

 We Create the Next Value

Automatic Transfer Switches

General Catalog



We Create the Next Value

In the light of technology, In the light of value,
In the light of trust

People with customers, VITZRO EM

Contents

A5-2	Features
A5-4	Internal Accessories
A5-6	Ratings
A5-18	Applied Standards
A5-22	Contact Time Charts
A5-23	Circuit Diagrams
A5-29	External Sizes

Automatic Transfer Switches 100~200A

These VITZRO EM ATS units combine new IT technologies to design and produce the optimal solution for any customer environment. This premium offering is complete with user-centered protection to satisfy a wide range of customer needs and ensure maximum safety.

Saving Power

Low operating current instantaneous excitation system.

Safety Design

Contact is maintained by an anti-vibration configuration molded into the poles

2-Coil System

For reliable operation

Miniature Structure

These compact units can be built into portable generators or UPS, and is ideal for single-phase load less than 200A.

Applied Standard

IEC 60947-6-1/UL1008



Automatic Transfer Switches

100~3000A

Innovative convenience and ergonomics are built into VITZRO EM ATS units.

These ATS units are premium products that deliver ideal solutions for a wide range of customer applications with world-class reliability.

Certificate & Approval

VITZRO EM ATS designs are based on years of experience with switching, operational, and insulation design and technology.

It is a product with the largest short circuit capacity and applied with the international standards IEC60947-3 ^{Note1)} (Transfer Switching Equipment) and IEC60947-6-1 (Transfer Switching Equipment).

It is an automatic transfer switch with enhanced breaking capacity and reliability, verified through KERI Type Test short circuit certification.

It has two way breaking capacity.

Can be installed in a 1000 mm panel board for all types.

Suitable for integration into movable generators or UPS due to its compact structure.

Provides stable power supply through a separate system configuration.

Each phase has been individually sealed for enhanced prevention and safety

Individual moldings and closures on each of the phase improve blocking performance and increase lifespan.

Short arc time and low contact consumption during opening and closing causes reduce wear.

The use of separate springs for the opening of contacts ensures consistent and reliable shutdown performance regardless of operating voltage.

Improved safety for users

The protection and breaking capacity of main points have been enhanced by the design of the trip system after the lines are inserted at the auxiliary contacts Improved safety for users.

Excellent opening and closing switching design reduces arcing enhancing product life.

Compact design for customers makes it convenient

The transparent terminal cover and insulation molding and protects against entry

Transparent insulation cover for access terminals enhances insulation performance the of foreign material and improving operator safety.

Sealed structure with fully molded insulation to maximizes the safety of the operator and lifespan of the device.

Transparent terminal cover adoption makes it easy to identify terminal connections and makes it easy to work with terminal covers when carrying out a connection.

* [Note1](#)) IEC60947-3 : Switches, disconnectors, Switch-disconnectors and Fuse-combination units.

It is easy to carry out maintenance and is designed for safety

It is easy to attach/detach the insulation cover so that it is easy to determine contact or terminal wear.

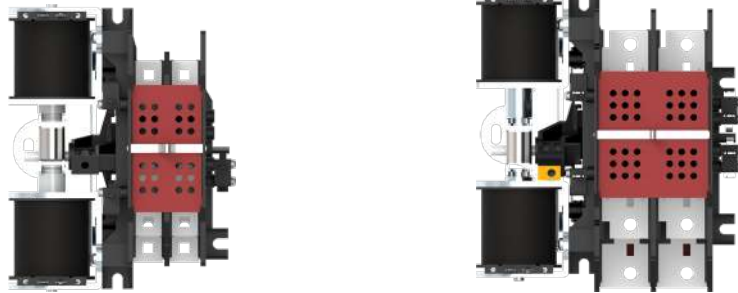
It is easy to check the switching performance and main contact state because of a simple, removable Arc Shute structure.

The operational mechanism is protected by a steel cover and the solenoid can be checked by simple.



Ratings

• Miniature ATS HS Types



Code			25010HS	25020HS
Rated Current(I _n)	A		100	200
Rated Voltage(U _e)	V		AC250	AC250
Rated Insulation Voltage(U _i)	V		AC300	AC300
Rated Impulse Voltage(U _{imp})	kV		4	4
Poles	P		2	2
Throw	T		Double Throw	Double Throw
Connection Type	Front		●	●
	Back		-	-
Performance				
Short Time Current(1s) I _{cw}	kA		5	10
Short Circuit Peak Current I _{cm}	kA		5	10
With Specific Circuit Breaker	kA		10	14
Fuse Mounting	kA		200	200
Switching Capacity ^{Note1)}	Class		AC-33B	AC-33B
Endurance	Electrical	Cycles	5,000	5,000
	Mechanical	Cycles	10,000	10,000
Transfer Sequence			A↔B	
Operation Time	Opening	msec	≤30	≤30
	Switching	msec	≤60	≤60
Conditions of Uninterruptible Transfer			2P	2P
Switching	AC 220V	A	5	8
Dimensions		H	165	176
		W	127	151
		D	100	121
Weights	Front	kg	1.1	2.2
	Back	kg	-	-
Precautions			1) Make sure a full operation is possible with an operation command of 0.5sec or more. 2) When A-side and B-side operation command is done simultaneously, it may lead to coil burning. 3) In case of an operation relay, select a sufficient contact capacity that exceeds the operating current.	

Note1) Utilization Category : AC-33B

Overcurrent Switching Performance (Closing 10×I_e, Breaking 10×I_e, Cosφ = 0.35),

Rated Load Switching Performance (Closing 1×I_e, Breaking 1×I_e, Cosφ = 0.8)

Ratings

• Standard ATS WN-B I - OFF - II



Code			B60010WN			B60020WN			B60040WN			
Old Code			61WN			62WN			64WN			
Rated Current(In)		A	100			200			400			
Rated Voltage(Ue)		V	AC600			AC600			AC600			
Rated Insulation Voltage(Ui)		V	AC800			AC800			AC800			
Rated Impulse Voltage(Uimp)		kV	8			8			8			
Poles		P	2	3	4	2	3	4	2	3	4	
Throw		T	Double Throw			Double Throw			Double Throw			
Connection Type	Front		●			●			●			
	Back		●			●			●			
Performance												
Short Time Current(1s) Icw		kA	5			10			12			
Short Circuit Peak Current Icm		kA	5			10			12			
With Specific Circuit Breaker		kA	14			14			25			
Fuse Mounting		kA	200			200			200			
Switching Capacity ^{Note1)}		Class	AC-33B			AC-33B			AC-33B			
Endurance	Electrical	Cycles	5,000			5,000			5,000			
	Mechanical	Cycles	10,000			10,000			10,000			
Transfer Sequence			A↔B, A↔Neutral(off)↔B									
Operation Time	Closing	msec	≤60			≤60			≤60			
	Opening	msec	≤20			≤20			≤20			
Conditions of Uninterruptible Transfer			2P	3P	4P	2P	3P	4P	2P	3P	4P	
Closing	AC/DC 110V	A	7			7			8			
	AC 220V	A	3.5			3.5			4			
Trip ^{Note2)}	AC/DC 110V	A	3			3			3			
	AC 220V	A	1.5			1.5			1.5			
Dimensions	Front	H	201.5	201.5	201.5	201.5	201.5	201.5	254	254	254	
		W	215	251	287	215	251	287	245	296	347	
		D	118	118	118	118	118	118	119	119	119	
	Back	H	174	174	174	174	174	174	208	208	208	
		W	215	251	287	215	251	287	245	296	347	
		D	143	143	143	143	143	143	163	163	163	
Weights	Front	kg	4.5	6	8	4.5	6	8	7.5	9	10.5	
	Back	kg	4.5	6	8	4.5	6	8	6	8	10	

Note1) Utilization Category : AC-33B
Overcurrent Switching Performance (Closing 10×Ie, Breaking 10×Ie, Cosφ = 0.35),
Rated Load Switching Performance (Closing 1×Ie, Breaking 1×Ie, Cosφ = 0.8)
Note2) Trip : The switch in the circuit is opened to the neutral position (OFF) at Power A or B.



	B60063WN		B60080WN		B60100WN	
	66WN		68WN		610WN	
	630 ^{Note3)}		800		1000	
	AC600		AC600		AC600	
	AC800		AC800		AC800	
	8		8		8	
	3	4	3	4	3	4
	Double Throw		Double Throw		Double Throw	
	●		●		●	
	●				●	
	15		20		20	
	15		20		20	
	35		42		42	
	200		200		200	
	AC-33B		AC-33B		AC-33B	
	5,000		5,000		5,000	
	10,000		10,000		10,000	
	A↔B, A↔Neutral(off)↔B					
	≤100		≤100		≤100	
	≤30		≤30		≤30	
	3P	4P	3P	4P	3P	4P
	8	10	10	10	10	10
	4	5	5	5	5	5
	4		4		4	
	2		2		2	
	278	278	298	298	298	298
	340	400	400	480	400	480
	143	143	143	143	143	143
	248	248	267	267	267	267
	340	400	400	480	400	480
	176	176	178	178	178	178
	15	18	20	24	21	25
	14	17	19	23	20	24

Ratings

• Standard ATS WN-B I - OFF - II

Code			B60125WN		B60160WN		
Old Code			616WN		616WN		
Rated Current(In)		A	1250		1600		
Rated Voltage(Ue)		V	AC600		AC600		
Rated Insulation Voltage(Ui)		V	AC800		AC800		
Rated Impulse Voltage(Uimp)		kV	8		8		
Poles		P	3	4	3	4	
Throw		T	Double Throw		Double Throw		
Connection Type	Front		●		●		
	Back		●		●		
Performance							
Short Time Current(1s) Icw		kA	25		32		
Short Circuit Peak Current Icm		kA	25		32		
With Specific Circuit Breaker		kA	50		50		
Fuse Mounting		kA	200		200		
Switching Capacity ^{Note1)}		Class	AC-33B		AC-33B		
Endurance	Electrical	Cycles	5,000		5,000		
	Mechanical	Cycles	10,000		10,000		
Transfer Sequence			A↔B, A↔Neutral(off)↔B				
Operation Time	Closing	msec	≤150		≤150		
	Opening	msec	≤30		≤30		
Conditions of Uninterruptible Transfer			3P	4P	3P	4P	
Closing	AC/DC 110V	A	10	10	10	10	
	AC 220V	A	5	5	5	5	
Trip ^{Note2)}	AC/DC 110V	A	4	4	4		
	AC 220V	A	2	2	2		
Dimensions	Front	H	535	535	535	535	
		W	453	536	453	536	
		D	228	228	228	228	
	Back	H	380	380	380	380	
		W	453	536	153	536	
		D	261	261	261	261	
Weights	Front	kg	52.5	63.5	58	69	
	Back	kg	50	60	55	65	

Note1) Utilization Category : AC-33B

Overcurrent Switching Performance (Closing 10×Ie, Breaking 10×Ie, Cosφ = 0.35),

Rated Load Switching Performance (Closing 1×Ie, Breaking 1×Ie, Cosφ = 0.8

Note2) Trip : The switch in the circuit is opened to the neutral position (OFF) at Power A or B.

	B60200WN		B60250WN		B60300WN	
	620WN		630WN			
	2000		2500		3000	
	AC600		AC600		AC600	
	AC800		AC800		AC800	
	8		8		8	
	3	4	3	4	3	4
	Double Throw		Double Throw		Double Throw	
	-		-		-	
	●		●		●	
	40		50		50	
	40		50		50	
	65		85		85	
	200		200		200	
	AC-33B		AC-33B		AC-33B	
	5,000		5,000		5,000	
	10,000		10,000		10,000	
	A↔B, A↔Neutral(off)↔B					
	≤180		≤180		≤180	
	≤35		≤35		≤35	
	3P	4P	3P	4P	3P	4P
	10	13	-	-	-	-
	5	6.5	13	13	13	13
	4		-		-	
	2		2		2	
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	380	380	380	380	380	380
	528	636	604	737.5	604	737.5
	261	261	325	325	325	325
	-	-	-	-	-	-
	65	85	92.5	119	92.5	119

Ratings

• Standard ATS WN-C I - OFF - II



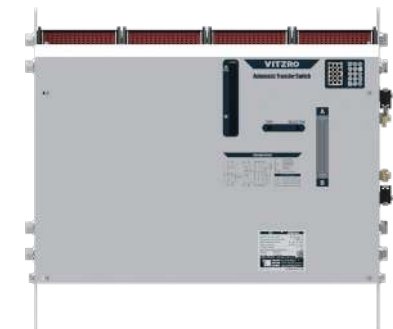
Code			C60125WN		
Rated Current(In)	A		1250		
Rated Voltage(Ue)	V		AC600		
Rated Insulation Voltage(Ui)	V		AC800		
Rated Impulse Voltage(Uimp)	kV		8		
Poles	P		3	4	
Throw	T		Double Throw		
Connection Type	Front		-		
	Back		●		
Performance					
Short Time Current(1s) Icw	kA		25		
Short Circuit Peak Current Icm	kA		25		
With Specific Circuit Breaker	kA		50		
Fuse Mounting	kA		200		
Switching Capacity ^{Note1)}	Class		AC-33B		
Endurance	Electrical	Cycles	5,000		
	Mechanical	Cycles	10,000		
Transfer Sequence			A↔B, A↔Neutral(off)↔B		
Operation Time	Closing	msec	≤150		
	Opening	msec	≤30		
Conditions of Uninterruptible Transfer			3P	4P	
Closing	AC/DC 110V	A	11	11	
	AC 220V	A	6	6	
Trip ^{Note2)}	AC/DC 110V	A	4	4	
	AC 220V	A	2	2	
Dimensions	Front	H	-	-	
		W	-	-	
		D	-	-	
	Back	H	485	485	
		W	329	412	
		D	416	416	
Weights	Front	kg	-	-	
	Back	kg	50	60	

Note1) Utilization Category : AC-33B

Overcurrent Switching Performance (Closing 10×Ie, Breaking 10×Ie, Cosφ = 0.35),

Rated Load Switching Performance (Closing 1×Ie, Breaking 1×Ie, Cosφ = 0.8

Note2) Trip : The switch in the circuit is opened to the neutral position (OFF) at Power A or B.



	C60160WN		C60200WN		C60250WN		C60320WN	
	1600		2000		2500		3200	
	AC600		AC600		AC600		AC600	
	AC800		AC800		AC800		AC800	
	8		8		8		8	
	3	4	3	4	3	4	3	4
	Double Throw		Double Throw		Double Throw		Double Throw	
	-		-		-		-	
	●		●		●		●	
	32		40		50		50	
	32		40		50		50	
	50		65		85		85	
	200		200		200		200	
	AC-33B		AC-33B		AC-33B		AC-33B	
	5,000		5,000		5,000		5,000	
	10,000		10,000		10,000		10,000	
	A↔B, A↔Neutral(off)↔B							
	≤150		≤180		≤180		≤180	
	≤30		≤35		≤35		≤35	
	3P	4P	3P	4P	3P	4P	3P	4P
	11	11	11	14	-	-	-	-
	6	6	6	7	15	15	15	15
	4		4		-		-	
	2		2		2		2	
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	485	485	485	485	485	485	485	485
	329	412	404	512	480.5	614	480.5	614
	416	416	416	416	480	480	480	480
	-	-	-	-	-	-	-	-
	55	65	65	85	92.5	119	92.5	119

Ratings

• ATS W, WP Type I - II

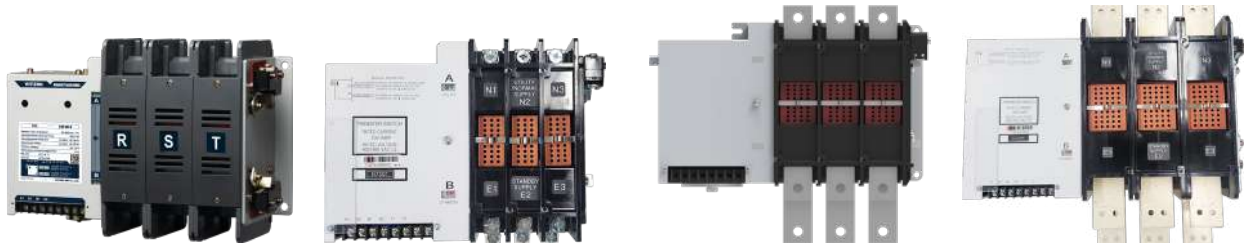


Code			B48010W		B48020W		
Old Code			61W		62W		
Rated Current(In)		A	100		200		
Rated Voltage(Ue)		V	AC480		AC480		
Rated Insulation Voltage(Ui)		V	AC600		AC600		
Rated Impulse Voltage(Uimp)		kV	6		6		
Poles		P	3	4	3	4	
Throw		T	Double Throw		Double Throw		
Connection Type	Front		●		●		
	Back		-		-		
Performance							
Short Time Current(1s) Icw		kA	5		10		
Short Circuit Peak Current Icm		kA	5		10		
With Specific Circuit Breaker		kA	10		14		
Fuse Mounting		kA	200		200		
Switching Capacity ^{Note1)}		Class	AC-33B		AC-33B		
Endurance	Electrical	Cycles	5,000		5,000		
	Mechanical	Cycles	10,000		10,000		
Transfer Sequence			A↔B				
Operation Time	Opening	msec	≤30		≤30		
	Closing	msec	≤60		≤60		
	Closing Delay	sec	-		-		
Conditions of Uninterruptible Transfer			3P	4P	3P	4P	
Switching	AC/DC 110V	A	-		-		
	AC 220V	A	8		8		
Dimensions	Front	H	171		171		
		W	219		219		
		D	110		110		
	Back	H	-		-		
		W	-		-		
		D	-		-		
Weight	Front	kg	2.5	3	3.5	4	
	Back	kg	-	-	-	-	

Note1) Utilization Category : AC-33B

Overcurrent Switching Performance (Closing 10×Ie, Breaking 10×Ie, Cosφ = 0.35),

Rated Load Switching Performance (Closing 1×Ie, Breaking 1×Ie, Cosφ = 0.8)



