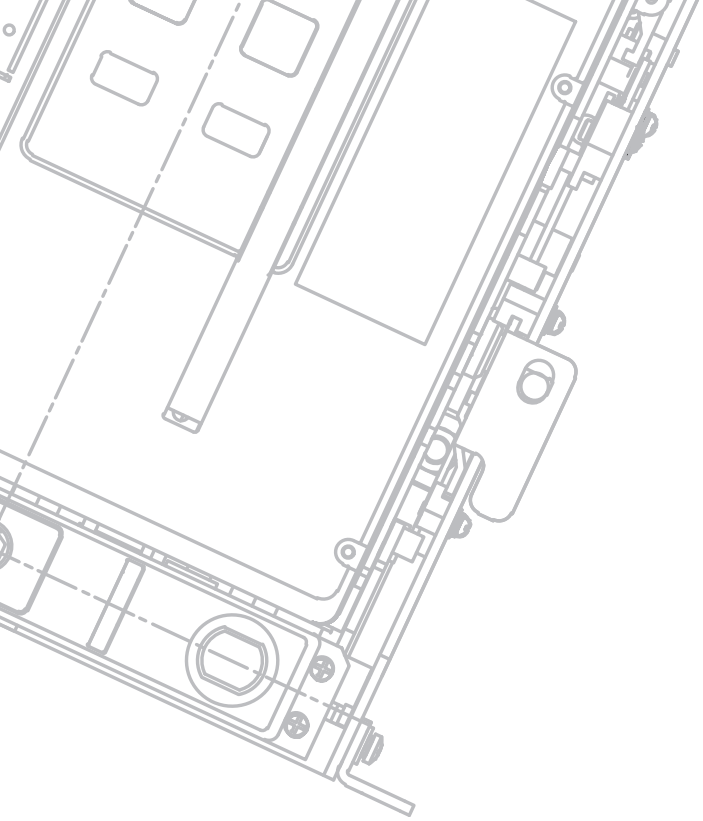
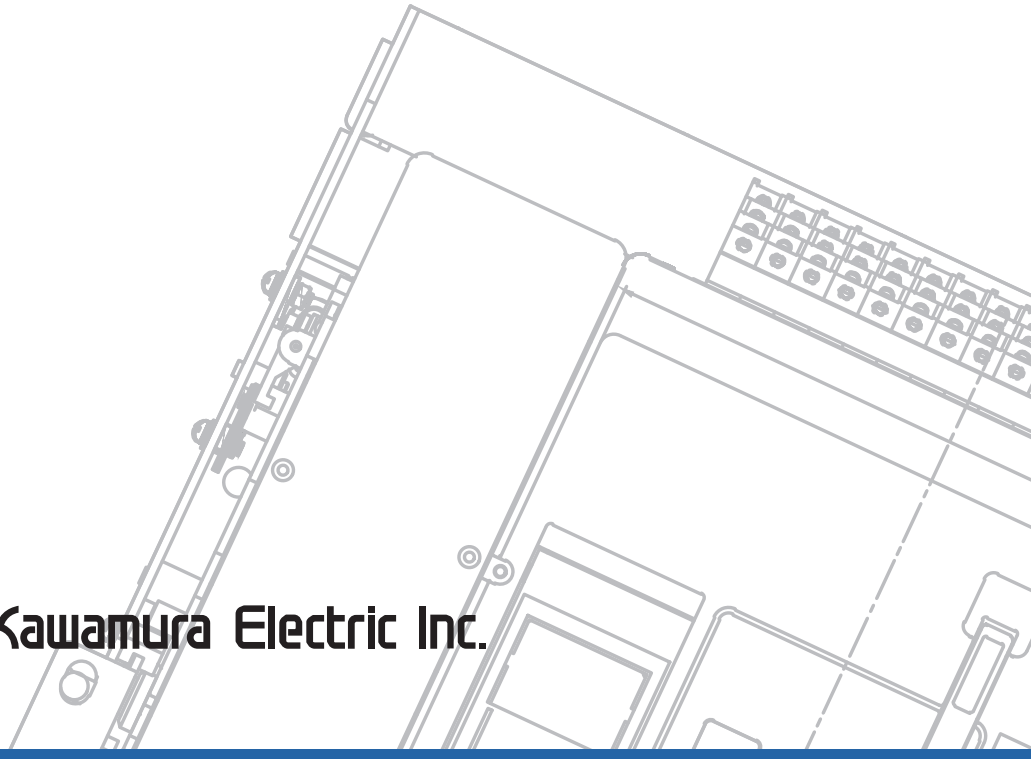
kawamura



ACB

Air Circuit Breaker



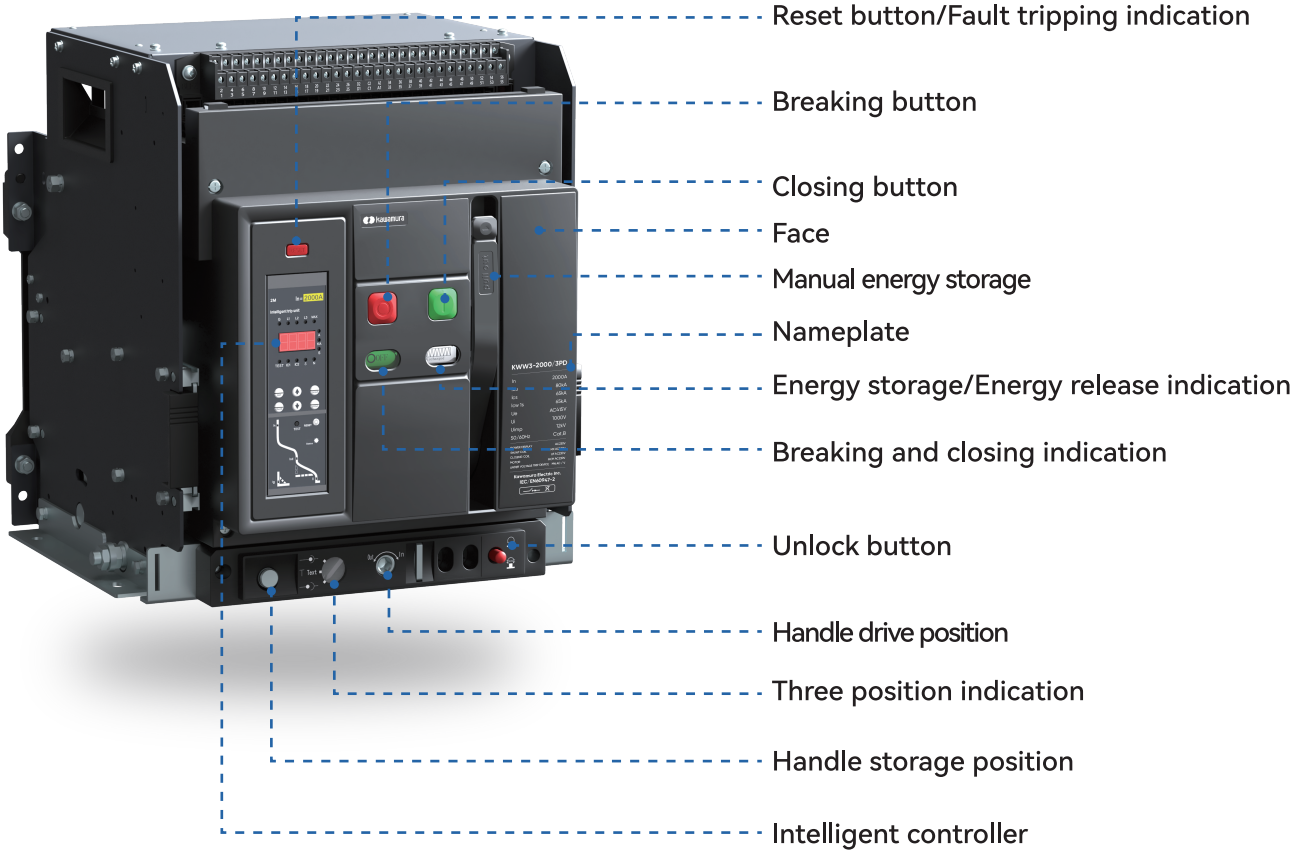
Kawamura Electric Inc.

Enterprise code	KW
Air circuit breaker	W
Design code	3
Frame Size	1600A,2000A,3200A,4000A,6300A,7500A
Number of pole	3P,4P

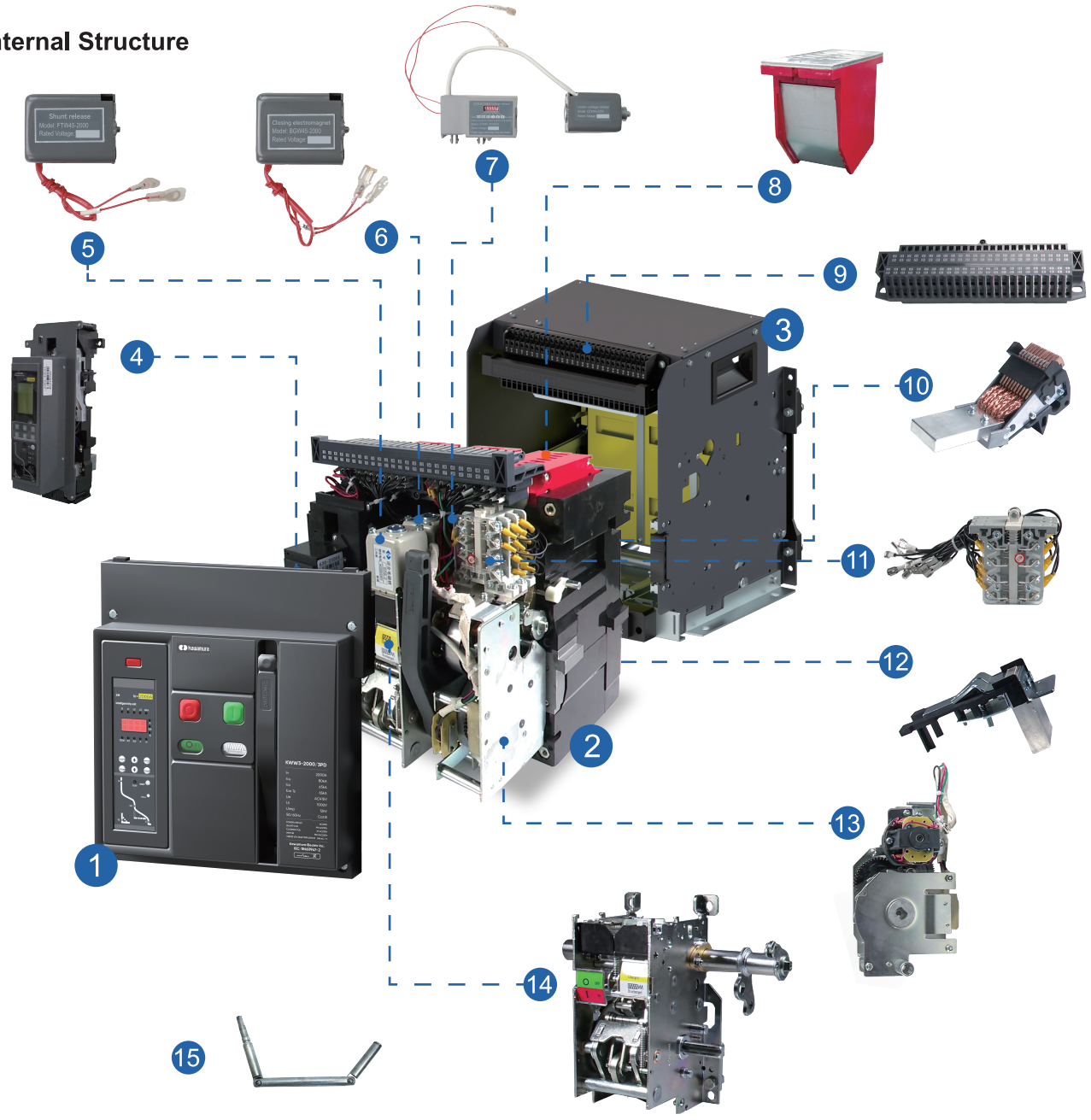
KW	W	3	-	□	/ □

Synopsis Of Structure

External Structure



■ Internal Structure



DRAW-OUT CIRCUIT BREAKER

1 Face	2 Body	3 Drawer base	4 Intelligent controller	5 Shunt release
6 Closing electromagnet	7 Under-voltage release	8 Arc chamber	9 Secondary terminals	10 Moving contact
11 Auxiliary switch	12 Fixed contact	13 Electric operating mechanism	14 Energy storage mechanism	15 Handle crank

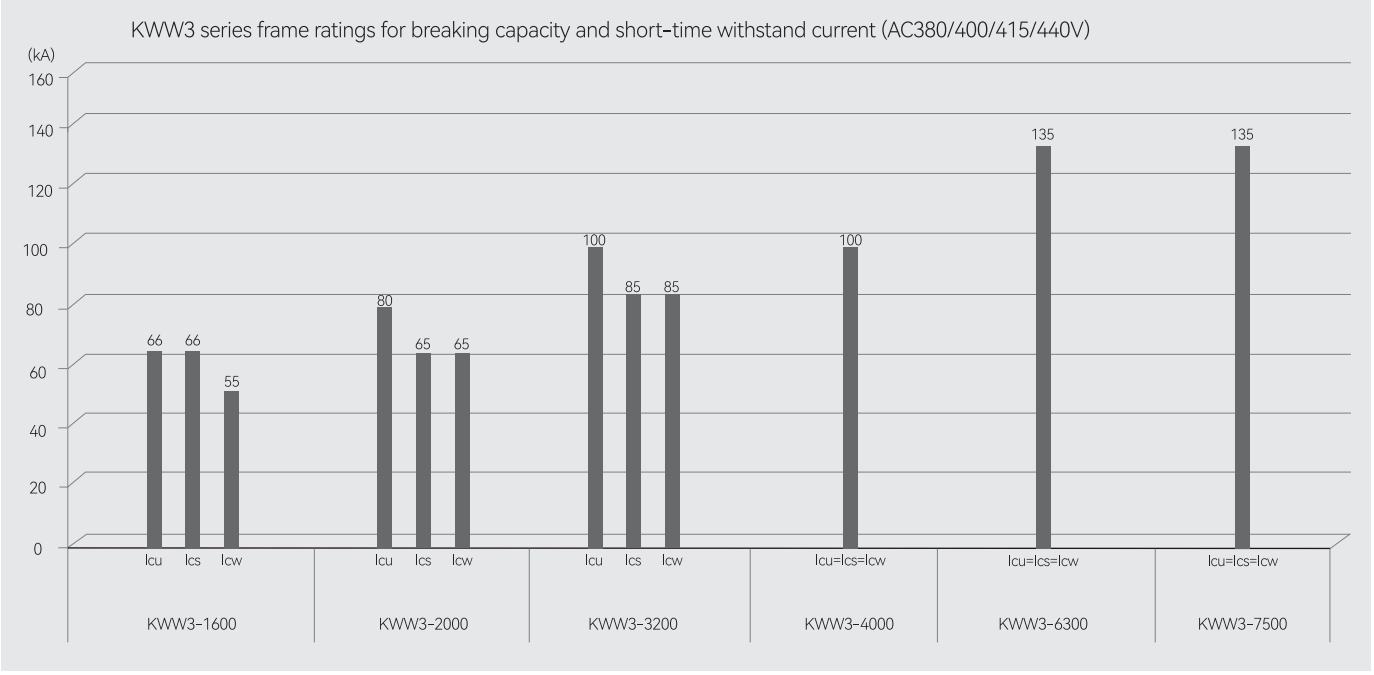
Overview

KWW3-1600	KWW3-2000	KWW3-3200	KWW3-4000	KWW3-6300	KWW3-7500
					

KWW3 series circuit breakers rated current

Rated current(A) / Frame grade	200	400	630	800	1000	1250	1600	2000	2500	2900	3000	3200	3600	4000	5000	6300	7500
KWW3-1600																	
KWW3-2000																	
KWW3-3200																	
KWW3-4000																	
KWW3-6300																	
KWW3-7500																	

KWW3 Series Circuit Breaker Interrupting Capacity and Short-Time Withstand Current



Ratings and Specifications

Frame Size			 Fixed type	 Drawout type
Characteristics			KWW3-1600	
Frame size rated current In(A)			1600	
Number of poles			3,4	
Rated current In(A)			200,400,630,800, 1000,1250,1600	
Rated voltage Ue(V)			50/60Hz, AC380/400/415/440	
Insulation voltage Ui(V)			1000	
Impulse withstand voltage Uimp(kV)			12	
Rated current of N-pole In(A)			100%In	
Ultimate breaking capacity Icu(kA)		380/400/415/440	66	
Operation breaking capacity Ics(kA)		380/400/415/440	66	
Short-time withstand current (1s) RMS Icw(kA)		380/400/415/440	55	
Opening Time(ms)			≤30	
Closing time(ms)			≤60	
Closing time(ms)	Electrical life		8000	
	Mechanical life	Maintenance free	15000	
		Maintenance required	30000	
Connection mode			Horizontal	
Overall dimension W . H . D (mm) Width·Height·Thickness		Fixed type 3P	262X310X199	
		Fixed type 4P	332X310X199	
		Drawout type 3P	302X345X297	
		Drawout type 4P	372X345X297	
Certification			DEKRA CE CB	

Ratings and Specifications

Frame Size			 Fixed type	 Drawout type
Characteristics			KWW3-2000	
Frame size rated current In(A)			2000	
Number of poles			3,4	
Rated current In(A)			630,800,1000, 1250,1600,2000	
Rated voltage Ue(V)			50/60Hz, AC380/400/415/440	
Insulation voltage Ui(V)			1000	
Impulse withstand voltage Uimp(kV)			12	
Rated current of N-pole In(A)			100%In	
Ultimate breaking capacity Icu(kA)		380/400/415/440	80	
Operation breaking capacity Ics(kA)		380/400/415/440	65	
Short-time withstand current (1s) RMS Icw(kA)		380/400/415/440	65	
Opening Time(ms)			≤30	
Closing time(ms)			≤60	
Closing time(ms)	Electrical life		8000	
	Mechanical life	Maintenance free	15000	
		Maintenance required	30000	
Connection mode			Horizontal	
Overall dimension W . H . D (mm) Width · Height · Thickness		Fixed type 3P	366X401X298	
		Fixed type 4P	461X401X298	
		Drawout type 3P	406X434X389	
		Drawout type 4P	501X434X389	
Certification			DEKRA CE CB	

Ratings and Specifications

Frame Size	 Fixed type	 Drawout type

Characteristics			KWW3-3200
Frame size rated current In(A)			3200
Number of poles			3,4
Rated current In(A)			1600,2000,2500, 2900,3000,3200
Rated voltage Ue(V)			50/60Hz, AC380/400/415/440
Insulation voltage Ui(V)			1000
Impulse withstand voltage Uimp(kV)			12
Rated current of N-pole In(A)			100%In
Ultimate breaking capacity Icu(kA)		380/400/415/440	100
Operation breaking capacity Ics(kA)		380/400/415/440	85
Short-time withstand current (1s) RMS Icw(kA)		380/400/415/440	85
Opening Time(ms)			≤30
Closing time(ms)			≤60
Closing time(ms)	Electrical life		7000
	Mechanical life	Maintenance free	10000
		Maintenance required	20000
Connection mode			Horizontal
Overall dimension W . H . D (mm) Width·Height·Thickness		Fixed type 3P	426X402X297
		Fixed type 4P	541X402X297
		Drawout type 3P	467X433X389
		Drawout type 4P	582X433X389
Certification			DEKRA CE CB

Ratings and Specifications

Frame Size	 Fixed type	 Drawout type

Characteristics			KWW3-4000
Frame size rated current In(A)			4000
Number of poles			3,4
Rated current In(A)			2000,2500,2900,3000, 3200,3600,4000
Rated voltage Ue(V)			50/60Hz, AC380/400/415/440
Insulation voltage Ui(V)			1000
Impulse withstand voltage Uimp(kV)			12
Rated current of N-pole In(A)			100%In
Ultimate breaking capacity Icu(kA)		380/400/415/440	100
Operation breaking capacity Ics(kA)		380/400/415/440	100
Short-time withstand current (1s) RMS Icw(kA)		380/400/415/440	100
Opening Time(ms)			≤30
Closing time(ms)			≤60
Closing time(ms)	Electrical life		6000
	Mechanical life	Maintenance free	10000
		Maintenance required	20000
Connection mode			Fixed Type Horizontal / Drawout Type Horizontal, Vertical
Overall dimension W . H . D (mm) Width·Height·Thickness		Fixed type 3P	421X400X303
		Fixed type 4P	536X400X303
		Drawout type 3P	475X430X414
		Drawout type 4P	590X430X414
Certification			DEKRA CE CB

