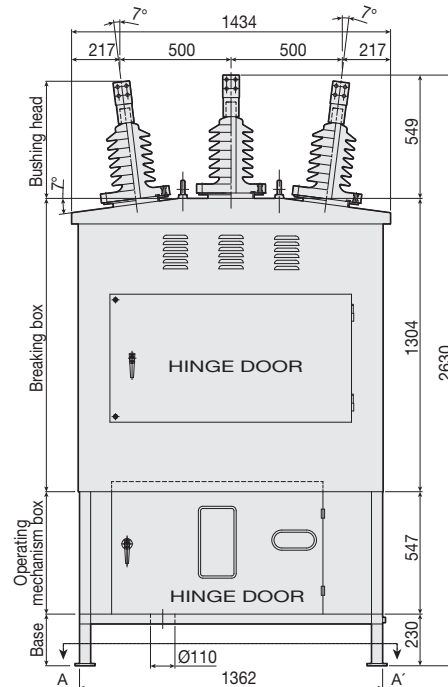
Terminal Detail
3000A



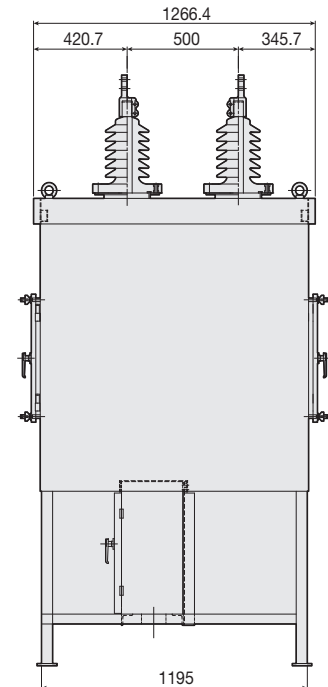
Type	Diameter
VVAG-38140M	Ø50
VVAG-38240M	Ø50
VVAG-38340M	Ø79



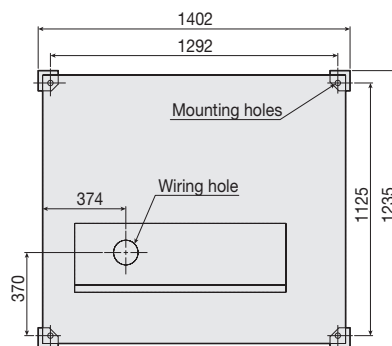
For Outdoor use
25.8kV 25kA
(KVAX Type)



Front View

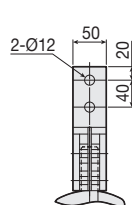


Side View

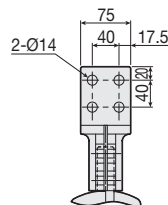


A-A' Section View

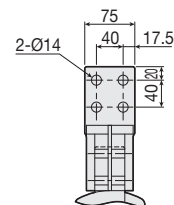
* Dimension Tolerance: $\pm 5\%$



Upper Terminal
600A



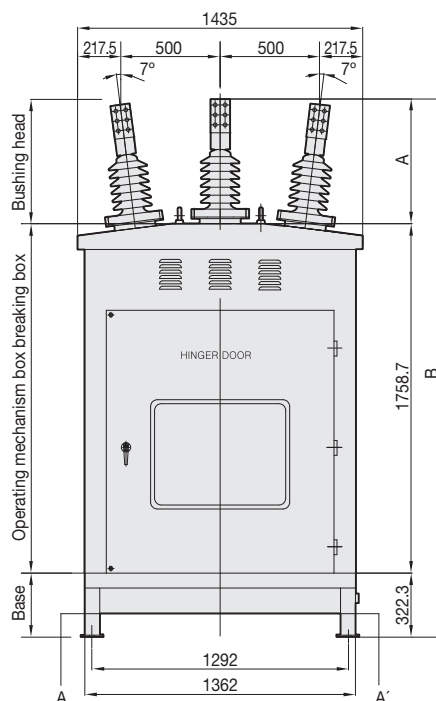
Upper Terminal
1200A



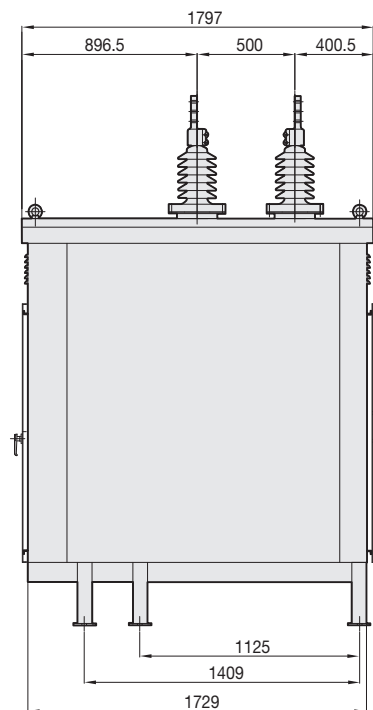
Upper Terminal
2000A

Dimensions

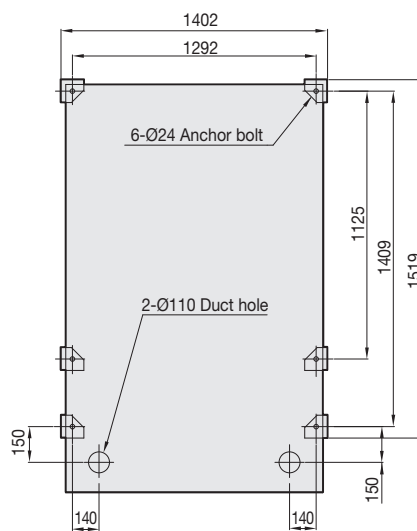
For Outdoor use
25.8kV 40kA
(VVBX Type)