	B60040W			60010WP			60020WP			60040WP		
	64W			61WP			62WP			64WP		
	400			100			200			400		
	AC600			AC600			AC600			AC600		
	AC800			AC800			AC800			AC800		
	8			8			8			8		
	2	3	4	2	3	4	2	3	4	2	3	4
	Double Throw			Double Throw			Double Throw			Double Throw		
	●			●			●			●		
	●			●			●			●		
	12			5			10			12		
	12			5			10			12		
	25			14			25			35		
	200			200			200			200		
	AC-33B			AC-33B			AC-33B			AC-33B		
	5,000			5,000			5,000			5,000		
	10,000			10,000			10,000			10,000		
	A↔B			A↔Pause(Off)↔B								
	≤60			≤30			≤30			≤60		
	≤200			≤200			≤200			≤200		
	-			3~30			3~30			3~30		
	2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P
	7	7	10	5	5	7	7	7	10	8	8	10
	3.5	3.5	5	2.5	2.5	3.5	3.5	3.5	5	4	4	5
	254	254	254	191	191	191	252	252	252	278	278	278
	245	296	347	214	244	274	244	289	334	290	350	410
	119	119	119	112	112	112	112	112	112	132	132	132
	208	208	208	176	176	176	176	176	176	224	224	224
	245	296	347	214	244	274	244	289	334	290	350	410
	207	207	207	148	148	148	158	158	158	216	216	216
	7.5	9	10.5	4.5	6	8	6	8	10	11	14	18
	6	8	10	4.5	6	8	6	8	10	11	14	18

Ratings

• Closed Transition Transfer Switch (CTTS)



Code			60010CTTS			60020CTTS			60040CTTS			
Old Code			61CT			62CT			64CT			
Rated Current (In)		A	100			200			400			
Rated Voltage (Ue)		V	AC600			AC600			AC600			
Rated Insulation Voltage (Ui)		V	AC800			AC800			AC800			
Rated Impulse Voltage (Uimp)		kV	8			8			8			
Pole		P	2	3	4	2	3	4	2	3	4	
Throw		T	Double Throw			Double Throw			Double Throw			
Connection Type	Front		●			●			●			
	Back		-			-			-			
Performance												
Short Time Current(0.05sec) Icw		kA	5			10			12			
Short Circuit Peak Current Icm		kA	5			10			12			
With Specific Circuit Breaker		kA	14			25			35			
Fuse Mounting		kA	200			200			200			
Switching Capacity ^{Note1)}		Class	AC-33B			AC-33B			AC-33B			
Endurance	Electrical	Cycle	5,000			5,000			5,000			
	Mechanical	Cycle	10,000			10,000			10,000			
Transfer Sequence			A ↔ overlapping ↔ B , A ↔ B, A ↔ Neutral(off) ↔ B									
Conditions of Uninetrruptible Transfer			Phase difference: Within 10 electrical degrees Frequency difference: Within 0.2 Hz Voltage difference: Within 5% of the nominal voltage Instantaneous synchronization time: Within 0.05 seconds									
Operation Time	Closing	msec	≤55			≤55			≤60			
	Opening	msec	≤20			≤20			≤25			
Conditions of Uninterruptible Transfer			2P	3P	4P	2P	3P	4P	2P	3P	4P	
Closing	DC 110V	A	4	4	5	5	5	7	6.4	6.4	9	
	AC 220V	A	2	2	2.5	2.5	2.5	3.6	3.2	3.2	4.5	
Trip ^{Note2)}	DC 110V	A	1.4			1.4			2			
	AC 220V	A	0.7			0.7			1			
Dimensions	Front	H	268	268	268	283	283	283	307	307	307	
		W	211	241	271	241	286	331	290	353	413	
		D	112	112	112	112	112	132	132	132	220	
	Back	H	-	-	-	-	-	-	-	-	-	
		W	-	-	-	-	-	-	-	-	-	
		D	-	-	-	-	-	-	-	-	-	
Weights	Front	kg	6.5	8	10	8	10	12	14	17	21	
	Back	kq	-	-	-	-	-	-	-	-	-	

Note1) Utilization Category : AC-33B

Overcurrent Switching Performance (Closing 10×le, Breaking 10×le, Cosφ = 0.35),

Rated Load Switching Performance (Closing 1×le, Breaking 1×le, Cosφ = 0.8

Note2) Trip : The switch in the circuit is opened to the neutral position (OFF) at Power A or B.

Note3) 416CT/425CT Test Report held.



	60063CTTS		60080CTTS		60100CTTS		60125CTTS		60160CTTS ^{Note3)}		60200CTTS		60250CTTS ^{Note3)}		60320CTTS	
	66CT		68CT		610CT		616CT		616CT		620CT		630CT		630CT	
	630		800		1000		1250		1600		2000		2500		3200	
	AC600		AC600		AC600		AC600		AC600/AC415		AC600		AC600/AC415		AC600	
	AC800		AC800				AC800		AC800/AC600		AC800		AC800/AC600		AC800	
	8		8		8		8		8		8		8		8	
	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4
	Double Throw		Double Throw		Double Throw		Double Throw		Double Throw		Double Throw		Double Throw		Double Throw	
	●		●		●		●		●		●		●		●	
	●		●		●		●		●		●		●		●	
	15		25		25		32		32		40		50		50	
	15		25		25		32		32		40		50		50	
	42		50		50		65		65		85		85		85	
	200		200		200		200		200		200		200		200	
	AC-33B		AC-33B		AC-33B		AC-33B		AC-33B		AC-33B		AC-33B		AC-33B	
	5,000		5,000		5,000		5,000		5,000		5,000		5,000		5,000	
	10,000		10,000		10,000		10,000		10,000		10,000		10,000		10,000	
	A ↔ overlapping ↔ B , A ↔ B, A ↔ Neutral(off) ↔ B															
	Phase difference: Within 10 electrical degrees Frequency difference: Within 0.2 Hz Voltage difference: Within 5% of the nominal voltage Instantaneous synchronization time: Within 0.05 seconds															
	≤100		≤115		≤115		≤150		≤150		≤250		≤250		≤250	
	≤30		≤30		≤30		≤60		≤60		≤80		≤80		≤80	
	3P	4P	3P	4P	3P	4P	3P	4P	3P	4P	3P	4P	3P	4P	3P	4P
	7	8	8	10	8	10	10	13	10	13	13	16	16	18	16	18
	3.5	4	4	5	4	5	5	6.5	5	6.5	6.5	8	8	9	8	9
	2		2		2		4		4		4		4		4	
	1		1		1		2		2		2		2		2	
	545	545	607	607	607	607	644	644	644	644	-	-	-	-	-	-
	465	530	510	590	510	590	570	670	570	670	-	-	-	-	-	-
	220	220	220	220	220	220	220	220	220	220	-	-	-	-	-	-
	478	478	478	478	478	478	478	478	478	478	580	580	580	580	580	580
	465	530	510	590	510	590	570	670	570	670	685	820	835	1020	835	1020
	255	255	300	300	300	300	300	300	300	300	335	335	370	370	370	370
	53	61	66	76	66	76	72	84	72	84	-	-	-	-	-	-
	53	61	66	76	66	76	72	84	72	84	130	150	165	205	165	205

Applied Standards

Consideration points when applying and selecting

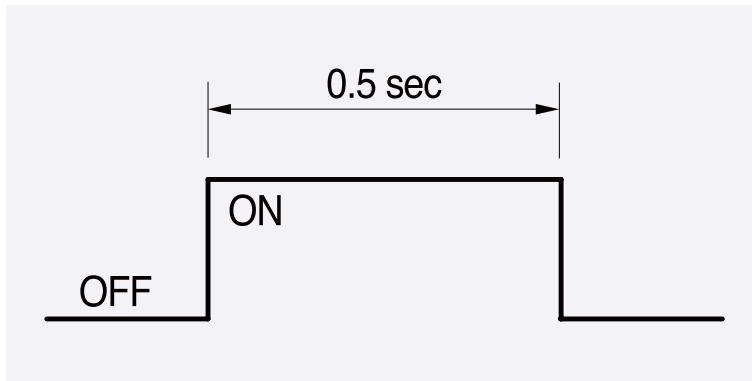
Relevant Standards

- UL 1008
- IEC 60947-6-1

Control Command

Closing and trip transfer operation is completed within 0.3 sec but the sequence to be able to set the operating commands at more than 0.5 sec, to achieve the safe and accurate operation.

However, continuous operating commands can cause coil burnout.



Interlock

Install an interlock (electrical) so that A power source and B power source are not commanded simultaneously at the operating circuit.

In case of WN Type, set a Sequence so that closing command and trip command are not in the same direction.

TR Capacity for Operating Circuit

The TR capacity of operating circuit should be calculated as shown below and use the capacity that exceeds the calculated value.

Operating Voltage × Operating Current × 0.5 = () VA

ex) Operating Voltage AC220V Operating Current 4A

$$220 \times 4 \times 0.5 = 440 \text{ VA}$$

Use TR with 440VA or above.

Control Circuit

ATS is designed to turn OFF the operating current using an internal SW after the operation is completed. When the operating current is turned OFF by an auxiliary SW of body, it may lead to malfunctioning.

Selection of Control Relay

Use the selected voltage Relay 27, 84 and Timer with contact conducting current that exceeds the ATS operating current.

Considering the chattering of control relay, select a relay that can interrupt the operating current which is safer.

* When the operating power is unstable, use the voltage regulator.

Type classification and order marking method

Basic Type					Pole			Connection Type		Control Voltage		Auxiliary contact		Customer		Applicable standard	
Basic Type	Type	Rated Voltage	Rated Current	Transfer method	2	3	4	Front	Back	AC220V	DC110V	1a1b	2a2b			IEC	UL
								F	B	A22	D11	11	22			I	U
VAT VITZRO ATS	None	25 AC250V	010 100A	HS	○	-	-	○	-	○	-	11 1a1b		D Domestic E Export		I IEC U UL	
			020 200A		○	-	-	○	-	○	-						
	B	48 AC480V	010 100A	W	-	○	○	○	-	○	-	11 1a1b (22 2a2b) ⁴⁾					
			020 200A		-	○	○	○	-	○	-						
			040 400A		○	○	○	○	○	○	○						
	B	60 AC600V	010 100A	WN	○	○	○	○	○	○	○	11 1a1b (22 2a2b) ⁴⁾					
			020 200A		○	○	○	○	○	○	○						
			040 400A		○	○	○	○	○	○	○						
			063 630A		-	○	○	○	○	○	○						
			080 800A		-	○	○	○	○	○	○						
			100 1000A		-	○	○	○	○	○	○						
			125 1250A		-	○	○	-	○	○	○						
			160 1600A		-	○	○	-	○	○	○						
			200 2000A		-	○	○	-	○	○	○						
			250 2500A		-	○	○	-	○	○	○						
	C	60 AC600V	320 3200A		-	○	○	-	○	○	○						
			010 100A	CTTS	○	○	○	○	-	○	○	22 2a2b					
			020 200A		○	○	○	○	-	○	○						
			040 400A		○	○	○	○	-	○	○						
			063 630A		-	○	○	○	○	○	○						
			080 800A		-	○	○	○	○	○	○						
			100 1000A		-	○	○	○	○	○	○						
			125 1250A		-	○	○	○	○	○	○						
			160 1600A		-	○	○	○	○	○	○						
			200 2000A		-	○	○	-	○	○	○						
	250 2500A	-	○		○	-	○	○	○								
	None	60 AC600V	320 3200A		-	○	○	-	○	○	○						
			010 100A		○	○	○	○	-	○	○						
			020 200A		○	○	○	○	-	○	○						
			040 400A		○	○	○	○	-	○	○						
			063 630A		-	○	○	○	○	○	○						
			080 800A		-	○	○	○	○	○	○						
			100 1000A		-	○	○	○	○	○	○						
			125 1250A		-	○	○	○	○	○	○						
			160 1600A		-	○	○	○	○	○	○						
			200 2000A		-	○	○	-	○	○	○						
			250 2500A		-	○	○	-	○	○	○						
			320 3200A		-	○	○	-	○	○	○						
VAT	C	60	320	WN	4		B		A22		11		D		I		
Basic Type (VITZRO ATS)	Compact Type (C-Type)	Rated Voltage	Rated Current	Transfer method	Pole (4P)			Connection Type		Control Voltage (AC220V)		Auxiliary contact		Customer (Domestic)		Applicable standard	

1) Please contact us if you need other control voltage. (Ex) AC230V, AC240V etc.)

2) Please contact us if you need other Rated Current. (Ex) 600A, 1200A, 3000A etc.)

3) The auxiliary contact is composed of W, WN 1a1b, CTTS 2a2b as basic specifications.

4) Option: Please select if you need additional auxiliary contact.

5) As for the customer classification, the nameplate specification consists of domestic and export.

Applied Standards

• Low Voltage Auto Transfer Switch ATS, CTTS

Ambient temperature

The temperature should be no higher than +45°C and no lower than -5°C.

Relative humidity

The relative humidity at the installation site should not exceed 85% at a maximum temperature of +45°C.

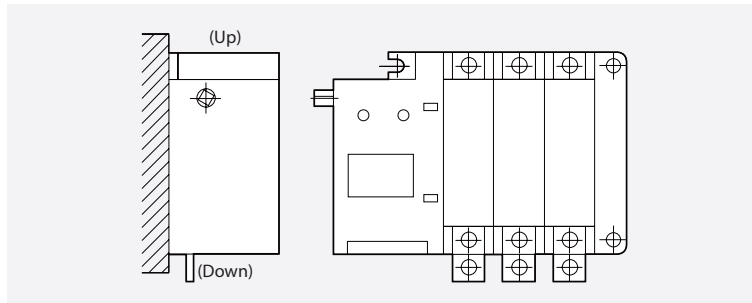
Attitude

The attitude of the installation site should not be above 1000m

Installation Direction

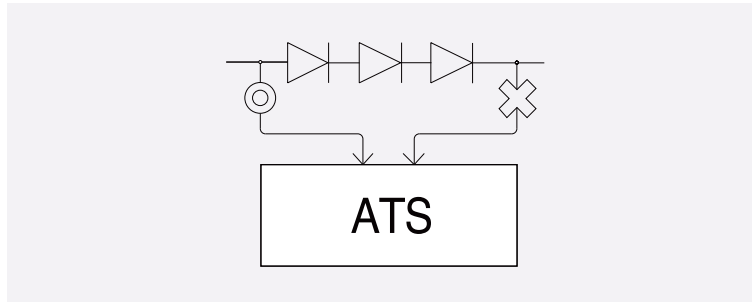
ATS is designed to use it by installing it in a certain direction. When the installation direction is changed, the feature will be changed. So, install it accurately. ATS should be installed so that the body rating plate can be read properly when facing the front and it should be installed without any twist, vertical to the panel.

* If a normal installation is not possible due to problems on wiring or equipment arrangement, consult with our company.



Operating Power

In case of DC operation and if a dropper circuit is included in the operating power, the operating power of ATS must be connected to the input part of dropper circuit.



Control Circuit Connection

Use a control power and control line with extra length.

In case of DC operation, be cautious of battery shortage and charging shortage.

Main Circuit Connection

Firmly connect it by selecting wire size and solderless terminal that meets the current capacity.

Be careful not to add an excessive stress to the main circuit terminal.

Especially, when connecting using a Busbar, be careful not to add an excessive stress to the main circuit terminal.

Precautions when Operating Handle

Manual operation of ATS should be carried out only when a detailed inspection of operating part and charging part is performed at no-load status.

There may be some differences in switch force, switch speed and so on based on the manual operation of the operator, so ATS features cannot be guaranteed.

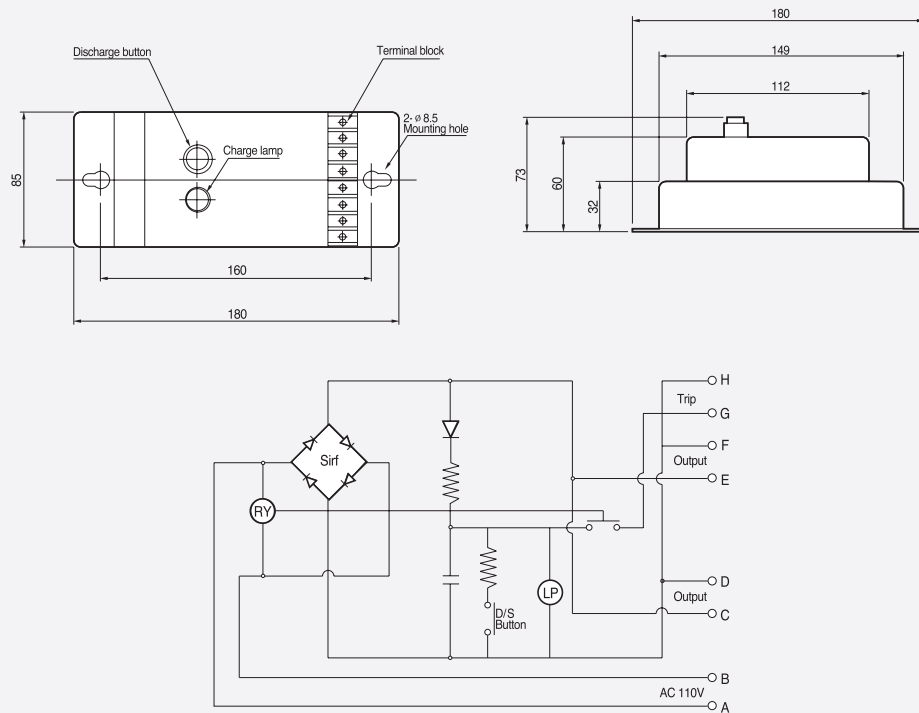
Maintenance & Inspection

Conduct maintenance and inspection at regular cycle in order to maintain the performance of ATS steadily and well.

* Refer to the maintenance and inspection items presented in the instruction manual for the detailed information.