Ratings and Specifications

Frame Size	 Fixed type	 Drawout type

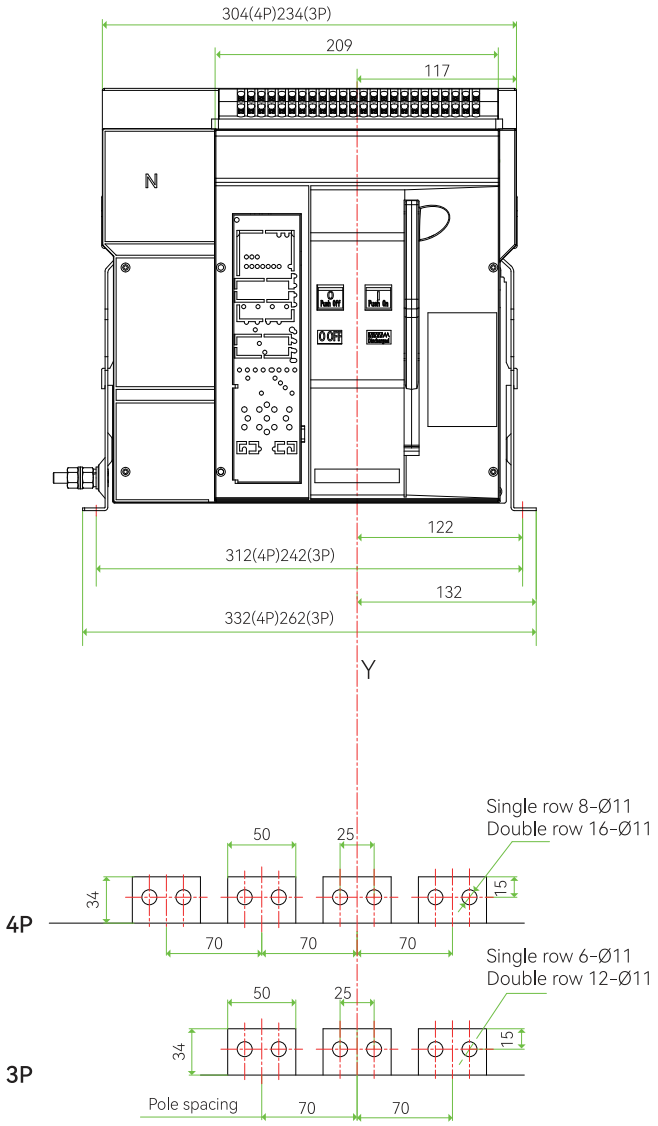
Characteristics			KWW3-6300
Frame size rated current In(A)			6300
Number of poles			3,4
Rated current In(A)			4000,5000,6300
Rated voltage Ue(V)			50/60Hz, AC380/400/415/440
Insulation voltage Ui(V)			1000
Impulse withstand voltage Uimp(kV)			12
Rated current of N-pole In(A)			50%In, 100%In
Ultimate breaking capacity Icu(kA)		380/400/415/440	135
Operation breaking capacity Ics(kA)		380/400/415/440	135
Short-time withstand current (1s) RMS Icw(kA)		380/400/415/440	135
Opening Time(ms)			≤30
Closing time(ms)			≤60
Closing time(ms)	Electrical life		2500
	Mechanical life	Maintenance free	10000
		Maintenance required	15000
Connection mode			4000,5000A Horizontal, Vertical / 6300A Vertical
Overall dimension W . H . D (mm) Width·Height·Thickness		Fixed type 3P	767X409.5X295
		Fixed type 4P(50%In)	882X409.5X295
		Fixed type 4P(100%In)	997X409.5X295
		Drawout type 3P	757X497X398
		Drawout type 4P(50%In)	872X497X398
		Drawout type 4P(100%In)	987X497X398
Certification			

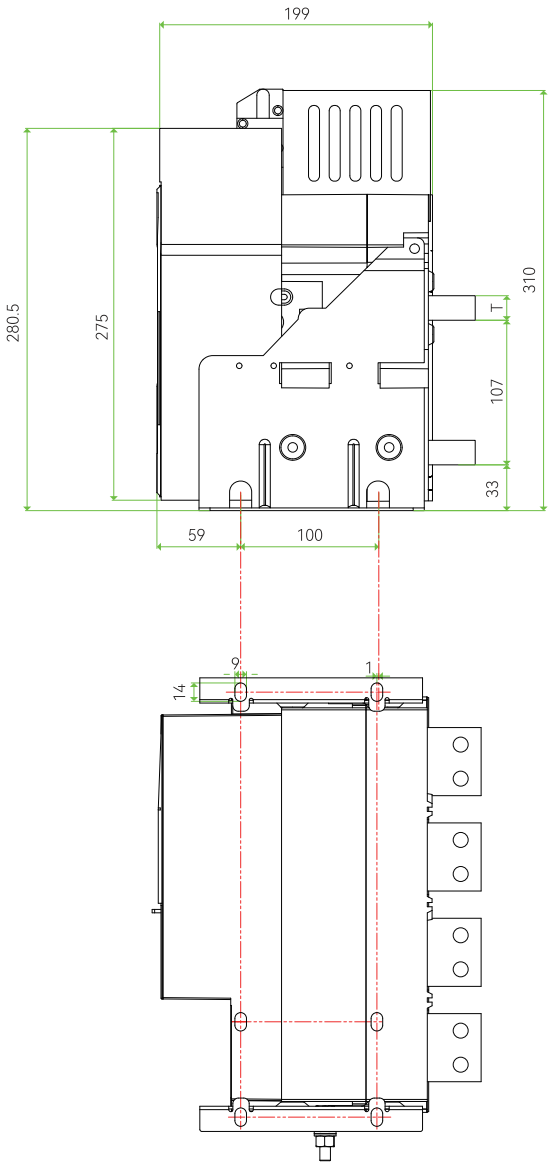
Ratings and Specifications

Frame Size			 Drawout type
Characteristics			KWW3-7500
Frame size rated current In(A)			7500
Number of poles			3,4
Rated current In(A)			5000,6300,7500
Rated voltage Ue(V)			50/60Hz, AC380/400/415/440
Insulation voltage Ui(V)			1250
Impulse withstand voltage Uimp(kV)			12
Rated current of N-pole In(A)			50%In
Ultimate breaking capacity Icu(kA)		380/400/415/440	135
Operation breaking capacity Ics(kA)		380/400/415/440	135
Short-time withstand current (1s) RMS Icw(kA)		380/400/415/440	135
Opening Time(ms)			≤30
Closing time(ms)			≤60
Closing time(ms)	Electrical life		2000
	Mechanical life	Maintenance free	8000
		Maintenance required	10000
Connection mode			5000,6300A Horizontal, Vertical / 7500A Vertical
Overall dimension W . H . D (mm) Width·Height·Thickness		Fixed type 3P	
		Fixed type 4P	
		Drawout type 3P	872X495X398
		Drawout type 4P	987X495X398
Certification			