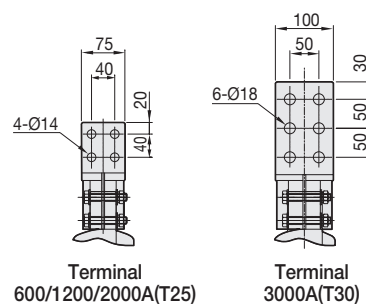
Front View



Side View



A-A' Section View



Terminal
600/1200/2000A(T25)

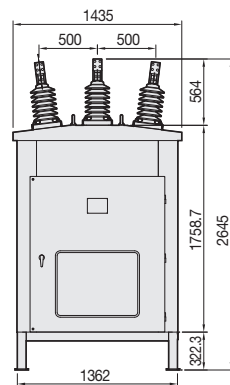
Terminal
3000A(T30)

Type	Standard	Rated Voltage (kV)	Rated Current (A)	Rated Breaking Current (kA)	Impulse Withstand Testing Voltage (kV)	Weight (kg)
WBX-25640M	ES-5925 0001	25.8	600	40	150	1850
WBX-25140M		25.8	1200	40	150	1900
WBX-25240M		25.8	2000	40	150	2000
WBX-25340M		25.8	3000	40	150	2100

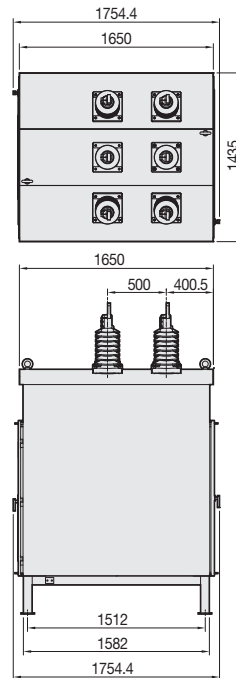
Type	A	B	Note
WBX-25640M	558.5	2639.5	600A
WBX-25140M	558.5	2639.5	1200A
WBX-25240M	558.5	2639.5	2000A
WBX-25340M	268.5	2709.5	3000A

Note. Dimension tolerance : $\pm 5\%$

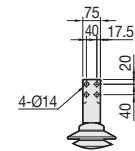
For Outdoor use
36kV 25kA
1250A
(VVBX-xxxxM)