• Option

Condenser Trip Device



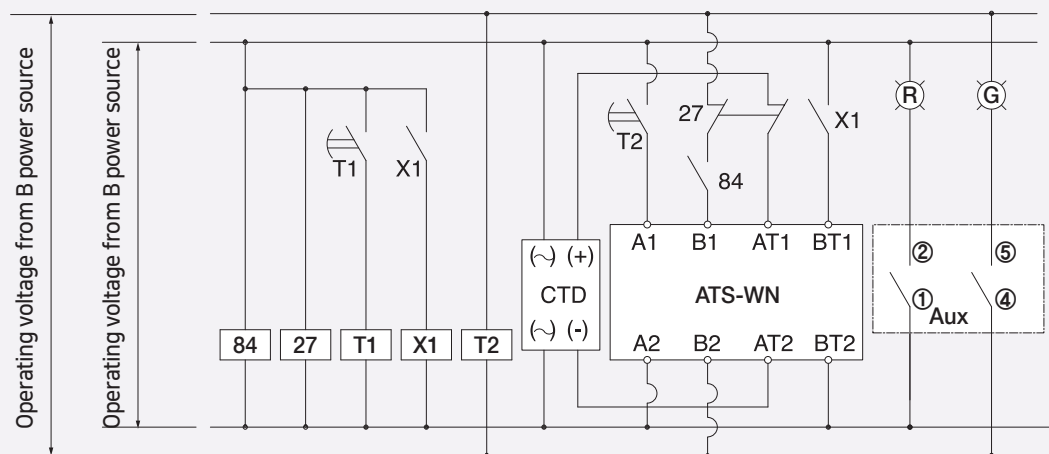
When using as CTD

When G, H terminals are connected to Trip Circuit during a power failure, it immediately trips. If tripping is required at an optional time, it can be used by adding S/W. (Normal operation is possible within 30 seconds)

When using as Rectifier

C.D and E.F output terminals can be used as DC power. (Close, Open, Motor OCR Power and etc)

• Operating circuit



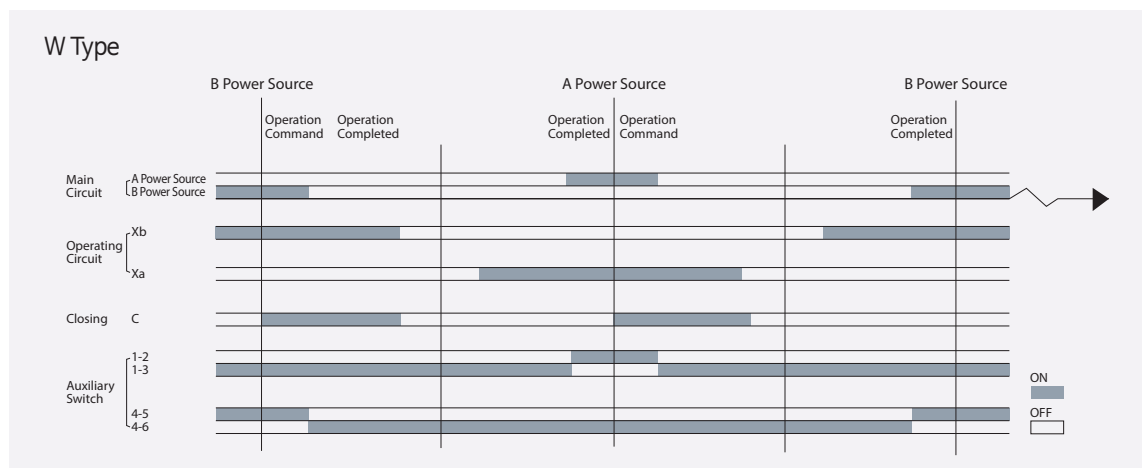
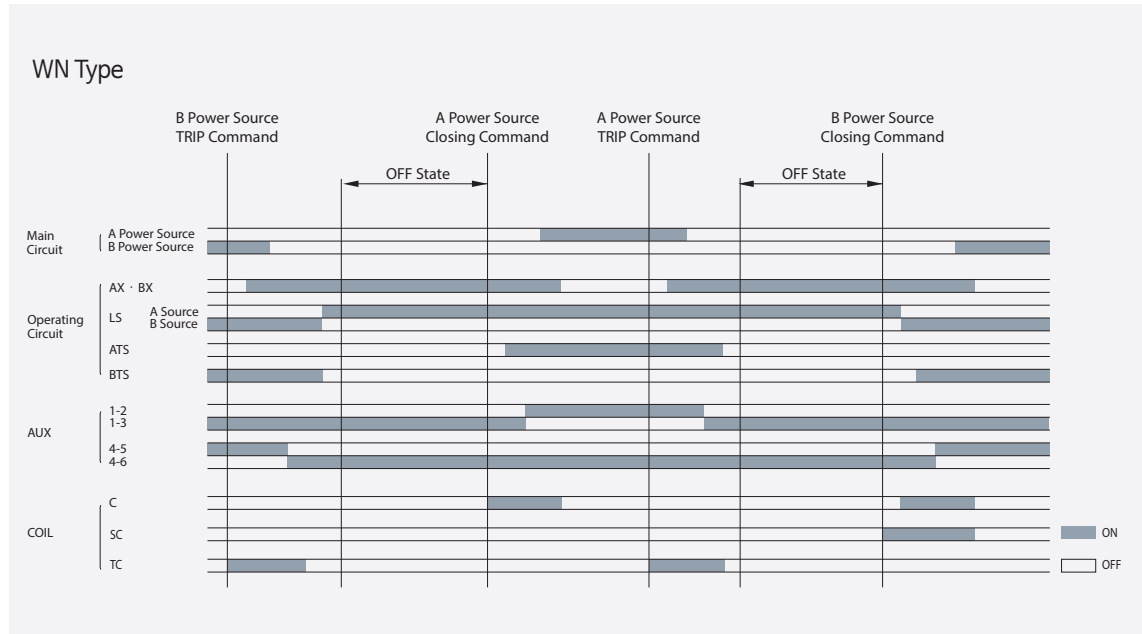
CONDENSOR TRIP의 경우

* X1(제어 Relay) : CTD(Condensor Trip 장치) Condensor의 충전 시간을 고려하여 Timer의 시간을 설정하여 주십시오.

Contact Time Charts & Circuit Diagrams

• ATS

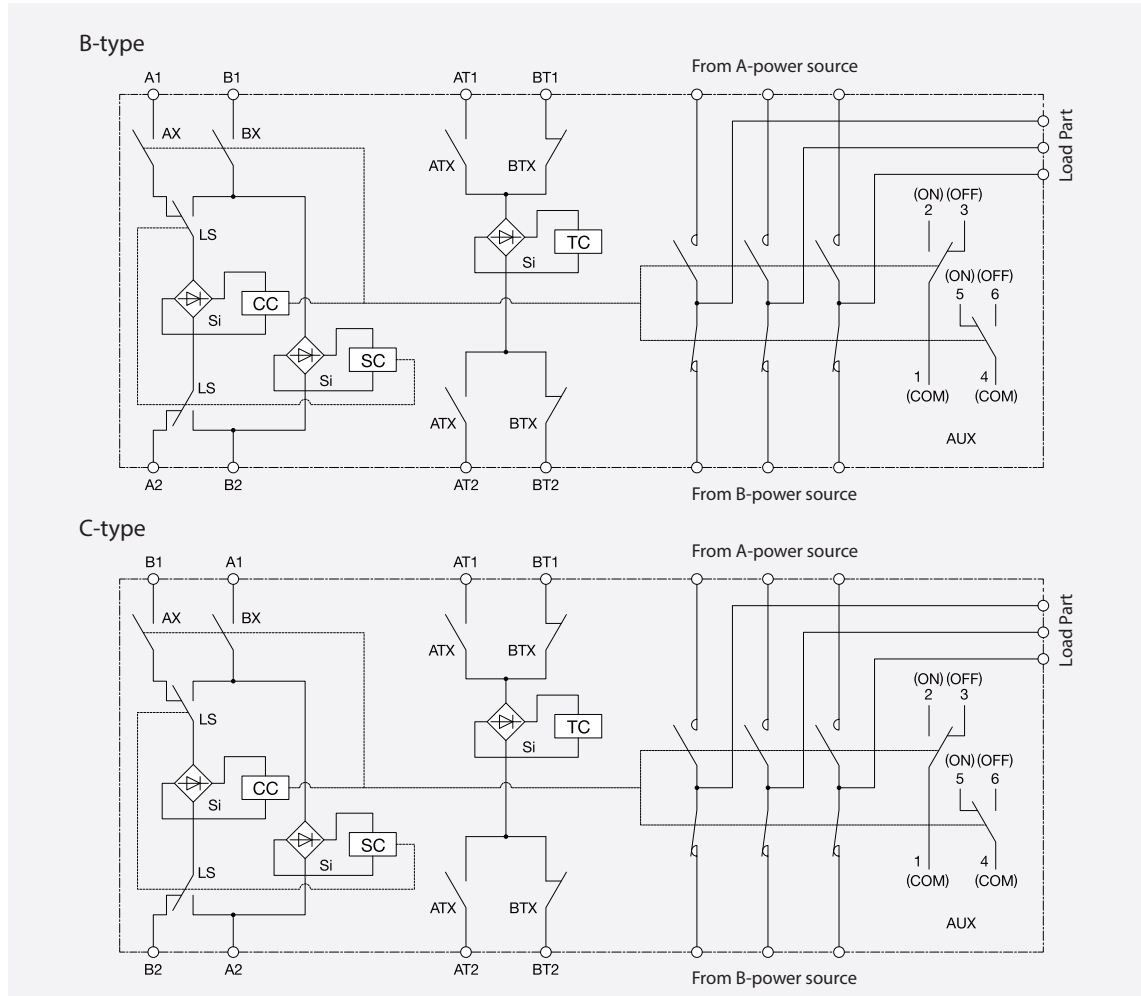
Contact Time Charts



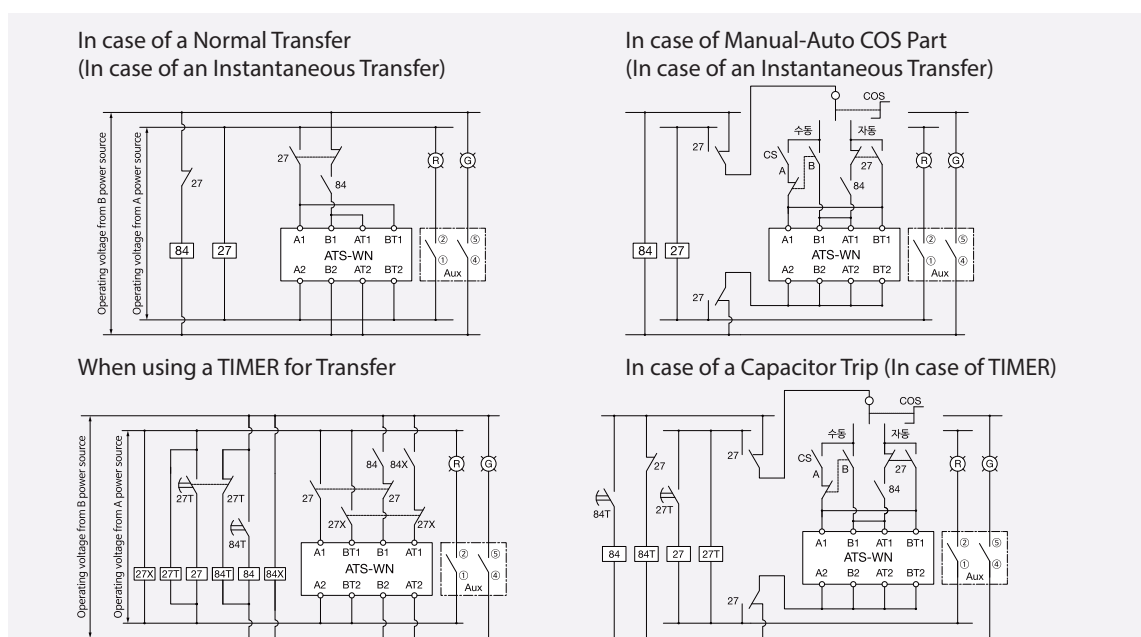
Contact Time Charts & Circuit Diagrams

• ATS - WN Type

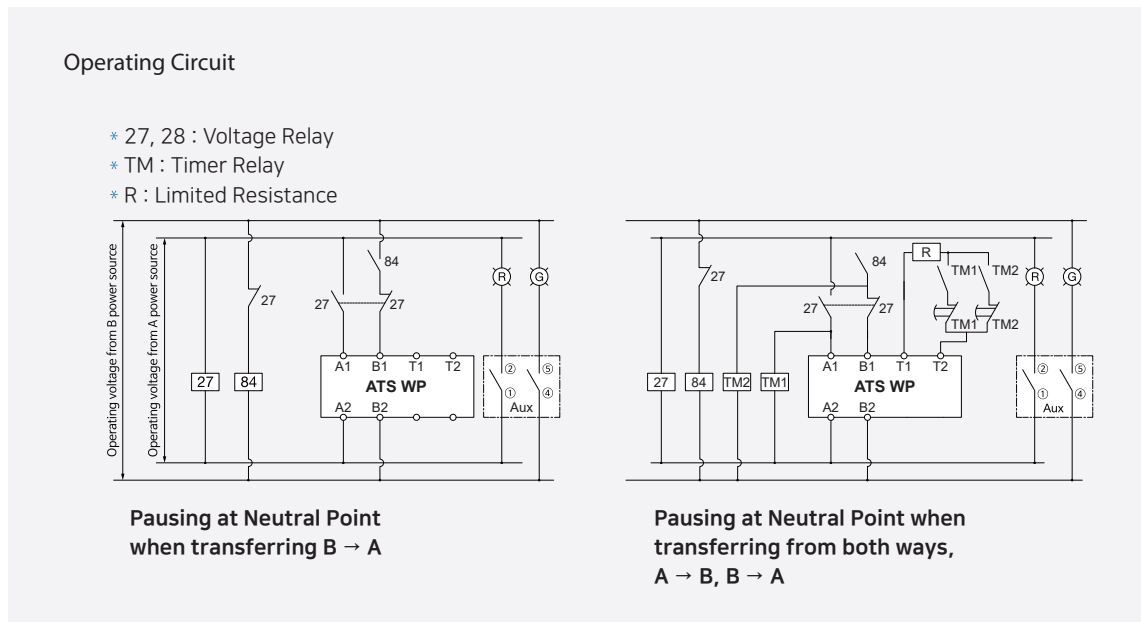
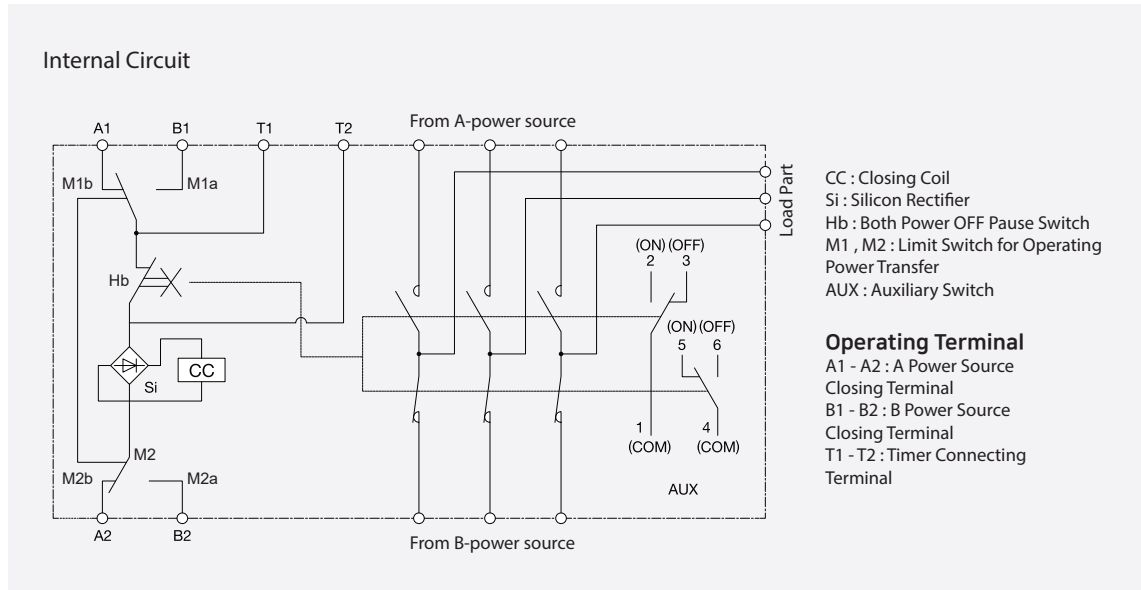
WN Type Internal Circuit



WN Type Operating Circuit



• ATS - WP Type



• Precautions

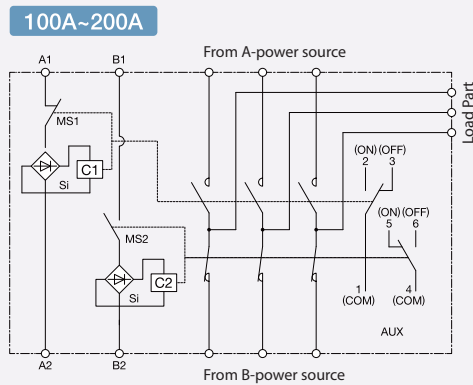
- To pause at a neutral position, connect a Timer and limited resistance to T1, T2 terminals.
* Prepare a separate Timer and limited resistance.
- If the pause time is less than 3 seconds at the neutral position, the limited resistance should not be installed.
- The operating voltage to use when pausing at the neutral position should be AC 110, AC 220V.
- When operating continuously, it should be within 5 times. When operating continuously for more than 5 times, it may malfunction due to overheating of coil or coil may be burned. Be cautious.
- When it is required to pause for more than 30 seconds (Both power OFF), use WN-Type of our company.