Overall and Mounting Dimensions

KWW3-1600/200A-1600A ACB Fixed Type

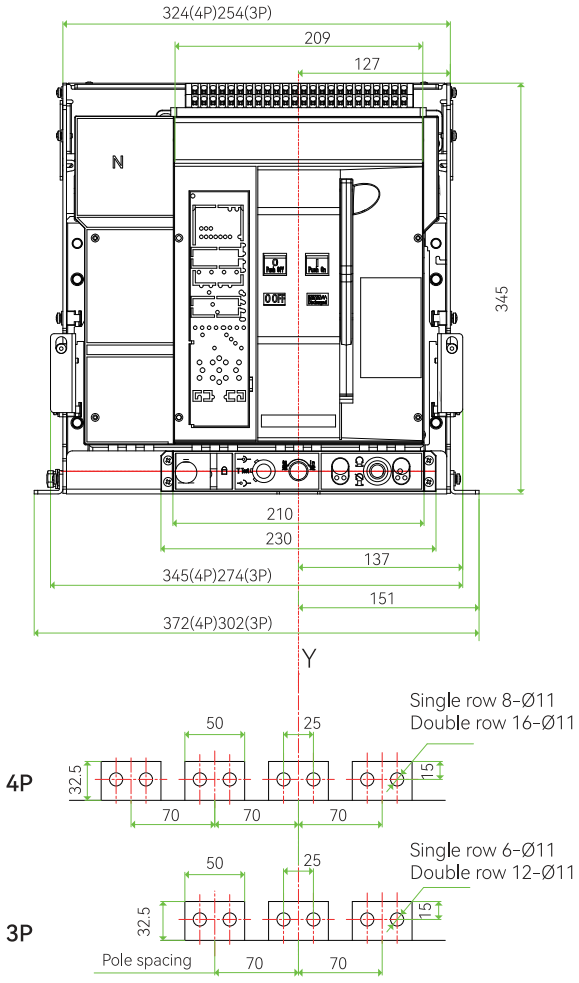


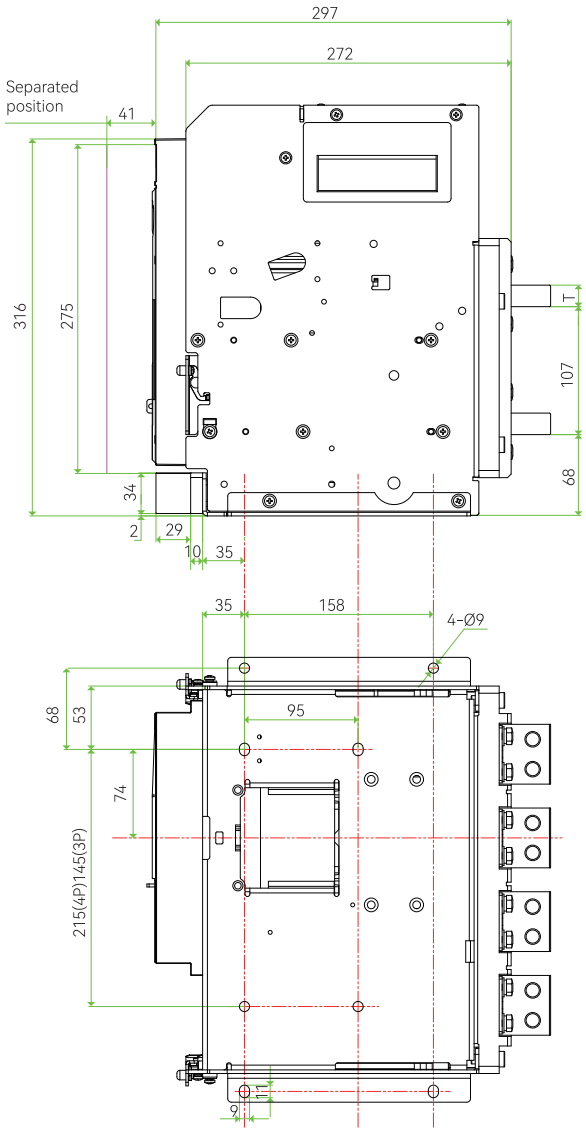


Rated current In(A)	Dimensions T(mm)
200,400,630,800,1000	10
1250,1600	18

Overall and Mounting Dimensions

KWW3-1600/200A-1600A ACB Drawout Type

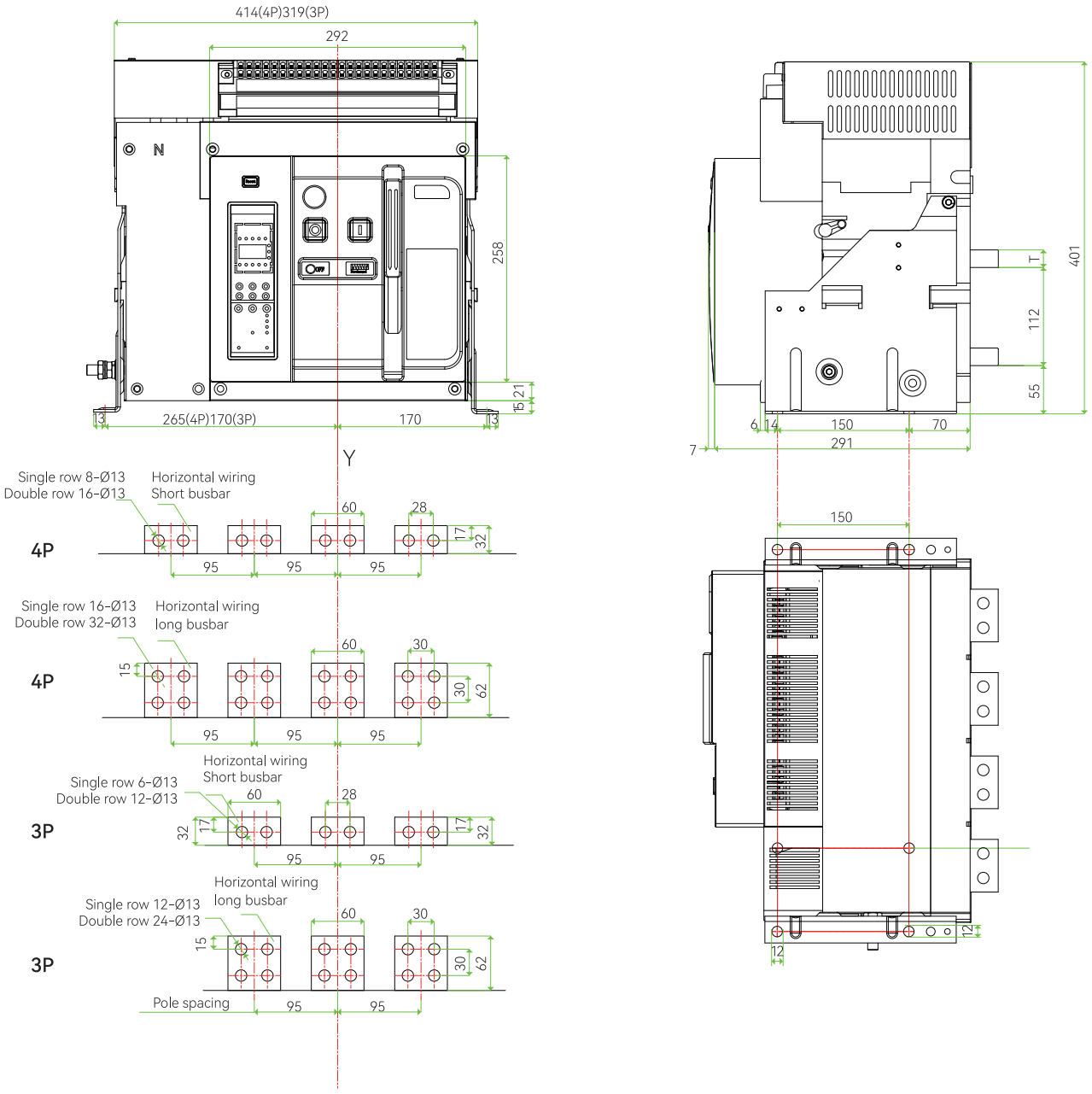




Rated current In(A)	Dimensions T(mm)
200,400,630,800,1000	10
1250,1600	18

Overall and Mounting Dimensions

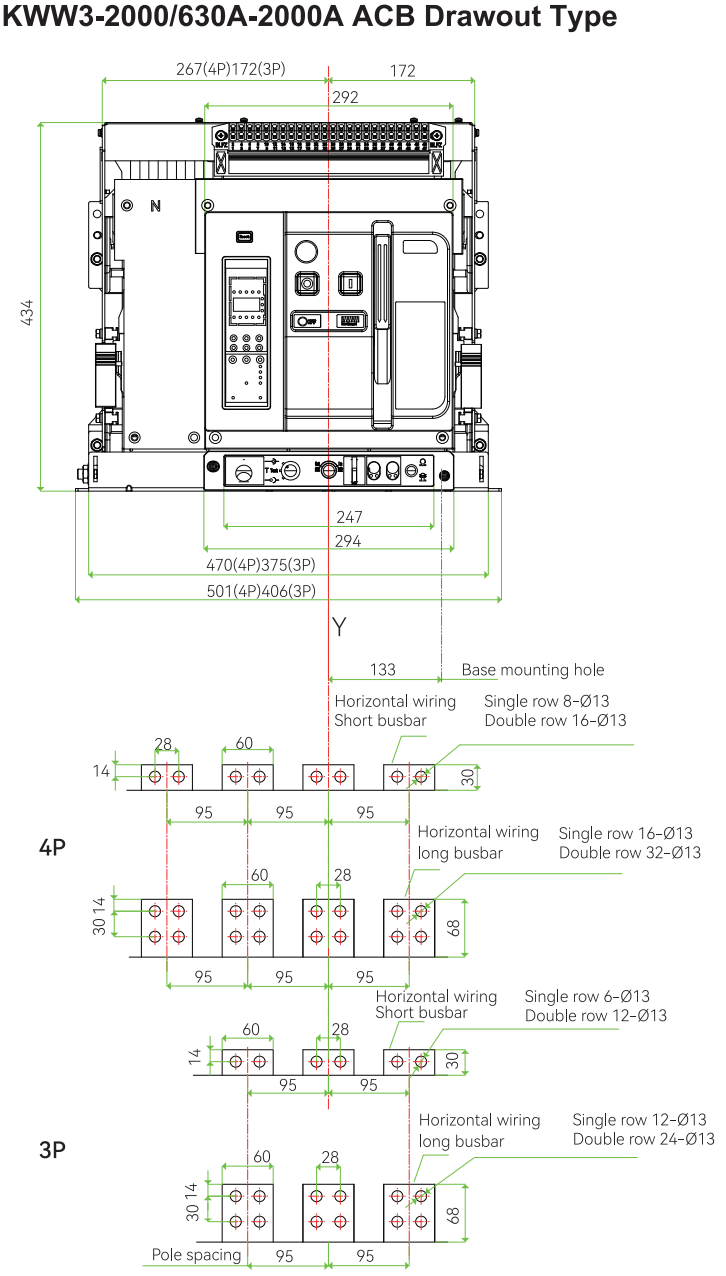
KWW3-2000/630A-2000A ACB Fixed Type

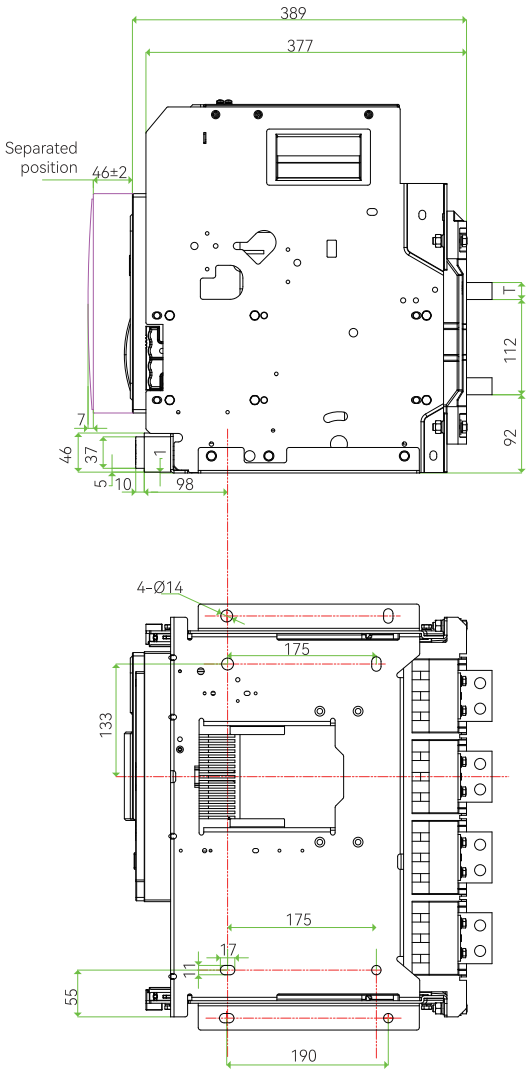


Rated current In(A)	Dimensions T(mm)
630,800	10
1000,1250,1600	15
2000	20

Overall and Mounting Dimensions

KWW3-2000/630A-2000A ACB Drawout Type

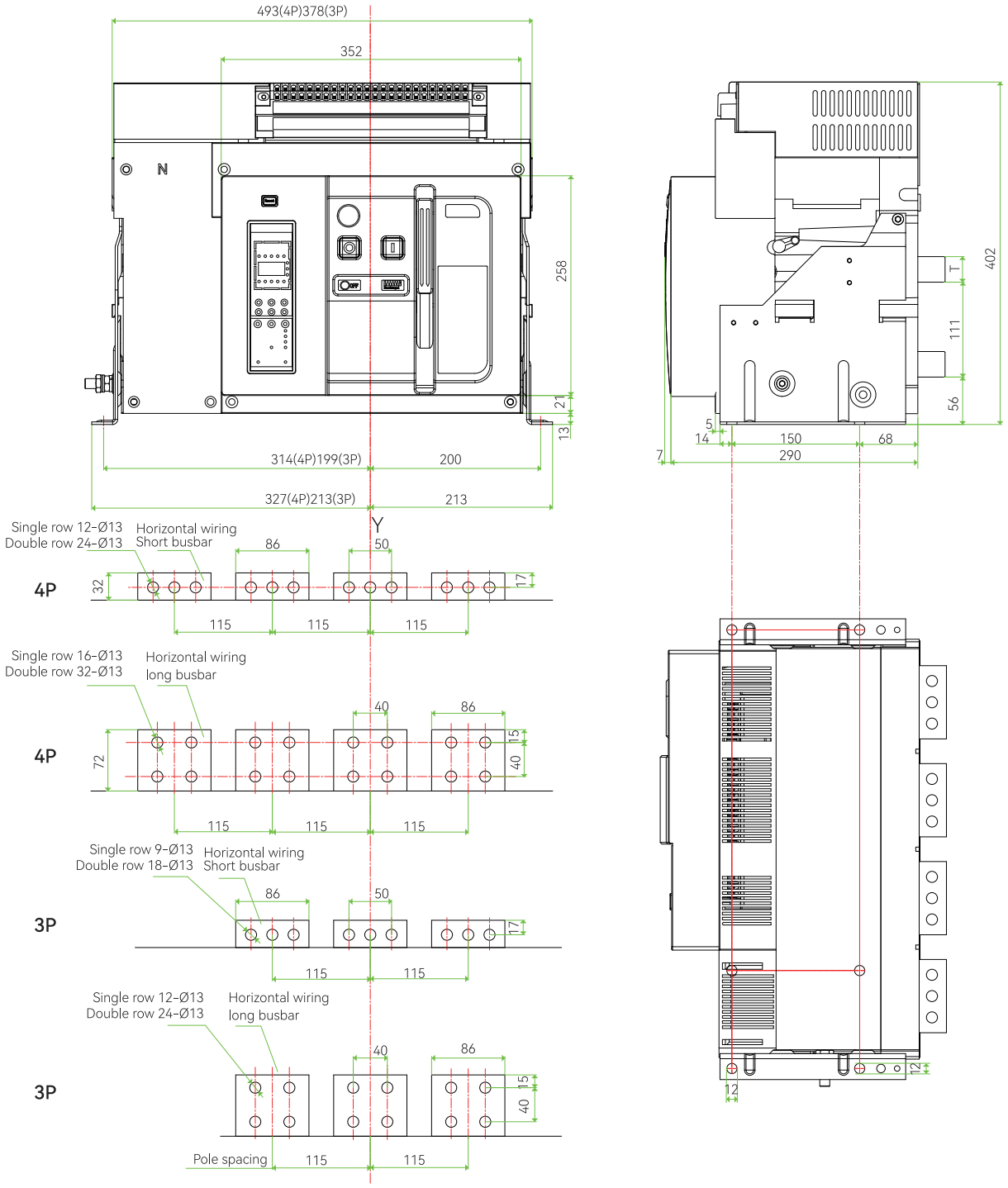




Rated current In(A)	Dimensions T(mm)
630,800	10
1000,1250,1600	15
2000	20

Overall and Mounting Dimensions

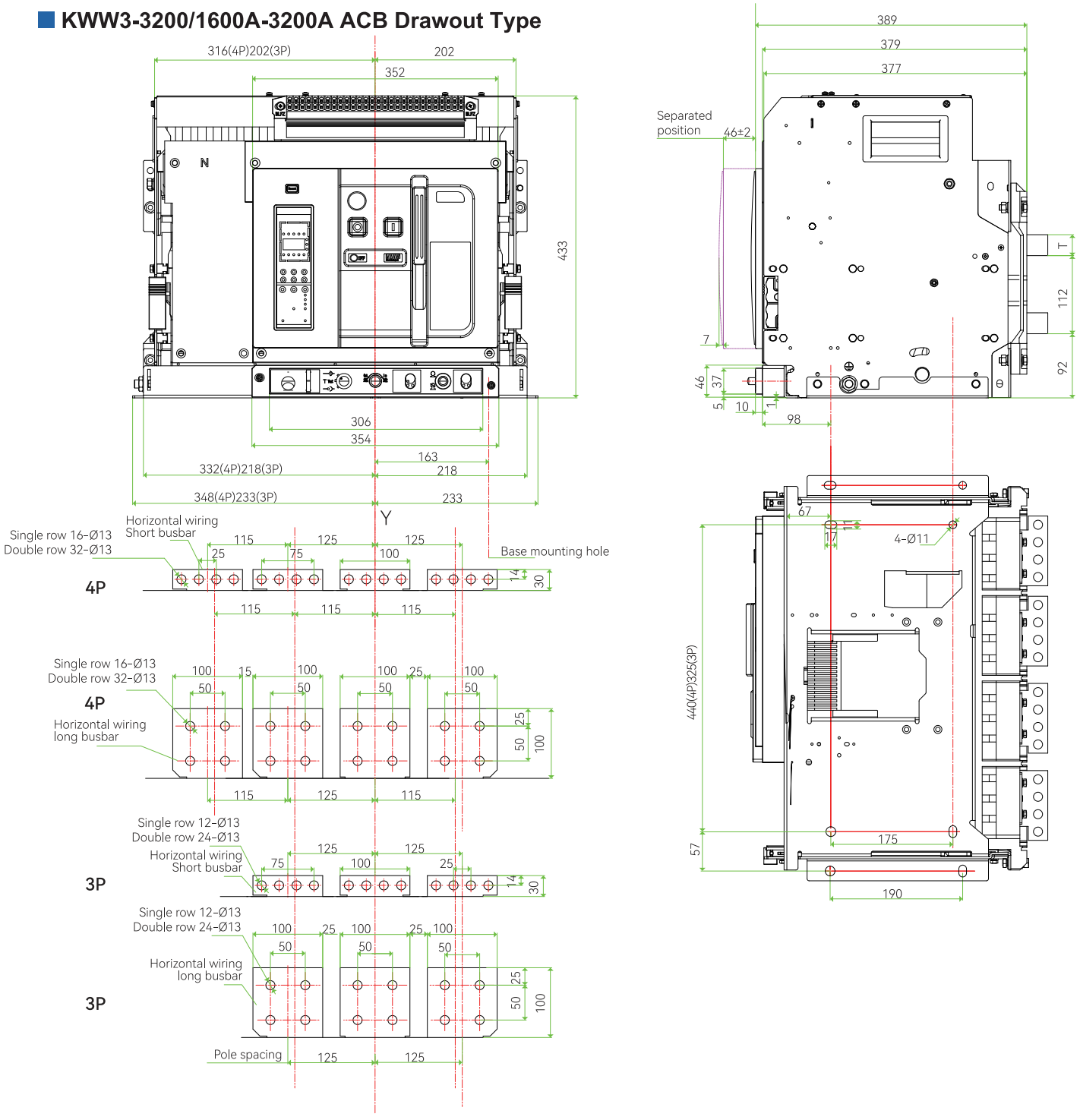
KWW3-3200/1600A-3200A ACB Fixed Type



Rated current In(A)	Dimensions T(mm)
1600,2000,2500	20
2900,3000,3200	30

Overall and Mounting Dimensions

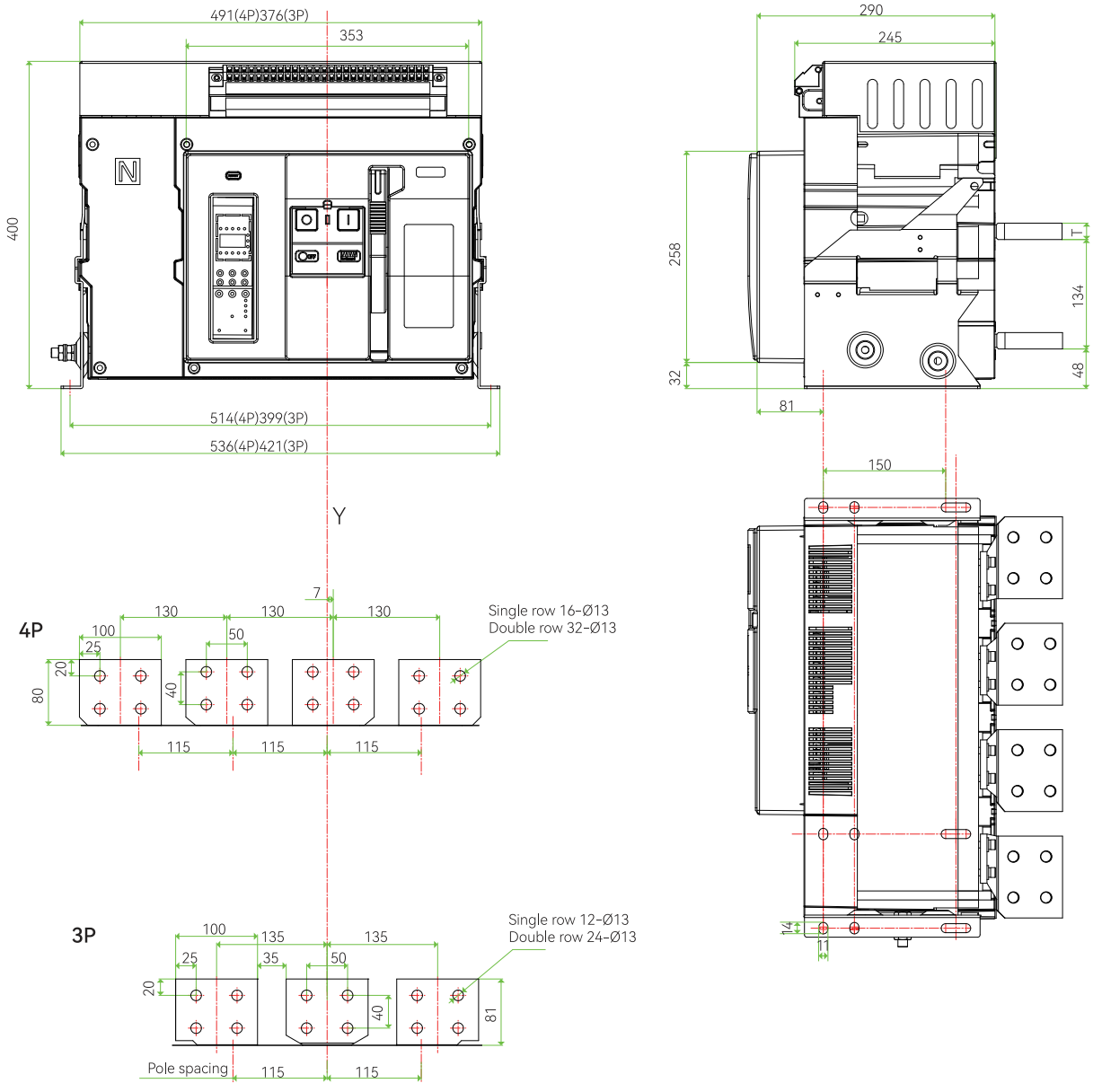
KWW3-3200/1600A-3200A ACB Drawout Type



Rated current In(A)	Dimensions T(mm)
1600,2000,2500	20
2900,3000,3200	30

Overall and Mounting Dimensions

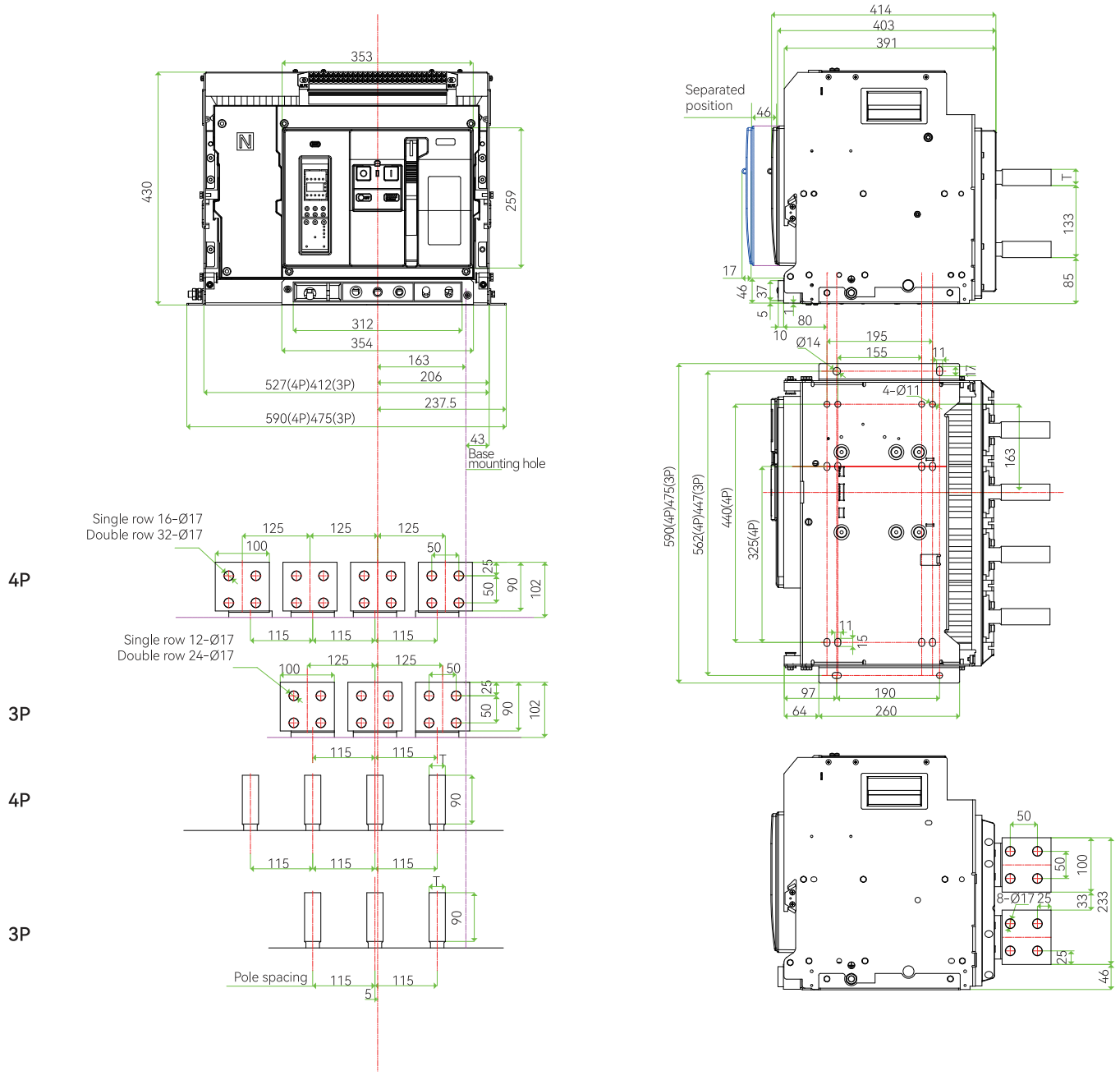
KWW3-4000/2000A-4000A ACB Fixed Type



Rated current In(A)	Dimensions T(mm)
2000,2500,2900, 3000,3200,3600,4000	20

Overall and Mounting Dimensions

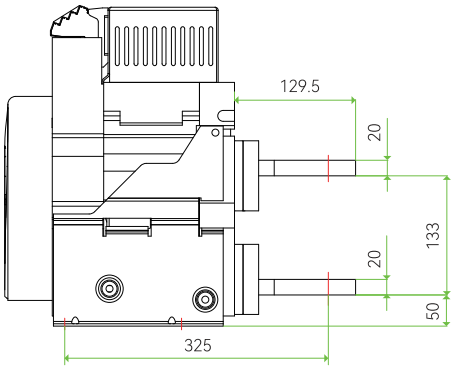
KWW3-4000/2000A-4000A ACB Drawout Type

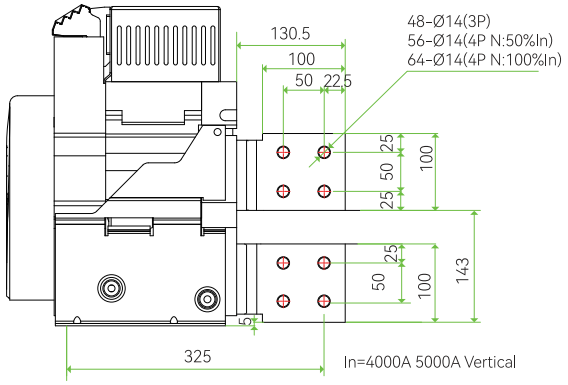


Rated current In(A)	Dimensions T(mm)
2000,2500,2900	20
3000,3200,3600,4000	30

Overall and Mounting Dimensions

KWW3-6300/3 Poles-4 Poles ACB Fixed Type

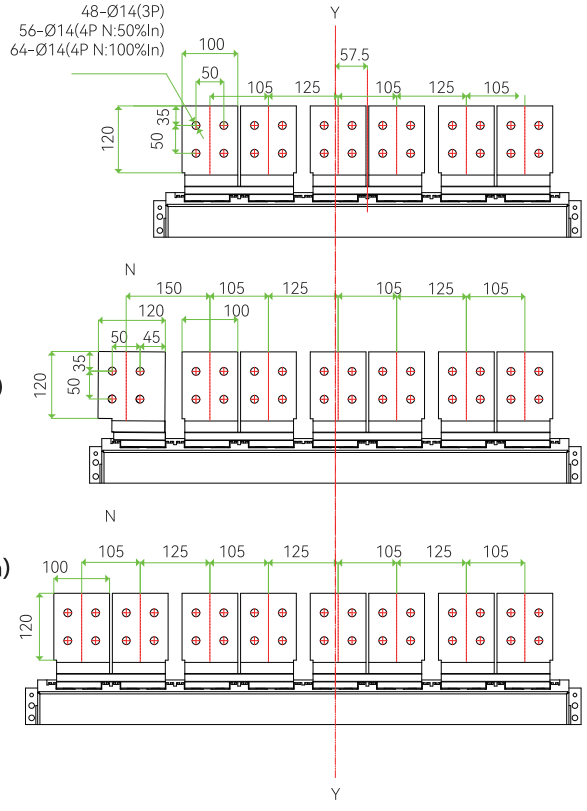


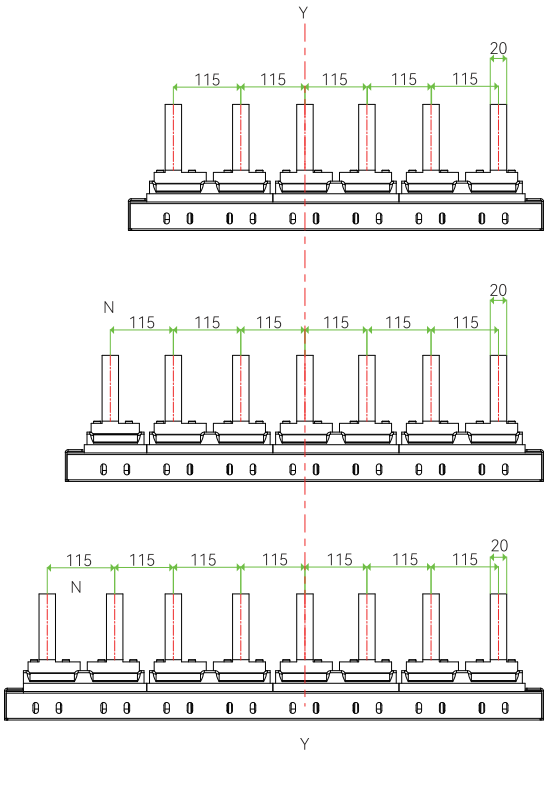


3P

4P (N:50%In)

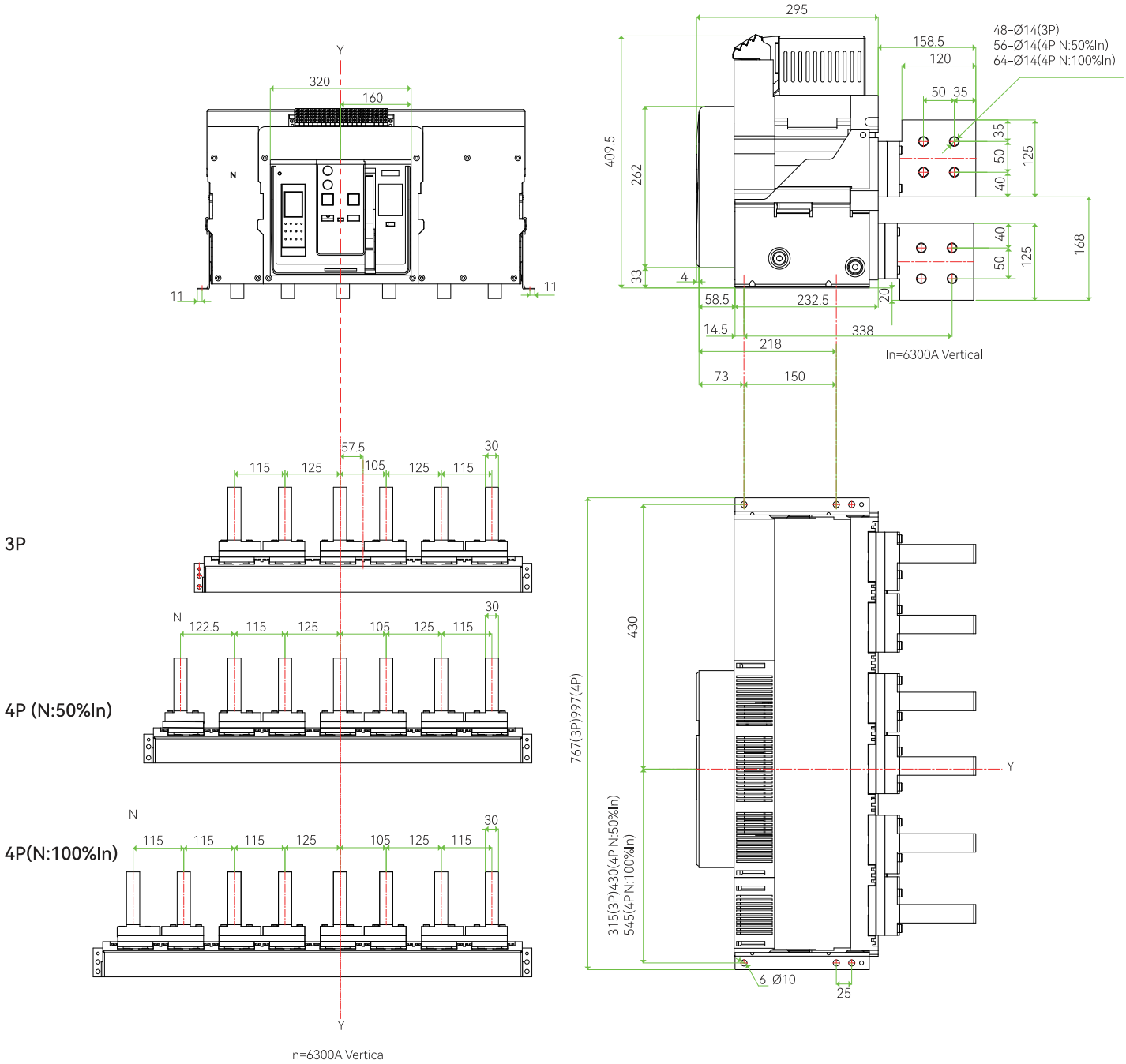
4P(N:100%In)





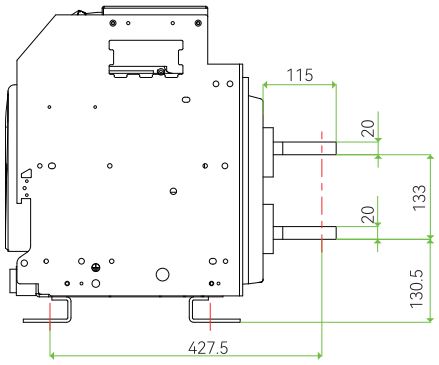
Overall and Mounting Dimensions

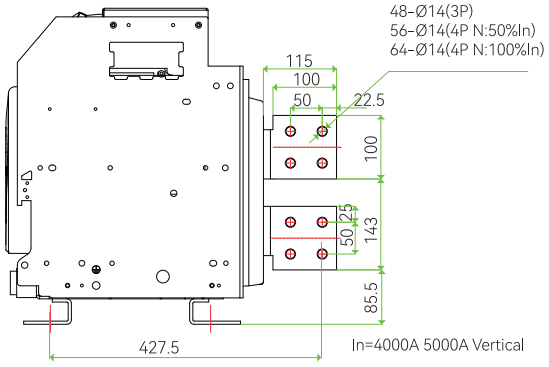
KWW3-6300/3 Poles-4 Poles ACB Fixed Type