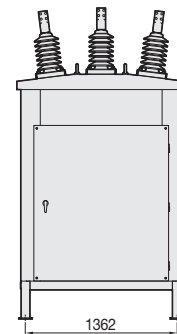
Front View



Inner Side View

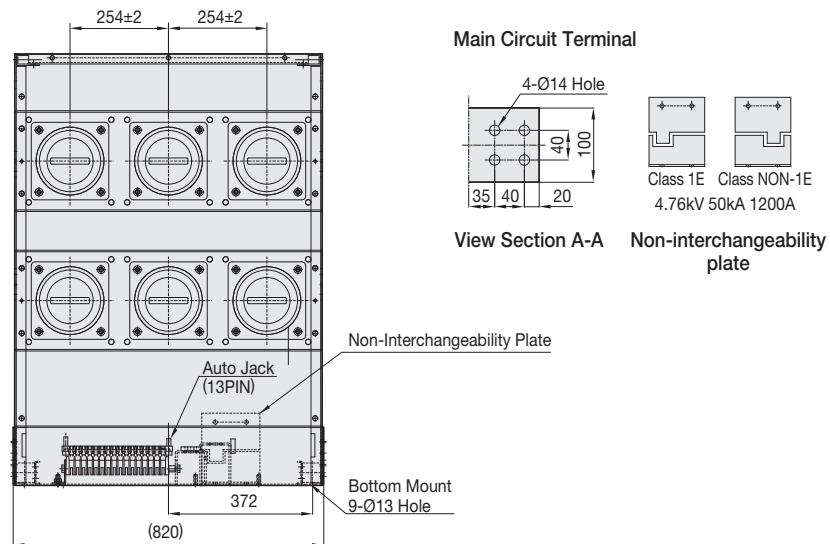


Upper Terminal 1250A



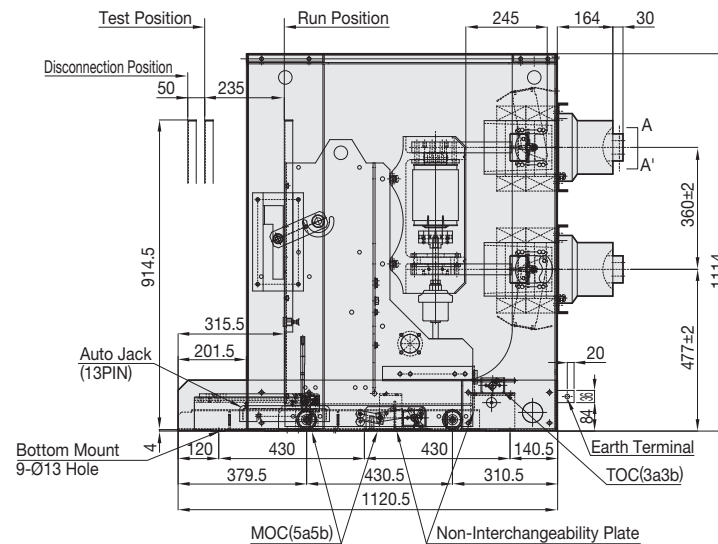
Rear View

1200A



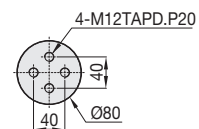
For Nuclear
Power Plant
4.76kV 50kA
8.25kV 50kA
15kV 40kA

2000/3000A

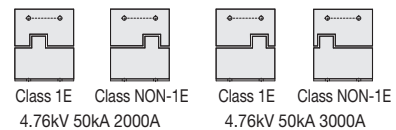
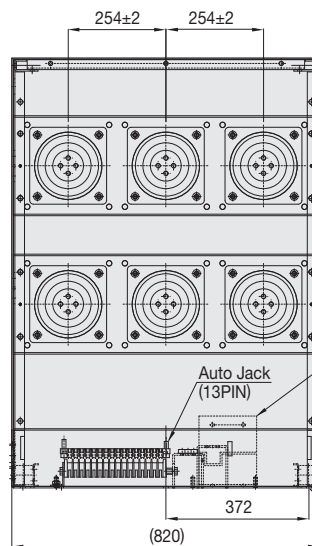


Nuclear Safety Related

Main Circuit Terminal



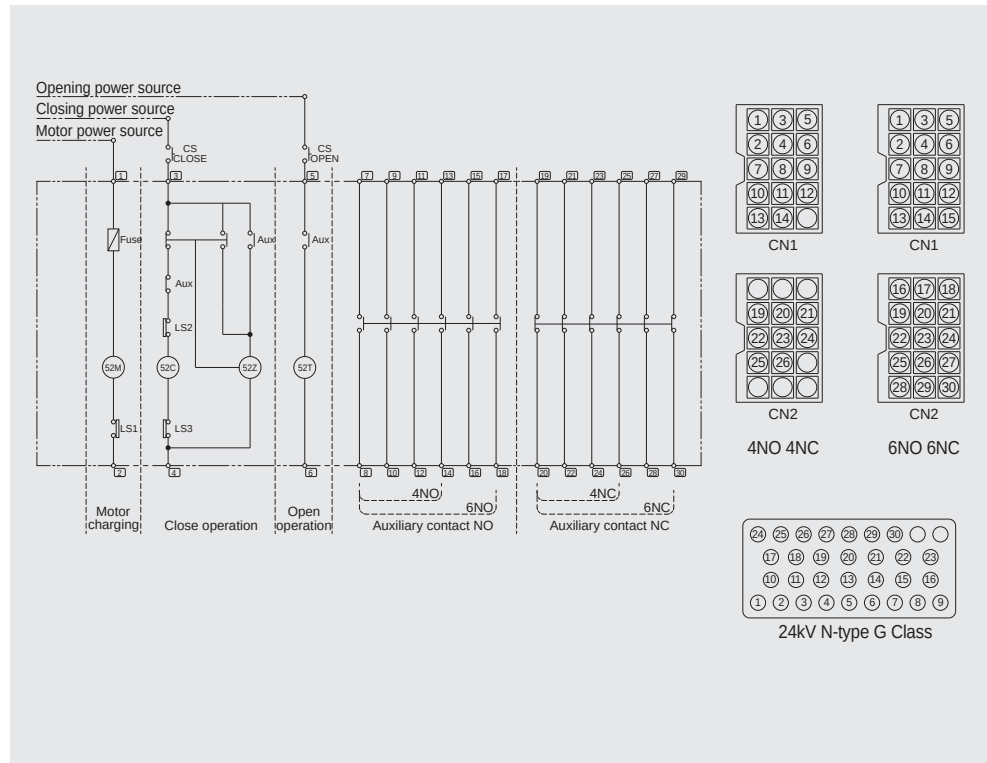
View Section A-A'