Type		WP	
Operating Voltage		DC 110V	AC 220V
Timer Used		Select a Timer that can interrupt the operating current.	
Timer Adjusting Time		3sec ~ 30sec	
Limited Resistance	Rated Power	200W	200W
	Resistance	50Ω	200Ω

Circuit diagram

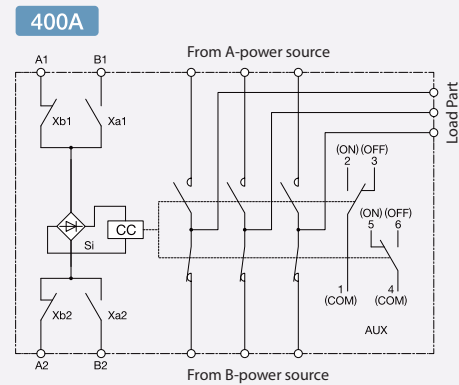
• ATS - W Type

Internal Circuit



C1, C2 : Closing Coil
Si : Silicon Rectifier
MS1, MS2 : Manipulation for
Power Source Limit Switch
AUX : Auxiliary Switch

Operating Terminal
A1 - A2 : A Power Source
Closing Terminal
B1 - B2 : B Power Source
Closing Terminal

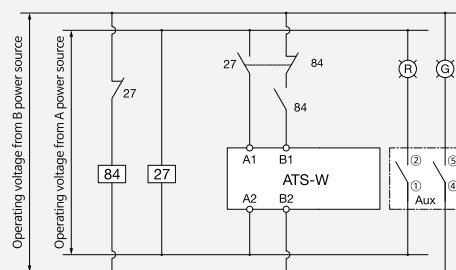


Xa1-Xa2, Xb1-Xb2 :
Control Switch
CC : Closing Coil
Si : Silicon Rectifier

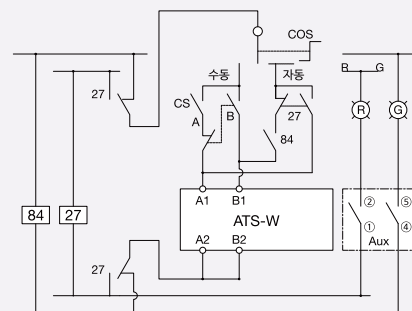
Operating Terminal
A1 - A2 : A Power Source
Closing Terminal
B1 - B2 : B Power Source
Closing Terminal

Operating Circuit

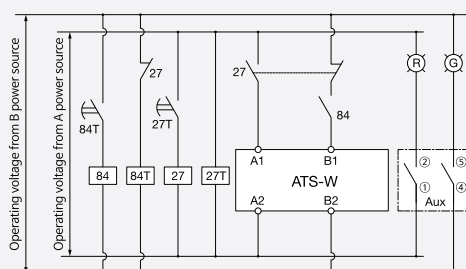
- * 27, 28 : Voltage Relay
- * TM : Timer Relay



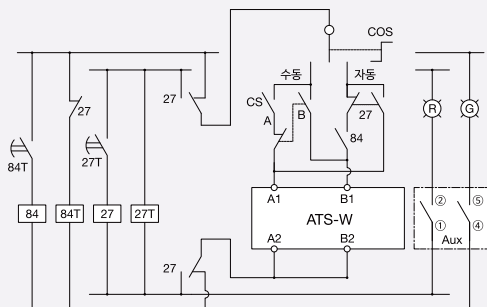
In case of a Normal Transfer
(In case of an Instantaneous Transfer)



In case of Manual-Auto COS Part
(In case of an Instantaneous Transfer)



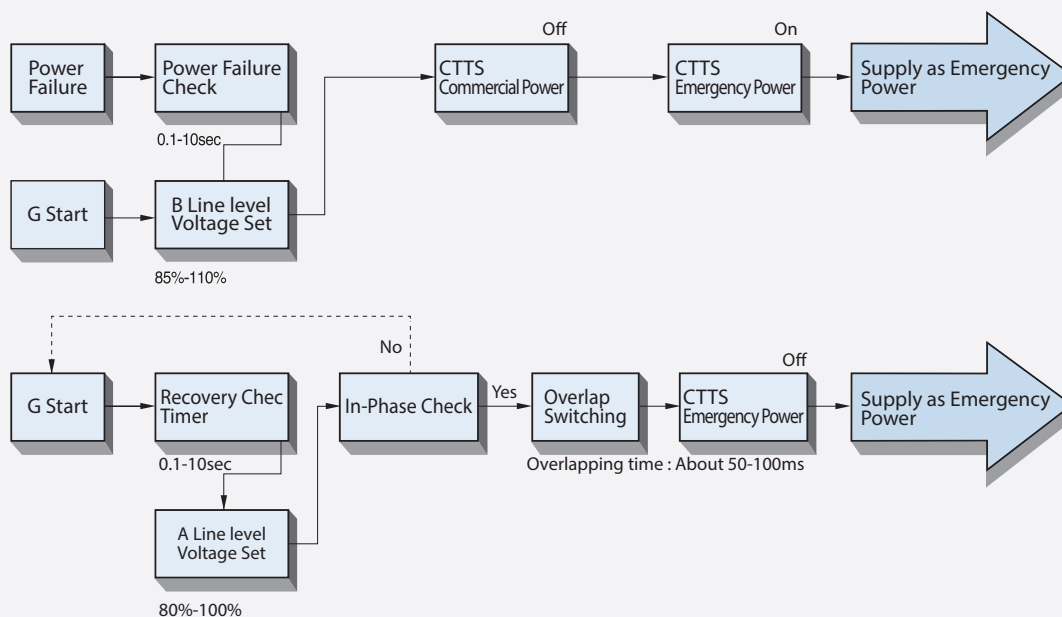
When using a TIMER for Transfer



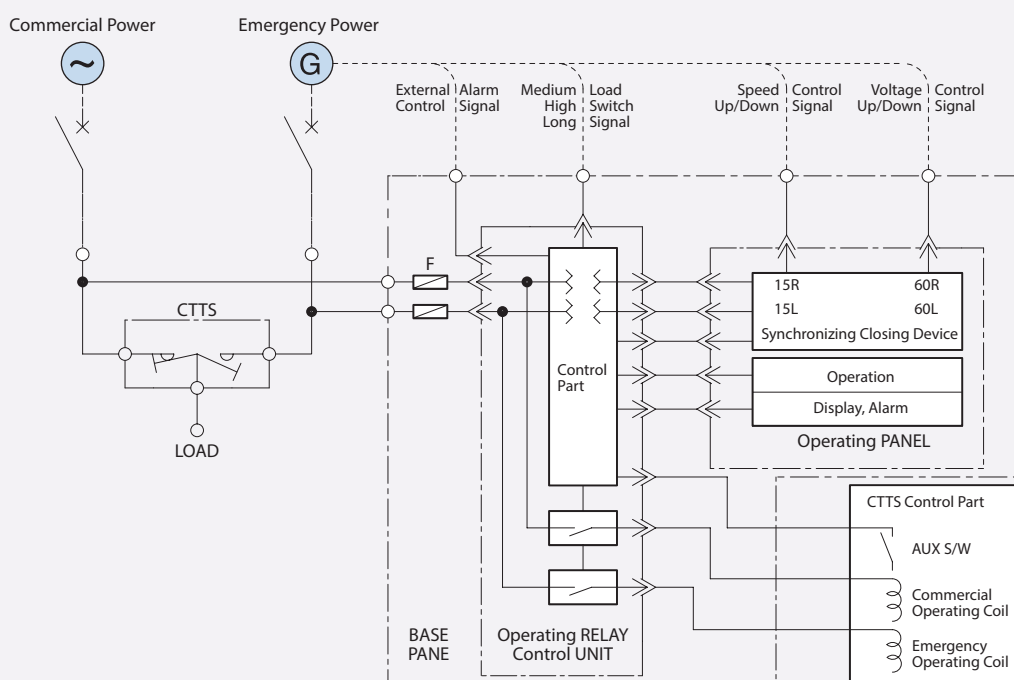
In case of a Capacitor Trip (In case of TIMER)

• CTTS

Operational Flow Chart

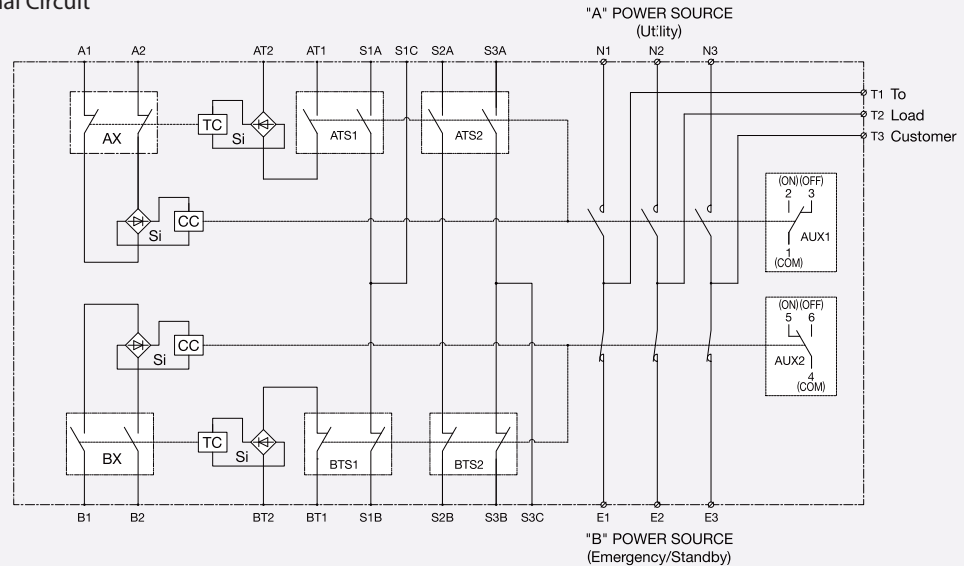


Operating Circuit



• CTTs

Internal Circuit



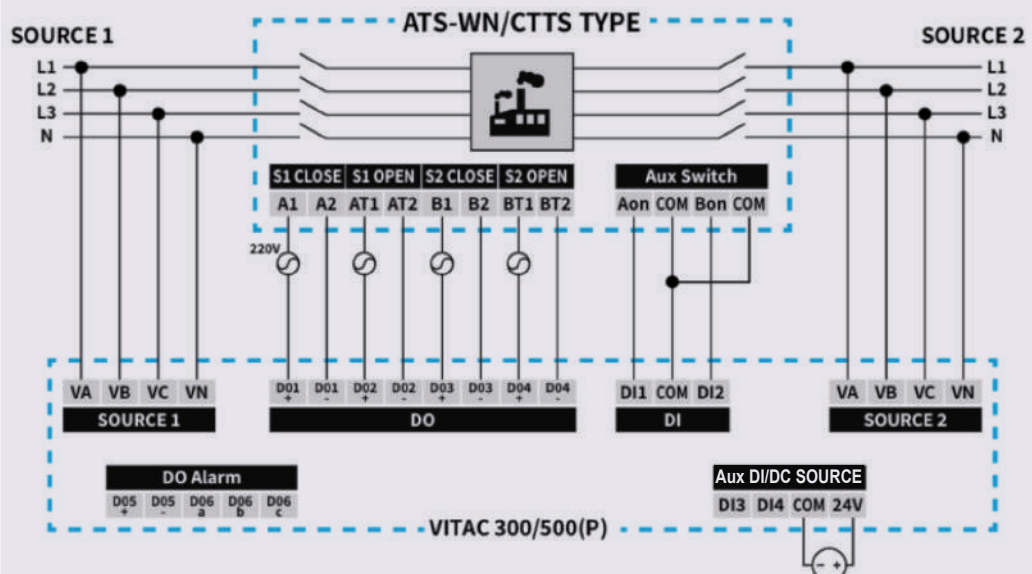
CC : Closing Coil
TC : Trip Coil
Si : Silicon Rectifier
AX, BX : Switch, Auxiliary
ATS1, ATS2, BTS1, BTS2 :
Switch, Position contacts

S1A, S1B, S1C, S3A, S3B, S3C :
Switch, Position sensing
S2A, S2B :
Display both Closing
Aux1, 2 : Switch, Auxiliary

Operating Terminal

A1 - A2 : A Power Source Closing Terminal
B1 - B2 : B Power Source Closing Terminal
AT1 - AT2 : A Power Source Trip Terminal
BT1 - BT2 : B Power Source Trip Terminal

Connection Diagram



External Sizes

Application

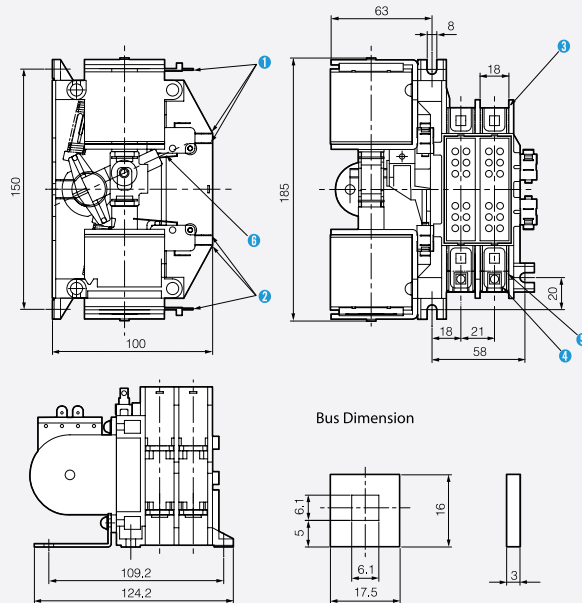
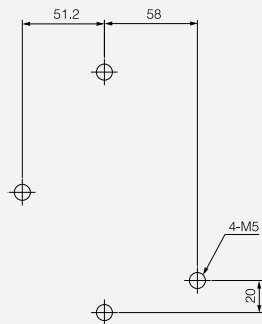
ATS HS

25010HS / 25020HS

• HS 100A

(Unit : mm)

Mounting Dimension



Part Names

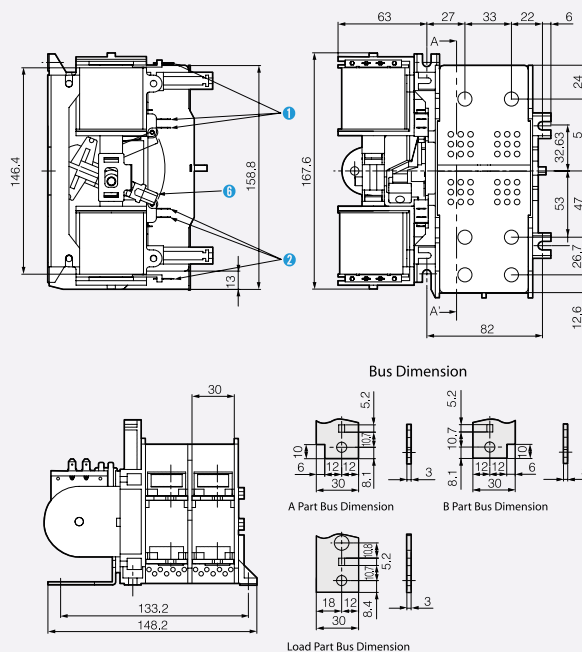
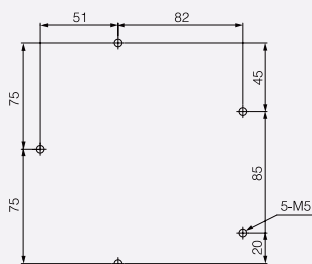
- ① A Operating circuit terminal
- ② B Operating circuit terminal
- ③ A power source side main circuit terminal
- ④ Loading side main circuit terminal
- ⑤ B power source side main circuit terminal
- ⑥ Manual operating lever

Panel Processing Dimension
(Front)/100A 2P

• HS 200A

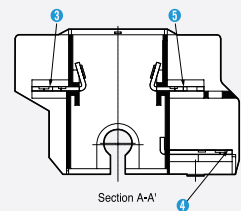
(Unit : mm)

Mounting Dimension



Part Names

- ① A Operating circuit terminal
- ② B Operating circuit terminal
- ③ A power source side main circuit terminal
- ④ Loading side main circuit terminal
- ⑤ B power source side main circuit terminal
- ⑥ Manual operating lever



External Sizes

Application

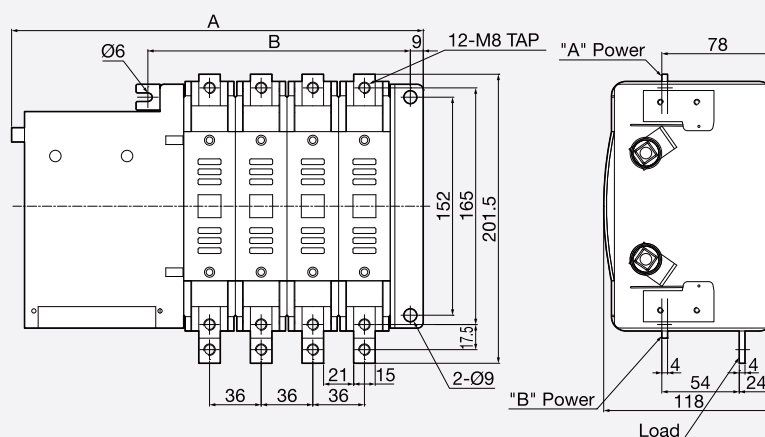
WN B-Type 100A~200A

B60010WN / B60020WN

• Front

(Unit : mm)

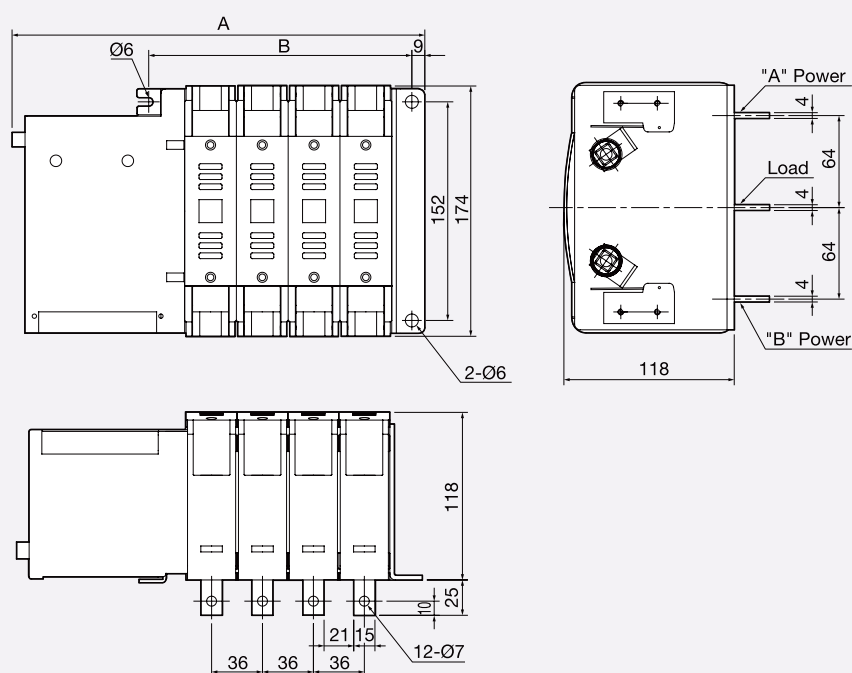
Pole	A	B
2P	215	111
3P	251	147
4P	287	183