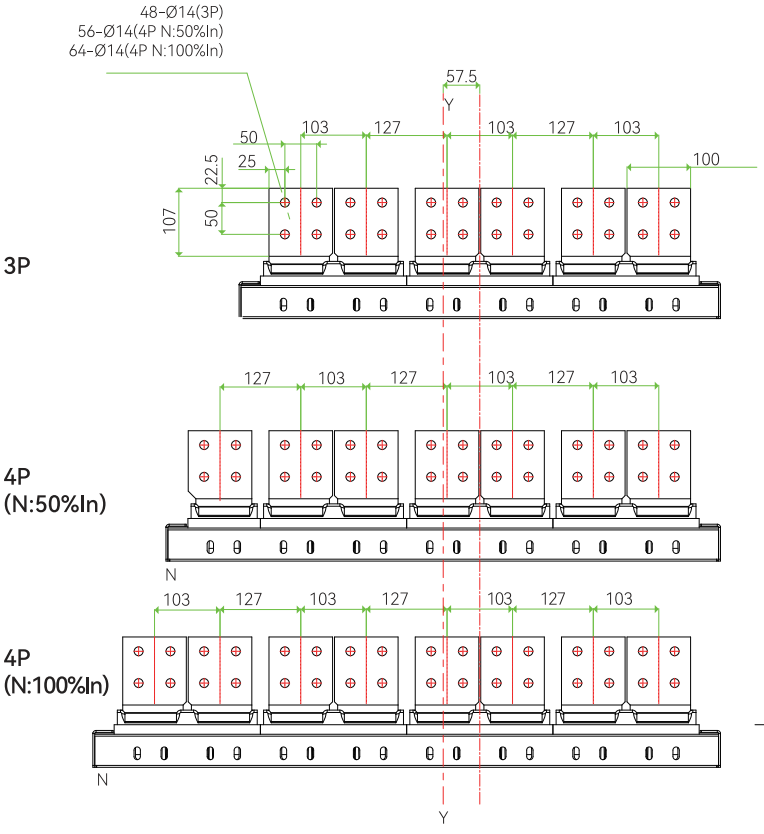
Overall and Mounting Dimensions

KWW3-6300/3 Poles-4 Poles ACB Drawout Type

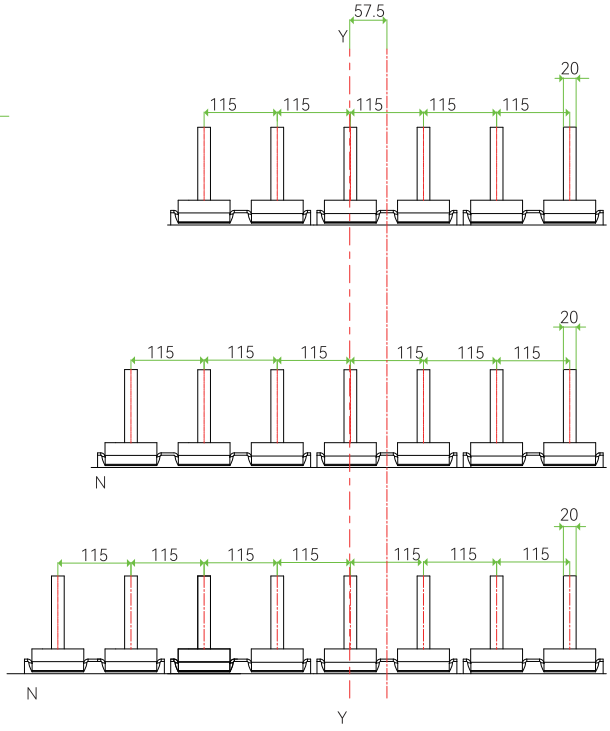




In=4000A 5000A Vertical



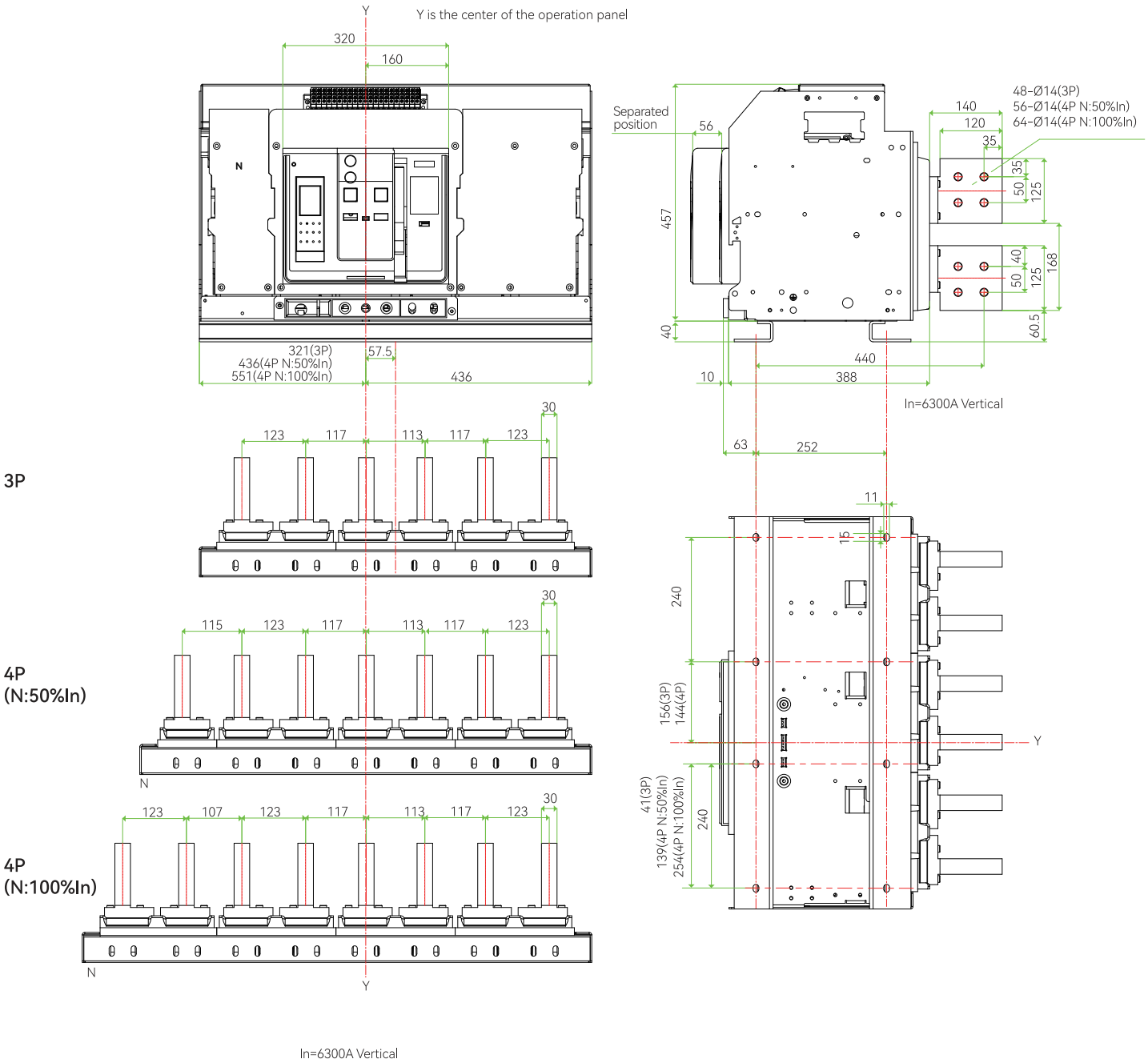
In=4000A 5000A Horizontal



In=4000A 5000A Vertical

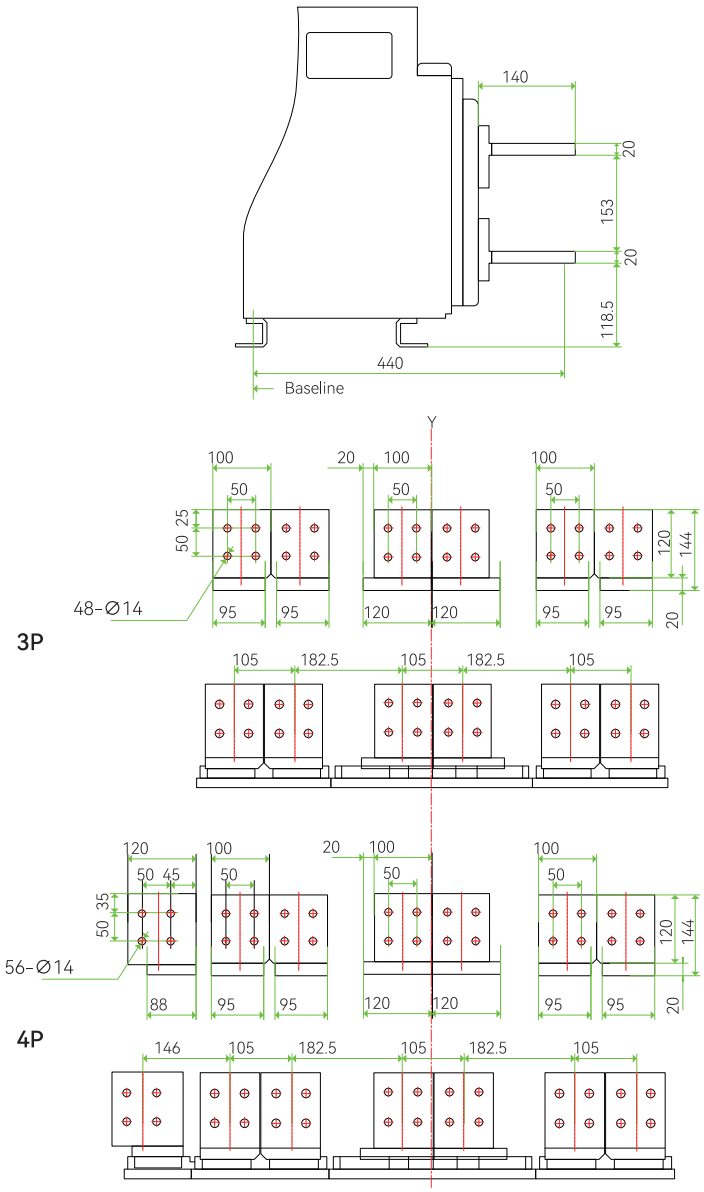
Overall and Mounting Dimensions

KWW3-6300/3 Poles-4 Poles ACB Drawout Type

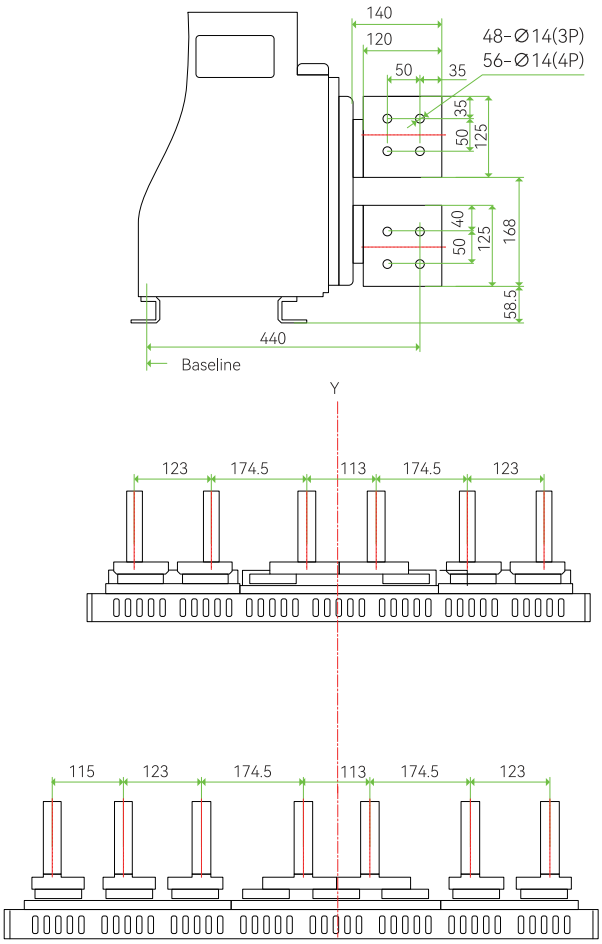


Overall and Mounting Dimensions

KWW3-7500/3 Poles-4 Poles ACB Drawout Type



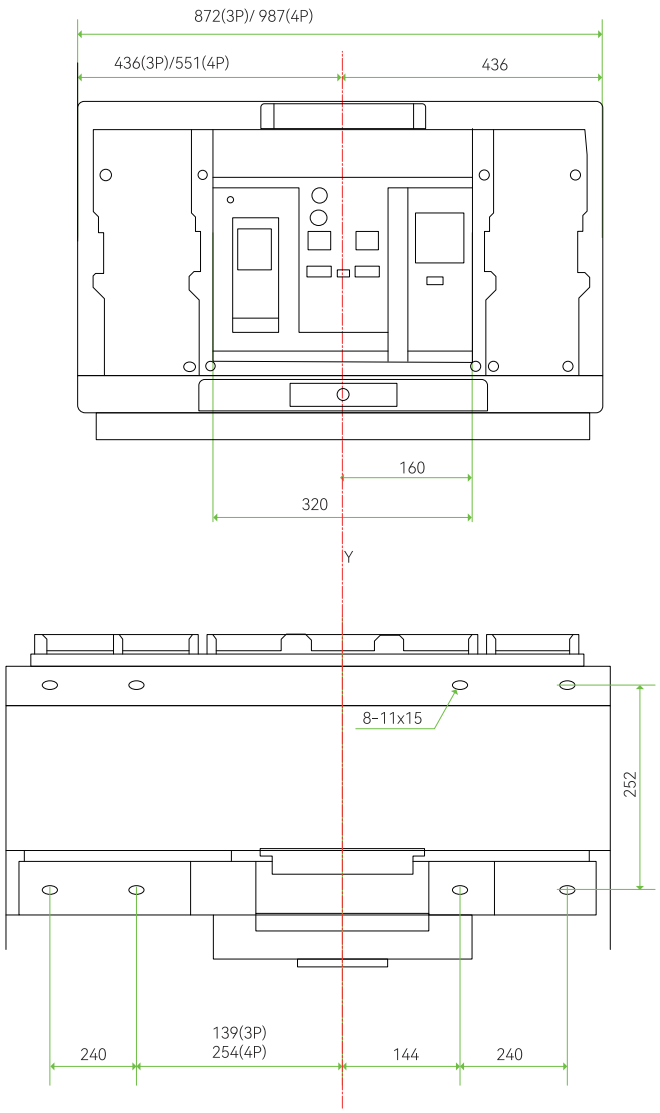
In=5000A 6300A Horizontal

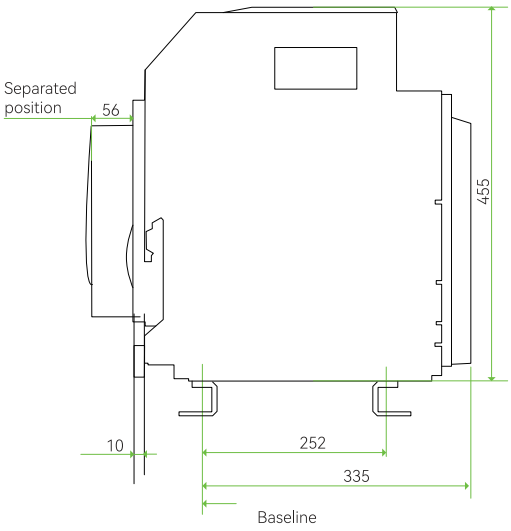


In=5000A 6300A 7500A Vertical

Overall and Mounting Dimensions

KWW3-7500/3 Poles-4 Poles ACB Drawout Type

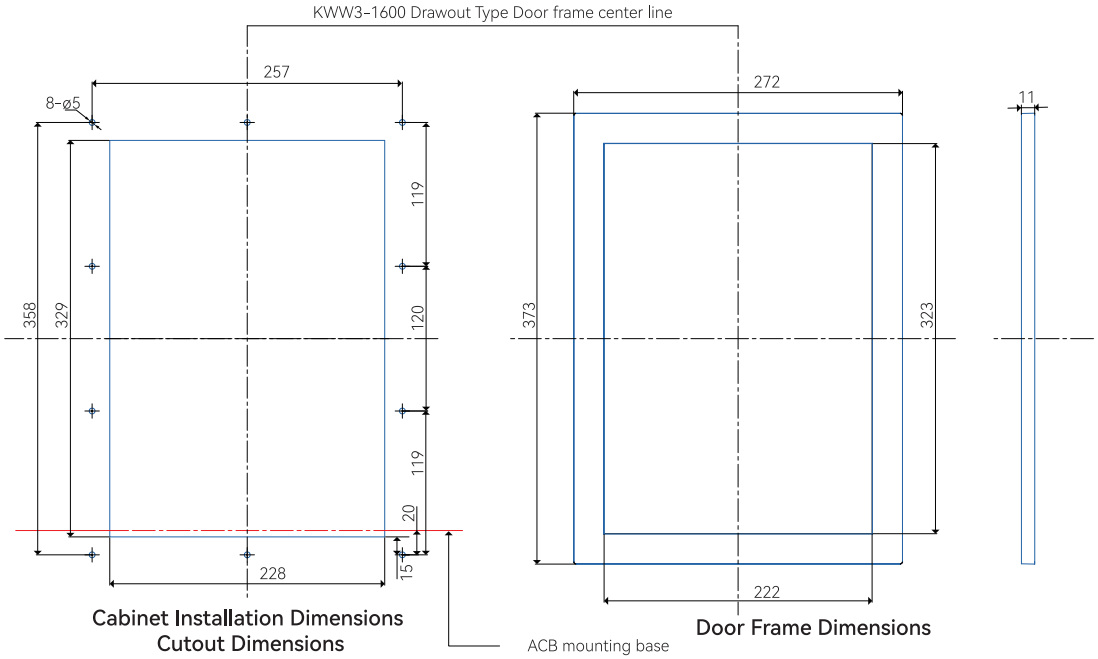


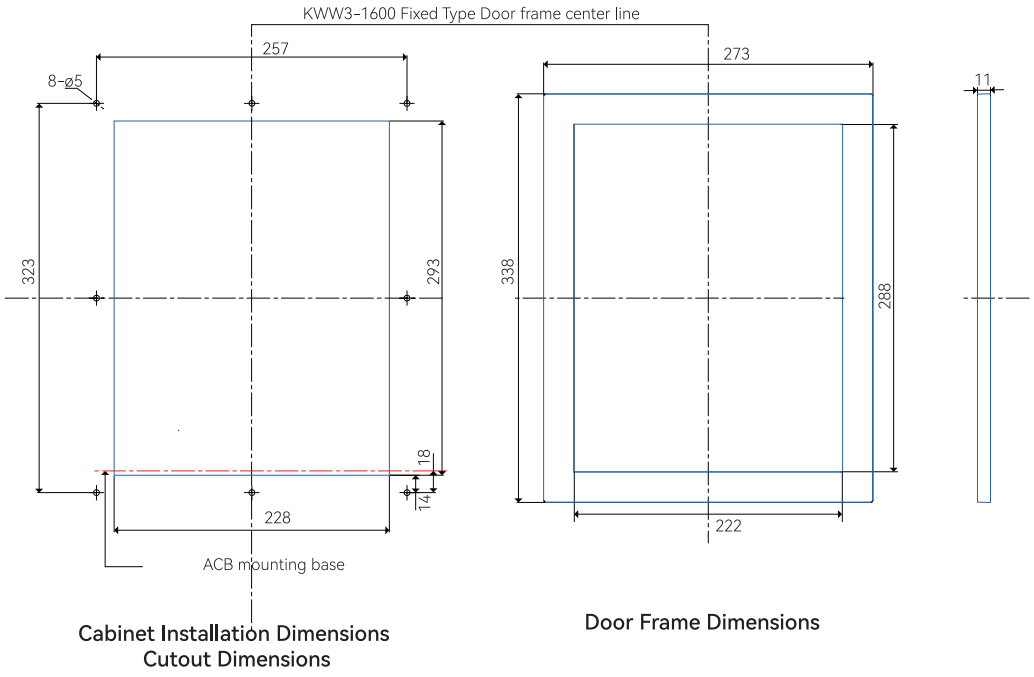


Overall and Mounting Dimensions

Door frame drawing

◆ **KWW3-1600**

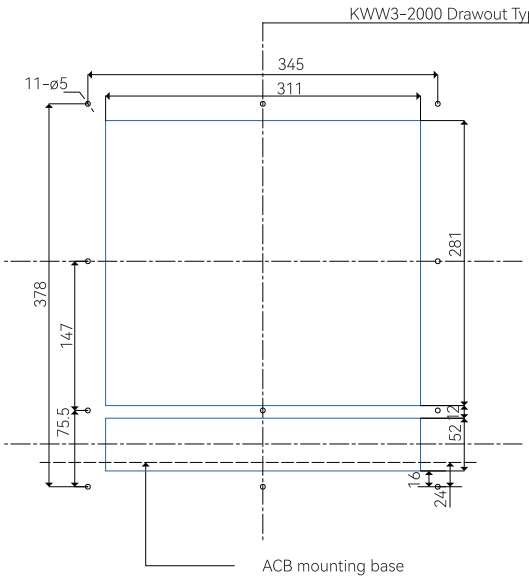




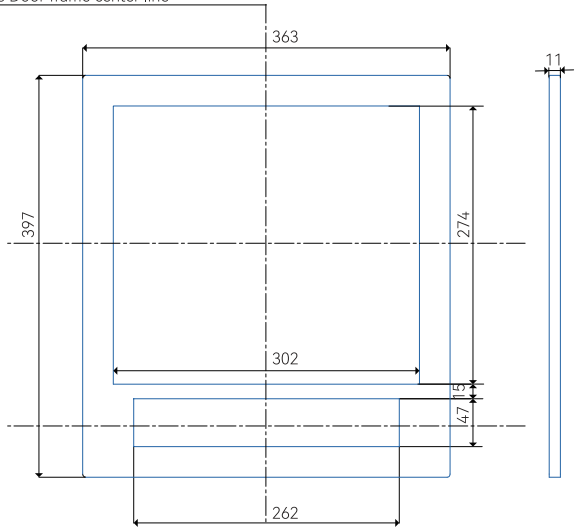
Overall and Mounting Dimensions

Door frame drawing

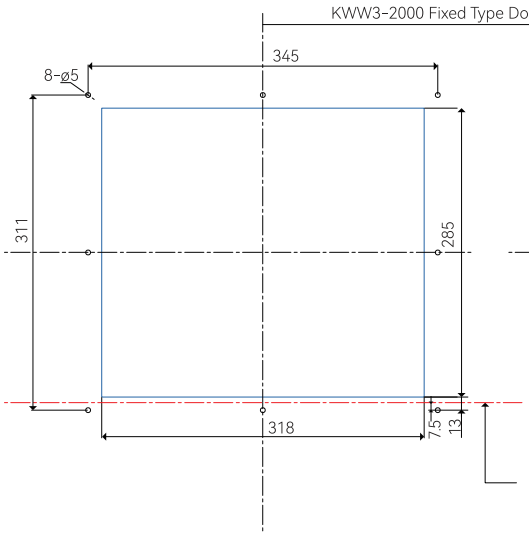
◆ **KWW3-2000**



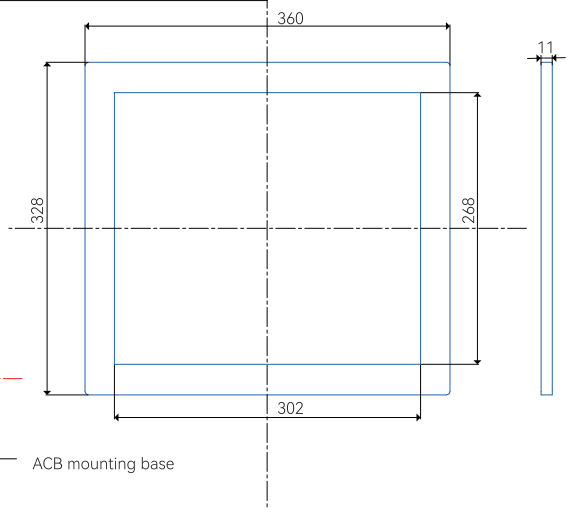
Cabinet Installation Dimensions
Cutout Dimensions