Non-interchangeability plate

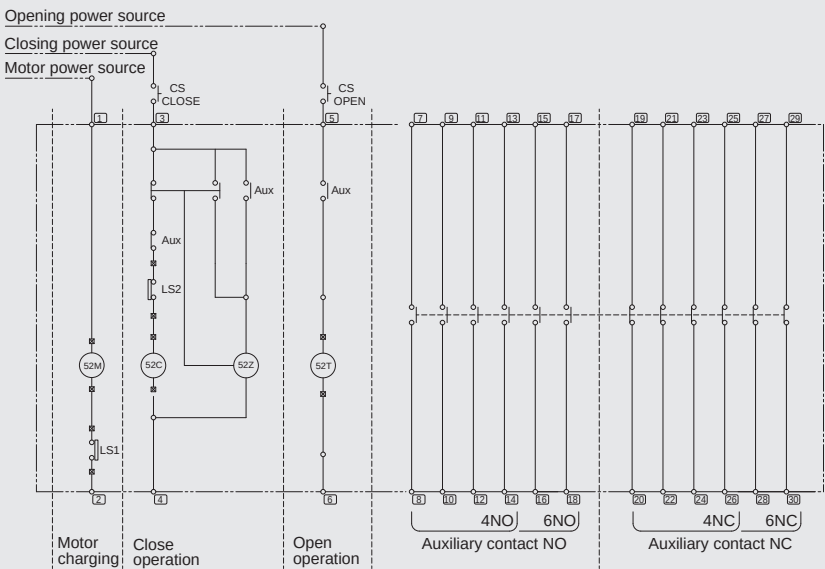
Control Circuit Diagrams

7.2kV 20~40kA,
24kV 12.5~25kA
(VVA□-xxxxM)



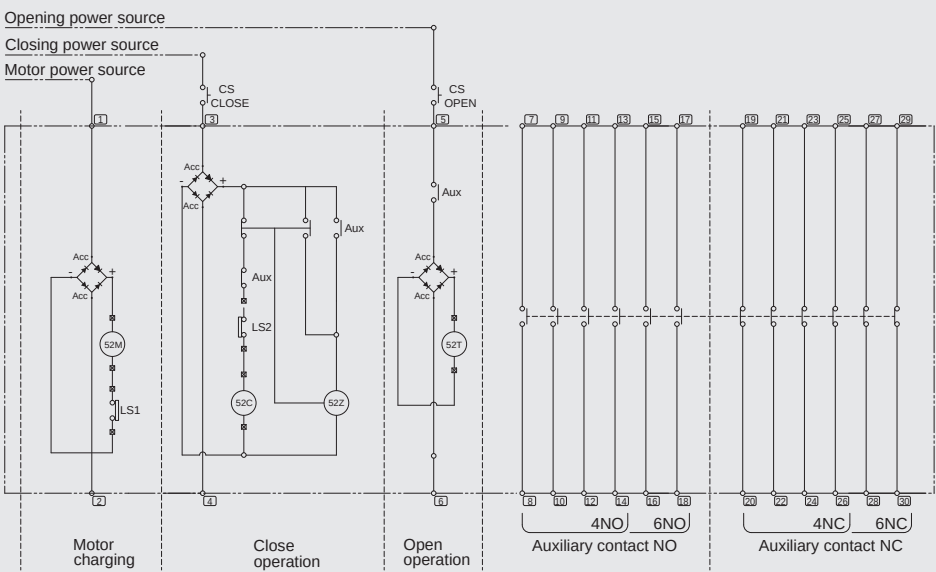
7.2/12/17.5/
25.8kV
8/12.5/20/25kA

DC Circuit



Internal Diagram

AC Circuit



Internal Diagram

19	21	23	25	-	-	-	-
20	22	24	26	-	-	-	-

CN1

1	3	5	-	7	-	9	11	13	-
2	4	6	-	8	-	10	12	14	-

CN2

19	21	23	25	27	-	29	-	-	-
20	22	24	26	28	-	30	-	-	-

CN1

1	3	5	-	7	-	9	11	13	15	17
2	4	6	-	8	-	10	12	14	16	18

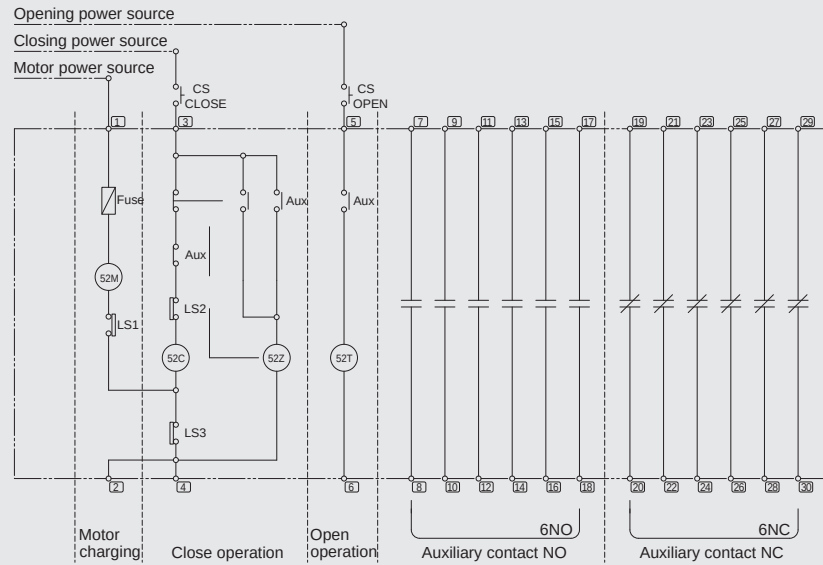
CN2

Connector Pin Array(CB Frontal)