• Back

(Unit : mm)

Pole	A	B
2P	215	111
3P	251	147
4P	287	183



External Sizes

Application

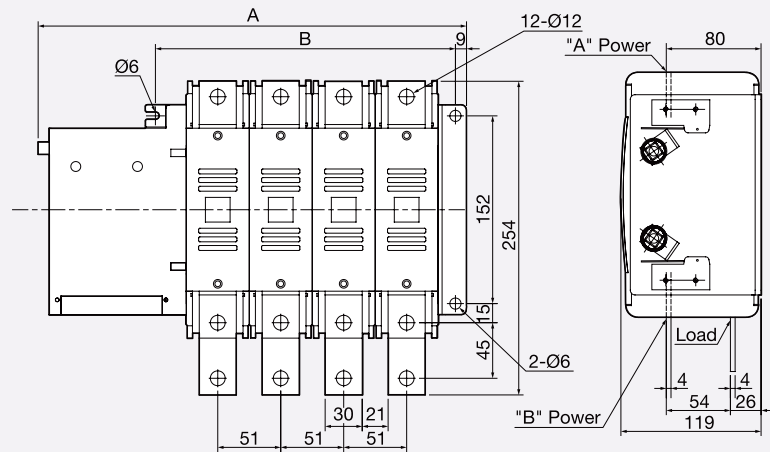
WN B-Type 400A

B60040WN

• Front

(Unit : mm)

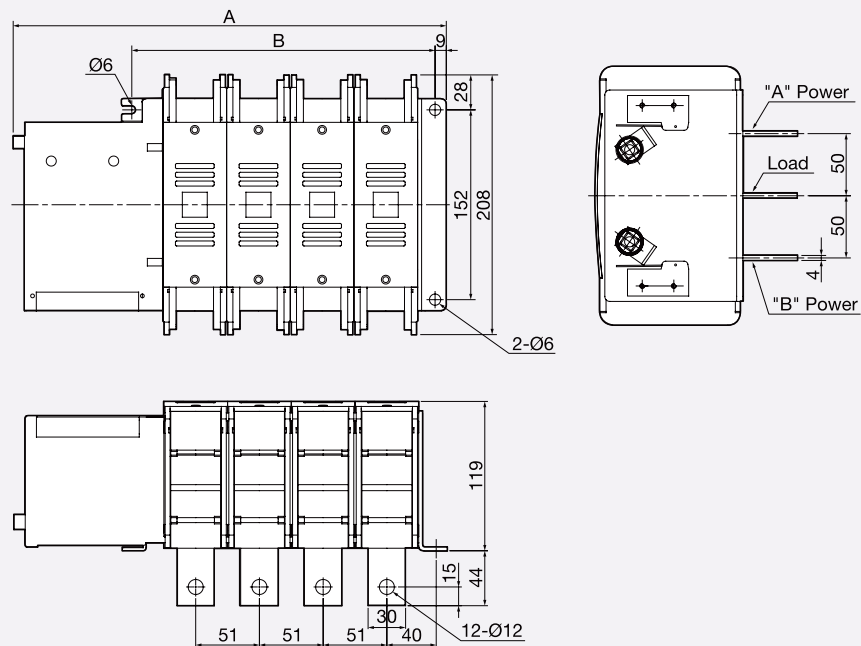
Pole	A	B
2P	245	141
3P	296	192
4P	347	243



• Back

(Unit : mm)

Pole	A	B
2P	254	141
3P	296	192
4P	347	243



External Sizes

Application

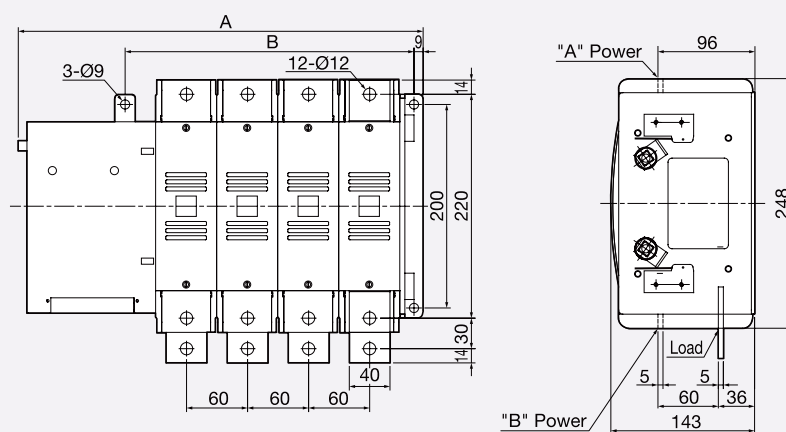
WN B-Type 600~630A

B60060WN / B60063WN

● Front

(Unit : mm)

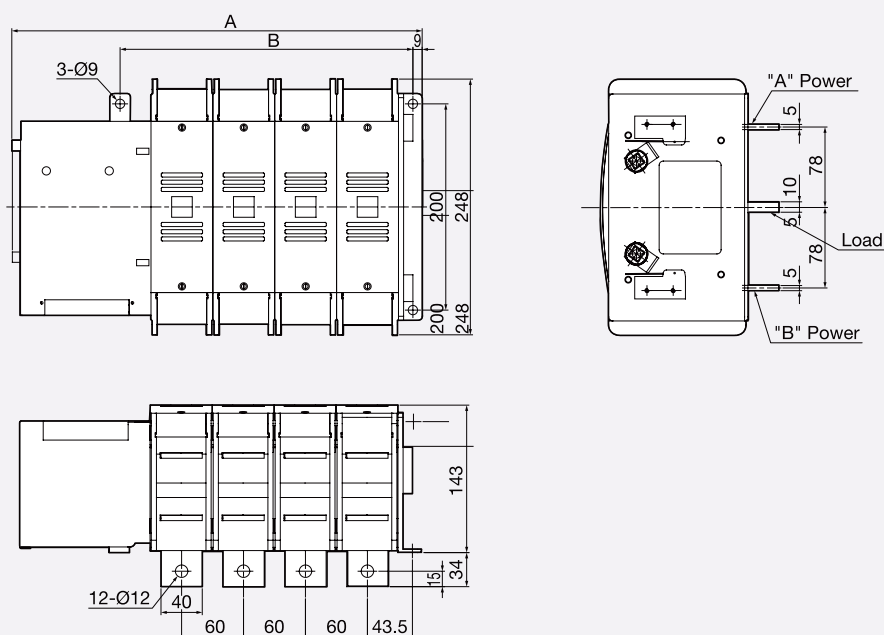
Pole	A	B
3P	340	224
4P	400	284



● Back

(Unit : mm)

Pole	A	B
3P	340	224
4P	400	284



External Sizes

Application

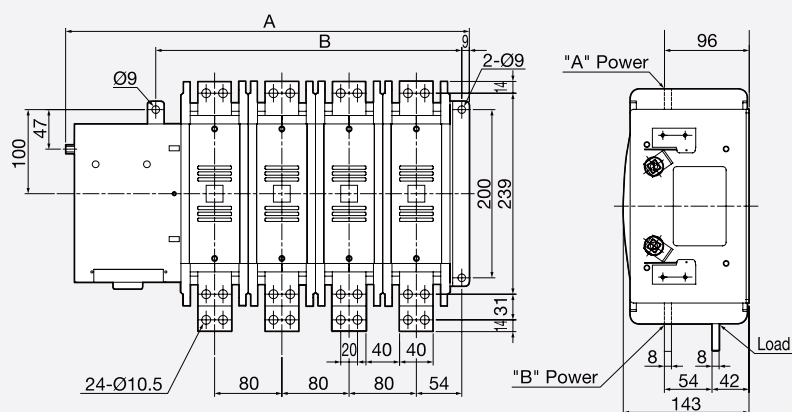
WN B-Type 800A

B60080WN

• Front

(Unit : mm)

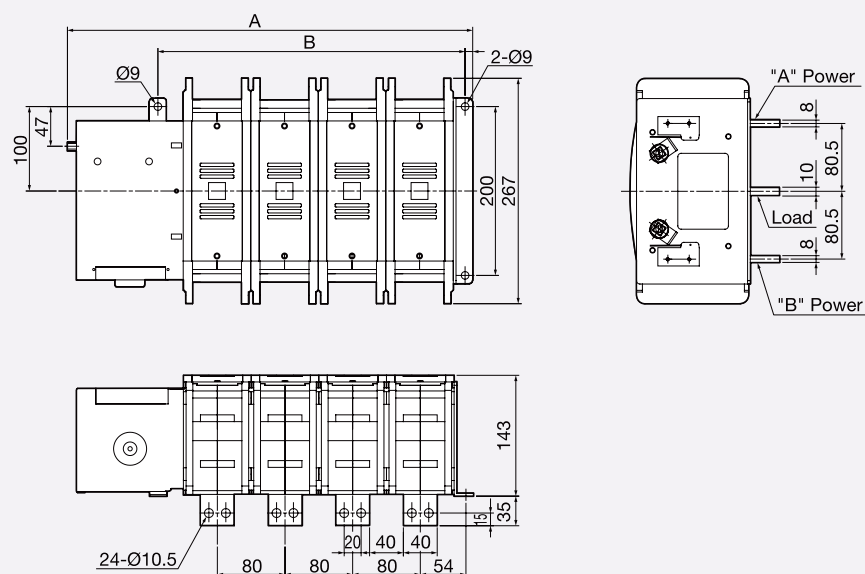
Pole	A	B
3P	400	284
4P	480	364



• Back

(Unit : mm)

Pole	A	B
3P	400	284
4P	480	364



External Sizes

Application

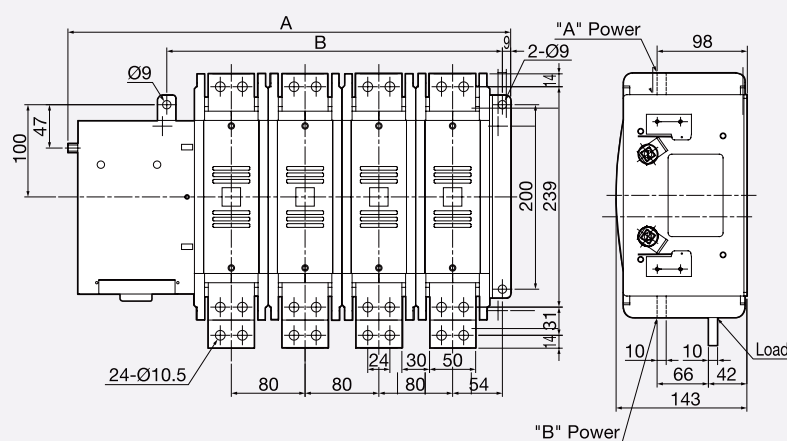
WN B-Type 1000A

B60100WN

• Front

(Unit : mm)

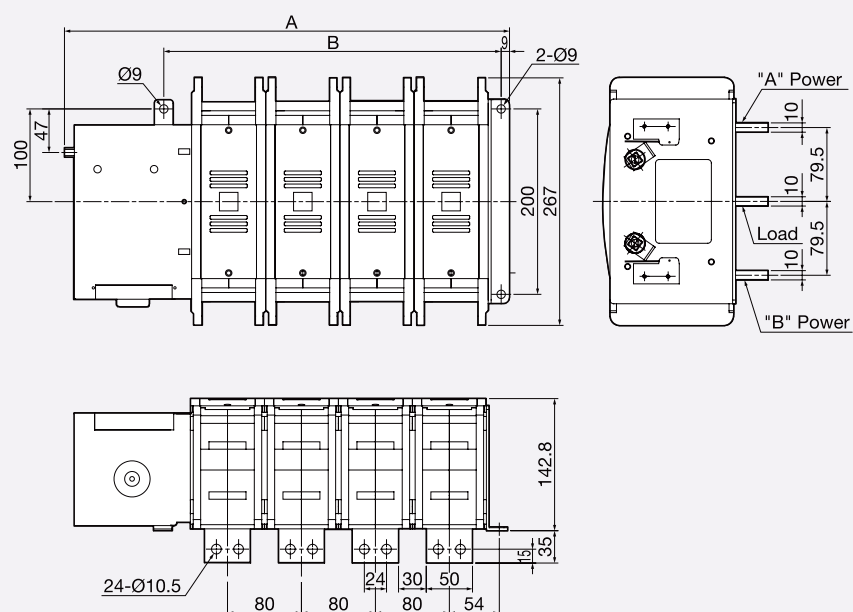
Pole	A	B
3P	400	284
4P	480	364



• Back

(Unit : mm)

Pole	A	B
3P	400	284
4P	480	364



External Sizes

Application

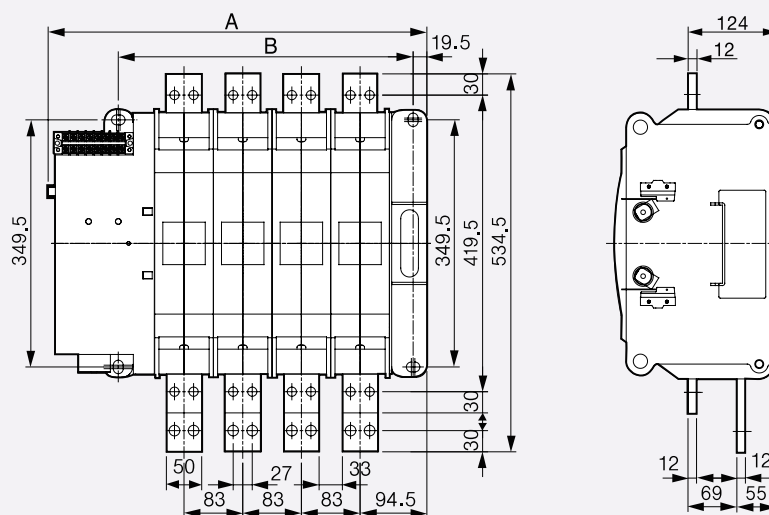
WN B-Type 1250A

B60125WN

• Front

(Unit : mm)

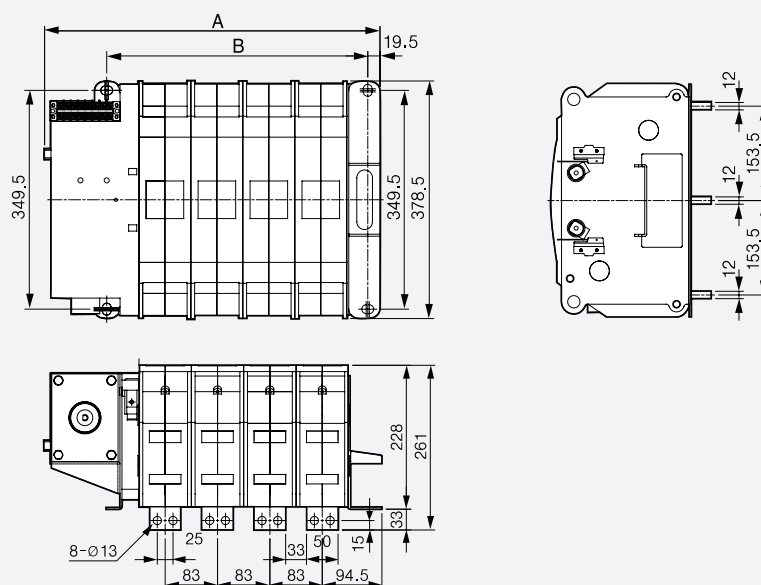
Pole	A	B
3P	452.5	334
4P	535.5	417



• Back

(Unit : mm)

Pole	A	B
3P	452.5	334
4P	535.5	417



External Sizes

Application

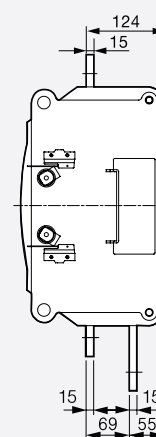
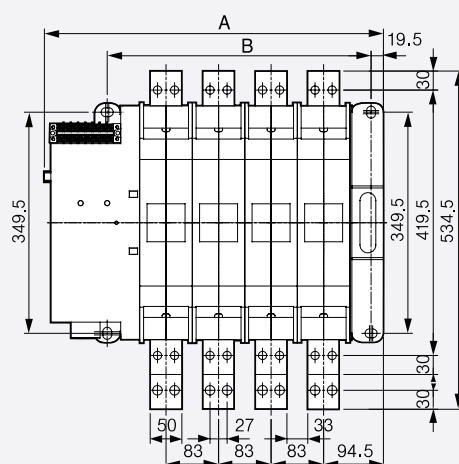
WN B-Type 1600A

B60160WN

• Front

(Unit : mm)

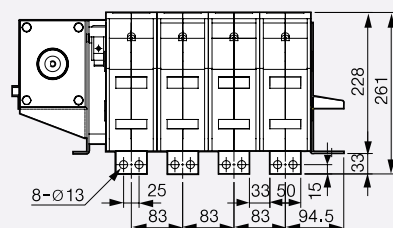
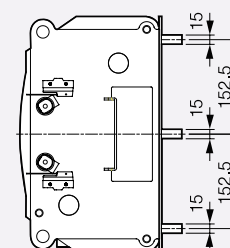
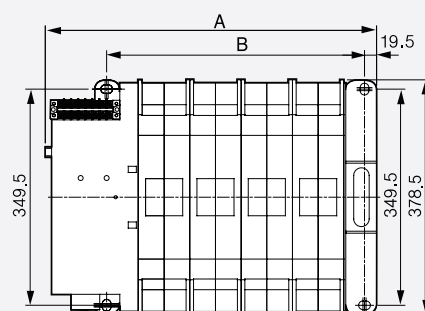
Pole	A	B
3P	452.5	334
4P	535.5	417



• Back

(Unit : mm)