Door Frame Dimensions



Cabinet Installation Dimensions
Cutout Dimensions

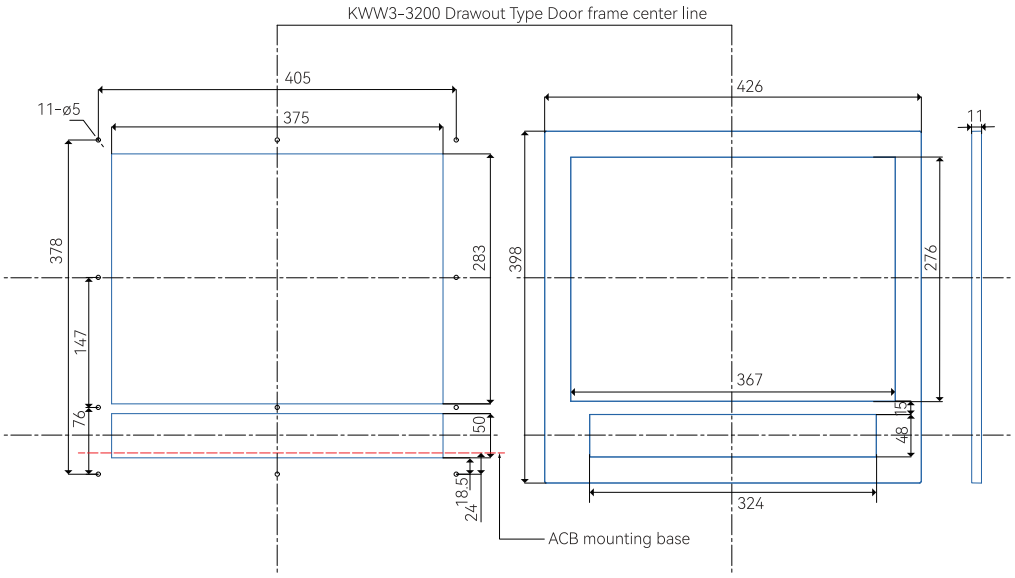


Door Frame Dimensions

Overall and Mounting Dimensions

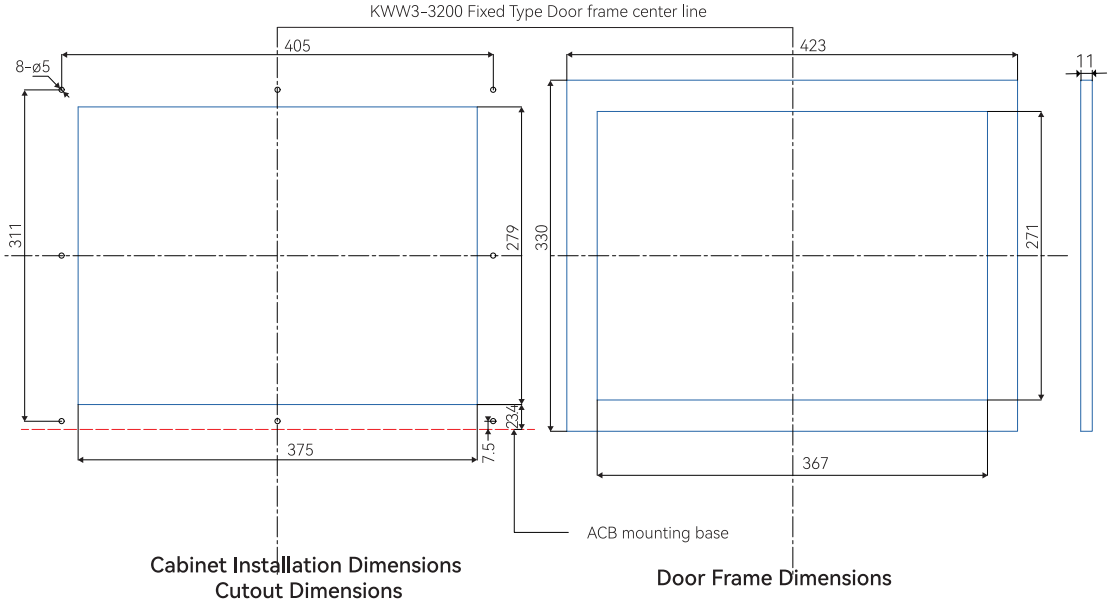
Door frame drawing

◆ **KWW3-3200**



Cabinet Installation Dimensions
Cutout Dimensions

Door Frame Dimensions



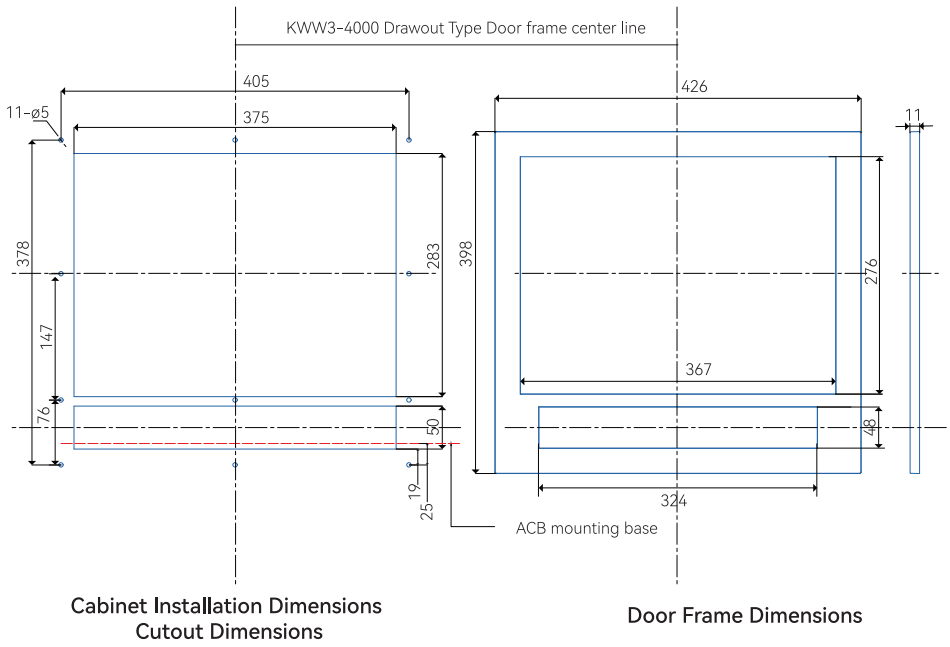
Cabinet Installation Dimensions
Cutout Dimensions

Door Frame Dimensions

Overall and Mounting Dimensions

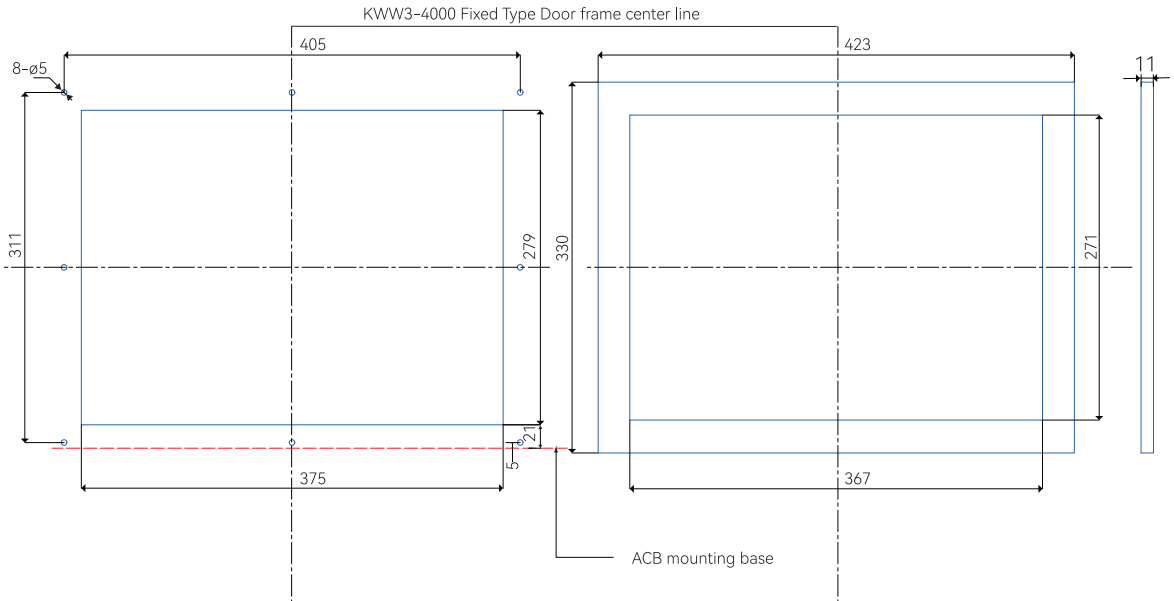
Door frame drawing

◆ **KWW3-4000**



Cabinet Installation Dimensions
Cutout Dimensions

Door Frame Dimensions



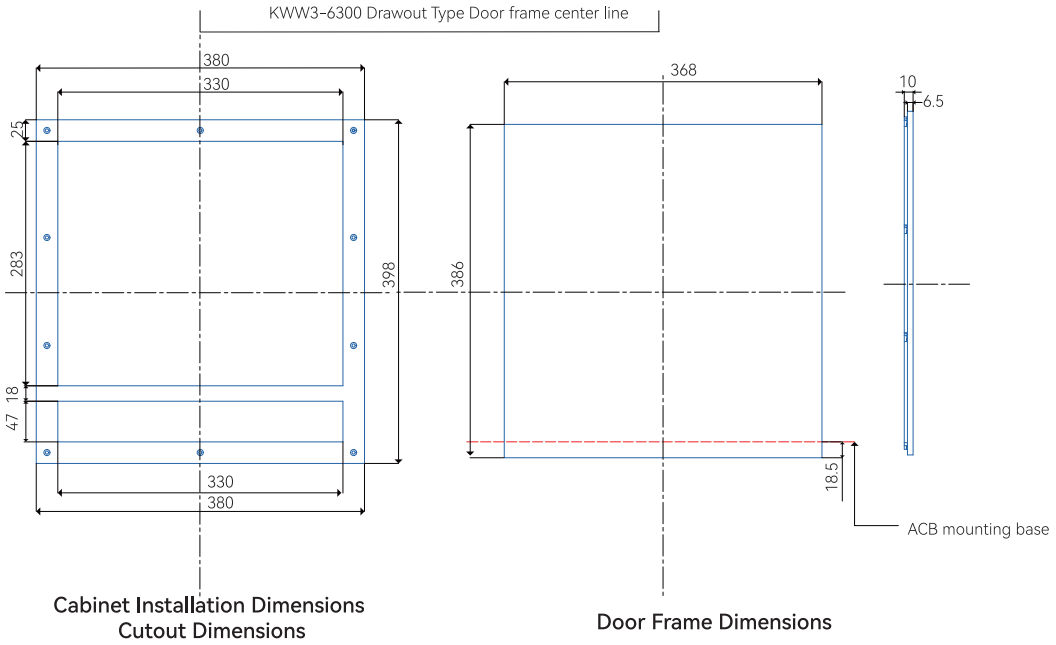
Cabinet Installation Dimensions
Cutout Dimensions

Door Frame Dimensions

Overall and Mounting Dimensions

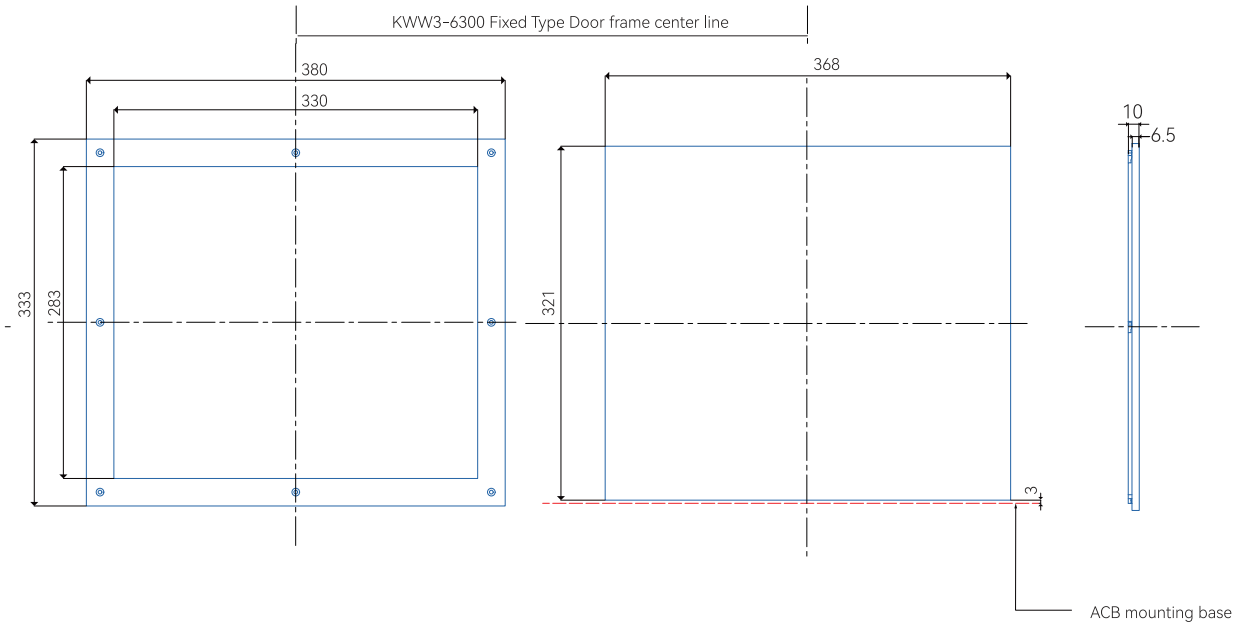
Door frame drawing

◆ **KWW3-6300**



Cabinet Installation Dimensions
Cutout Dimensions

Door Frame Dimensions



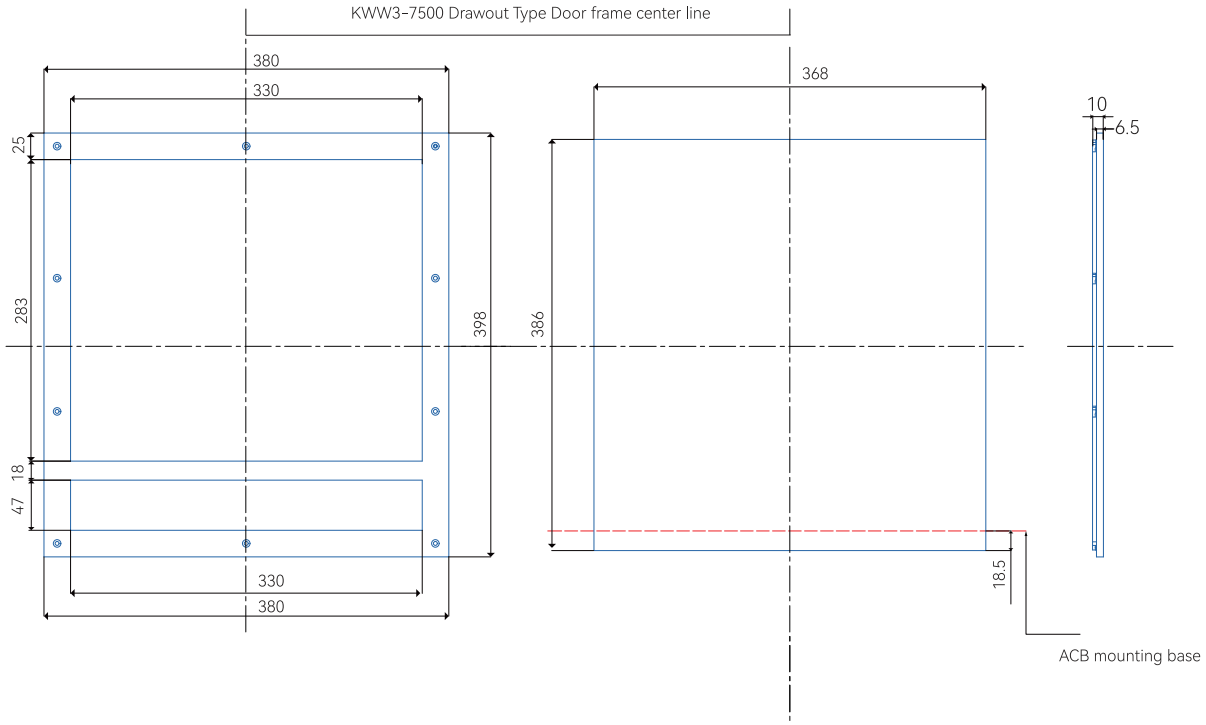
Cabinet Installation Dimensions
Cutout Dimensions

Door Frame Dimensions

Overall and Mounting Dimensions

Door frame drawing

◆ **KWW3-7500**



Cabinet Installation Dimensions
Cutout Dimensions

Door Frame Dimensions

Intelligent Controller

Characteristics				KWA3-2M	KWA3-3M	KWA3-3H
	Picture of product					
Rated current	Frame 1600		200,400,630,800,1000,1250,1600	√	√	√
	Frame 2000		630,800,1000,1250,1600,2000	√	√	√
	Frame 3200		1600,2000,2500,2900,3000,3200	√	√	√
	Frame 4000		2000,2500,2900,3000,3200,3600,4000	√	√	√
Power supply voltage	AC 230V			O	O	O
	AC 380V			O	O	O
	DC 24V			O	O	O
	DC 110V			O	O	O
	DC 220V			O	O	O
	Other voltage can be customized			O	O	O
Human-computer interface	Display		Nixie+LED	√	—	—
	Operation		LCD	—	√	√
			Button	√	√	√
	Language:Chinese / English Button			√	√	√
Communication functions	Modbus-RTU			—	—	√
	Profibus-DP			—	—	O
	HPLC (DL/T 645)			—	—	O
	wifi			—	—	O
	Ethernet			—	—	O
	Profi NET			—	—	O
	Bluetooth			—	—	O
Protection functions	Overload Long time delay (Ir) (Multiple curves are available)			√	√	√
	Short-circuit short time delay (Isd)			√	√	√
	Short-circuit instantaneous (Ii)			√	√	√
	Current unbalance protection			√	√	√
	Ground fault protection (Ig)	Residual ground fault protection	Residual ground fault protection by default	O	O	O
		Zero sequence ground-fault protection				
	Residual current protection (I△n)			O	O	O
	Neutral line overcurrent protection (3P+N, 4P)			O	O	O
	Overload pre-alarm			—	√	√
	Making Current Release (MCR)			O	√	√
	Out-of-limit tripping protection (HSISC)			O	√	√
	Overvoltage protection (Off by default)			—	√	√

Intelligent Controller

Characteristics			KWA3-2M	KWA3-3M	KWA3-3H
	Picture of product				
Protection functions	Undervoltage protection (Off by default)		—	√	√
	Voltage unbalance protection (Off by default)		—	√	√
	Overfrequency protection (Off by default)		—	√	√
	Underfrequency protection (Off by default)		—	√	√
	Phase-sequence protection (Off by default)		—	√	√
	Reverse power protection (Off by default)		—	√	√
	Required current protection (Off by default)		—	√	√
	Load monitoring		√	√	√
	Zone interlocking		O	O	O
	Voltage-checking protection		—	√	√
	Thermal memory		√	√	√
Measurement functions	Current	Three-phase current, maximum of instantaneous value, unbalance rate	√	√	√
		Ground/leakage current	√	√	√
		Neutral current	O	O	O
	Voltage: Line voltage, Phase voltage,average voltage, unbalance rate		—	√	√
	Frequency		—	√	√
	Power: active power		—	√	√
	Power: reactive power, apparent power		—	√	√
	Power factor		—	√	√
	Electrical energy: active electrical energy, reactive electrical energy, apparent electrical energy		—	√	√
	Phase-sequence		—	√	√
	Waveform capture		—	√	√
	Harmonic measurement		—	O	O
	System clock		—	√	√
	Long time delay heat capacity		—	√	√
Maintenance functions	Self-test function: overtemperature of controller, memory fault, A/D sampling		√	√	√
	Test function		√	√	√
	Remote reset		O	O	O
	I/O faultily tripping function		O	O	O
	Contact wear rate		—	√	√
	Historic records	Tripping records	—	√ 10 times	√ 10 times
		Alarm records	—	√ 10 times	√ 10 times
		Replacement records	—	√ 10 times	√ 10 times
Contact output	Quad programmble contact output		O	O	O

Notice: “√” means basic function; “O” means optional function; “ -”means no such function

Intelligent Controller

Characteristics			bse6-2.X	bse6-3.X
Picture of product				
Rated current	Frame 6300	4000,5000,6300	√	√
	Frame 7500	5000,6300,7500	√	√
Power supply voltage	AC 230V/AC 380V/DC 24V/DC 110V/DC 220V		O	O
• Long Time Delay				
Protection Curve Type			I_rt, I^2t (Distribution), I^4t (Generator), I^4t	
Long Time Delay Setting Current Ir1=1n×			(0.4~1)×OFF	
Long Time Delay Time @0.5Ir1(I_rt, I^2t (Distribution), I^4t)			10, 15, 30, 60, 90, 120, 240, 480	
@1.2Ir1(I^2t (Generator))			Anti-time limit	
Accuracy			±10%	
Thermal Memory			10min	
• Short Time Delay				
Short Time Delay Setting Current Ir2=1n×			(0.4~15)×OFF	
Short Time Delay Setting Time Characteristic			0.1, 0.2, 0.3, 0.4 Definite/Inverse Time Limit	
Accuracy			±10%	
Thermal Memory			10min	
• Instantaneous Short Circuit				
Instantaneous Short Circuit Setting Current Ir3=1n×			(1~20)×OFF	
Earth Fault Protection			√	
Earth Fault Protection Setting Current Ir4=1n×			(0.2~1)×OFF	
Earth Fault Protection Delay Time			0.1~1s	
• Alarm and Other Protections				
Current	Current Unbalance Protection	Protection Starting Value	20%~80%	
		Action Delay Time	1~40s	
		Protection Return Value	20%~80%	
		Return Delay Time	10~360s	
	Neutral Line Protection		50%, 100%, 160%, 200%+OFF	
	Demand Current Protection	Protection Starting Value	0.4~Return Setting Value	
		Action Delay Time	15~1500s	
		Protection Return Value	0.2~1	
		Return Delay Time	15~3000s	
	Earth Fault Alarm		(0.4~1)×1n+OFF	
Voltage	Under Voltage Protection	Protection Starting Value	/	50~1140V
		Action Delay Time		1~30S
		Protection Return Value		Starting Value~1140V
		Return Delay Time		1~100s
	Over Voltage Protection	Protection Starting Value	/	200~1482V
		Action Delay Time		1~5s
		Protection Return Value		200V~Over Starting Value
		Return Delay Time		1~36s
	Voltage Unbalance Protection	Protection Starting Value	/	2%~50%
		Action Delay Time		1~40s
		Protection Return Value		2%~Starting Value
		Return Delay Time		10~360s