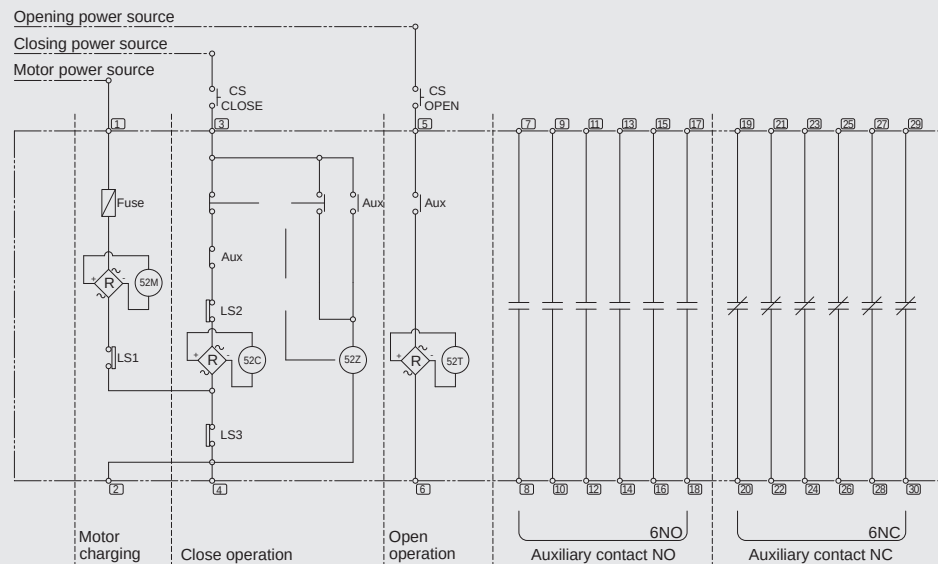
Control Circuit Diagrams

38kV 40kA

DC Circuit



AC Circuit

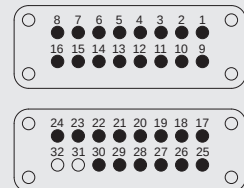


Note. 1. Applicable for standard type of VCB for AC operation.