Pole	A	B
3P	452.5	334
4P	535.5	417



External Sizes

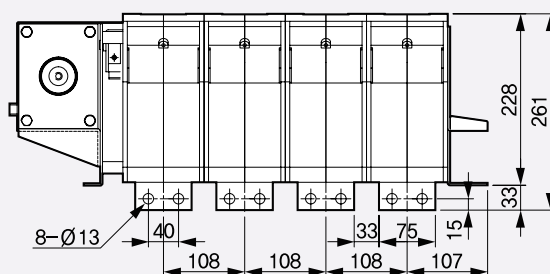
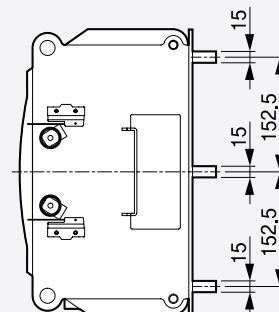
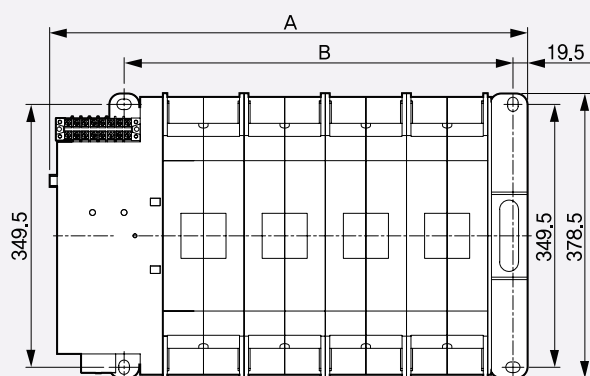
Application

WN B-Type 2000A
B60200WN

• Back

(Unit : mm)

Pole	A	B
3P	527.5	409
4P	635.5	517



External Sizes

Application

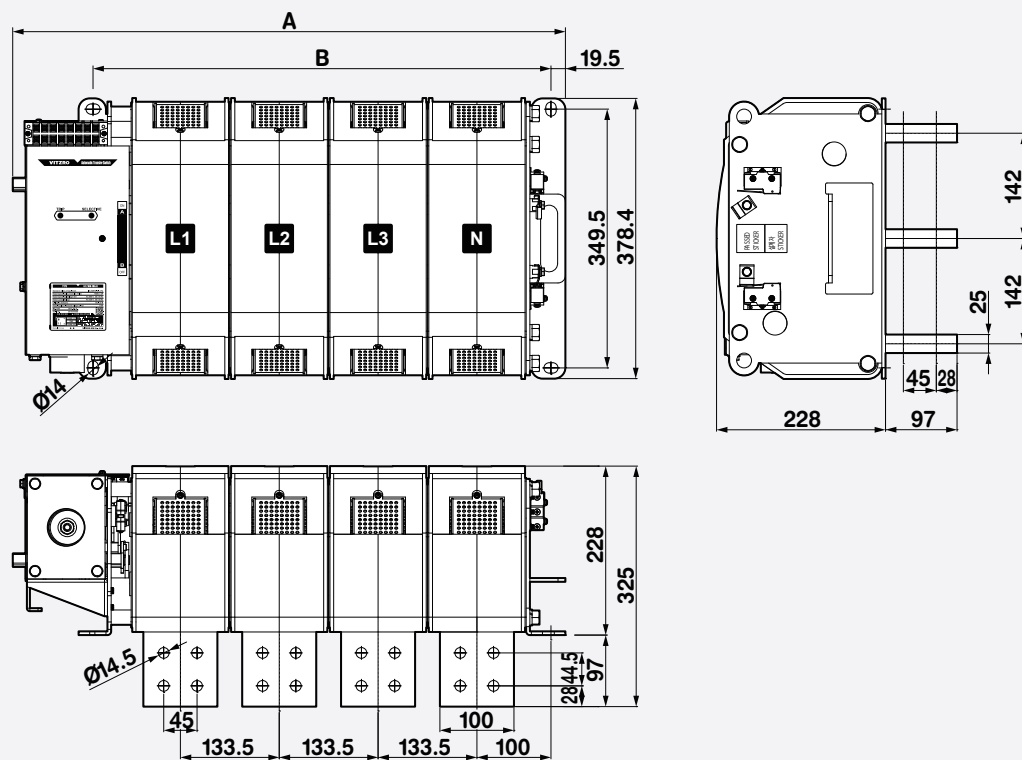
WN B-Type 2500A ~ 3000A

B60250WN, B60320WN

• Back

(Unit : mm)

Pole	A	B
3P	613	485
4P	746.5	618.5



External Sizes

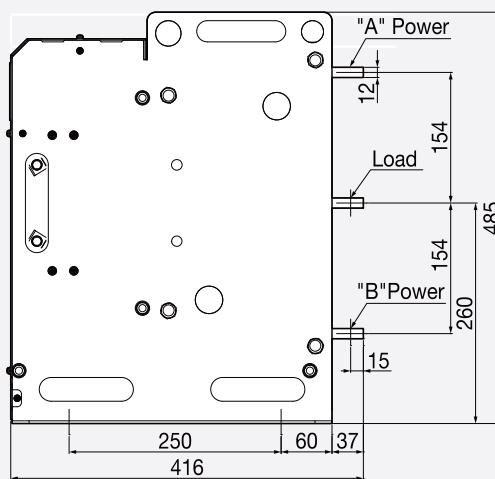
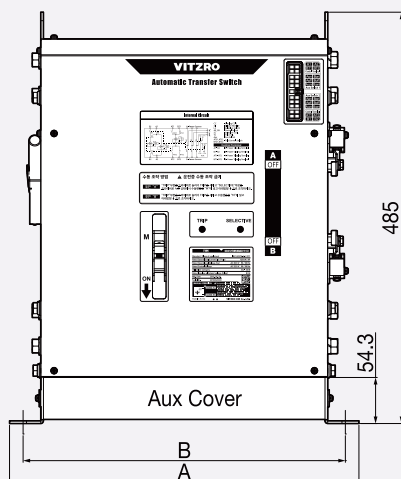
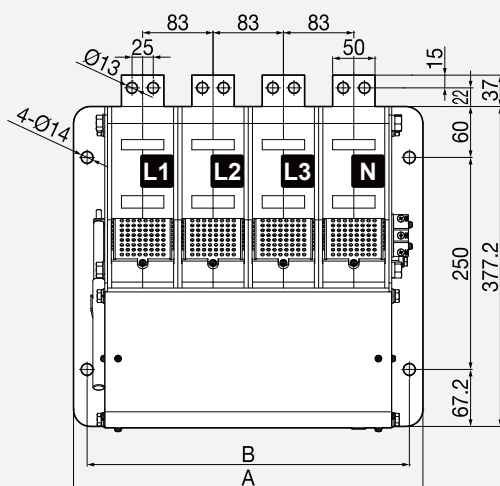
Application

WN C-Type 1200A~1600A
C60125WN / C60160WN

• Back

(Unit : mm)

Pole	A	B
3P	329	297
4P	412	380



External Sizes

Application

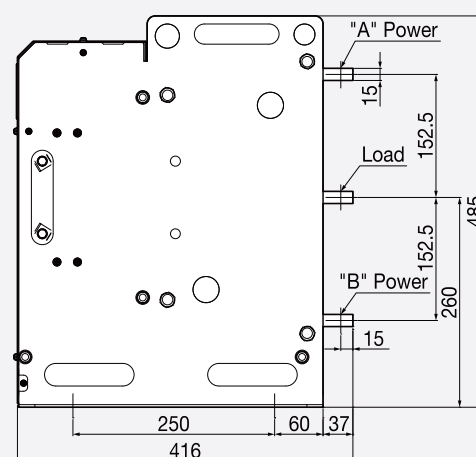
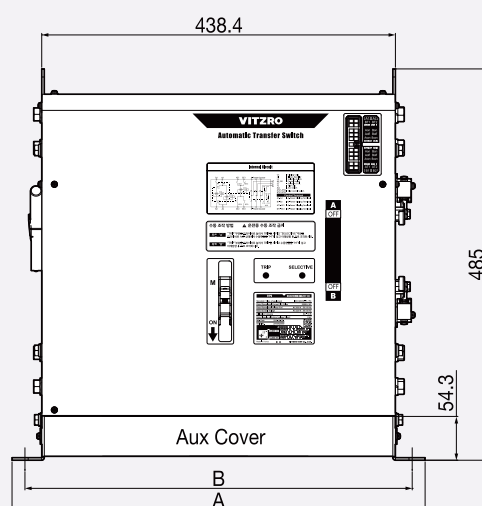
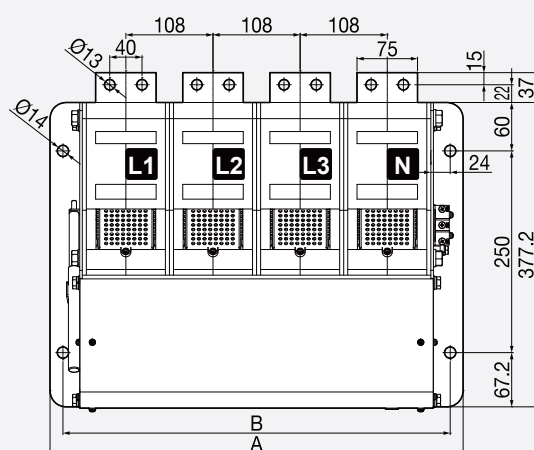
WN C-Type 2000A

C60200WN

- **Back**

(Unit : mm)

Pole	A	B
3P	404	372
4P	512	480



External Sizes

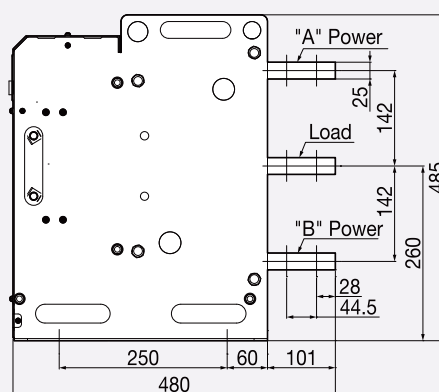
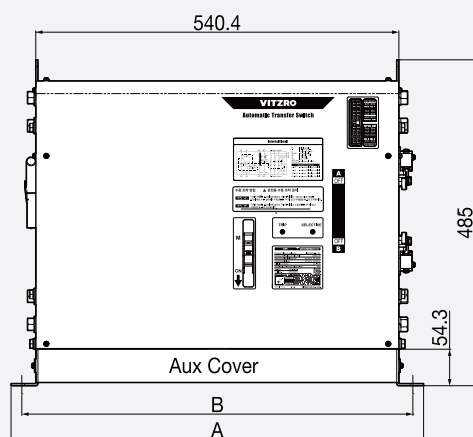
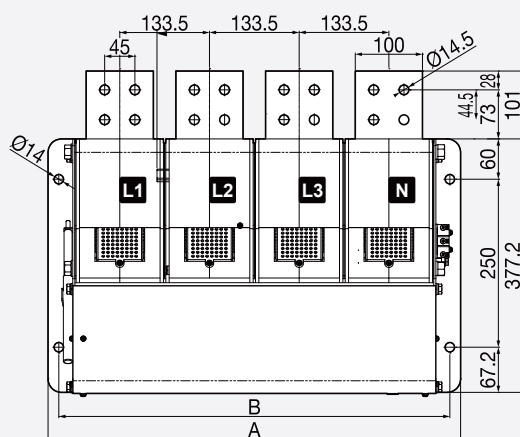
Application

WN C-Type 2500A~3200A
C60250WN / C60320WN

• Back

(Unit : mm)

Pole	A	B
3P	480	448.5
4P	614	582



Mounting Dimension

Application

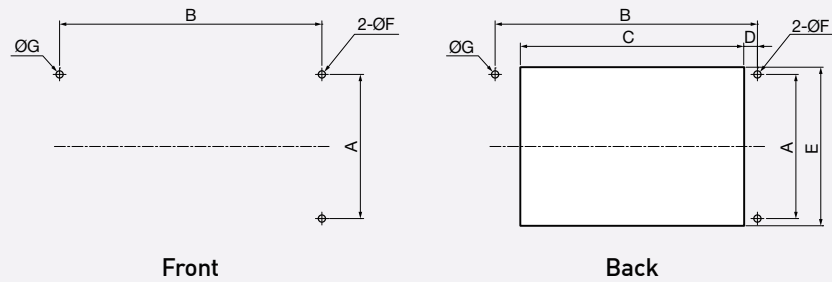
WN B-Type 100A~3200A

B60010WN / B60020WN / B60040WN / B60063WN / B60080WN / B60100WN / B60125WN / B60160WN / B60200WN / B60250WN / B60320WN

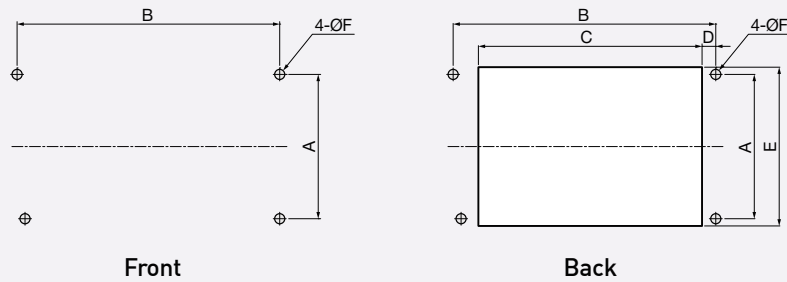
WN C-Type 1200A~3200A

C60125WN / C60160WN / C60200WN / C60250WN / B60320WN

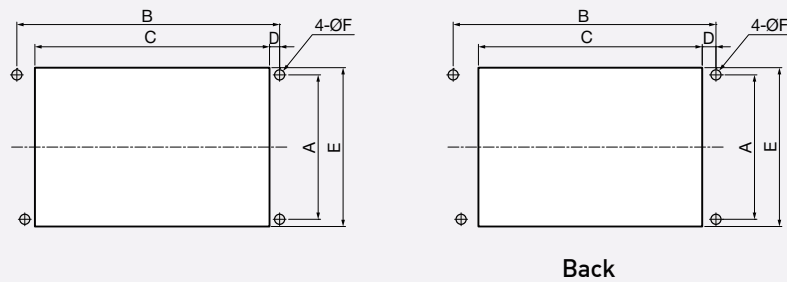
• WN B-Type 100A~1000A



• WN B-Type 1250A~3200A



• WN C-Type 1250A~3200A



Type	WN B-Type												WN C-Type		
	100~200A		400A		630A		800~1000A		1250A~1600A		2000A	2500A~3000A	1250A~1600A	2000A	2500A~3200A
	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Back	Back	Front	Back	Back
A	152	152	152	152	200	200	200	200	349.5	349.5	349.5	349.5	250	250	250
B	2P	111	111	141	141	-	-	-	-	-	-	-	-	-	-
	3P	147	147	192	192	224	224	284	284	334	334	409	482	297	372
	4P	183	183	243	243	284	284	364	364	417	417	517	617	380	480
C	2P	-	88	-	118	-	-	-	-	-	-	-	-	-	-
	3P	-	124	-	169	-	200	-	250	-	279	354	432	247	322
	4P	-	160	-	220	-	260	-	330	-	362	462	565	330	430
D	-	9.5	-	9.5	-	9	-	9	-	18.5	18.5	18.5	-	-	-
E	-	172	-	155	-	215	-	240	-	390	390	390	-	-	-
F	10	10	10	10	10	10	10	10	14	14	14	14	14	14	14
G	7	7	7	7	-	-	-	-	-	-	-	-	-	-	-

External Sizes

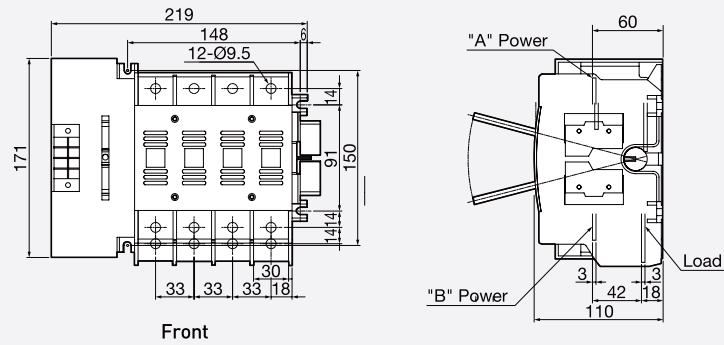
Application

W B-Type

B48010W / B48020W / B48040W

• W B-Type 100~200A

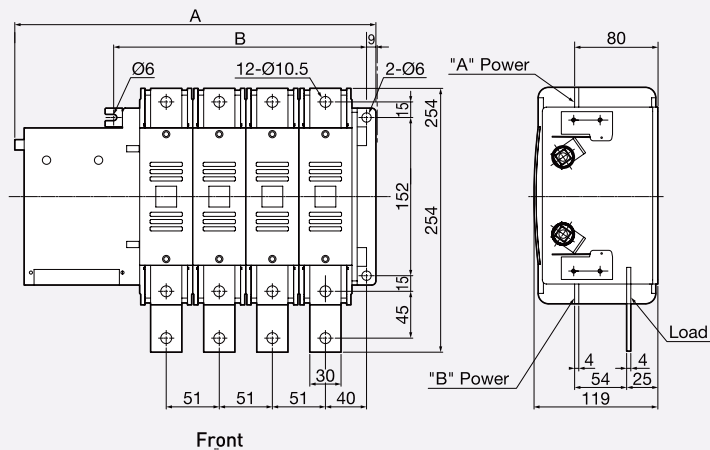
(Unit : mm)



• W B-Type 400A Front

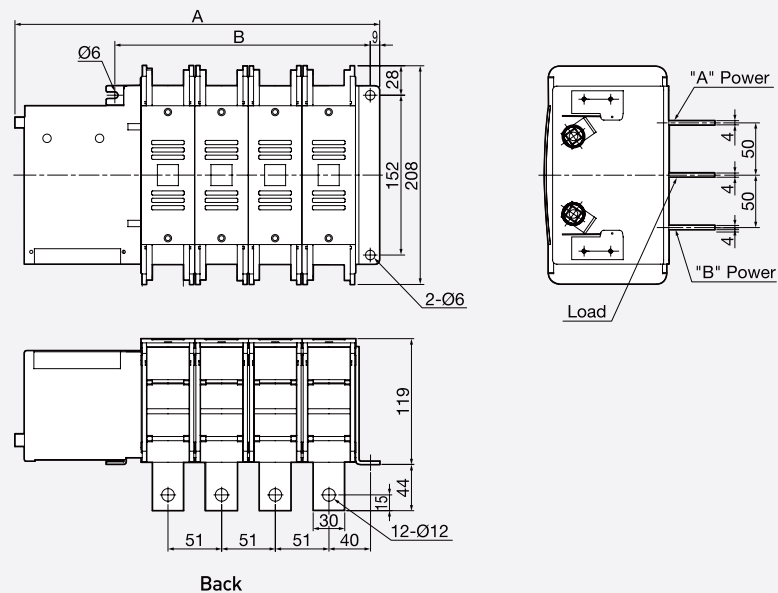
(Unit : mm)