Intelligent Controller

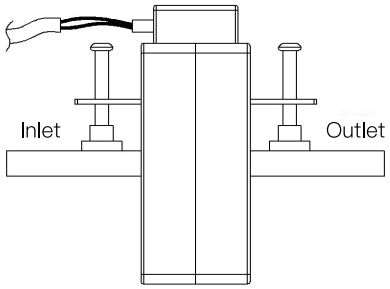
Function			Intelligent Controller bse6									
			2.0	2.1	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7
Protection	Current	Overload Long-time Delay	√	√	√	√	√	√	√	√	√	√
		Short-circuit Short-time Delay	√	√	√	√	√	√	√	√	√	√
		Short-circuit Instantaneous	√	√	√	√	√	√	√	√	√	√
		Neutral Conductor	√	√	√	√	√	√	√	√	√	√
		Earth-fault Protection	—	√	—	√	—	√	—	√	—	√
		Earth-fault Alarm	—	○	—	○	—	√	—	√	—	√
		Overload Pre-alarm	○	○	√	√	√	√	√	√	√	√
		Current Unbalance Protection & Alarm	○	○	√	√	√	√	√	√	√	√
		Demand-current Protection & Alarm	○	○	○	○	√	√	√	√	√	√
	Voltage	Overload Pre-alarm	—	—	○	○	√	√	√	√	√	√
		Over-voltage Protection & Alarm	—	—	○	○	√	√	√	√	√	√
		Voltage Unbalance Protection & Alarm	—	—	○	○	√	√	√	√	√	√
	Others	Phase-sequence Protection & Alarm	—	—	○	○	○	○	√	√	√	√
		Under-frequency Protection & Alarm	—	—	○	○	○	○	√	√	√	√
		Over-frequency Protection & Alarm	—	—	○	○	○	○	√	√	√	√
		Reverse-power Protection & Alarm	—	—	○	○	○	○	√	√	√	√
	Current Load Monitoring		○	○	○	○	√	√	√	√	√	√
	MCR		√	√	√	√	√	√	√	√	√	√
	Zone Selective Interlocking		○	○	○	○	○	○	○	○	○	○
Measure-ment	Current	A, B, C, (N) Current	√	√	√	√	√	√	√	√	√	√
		Earth-fault Current	—	√	—	√	—	√	—	√	—	√
		Current Unbalance Rate	√	√	√	√	√	√	√	√	√	√
		Historical Maximum Current	√	√	√	√	√	√	√	√	√	√
		Demand Current	○	○	√	√	√	√	√	√	√	√
		Historical Maximum Demand Current	○	○	○	○	√	√	√	√	√	√
	Voltage	Line Voltage, Phase Voltage	—	—	√	√	√	√	√	√	√	√
		Average Voltage	—	—	√	√	√	√	√	√	√	√
		Voltage Unbalance Rate	—	—	√	√	√	√	√	√	√	√
		Phase Sequence	—	—	○	○	√	√	√	√	√	√
		Frequency	—	—	○	○	√	√	√	√	√	√
	Power	Power: Active / Reactive / Apparent	—	—	√	√	√	√	√	√	√	√
		Power Factor	—	—	√	√	√	√	√	√	√	√
		Demand Power	—	—	○	○	√	√	√	√	√	√
		Historical Maximum Demand Power	—	—	○	○	○	○	√	√	√	√
	Energy: Active / Reactive / Apparent		—	—	○	○	√	√	√	√	√	√
	Harmonics	Current Fundamental, THD, thd	○	○	○	○	○	○	√	√	√	√
		Voltage Fundamental, THD, thd	—	—	○	○	○	○	√	√	√	√
		Current FFT	○	○	○	○	○	○	√	√	√	√
		Voltage FFT	—	—	○	○	○	○	√	√	√	√
	Waveform	Current Waveform, Peak Value	○	○	○	○	○	○	√	√	√	√
		Voltage Waveform, Peak Value	—	—	○	○	○	○	√	√	√	√

Notice: “√” means basic function; “O” means optional function; “ -”means no such function

Intelligent Controller Accessories

Dimensions & Installation of N-pole External Transformer

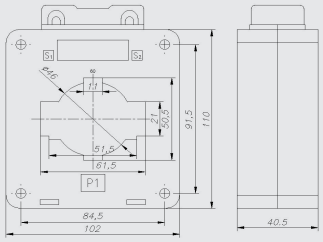
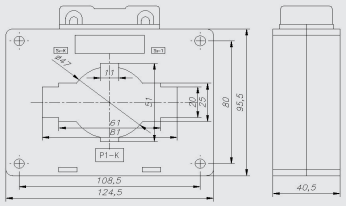
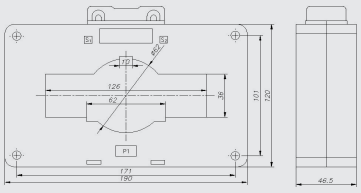
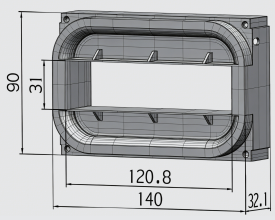
◆ Mounting Method



1.When the circuit breaker is wired with the upper terminals for power supply and the lower terminals for load, the external current transformer (CT) on the N pole shall have its inlet wire connected to the power side and outlet wire to the load side. Namely, the cable passes through the CT from the inlet side and exits from the outlet side.
2.When the circuit breaker is wired with the lower terminals for power supply and the upper terminals for load, the external CT on the N pole shall have its outlet wire connected to the power side and inlet wire to the load side. Namely, the cable passes through the CT from the outlet side and exits from the inlet side.
3.Twisted–pair cables shall be used for CT lead wires with a length ⩽ 2 m; coaxial cables shall be adopted when the length exceeds 2 m.
4.During CT installation, its lead wires shall be routed separately from other cables to prevent mutual electromagnetic interference.

◆ Transformer Dimensions

(Unit: mm)

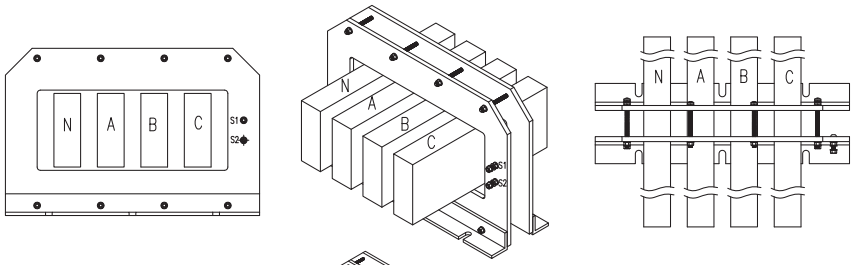
Type	Overall Dimensions	Inner Hole Dimensions	Screw Specification Quantity of Accessories	Note	Suitable frame
Full Series N-pole External Transformer	102×110×40.5	61.5×21	Short Screws M5×30 2 Sets of Accessories		KWW3-1600
	124.5×95.5×40.5	81×20	Short Screws M5×30 2 Sets of Accessories		KWW3-2000
	190×120×46.5	126×36	Long Screws M5×50 1 Set of Accessories		KWW3-3200/4000
	140×90×32.1	120.8x31	-		KWW3-6300/7500

Intelligent Controller Accessories

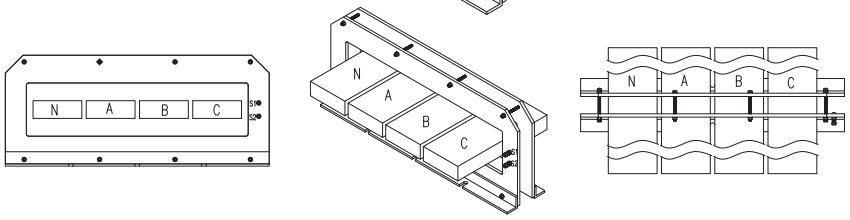
zero-sequence transformer

◆ Zero-sequence transformer specification and dimension drawing

Mounting Method 1
(Vertical Busbar Installation)



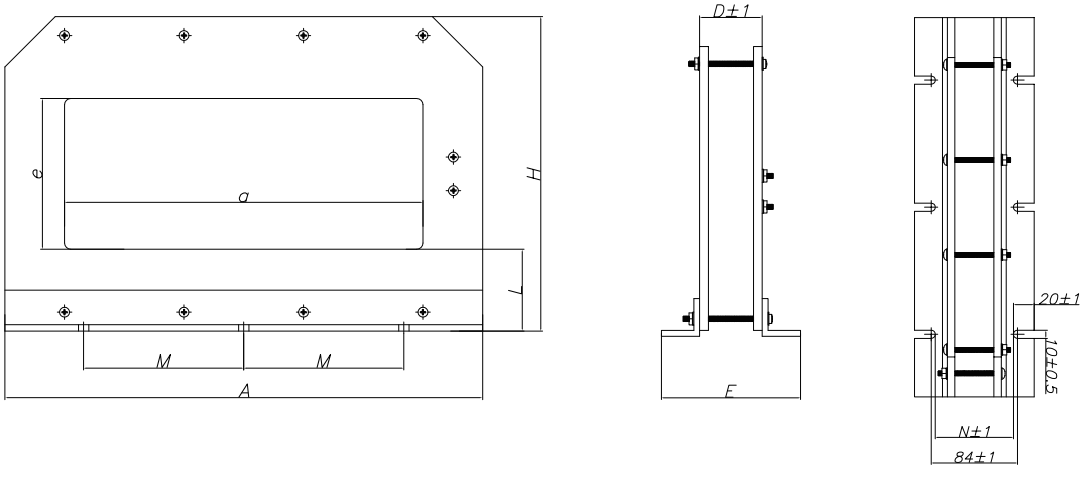
Mounting Method 2
(Horizontal Busbar Installation)



1.The transformation ratio of the current transformer is 30A:0.02A.
2.Busbars shall be installed either horizontally or vertically.
3.Terminals S1 and S2 of the current transformer shall be connected to the leakage outgoing wires of the controller, No earthing is required.
4.Mounting Method 1 is recommended for busbar installation.

(Unit: mm)

Model	Suitable frame	Overall Dimensions					Bore Dimensions		Mounting Dimensions	
		A	H	D	E	L	a	e	M	H
BH-LMB-280X120	1600 3P/4P	380	250	54	114	68	285	120	125	74
BH-LMB-370X120	2000 3P/4P	465	250	54	114	68	370	120	125	74
BH-LMB-390X120	3200/4000 3P	485	250	54	114	68	390	120	150	74
BH-LMB-500X120	3200/4000 4P	595	250	54	114	68	500	120	150	74



Intelligent Controller Accessories

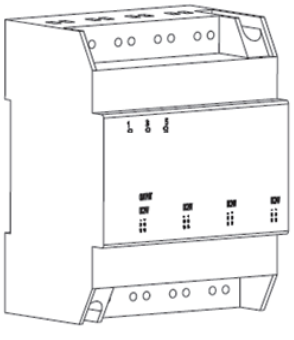
Controller Power Module

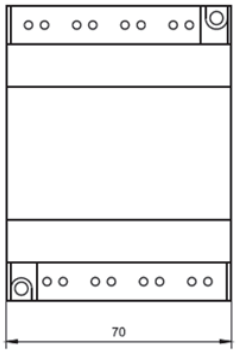
◆ CPM-DC110/220V-24V

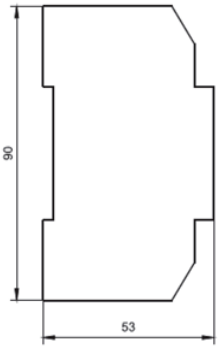
Technical Parameters		Index	Unit	Condition
Input Characteristics				
110/220VDC		90~360	V	DC
Output Characteristics				
Output Power		10	W	1 output circuit with 4 groups of terminals
Output Voltage		24	V	————
Voltage Accuracy		±3%max	————	At 100% load, nominal input voltage
Load Regulation		±0.5%max	————	At 10%~100% load, nominal input voltage
Line Regulation		±0.2%max	————	From low to high input voltage, at 100% load
Temperature Coefficient		±0.02% /℃	/℃	————
Short Circuit Protection		Available	————	————
Ripple & Noise		1%max	Vo	At 20MHz bandwidth
Dynamic Response Time		200max	μs	At 25% step load
Overshoot		≤±4%max	Vo	At 25% step load
General Characteristics				
Switching Frequency		720	kHz	————
Isolation Voltage	Input-Output	2500	VAC	1 minute, leakage current <5mA
	Input-Case	2500	VAC	
	Output-Case	500	VAC	
Environmental Characteristics				
Operating Temperature		-25~70℃	————	Derating: -0.2 W/℃ when temperature exceeds 55℃
Storage Temperature		-40~105℃	————	————
Relative Humidity		10%~90%	————	————

◆ Overall Dimensions









Intelligent Controller Accessories

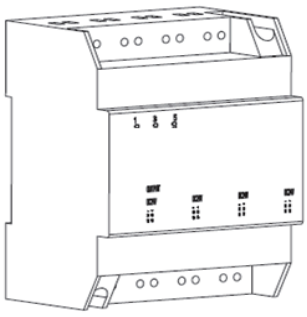
Controller Power Module

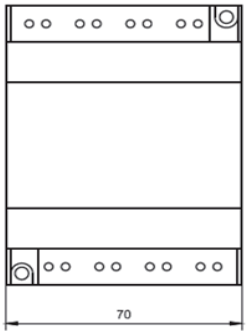
◆ CPM-AC230V-24V

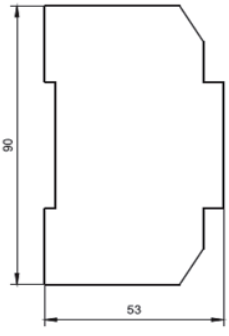
Technical Parameters		Index	Unit	Condition
Input Characteristics				
230VAC		176~264	VRMS	50Hz
Output Characteristics				
Output Power		10	W	1 output circuit with 4 groups of terminals
Output Voltage		24	V	————
Voltage Accuracy		±3%max	————	At 100% load, nominal input voltage
Load Regulation		±0.5%max	————	At 10%~100% load, nominal input voltage
Line Regulation		±0.2%max	————	From low to high input voltage, at 100% load
Temperature Coefficient		±0.02% /℃	/℃	————
Short Circuit Protection		Available	————	————
Ripple & Noise		1%max	Vo	At 20MHz bandwidth
Dynamic Response Time		200max	μs	At 25% step load
Overshoot		≤±4%max	Vo	At 25% step load
General Characteristics				
Switching Frequency		720	kHz	————
Isolation Voltage	Input-Output	2500	VAC	1 minute, leakage current <5mA
	Input-Case	2500	VAC	
	Output-Case	500	VAC	
Environmental Characteristics				
Operating Temperature		-40~70℃	————	Derating: -0.2 W/℃ when temperature exceeds 55℃
Storage Temperature		-50~105℃	————	————
Relative Humidity		10%~90%	————	————

◆ Overall Dimensions









Intelligent Controller Accessories

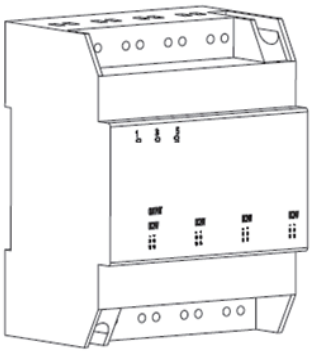
Controller Power Module

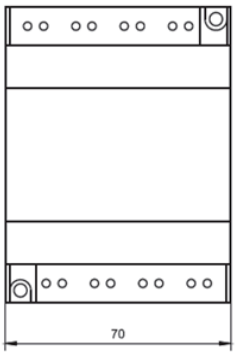
◆ CPM-AC380V-24V

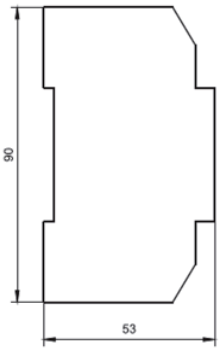
Technical Parameters		Index	Unit	Condition
Input Characteristics				
380VAC		304~456	VRMS	50Hz
Output Characteristics				
Output Power		10	W	1 output circuit with 4 groups of terminals
Output Voltage		24	V	————
Voltage Accuracy		±3%max	————	At 100% load, nominal input voltage
Load Regulation		±0.5%max	————	At 10%~100% load, nominal input voltage
Line Regulation		±0.2%max	————	From low to high input voltage, at 100% load
Temperature Coefficient		±0.02% /℃	/℃	————
Short Circuit Protection		Available	————	————
Ripple & Noise		1%max	Vo	At 20MHz bandwidth
Dynamic Response Time		200max	μs	At 25% step load
Overshoot		≤±4%max	Vo	At 25% step load
General Characteristics				
Switching Frequency		720	kHz	————
Isolation Voltage	Input-Output	2500	VAC	1 minute, leakage current <5mA
	Input-Case	2500	VAC	
	Output-Case	500	VAC	
Environmental Characteristics				
Operating Temperature		-40~70℃	————	Derating: -0.2 W/℃ when temperature exceeds 55℃
Storage Temperature		-50~105℃	————	————
Relative Humidity		10%~90%	————	————

◆ Overall Dimensions







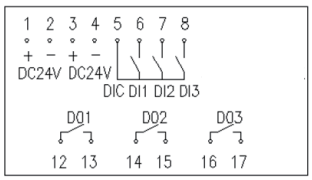


Intelligent Controller Accessories

Relay Module

◆ Inspection Instructions for KST External Relay Module





◆ Panel Diagram

Terminal Number	Label	Function Description
1	+	DC24V Positive
2	–	DC24V Negative
3	+	DC24V Positive
4	–	DC24V Negative
5	DIC	Digital Input Common
6	DI1	Digital Input 1
7	DI2	Digital Input 2
8	DI3	Digital Input 3
12/13	DO1	Digital Output 1 (NO Contact)
14/15	DO2	Digital Output 2 (NO Contact)
16/17	DO3	Digital Output 3 (NO Contact)

◆ Test Method

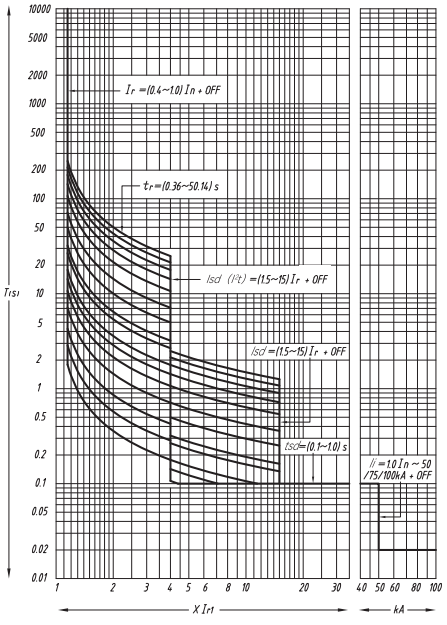
1.Apply DC24V power to the relay module.

2.Short DIC and DI1, measure DO1 terminals (12, 13) with multimeter continuity mode: continuity indicates qualified, otherwise unqualified.

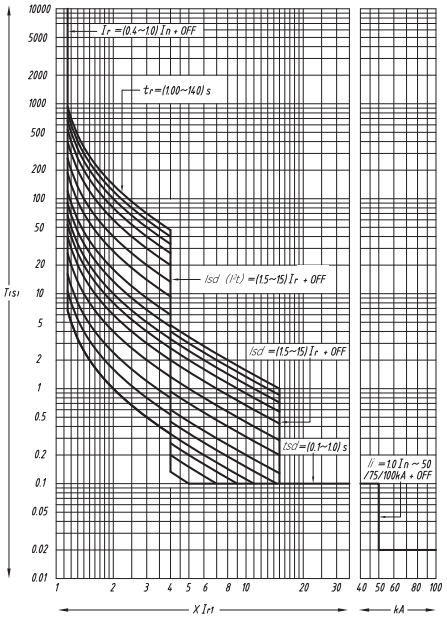
3.Short DIC and DI2, measure DO2 terminals (14, 15) with multimeter continuity mode: continuity indicates qualified, otherwise unqualified.

4.Short DIC and DI3, measure DO3 terminals (16, 17) with multimeter continuity mode: continuity indicates qualified, otherwise unqualified.