2. Information of bridge rectifier

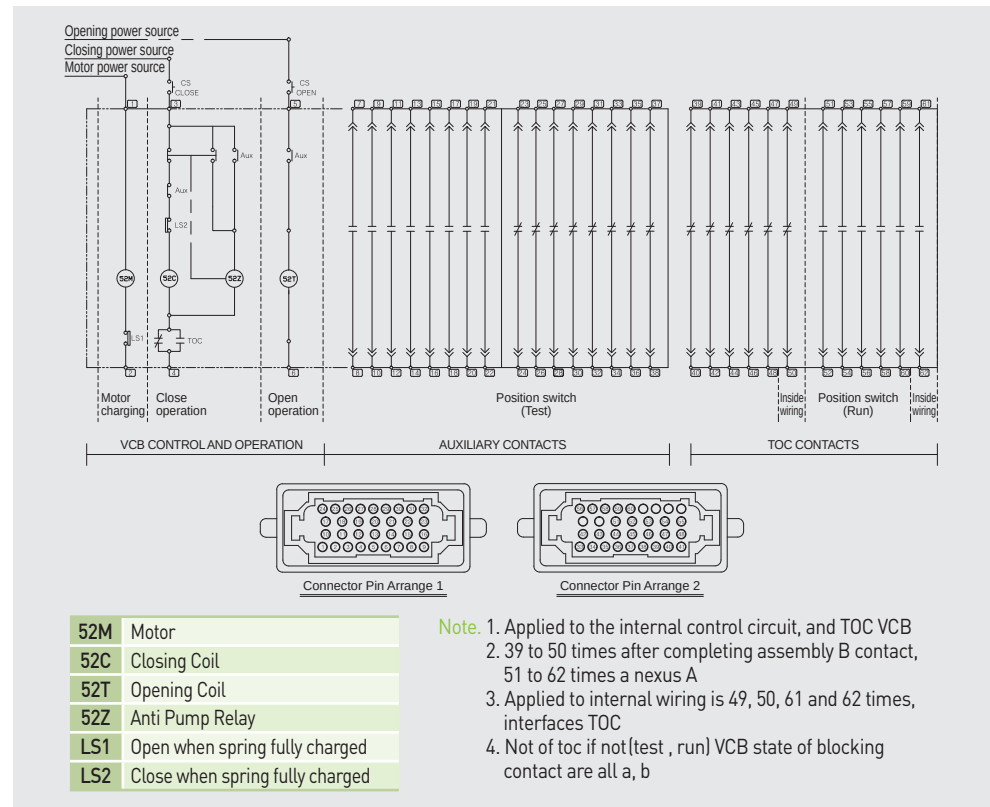
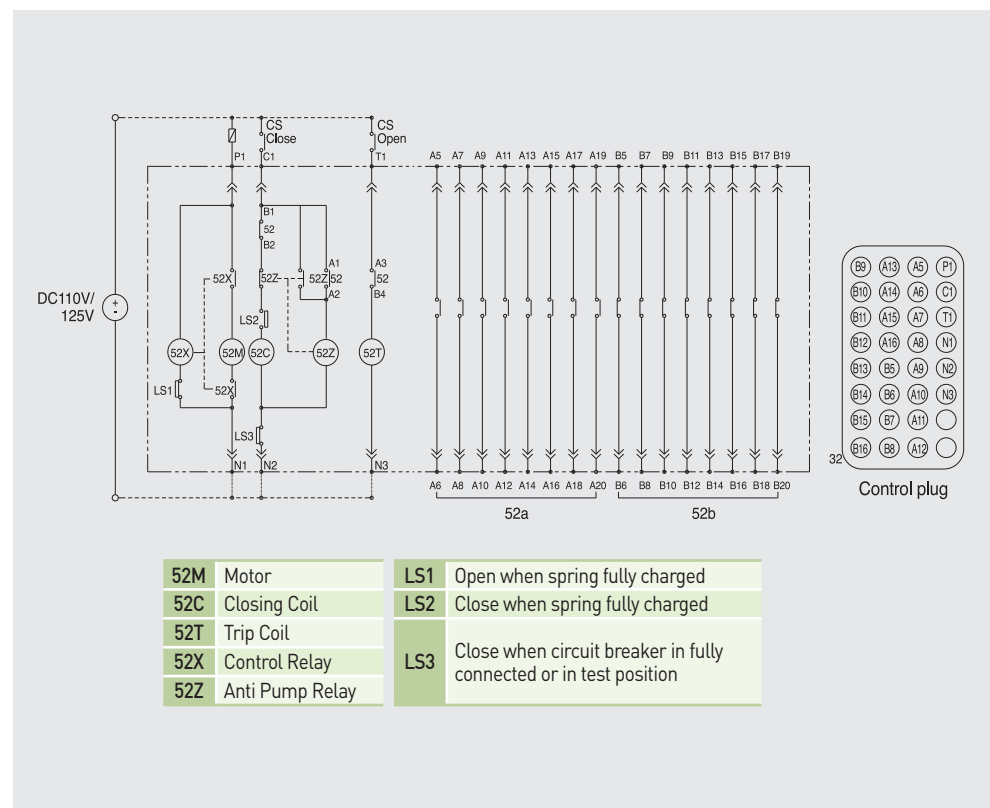
- Type : GBPC5010
- Max. average forward rectified current : 50A
- Max. recurrent peak reverse voltage : 1000V
- Operating temperature : -50 ~ 150°C

52M	Motor	LS1	Open when spring fully charged
52C	Closing Coil	LS2	Close when spring fully charged
52T	Opening Coil	LS3	Close when circuit breaker in fully connected or in test position (LS3 is not available in fixed type)
52Z	Anti Pump Relay		



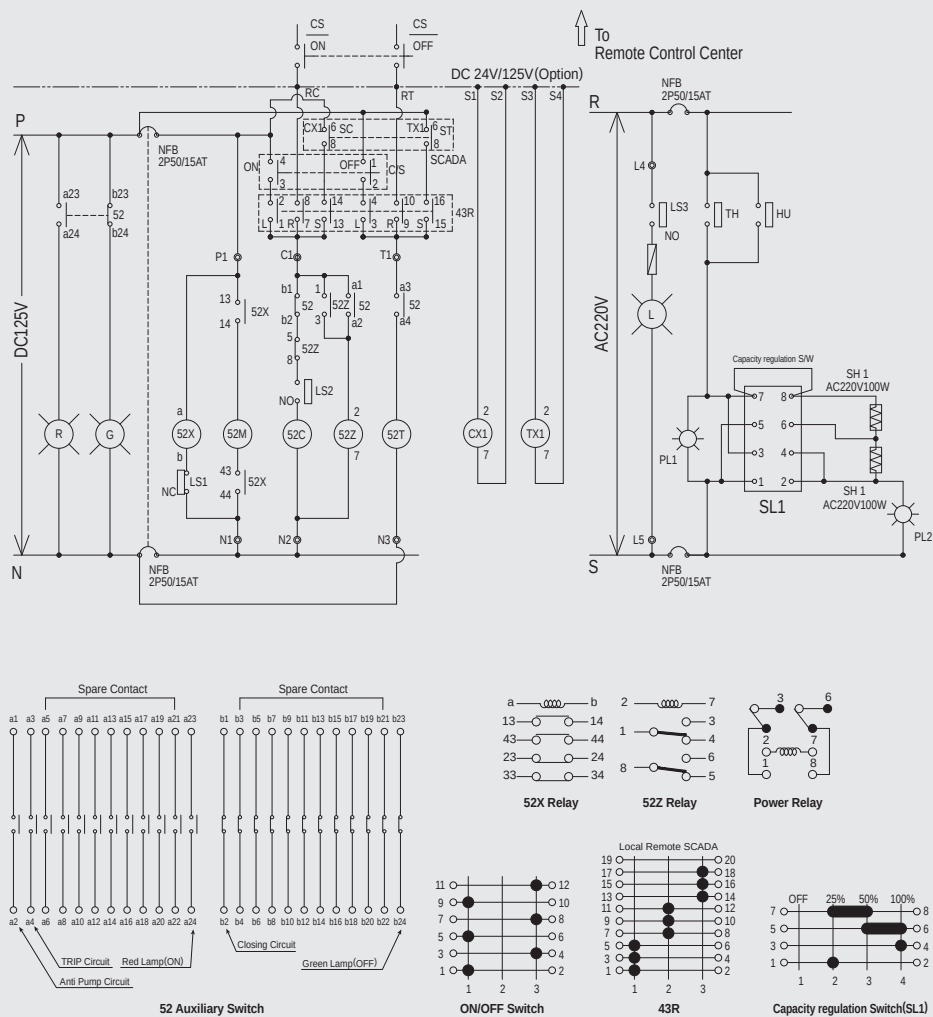
38kV 40kA 1200/2000A VCB
(Front view of VCB)