Pole	A	B
2P	245	141
3P	296	192
4P	347	243



• W B-Type 400A Back

Pole	A	B
2P	245	141
3P	296	192
4P	347	243



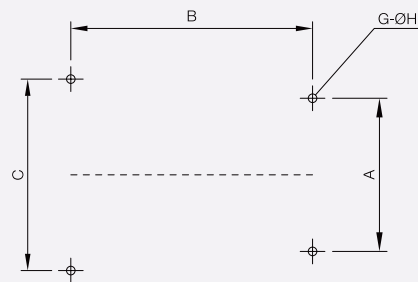
Mounting Dimension

Application

W B-Type

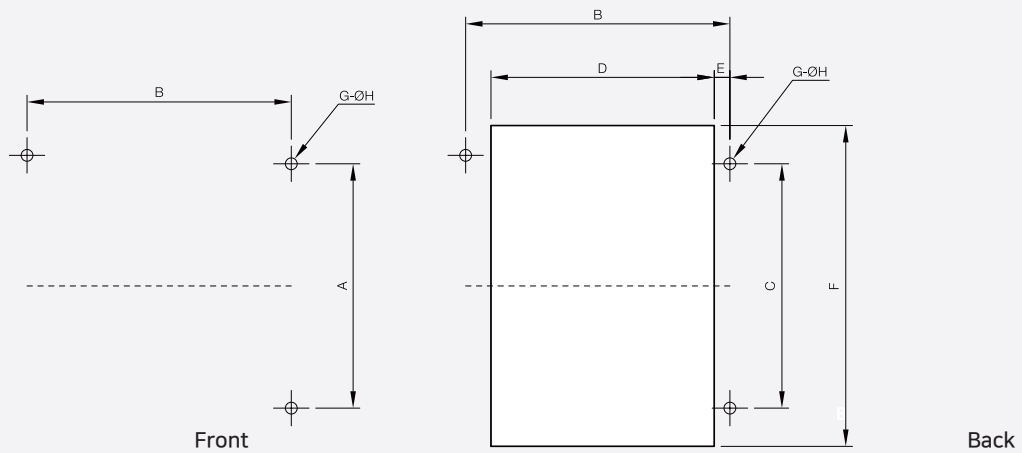
B48010W / B48020W / B48040W

• W B-Type 100A~200A



Front

• W B-Type 400A



Front

Back

Type	100~200A		400A	
		Front	Front	Back
A		91	152	-
B	2P	-	141	141
	3P	148	192	192
	4P	148	243	243
C		150	152	152
D	2P	-	-	170
	3P	-	-	170
	4P	-	-	220
E		-	-	9.5
F		-	-	155
G		4	3	3
H		9	9	9

External Sizes

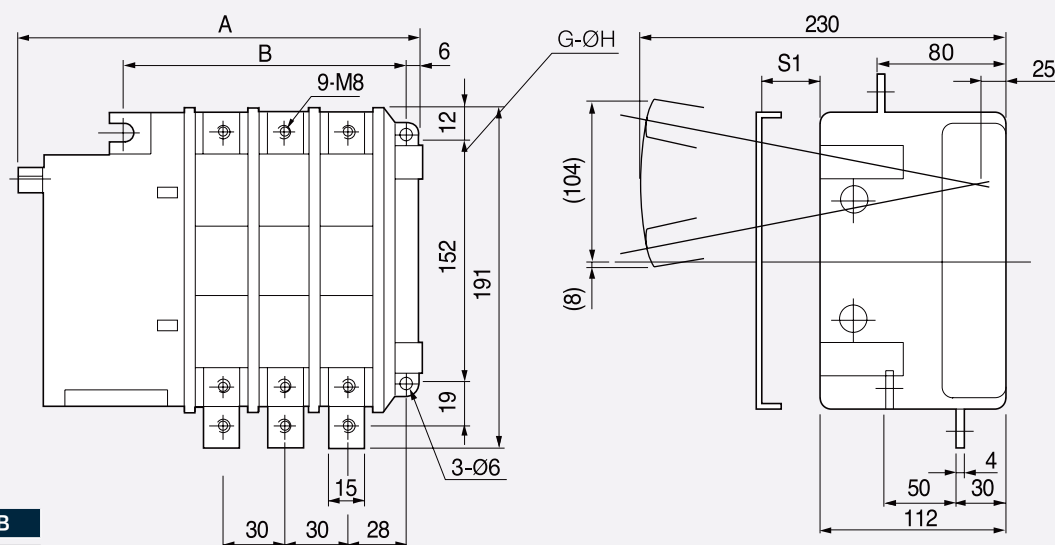
Application

WP 100A

60010WP

• Front

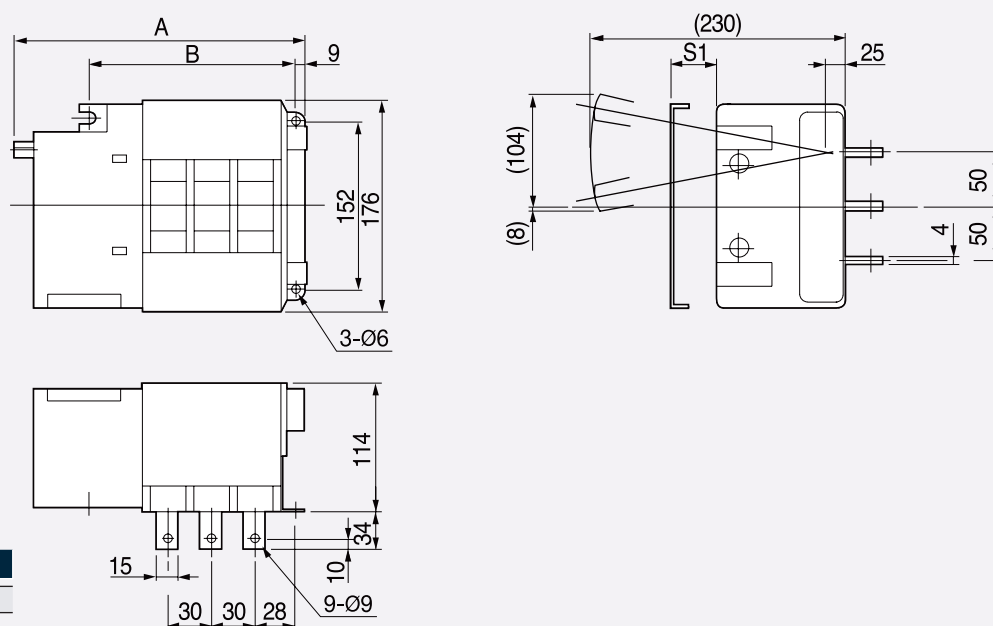
(Unit : mm)



Pole	A	B
2P	214	113
3P	244	143
4P	274	173

• Back

(Unit : mm)



Pole	A	B
2P	214	113
3P	244	143
4P	274	173

External Sizes

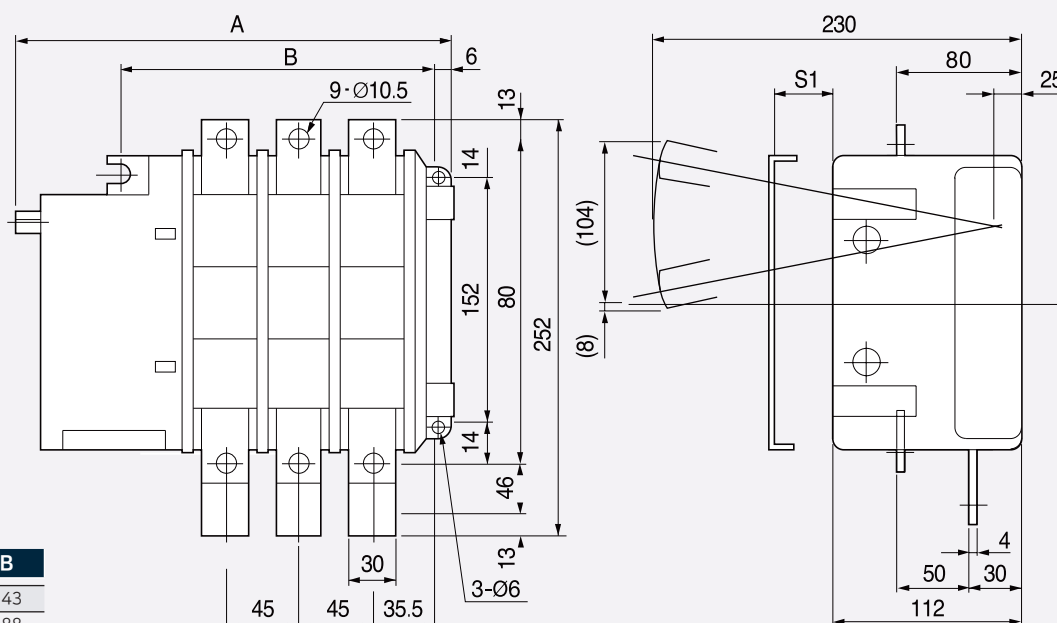
Application

WP 200A

60020WP

- **Front**

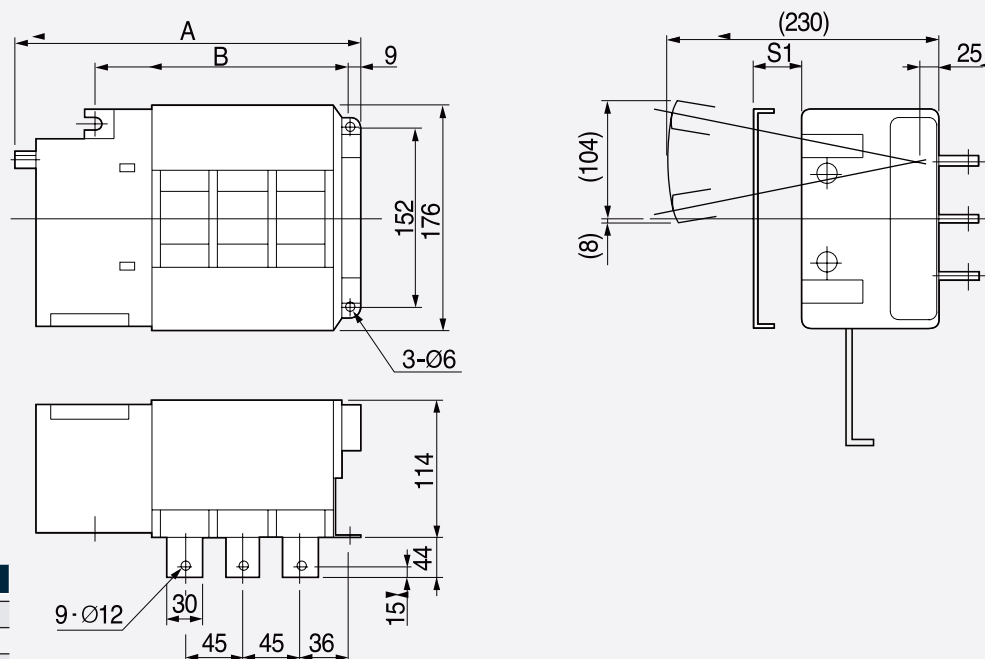
(Unit : mm)



Pole	A	B
2P	244	143
3P	289	188
4P	334	233

- **Back**

(Unit : mm)



Pole	A	B
2P	244	143
3P	289	188
4P	334	233

External Sizes

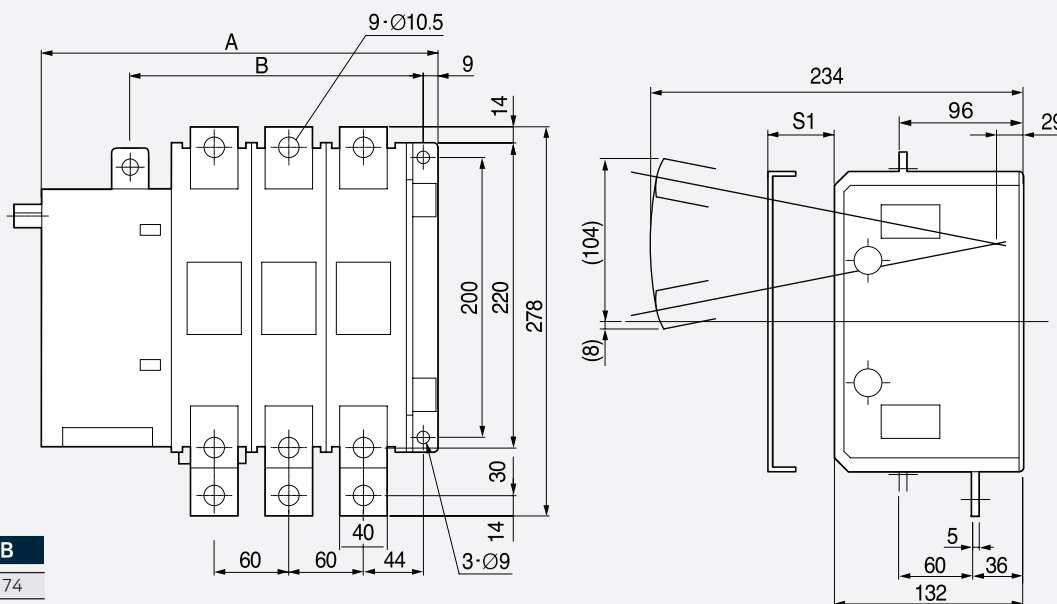
Application

WP 400A

60040WP

• Front

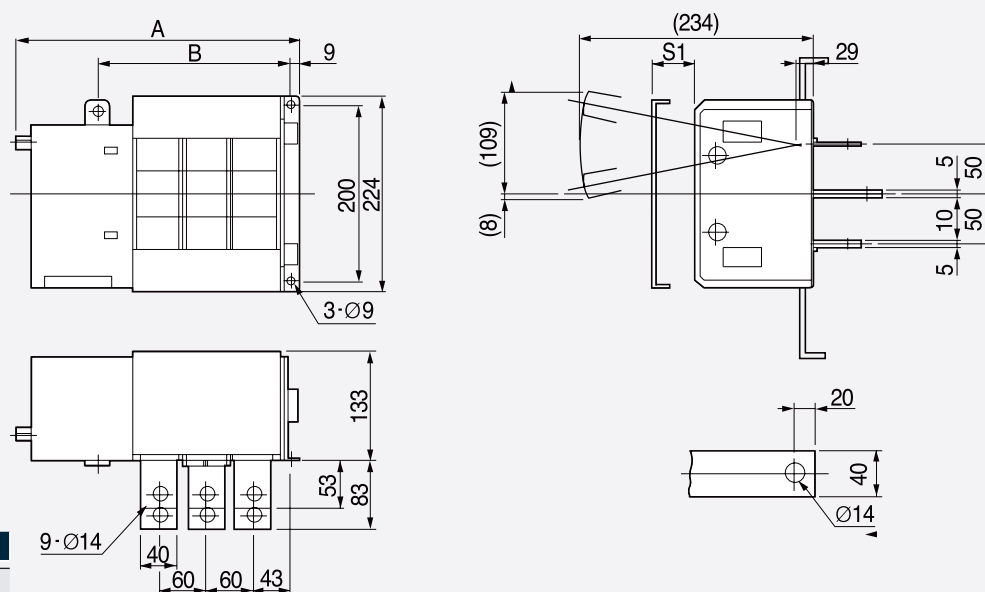
(Unit : mm)



Pole	A	B
2P	290	174
3P	350	234
4P	410	294

• Back

(Unit : mm)



Pole	A	B
2P	290	174
3P	350	234
4P	410	294

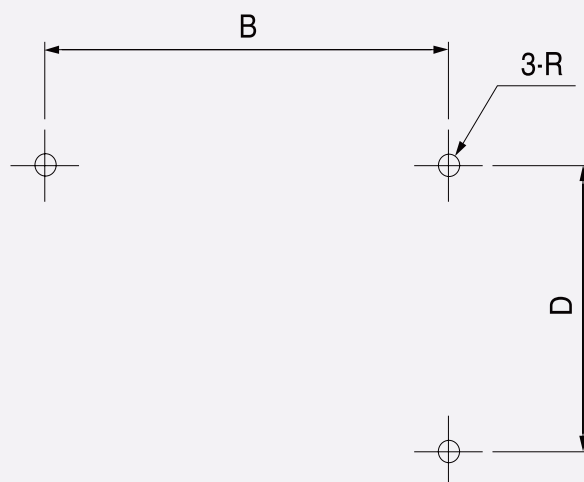
Mounting Dimension

Application

WP 100A~400A

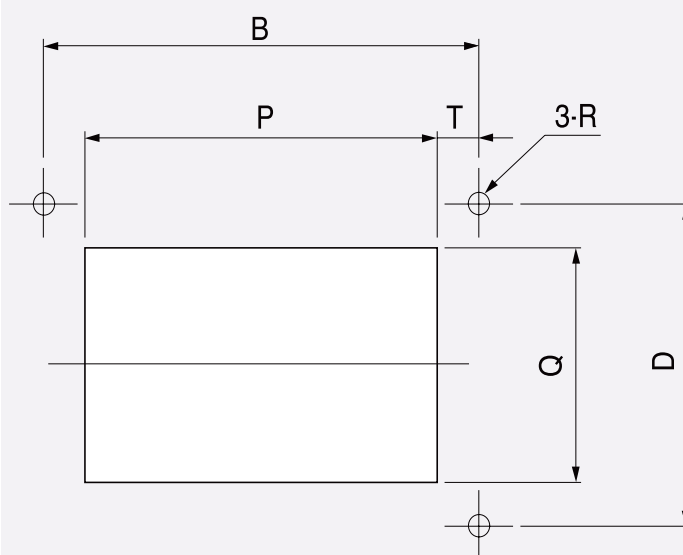
60010WP / 60020WP / 60040WP

• Front



Type	100A	200A	400A
B	2P	113	143
	3P	148	188
	4P	173	233
D	152	152	200
R	M5		M8

• Back



Type	100A	200A	400A
B	2P	113	143
	3P	143	188
	4P	173	233
D	152	152	200
P	2P	85	110
	3P	115	155
	4P	145	200
Q	140		180
T	7.5		9
R	M5		M8