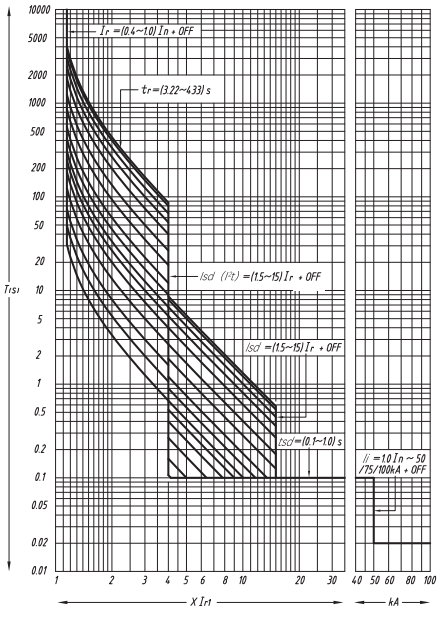
Overload Protection Characteristic Curve



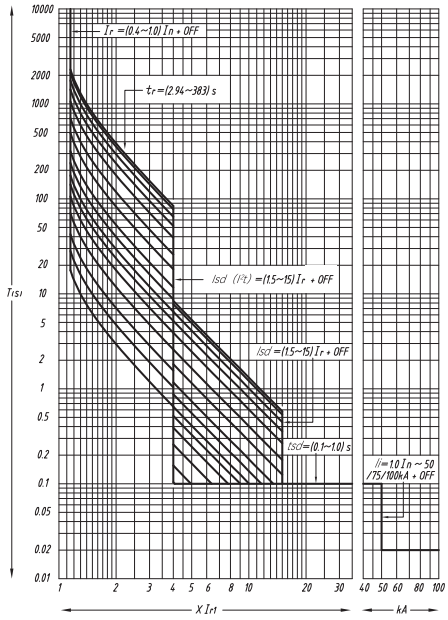
Curve 1: Standard Inverse Time



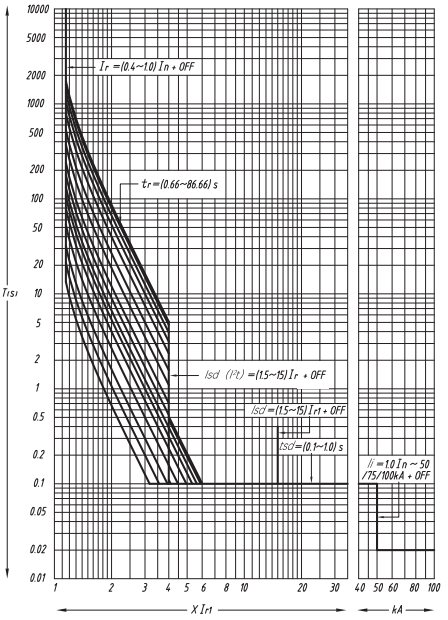
Curve 2: Fast Inverse Time



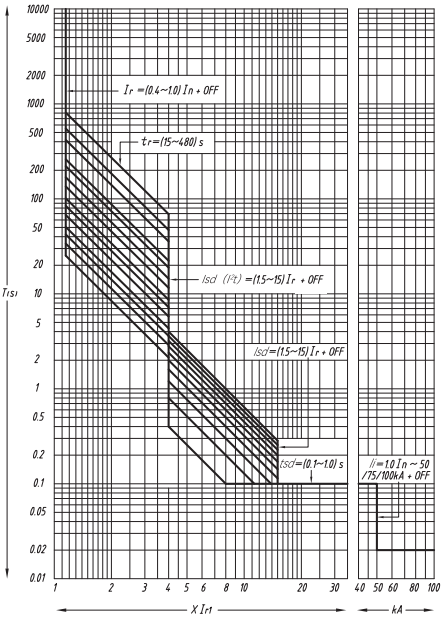
Curve 3: Very Fast Inverse Time (General Protection)



Curve 4: Very Fast Inverse Time (Motor Protection)



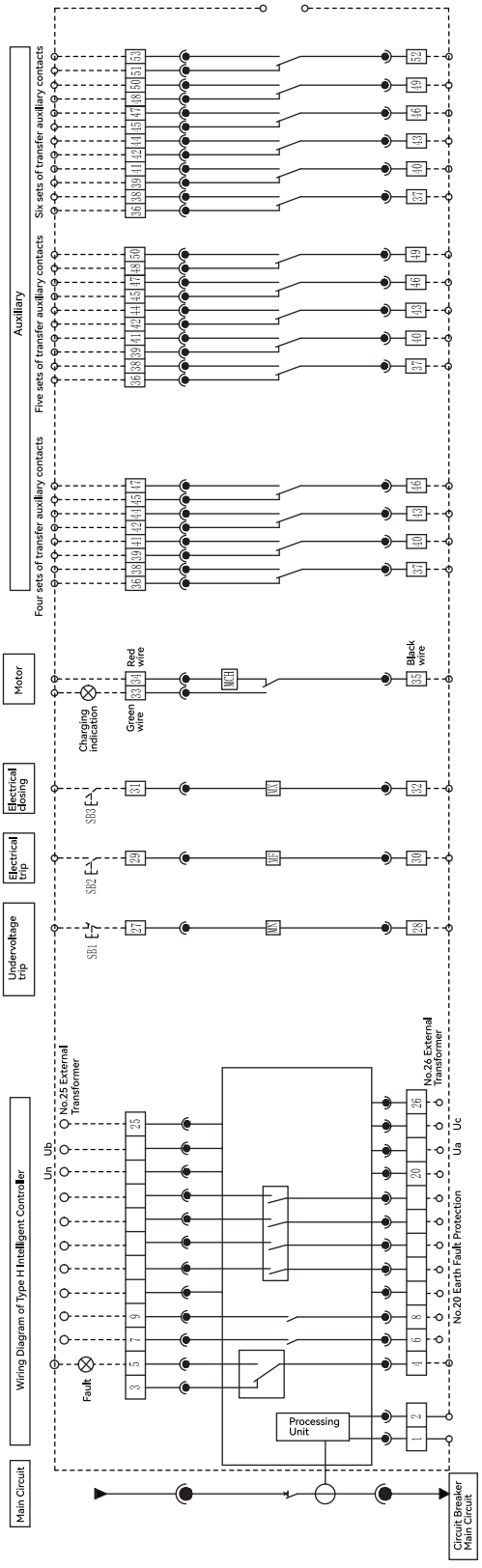
Curve 5: High-Voltage Fuse Compatible

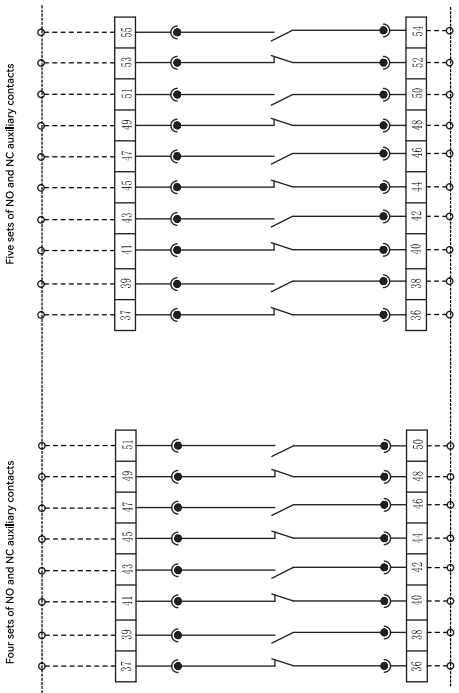


Curve 6: Very Fast Inverse Time 2 (General Purpose)

Secondary Circuit Wiring Diagram

Type 2M Controller for 1600A,2000A, 3200A, 4000A Ratings





Wiring Function Description

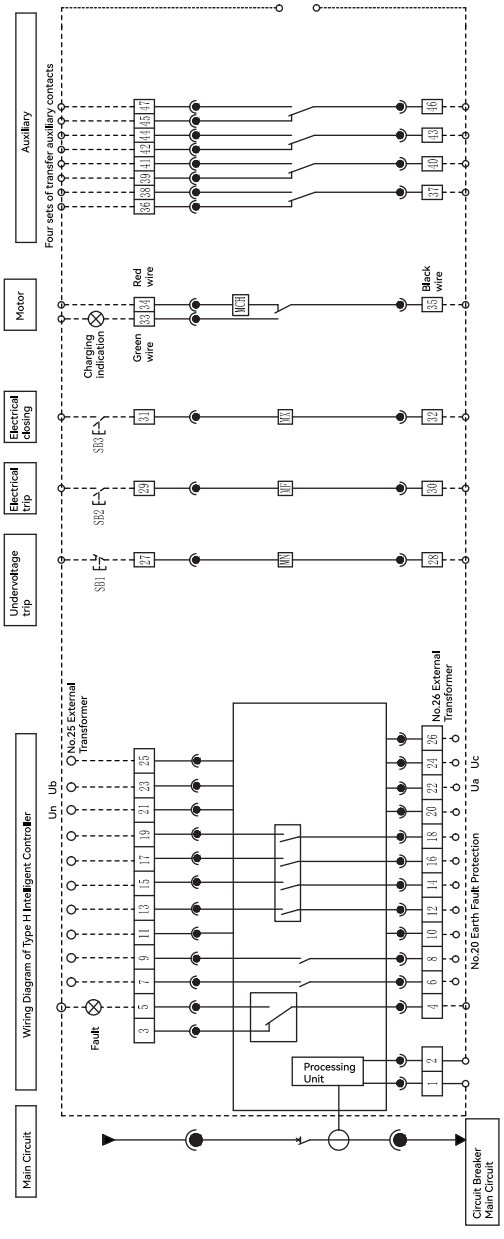
- Wires 1 & 2: Auxiliary power input terminals (Power supply voltage AC 230V/AC 380V/DC 24V/DC 110V/DC 220V)
- Wires 3, 4 & 5: Fault trip contact output terminals (Wire 4 is the common terminal)
- Wires 6 & 7: 1st group of auxiliary contact output terminals for circuit breaker status
- Wires 8 & 9: 2nd group of auxiliary contact output terminals for circuit breaker status
- Wire 20: Protective earth (PE) wire
- Wires 25 & 26: External transformer input terminals (available for residual current protection)

Component List

- SB1: Undervoltage pushbutton (user-supplied)
- SB2: Trip pushbutton (user-supplied)
- SB3: Closing pushbutton (user-supplied)
- MN: Undervoltage release or Undervoltage delay release
- MF: Shunt trip release
- MX: Closing solenoid
- MCH: Charging motor
- ⊗ –Indicator lamp (user-supplied)

Secondary Circuit Wiring Diagram

Type 3M & 3H Controllers for 1600A Ratings



Component List

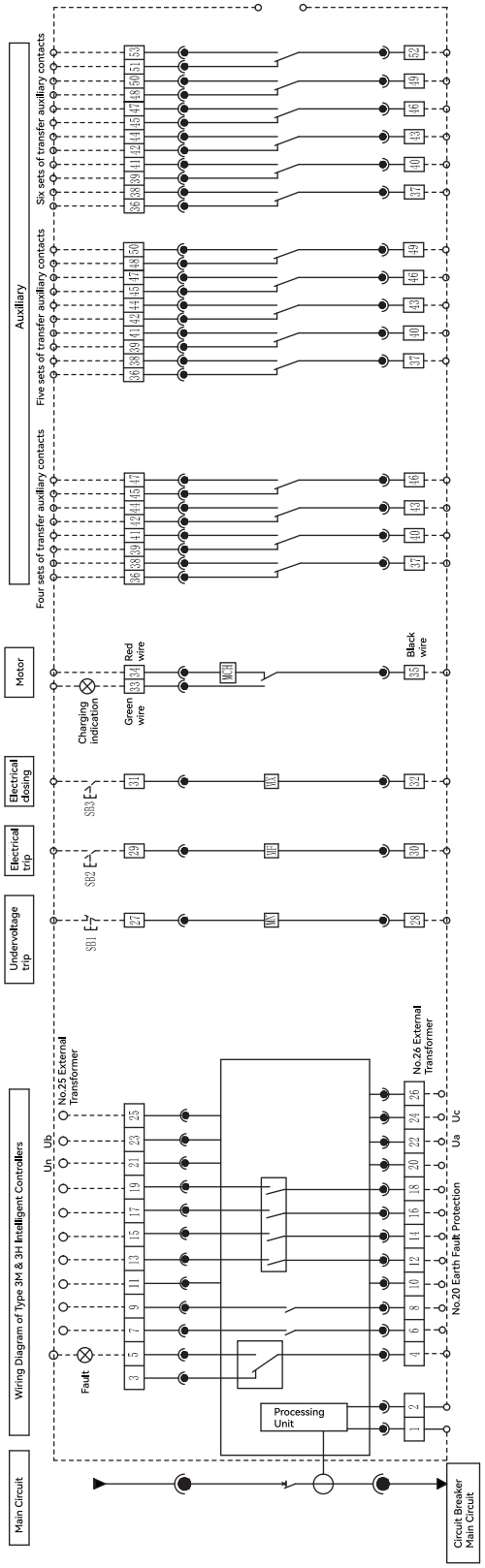
- SB1 – Undervoltage pushbutton (user-supplied)
- SB2 – Trip pushbutton (user-supplied)
- SB3 – Closing pushbutton (user-supplied)
- MN – Undervoltage release or Undervoltage delay release
- MF – Shunt trip release
- MX – Closing solenoid
- MCH – Charging motor
- ⊗ – Indicator lamp (user-supplied)

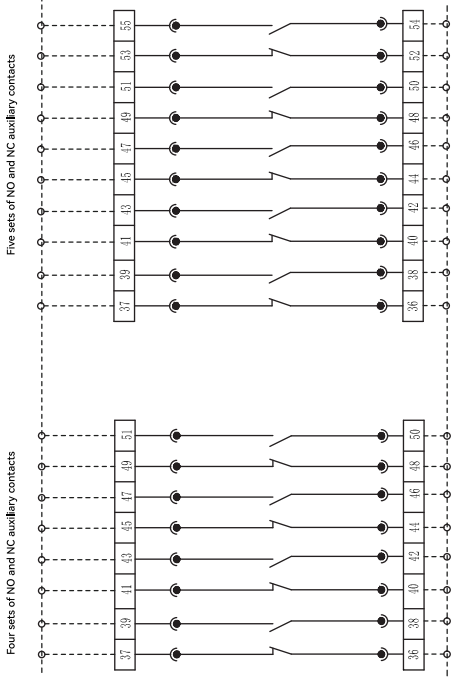
Wiring Function Description

- Wires 1 & 2: Auxiliary power input terminals(Power supply voltage AC 230V/AC 380V/DC 24V/DC 110V/DC 220V)
- Wires 3, 4 & 5: Fault trip contact output terminals (Wire 4 is the common terminal)
- Wires 6 & 7: 1st group of auxiliary contact output terminals for circuit breaker status
- Wires 8 & 9: 2nd group of auxiliary contact output terminals for circuit breaker status
- Wires 10 & 11: RS485 communication interface leads (Terminals A & B)
- Wires 12 & 13: 1st group of signal contact output terminals of the controller
- Wires 14 & 15: 2nd group of signal contact output terminals of the controller
- Wires 16 & 17: 3rd group of signal contact output terminals of the controller
- Wires 18 & 19: 4th group of signal contact output terminals of the controller
- Wire 20: Protective earth (PE) wire
- Wires 21, 22, 23 & 24: Voltage display input terminals (available with function meter)
- Wires 25 & 26: External transformer input terminals (available for residual current protection)

Secondary Circuit Wiring Diagram

Type 3M & 3H Controllers for 2000A, 3200A, 4000A Ratings





Component List

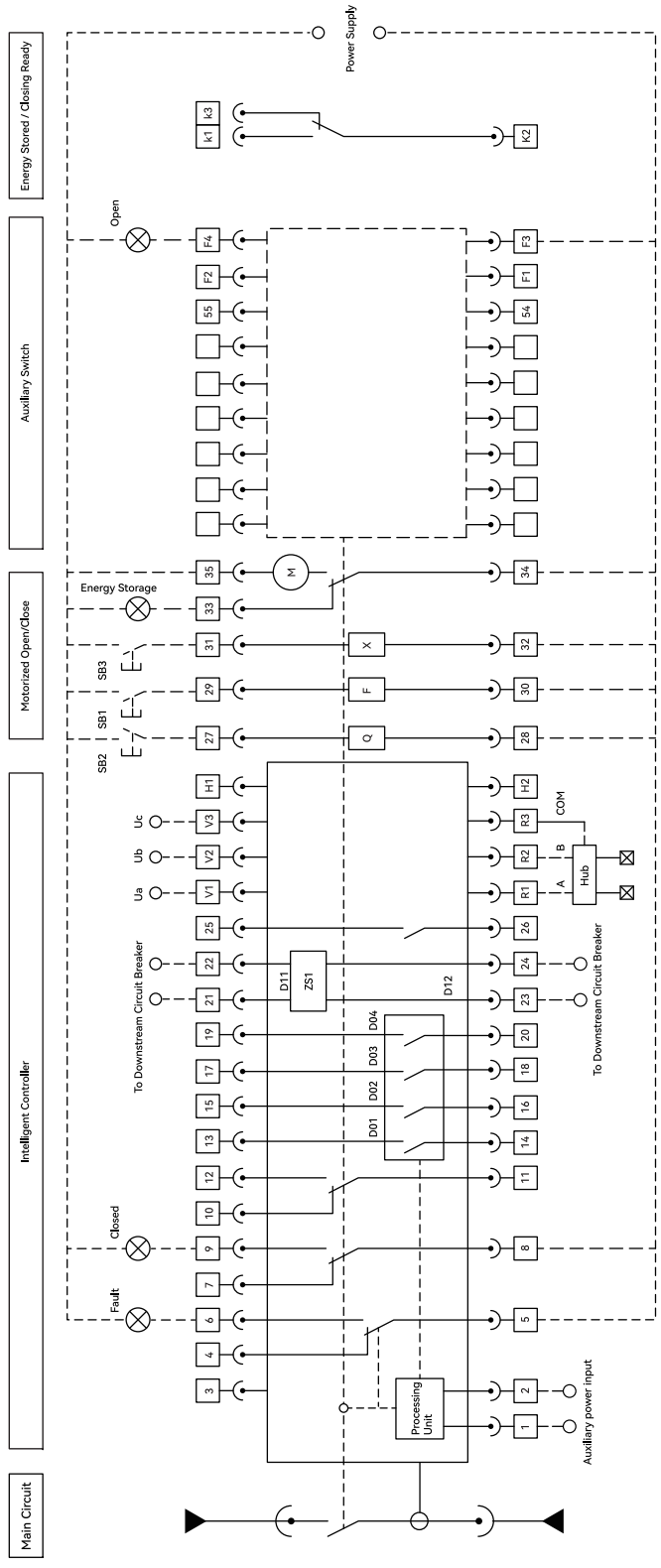
- SB1: Undervoltage pushbutton (user-supplied)
- SB2: Trip pushbutton (user-supplied)
- SB3: Closing pushbutton (user-supplied)
- MN: Undervoltage release or Undervoltage delay release
- MF: Shunt trip release
- MX: Closing solenoid
- MCH: Charging motor
- ⊗ – Indicator lamp (user-supplied)

Wiring Function Description

- Wires 1 & 2: Auxiliary power input terminals (Power supply voltage AC 230V/AC 380V/DC 24V/DC 110V/DC 220V)
- Wires 3, 4 & 5: Fault trip contact output terminals (Wire 4 is the common terminal)
- Wires 6 & 7: 1st group of auxiliary contact output terminals for circuit breaker status
- Wires 8 & 9: 2nd group of auxiliary contact output terminals for circuit breaker status
- Wires 10 & 11: RS485 communication interface leads (Terminals A & B, for H-type controllers only)
- Wires 12 & 13: 1st group of signal contact output terminals of the controller
- Wires 14 & 15: 2nd group of signal contact output terminals of the controller
- Wires 16 & 17: 3rd group of signal contact output terminals of the controller
- Wires 18 & 19: 4th group of signal contact output terminals of the controller
- Wire 20: Protective earth (PE) wire
- Wires 21, 22, 23 & 24: Voltage display input terminals (available with function meter)
- Wires 25 & 26: External transformer input terminals (available for residual current protection)

Secondary Circuit Wiring Diagram

Type bse6-2.X & bse6-3.X Controller for 6300A, 7500A Ratings

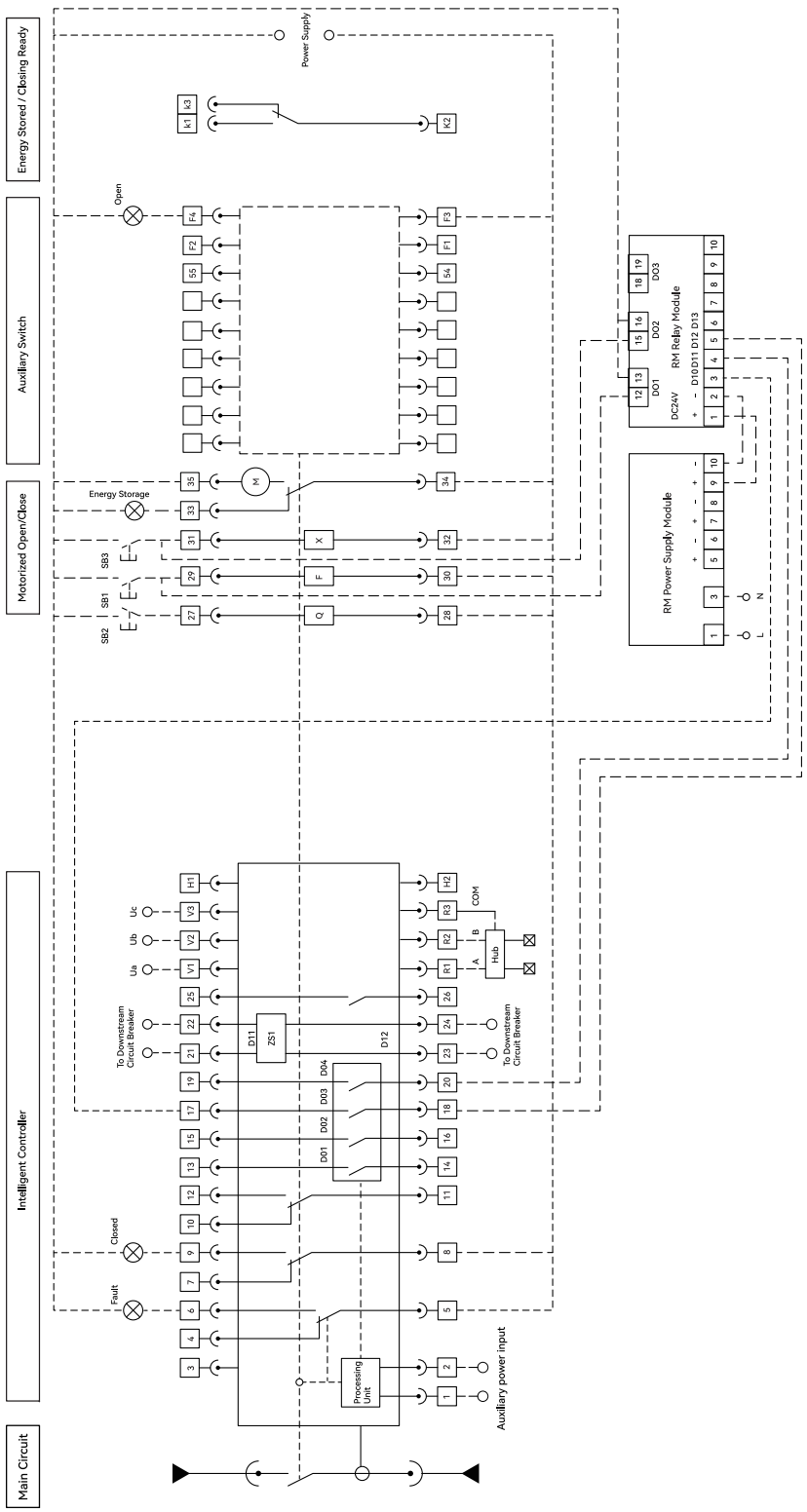


Wiring Function Description

- SB1 Shunt release button (user-supplied)
- SB2 Undervoltage button (user-supplied)
- SB3 Closing button (user-supplied)
- Q Undervoltage release or Undervoltage delay release
- F Shunt release
- X Closing electromagnet
- M Energy-storage motor
- 1~2 Power supply of the intelligent controller Note: If DC power is selected as the power supply of the intelligent controller, a DC power module must be added.
- 3 N-phase voltage signal (not connected for 4-pole circuit breakers)
- 4~6 Fault signal contact (3A/AC230V)
- 7~12 Intelligent controller signal contact (3A/AC230V)
- 13~20 Programmable output contact (optional) Note: This function must be selected if signal output is required.
- 21~24 Zone interlock input (optional)
- 25~26 Self-diagnosis signal output (optional)
- 27~28 Undervoltage release connection terminals
- 29~30 Shunt release connection terminals
- 31~32 Closing electromagnet connection terminals
- 33~35 Energy-storage motor
- 54~55 Auxiliary switch
- F1~F4 Auxiliary switch
- R1, R2, R3 RS-485 communication interface
- K1, K2, K3 Closing signal
- H1, H2 External neutral-pole or earth current transformer input
- V1, V2, V3 A, B, C phase voltage signals (to be connected by the user)