17.5kV 40kA

24kV/38kV
40kA

Control Circuit Diagrams

For Outdoor use
25.8kV 25kA

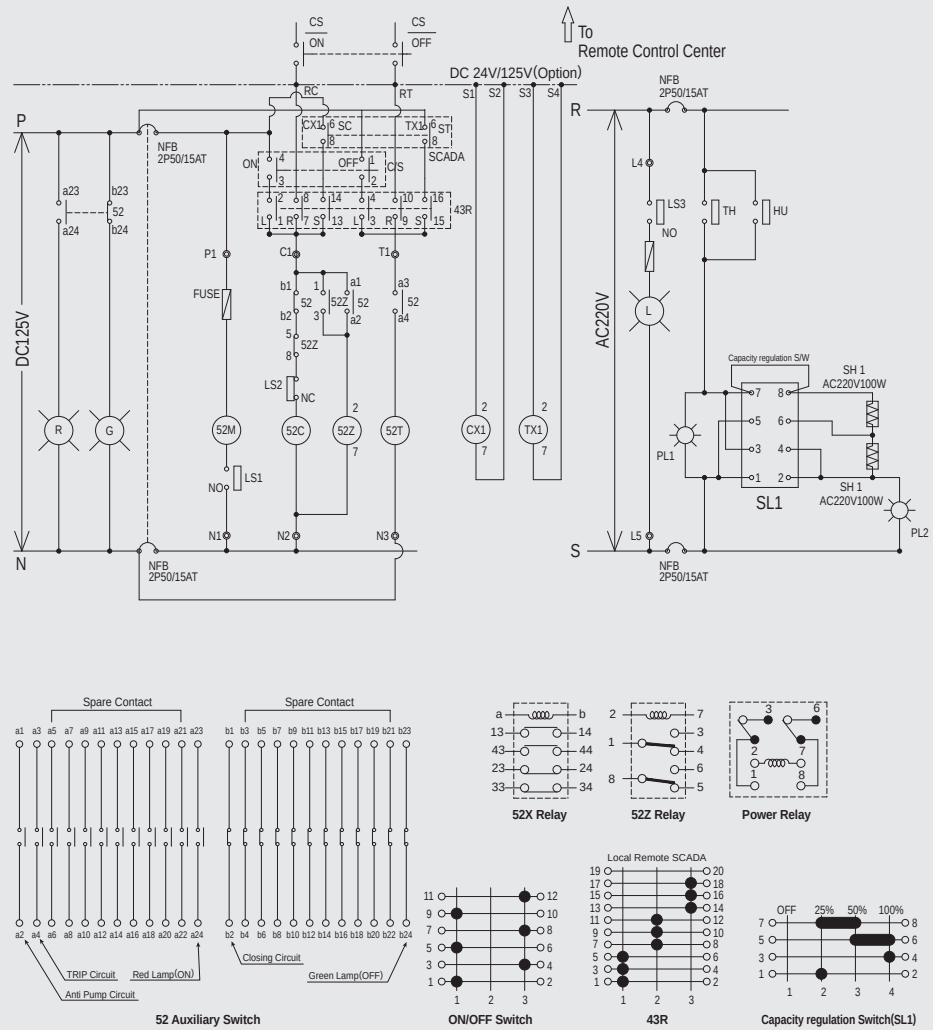


Note. 1. SCADA(DC 24/125V Optional)
2. DC FAIL(27D) Circuit

52M	Spring Charged Motor
52C	Closing Coil
52T	Trip Coil
52Z	Anti Pump Relay
52X	Control Relay
52a	AUX S/W - a
52b	AUX S/W - b
R	Red Lamp (VCB ON)
CX1	Closing Relay (for SCADA)