External Sizes

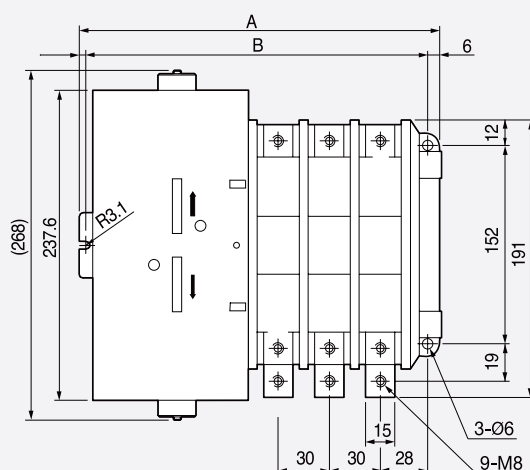
Application

CTTS 100A~200A

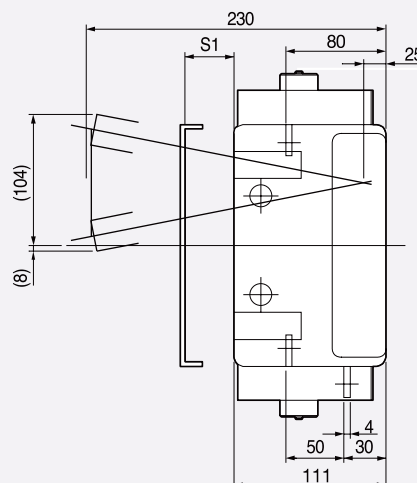
60010CTTS / 60020CTTS

• 100A Front

(Unit : mm)

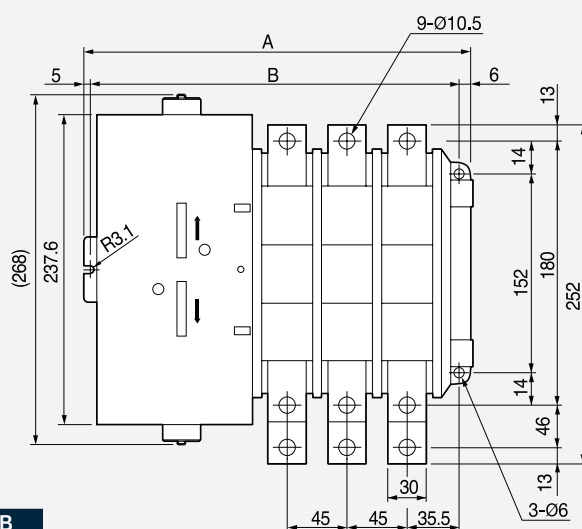


Pole	A	B
2P	210.8	199.8
3P	240.8	229.8
4P	270.8	259.8

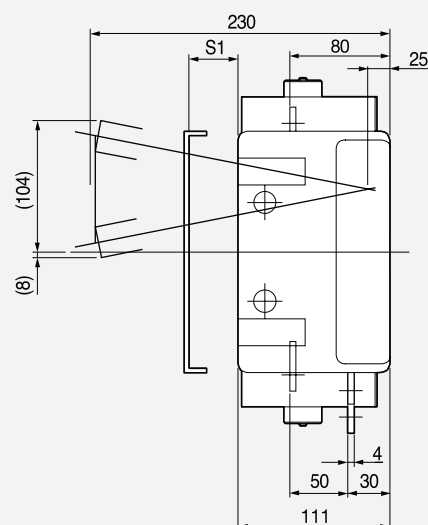


• 200A Front

(Unit : mm)



Pole	A	B
2P	240.8	229.8
3P	285.8	274.8
4P	330.8	319.8



External Sizes

Application

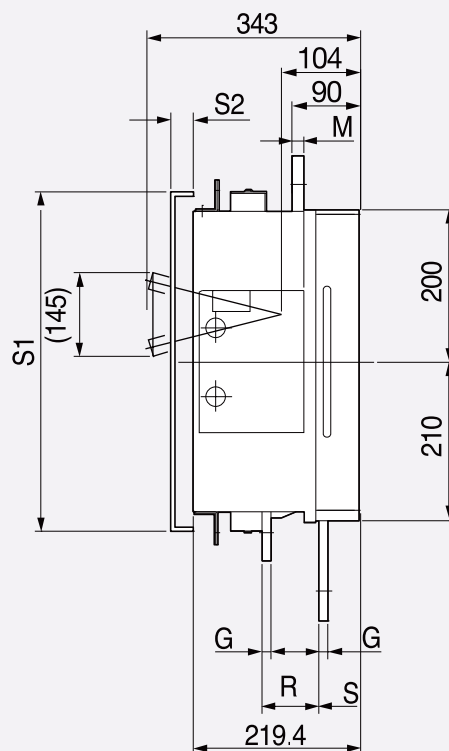
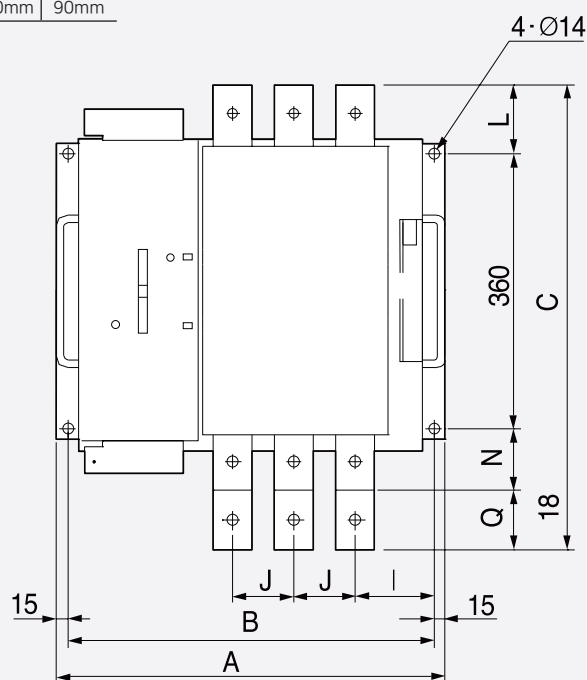
CTTS 600A~1600A

60063CTTS / 600800CTTS / 60100CTTS / 60125CTTS / 60160CTTS

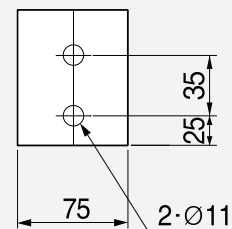
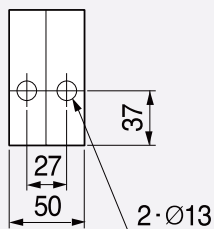
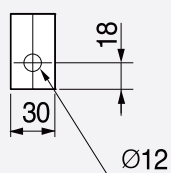
• Front

(Unit : mm)

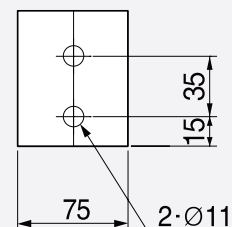
Main Circuit Voltage	S1	S2
200V	430mm	25mm
600V	450mm	90mm



600A



Type		630A	800A	1000A	1250A	1600A
A	3P	465	510	570		
	4P	530	590	670		
B	3P	435	480	540		
	4P	500	560	640		
C		545	607	644		
G		10	12	15		
I		95	103	112.5		
J		65	80	100		
L		70	90	109		
M		15	15	15		
N		71	79	66		
Q		44	79	66		
R		75	75	75		
S		55	55	55		



External Sizes

Application

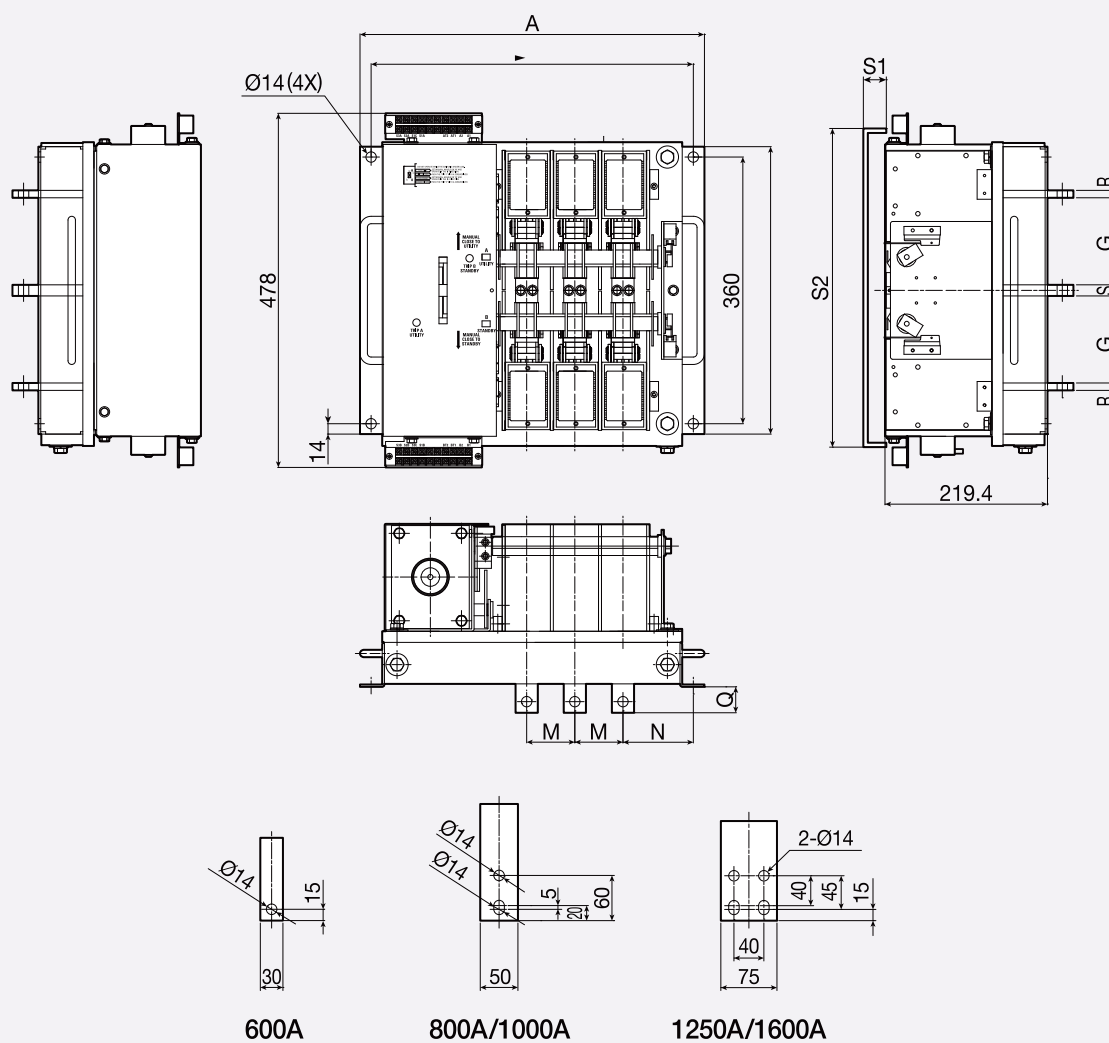
CTTS 600A~1600A

60063CTTS / 600800CTTS / 60100CTTS / 60125CTTS / 60160CTTS

• Back

(Unit : mm)

Main Circuit Voltage	S1	S2
200V	26mm	430mm
600V	90mm	450mm



Type		630A	800A	1000A	1250A	1600A
A	3P	465	510	570		
	4P	530	590	670		
B	3P	435	480	540		
	4P	500	560	640		
G		117.5	116.5	116.5		
M		65	80	100		
N		95	103	112.5		
Q		35	80	80		
R		10	15	15		
S		15	15	15		

External Sizes

Application

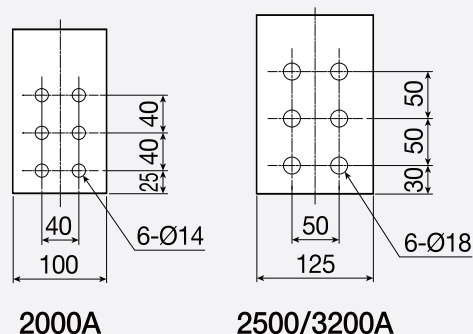
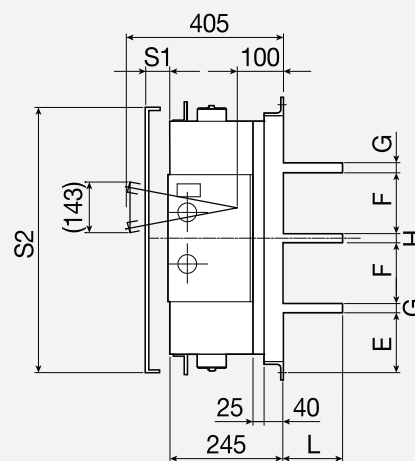
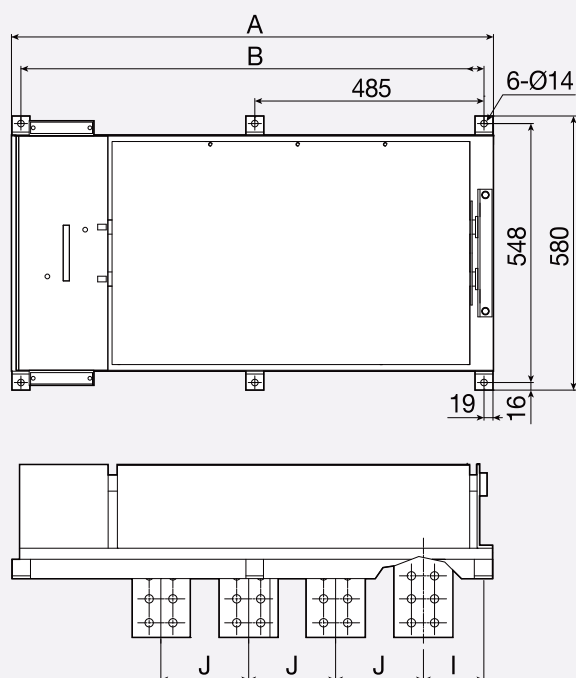
CTTS 2000A~3200A

60200CTTS / 600250CTTS / 60320CTTS

• Back

(Unit : mm)

Main Circuit Voltage	S1	S2
200V	50mm	560mm
600V	100mm	600mm



Type		2000A	2500A	3200A
A	3P	685		835
	4P	820		1020
B	3P	645		795
	4P	780		980
E		119		114
F		132.5		130
G		15		20
H		15		20
I		103		128
J		135		185
L		90		125

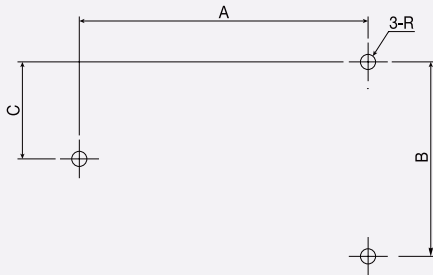
Mounting Dimension

Application

CTTS 100A~3200A

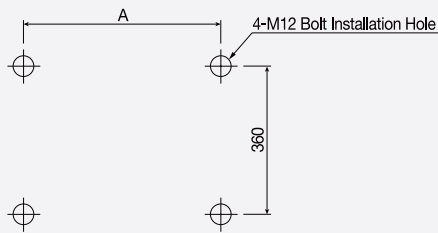
60010CTTS / 60020CTTS / 60040CTTS / 60063CTTS / 60080CTTS / 60100CTTS
60125CTTS / 60160CTTS / 60200CTTS / 60250CTTS / 60320CTTS

• Front 100A~400A



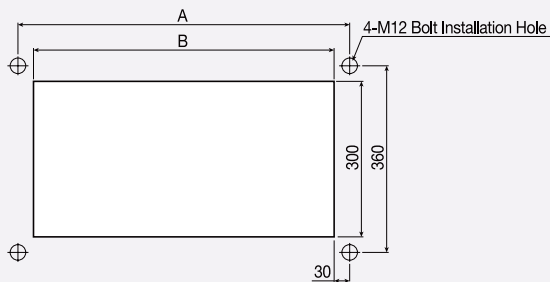
Type		100A	200A	400A
A	2P	199.8	229.8	278.5
	3P	229.8	274.8	338.5
	4P	259.8	319.8	398.5
B		152		200
C		76		100
R		M5		M8

• Front 600A~1600A



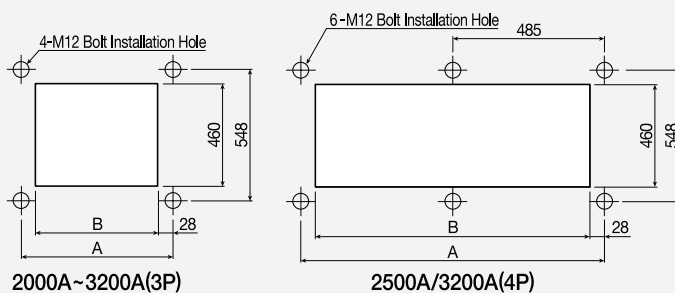
Type		630A	800A	1000A	1250A	1600A
A	3P	435	480	540		
	4P	500	560	640		

• Back 600A~1600A



Type		630A	800A	1000A	1250A	1600A
A	3P	435	480	540		
	4P	500	560	640		
B	3P	375	420	480		
	4P	440	500	580		

• Back 2000A~3200A



Type		2000A	2500A	3200A
A	3P	645	795	795
	4P	7800	980	980
B	3P	420	570	570
	4P	555	755	755



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Stores

* This manual is available on VITZRO EM's website.
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※ In the event of any problem or inconveniences related to our products, please contact VITZRO EM.