Secondary Circuit Wiring Diagram Protocol: MODBUS–RTU

Type bse6-2.X & bse6-3.X Controller for 6300A, 7500A Ratings

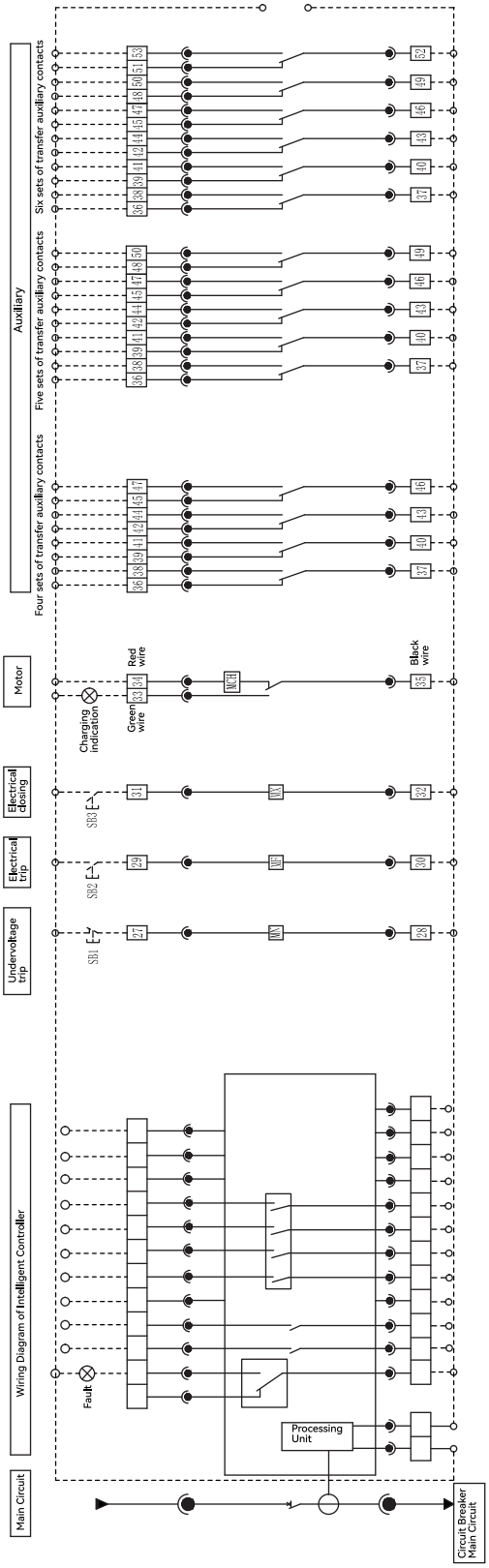


Wiring Function Description

- SB1 Shunt release button (user-supplied)
- SB2 Undervoltage button (user-supplied)
- SB3 Closing button (user-supplied)
- Q Undervoltage release or Undervoltage delay release
- F Shunt release
- X Closing electromagnet
- M Energy-storage motor
- 1~2 Power supply of the intelligent controller Note: If DC power is selected as the power supply of the intelligent controller, a DC power module must be added.
- 3 N-phase voltage signal (not connected for 4-pole circuit breakers)
- 4~6 Fault signal contact (3A/AC230V)
- 7~12 Intelligent controller signal contact (3A/AC230V)
- 13~20 Programmable output contact (optional) Note: This function must be selected if signal output is required.
- 21~24 Zone interlock input (optional)
- 25~26 Self-diagnosis signal output (optional)
- 27~28 Undervoltage release connection terminals
- 29~30 Shunt release connection terminals
- 31~32 Closing electromagnet connection terminals
- 33~35 Energy-storage motor
- 54~55 Auxiliary switch
- F1~F4 Auxiliary switch
- R1, R2, R3 RS-485 communication interface
- K1, K2, K3 Closing signal
- H1, H2 External neutral-pole or earth current transformer input
- V1, V2, V3 A, B, C phase voltage signals (to be connected by the user)

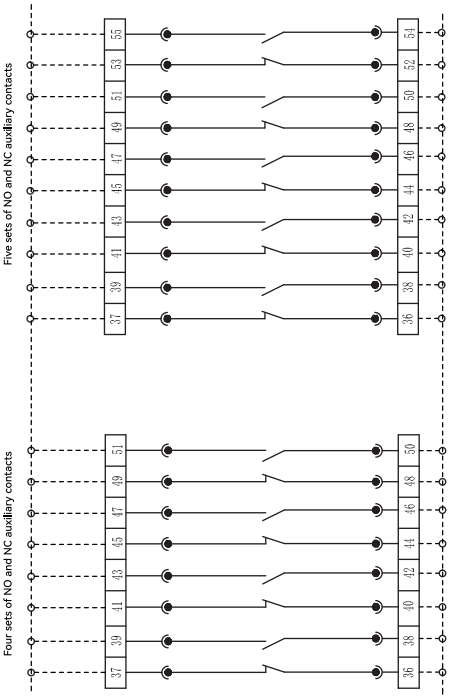
Secondary Circuit Wiring Diagram

Control/Auxiliary Series



Component List

- SB1 – Undervoltage pushbutton (user-supplied)
- SB2 – Trip pushbutton (user-supplied)
- SB3 – Closing pushbutton (user-supplied)
- MN – Undervoltage release or Undervoltage delay release
- MF – Shunt trip release
- MX – Closing solenoid
- MCH – Charging motor
- ⊗ – Indicator lamp (user-supplied)



Accessories

Normally-deployed accessories

◆ Shunt release (MX)

After the circuit breaker is charged, the shunt trip coil can instantaneously trip the circuit breaker at the rated power supply voltage, enabling remote operation.

Fitting breaker	KWW3-1600/2000/3200/4000	
Rated Control Operating Voltage Us(V)	AC220V、AC230V、AC240V、AC380V、AC400V、AC415V	DC24V、DC110V、DC220V、DC250V
Operating voltage Uop(V)	0.7 ~ 1.1(Us)	
Shunt trip time (ms)	≤60ms	



KWW3-1600~4000

◆ Closing electromagnet (YC)

After the circuit breaker is charged, the closing solenoid can close the circuit breaker at the rated supply voltage, enabling remote operation.

Fitting breaker	KWW3-1600/2000/3200/4000	
Rated Control Operating Voltage Us(V)	AC220V、AC230V、AC240V、AC380V、AC400V、AC415V	DC24V、DC110V、DC220V、DC250V
Operating voltage Uop(V)	0.85 ~ 1.1(Us)	
Closing time (ms)	≤30ms	

Note: Prolonged operation is prohibited to prevent damage. Especially in automatic control systems, pulse actuation must be used with a pulse width of 1 second; otherwise, components are prone to burnout.



KWW3-1600~4000

◆ Under-voltage release (MN)

To realize the undervoltage protection function of the circuit breaker, the undervoltage delay release can trip the circuit breaker after a delay of 0.3s, 0.5s, 1s, 3s, or 5s.

- When the voltage is 35%~70% of the rated working voltage, the undervoltage release shall reliably trip the circuit breaker.
- When the voltage is 85%~110% of the rated working voltage, the undervoltage release shall ensure the circuit breaker can be closed.
- When the voltage is below 35% of the rated working voltage, the undervoltage release shall prevent closing of the circuit breaker.

Fitting breaker	KWW3-1600/2000/3200/4000
Rated Control Operating Voltage (Uc)	AC220V、AC230V、AC240V、AC380V、AC400V、AC415V、AC440V
Operating Voltage (V)	0.35 ~ 0.7(Ue)
Reliable Closing Voltage (V)	0.85 ~ 1.1(Ue)
Reliable Non-closing Voltage (V)	≤35% (Ue)
Holding Power Consumption	5W



KWW3-1600~4000

Accessories

Normally-deployed accessories

◆ Shunt release (MX)

Enables remote tripping of the circuit breaker.
Note: If the Shunt Trip needs to be energized for a long duration, please specify at the time of ordering.

KWW3-6300/7500	AC (50/60Hz)	DC
Rated Operational Voltage Ue(V)	400/380V 230/220V	220V 110V
Rated Power	15VA	15W

F: Reliable operating range: 70%~110%Ue
X: Reliable closing range: 85%~110%Ue



KWW3-6300/7500

◆ Closing electromagnet (YC)

Energizes the circuit breaker in its stored energy state.

◆ Under-voltage release (MN)

Trips the circuit breaker instantaneously (or with time delay) when the supply voltage drops to 35%~70% of its rated value.
The circuit breaker can only be reliably closed when the voltage has recovered to 85%~110% of its rated value.

KWW3-6300/7500	Rated Operational Voltage Ue(V)	Rated Power
AC (50/60Hz)	400/380V 230/220V	15VA

Tripping operating time: 0.5, 1, 2, 3s ± 10%

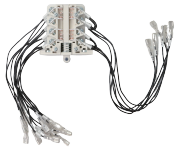
◆ Auxiliary switch (AX)

It adopts passive dry contacts to synchronously indicate the on/off status and fault state of the main circuit. It is mainly applied for remote status indication, electrical interlocking, alarm signal output and signal acquisition by PLC systems.

Fitting breaker	KWW3-1600				KWW3-2000/3200/4000			
Rated operating voltage Ue(V)	AC250V	AC415V	DC125V	DC250V	AC250V	AC415V	DC125V	DC250V
Rated thermal current Ith(A)	6A							
Rated control capacity (A)	3A	1.5A	0.55A	0.27A	5A	3A	0.55A	0.27A
Optional	4changeover contacts				4changeover contacts 5changeover contacts 6changeover contacts		4NO&4NC contacts 5NO&5NC contacts	



KWW3-1600



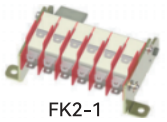
KWW3-2000~4000

KWW3-6300/7500	AC (50/60Hz)	DC
Rated Operational Voltage Ue(V)	400V 230V/110V	220V 110V
Rated Power	300VA	60W
Rated Operational Current Ie(A)	6A	6A

Usage Category: AC-15, DC-13

With Common Contact
6changeover contacts **FK2-1**
(Standard configuration for KWW3-6300/7500)

Without Common Contact
6NO+6NC contacts **FK2-2**
(Optional for KWW3-6300/7500)



FK2-1



FK2-2

Accessories

Normally-deployed accessories

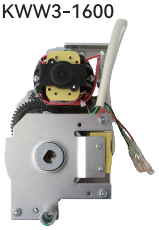
◆ Electric operating mechanism (MCH)

The circuit breaker has the functions of motor-driven energy storage and automatic energy-restroing
The energy storage can also be done manually.

Fitting breaker	KWW3-1600		KWW3-2000/3200/4000	
Rated control operating voltage Uc(V)	AC220V、AC230V、AC240V、AC380V、AC400V、AC415V	DC110V DC220V DC250V	AC220V、AC230V、AC240V、AC380V、AC400V、AC415V	DC110V DC220V DC250V
Operating voltage (V)	0.85 ~ 1.1(Us)			
Power consumption (W)	90W		85W/110W/150W	
Energy storage time (s)	<4s		<5s	



KWW3-1600



KWW3-2000/3200/4000

KWW3-6300/7500	AC (50/60Hz)	DC
Rated Operational Voltage Ue(V)	380V 220V 110V	220V 110V

	AC (50/60Hz)	Rated Power
KWW3-6300/7500	180VA	180W



KWW3-6300/7500

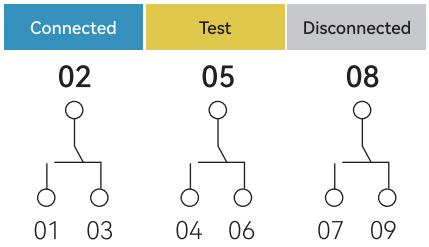
◆ Position indicator switch (PIS)

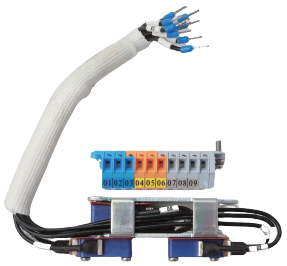
The position indicator switch is driven by the circuit breaker mechanism to output switching signals, indicating the ON/OFF status and energy storage state for remote indication and control.

Circuit Breaker Connected, Test, Disconnected Position Contact Signal Device

Function Description

Used to output signals indicating the Connected, Test, and Disconnected position status of
the circuit breaker.
1 set of NO (Normally Open) + NC (Normally Closed) contacts for the Connected position
1 set of NO + NC contacts for the Test position
1 set of NO + NC contacts for the Disconnected position
Usage Category: AC-15, DC-13





KWW3-1600~7500

KWW3-1600~4000	AC (50Hz)	DC
Rated Operational Voltage Ue(V)	250V	250V
Rated Power	375VA	75W
Rated Operational Current Ie(A)	3A	0.3A

KWW3-6300/7500	AC (50Hz)	DC
Rated Operational Voltage Ue(V)	400V	220V
Rated Power	300VA	60W
Rated Operational Current Ie(A)	6A	6A

Accessories

Normally-deployed accessories

◆ Phase barrier (PB)

It improves the insulation performance between circuit breaker terminals, preventing short circuits caused by conductive materials or dust. It is easy to install and remove. For availability, please refer to the table below.

Type	Connections	KWW3-1600/2000/3200	KWW3-4000/6300/7500
Fixed type (FIX)	Horizontal (FIX)	●	●
	Vertical terminal (FIX-VT)	—	●
Drawout type (DR)	Horizontal (DR)	●	●
	Vertical terminal (DR-VT)	—	●

● Available for the insulation —— Attachment is impossible





KWW3-1600~7500

◆ Push button cover (PBC)

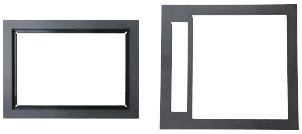
The cover prevents careless manual operation (ON,OFF) of the push buttons.
PBC can be locked by a padlock (The padlock should be supplied by the customer.)



KWW3-1600~7500

◆ Door frame (DF)

The door frame improves the appearance, after cutting out the panel door to install the breaker.



KWW3-1600~7500

◆ Break lock mechanism (BLM)

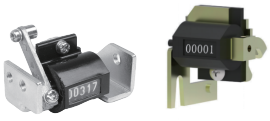
“Break” lock mechanism can lock the “OFF” button of the circuit breaker on the opening position. As a result, the circuit breaker can not be switched on.



KWW3-1600~7500

◆ Counter (CNT)

The number of open/close operations of the breaker are shown by a 5 digit counter.



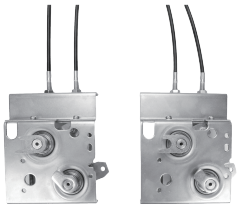
KWW3-1600~7500

Accessories

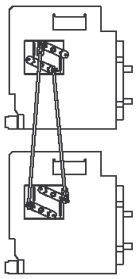
Normally-deployed accessories

◆ Mechanical interlock device (MID)

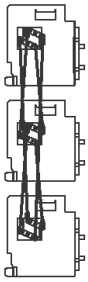
Configuration	Interlock Logic	Installation Type	Reference
Two-unit	One close one open	Lever Interlock vertical	Figure 1
		Cable Interlock horizontal	Figure 3
Three-unit	One close two open	Lever Interlock vertical	Figure 2
		Cable Interlock horizontal	Figure 4



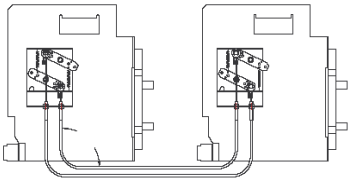
KWW3-1600~7500



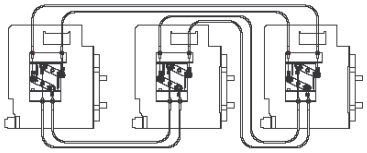
(Figure 1)



(Figure 2)



(Figure 3)



(Figure 4)

Connections

Terminal Configuration

There are many possible terminal configurations when connecting bus bar of distribution panel, vertical, horizontal plane type, etc.

Type \ Fitting breaker	KWW3-1600/2000/3200	KWW3-4000/6300/7500	
Fixed type (F)	 Horizontal	 Horizontal	 Vertical
Drawout type (D)	 Horizontal	 Horizontal	 Vertical

◆ Available connections

Connections \ Fitting breaker		KWW3-1600	KWW3-2000	KWW3-3200	KWW3-4000	KWW3-6300	KWW3-7500
Fixed type (F)	Horizontal	○	○	○	○	○	—
	Vertical	—	—	—	—	○	—
Drawout type (D)	Horizontal	○	○	○	○	○	○
	Vertical	—	—	—	○	○	○

○ Available

Selection Guide

Product Model	KWW3-1600	KWW3-2000	KWW3-3200	KWW3-4000	KWW3-6300	KWW3-7500
Rated Current(A)	☐200 ☐400 ☐630 ☐800 ☐1000 ☐1250 ☐1600	☐630 ☐800 ☐1000 ☐1250 ☐1600 ☐2000	☐1600 ☐2000 ☐2500 ☐2900 ☐3000 ☐3200	☐2000 ☐2500 ☐2900 ☐3000 ☐3200 ☐3600 ☐4000	☐4000 ☐5000 ☐6300	☐5000 ☐6300 ☐7500
Number of Poles	☐3P ☐4P（N 50%In）☐4P（N 100%In）					
Mounting Method	☐Fixed Type ☐Drawout Type					
Wiring	☐Horizontal ☐Vertical ☐Horizontal extended					
Intelligent Controller Selection — Type	☐2M ☐3M ☐3H ☐bse6-2.0 ☐bse6-2.1 ☐bse6-3.0 ☐bse6-3.1 ☐bse6-3.2 ☐bse6-3.3 ☐bse6-3.4 ☐bse6-3.5 ☐bse6-3.6 ☐bse6-3.7					
Control Voltage	☐AC230V ☐ AC380V ☐ DC220V ☐ DC110V ☐ DC24V					
Protection Parameter Settings	Default Factory Setting Ir=1In , Tr=15s ; Definite Time Isd=8Ir,Tsd=0.4s ; Inverse Time Isd=OFF ; Ii=12 In ; Ig=OFF Digital: Ig_0.4In Inverse Time Shear Coefficient k = OFF, Tg=OFF { LCD: ground protection OFF , ground alarm OFF }					
Long-time Delay Protection Ir	Ir=_____In(Select within 0.4~1.0 or set to OFF) Tr(1.5Ir)=_____ s(Select from 15, 30, 60, ..., 480)Note: Values only go up to 480.					
Short-time Delay Isd Short-circuit Protection	Isd=_____ Ir(Select from 1.5~15 or set to OFF) ☐Definite Time Tsd=_____s(Select from 0.1~0.4); ☐Inverse Time Tsd =0.1Tr					
Instantaneous Ii Short-circuit Protection	Ii=_____In(Select from 2.0~15 or set to OFF) , Max. 100 kA					
Ground Protection Ig	Ig=_____In (Select from 0.2~1.0 or set to OFF) Tg= _____s(Select from 0.1~1.0) Inverse Time Shear Coefficient k=_____ (Select from 1.6~6 or set to OFF)					
Optional Function	☐Communication Function: Modbus Protocol (Default) ☐profibus					
Standard Configuration Accessories — Closing Electromagnet	Pulse / Intermittent	☐AC220V ☐AC230V ☐AC240V ☐AC380V ☐AC400V ☐AC415V ☐DC24V ☐DC110V ☐DC220V ☐DC250V				
Shunt Trip	Pulse / Intermittent	☐AC220V ☐AC230V ☐AC240V ☐AC380V ☐AC400V ☐AC415V ☐DC24V ☐DC110V ☐DC220V ☐DC250V				
Electric operating mechanism	☐AC220V ☐AC230V ☐AC240V ☐AC380V ☐AC400V ☐AC415V ☐DC220V ☐DC110V ☐DC250V					
Auxiliary Switch	1600 ☐4changeover contacts	2000-4000 ☐4changeover contacts ☐4NO&4NC contacts ☐5changeover contacts ☐5NO&5NC contacts ☐6changeover contacts		6300/7500 ☐6changeover contacts ☐6NO&6NC contacts		
Optional Accessories — Undervoltage Release	☐AC220V ☐AC230V ☐AC240V ☐AC380V ☐AC400V ☐AC415V ☐AC440V					
	☐Instantaneous (Default)	Delayed tripping time	☐0.3s ☐0.5s ☐1s ☐3s ☐5s	KWW3-6300/7500	☐0.5s ☐1s ☐2s ☐3s	
Break lock mechanism	☐1600/2000/3200 ☐4000/6300 ☐7500	☐1 circuit breaker with 1 lock & 1 key ☐2 circuit breakers with 2 locks & 1 key		☐3 circuit breakers with 3 locks & 2 keys		
Mechanical Interlock device	☐1600/2000/3200 ☐4000/6300 ☐7500	☐Fixed Type ☐Drawout Type	☐Two-unit One close one open ☐Three-unit One close two open	☐Lever Interlock vertical ☐Cable Interlock horizontal		
Others	☐Residual Current Transformer ☐External Neutral Current Transformer ☐Phase Separator Plate ☐Power Adapter ☐Relay Module ☐Communication Conversion Module(Profibus-DP) ☐Drawer Base Three-Position Lock Note: Essential accessory for connecting the main circuit at 800V operating voltage.					

Note 1: If the user has other special requirements for the order, please negotiate with the manufacturer before placing the order.
Note 2: The costs of optional functions and optional accessories for the circuit breaker are not included in its standard configuration and shall be calculated separately.



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