LS	Limit Switch
L	Lamp (Three-Wave Bulb, AC220V 11W)
43R	Local Remote Scada Control Switch
NFB	No Fuse Breaker
SL1	Heater Selector Switch
TH	Thermo Stat
HU	Humidity Control Switch
G	Green Lamp (VCB OFF)
TX1	Trip Relay (for SCADA)

For Outdoor use
25.8kV 40kA

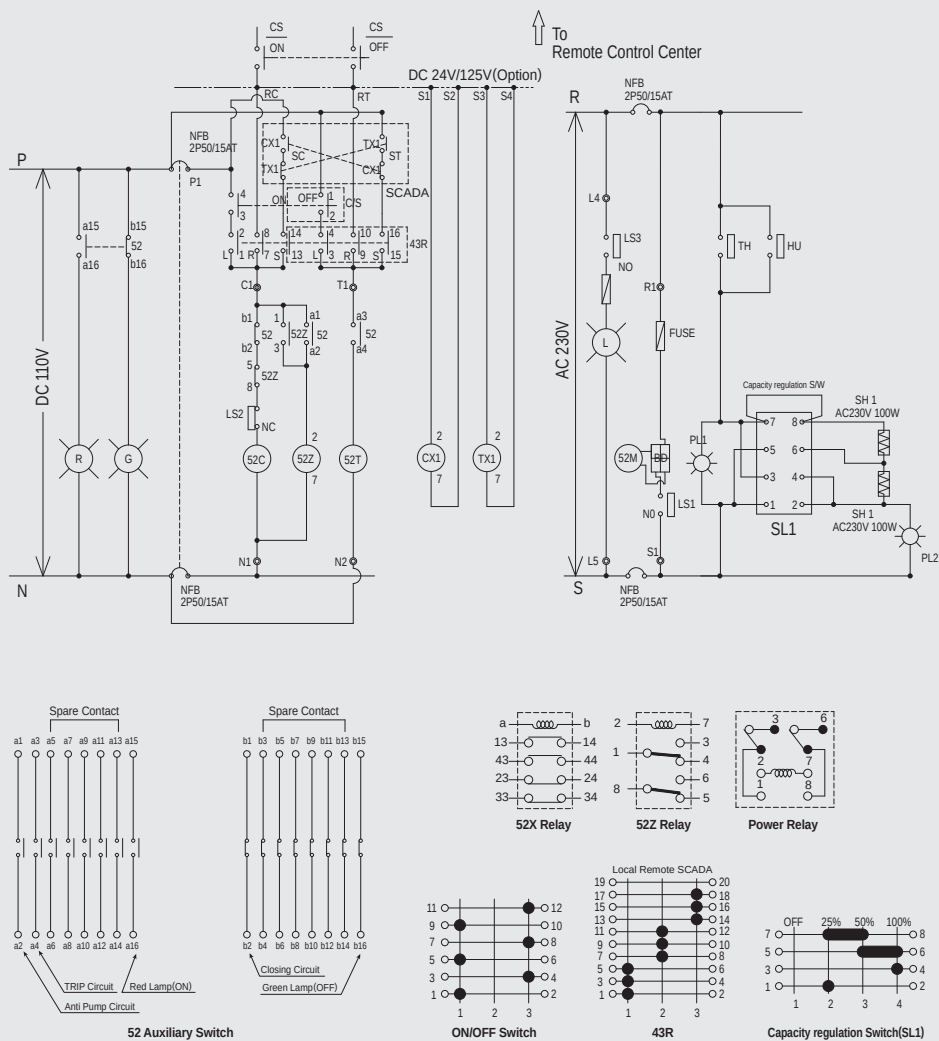


Note: 1. SCADA(DC 24/125V Optional)
2. DC FAIL [27D] Circuit

52M	Spring Charged Motor	L.S	Limit Switch
52C	Closing Coil	L	Lamp
52T	Trip Coil	43R	Local Remote Scada Control Switch
52X	Control Relay	NFB	No Fuse Breaker
52a	AUX S/W - a	SL1	Heater Selector Switch
52b	AUX S/W - b	TH	Thermo Stat
R	Red Lamp (VCB ON)	HU	Humidity Control Switch
CX1	Closing Relay (for SCADA)	G	Green Lamp (VCB OFF)
		TXI	Trip Relay (for SCADA)

Control Circuit Diagrams

For Outdoor use
36kV 25kA



Note. 1. SCADA(DC 24/125V Optional)
2. DC FAIL(27D) Circuit

52M	Spring Charged Motor	LS	Limit Switch
52C	Closing Coil	L	Lamp
52T	Trip Coil	43R	Local Remote Scada Control Switch
52Z	Anti Pump Relay	NFB	No Fuse Breaker
52a	AUX S/W - a	SL1	Heater Selector Switch
52b	AUX S/W - b	TH	Thermo Stat
R	Red Lamp (VCB ON)	HU	Humidity Control Switch
CX1	Closing Relay (for SCADA)	G	Green Lamp (VCB OFF)
BD	Bridge Diode	TXI	Trip Relay (for SCADA)

For Nuclear
Power Plant

