



Product Overview

The RDM5T/A、RT series circuit breakers are new, upgraded versions developed by our company by combining the advantages of the most advanced similar products internationally with the demands of domestic and international markets.

With a rated insulation voltage of up to 800V, these circuit breakers are suitable for AC 50/60Hz distribution network circuits with a rated operating voltage of up to 690V and a rated operating current of up to 1250A. They are used to distribute electrical energy and protect circuits and power supply equipment from damage caused by faults such as overloads, short circuits, and undervoltage. They can also be used for infrequent motor starting and for overload, short circuit, and undervoltage protection.

This circuit breaker features a compact size, high breaking capacity, and short arc length, making it an ideal choice for users. It can be installed vertically (upright) or horizontally (sideways).

This product complies with IEC/EN 60947-1 (General)	GB/T 14048.1
IEC/EN 60947-2 (Circuit-breakers)	GB/T 14048.2
IEC/EN 60947-3 (Switches, Isolators)	GB/T 14048.3
IEC/EN 60947-4 (Motors and drives)	GB/T 14048.4

Product Features

- Compact Design

The product features a compact design; for example, a 160-frame product has dimensions equivalent to the original 100- frame model, meeting customers' specific requirements for installation dimensions.

- Uniform Dimensions

Within the same frame size, products with different breaking capacities (C, S, M, H) and different functions (air, ground fault, and adjustable thermomagnetic) have completely identical installation dimensions

- Reasonable Setting of Functional Parameters

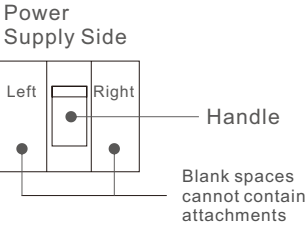
The circuit breaker allows for the adjustment of protection parameters such as long-time inverse-time overload protection and instantaneous short-circuit tripping. Users can independently configure the required protection characteristics, enabling more rational upstream and downstream configuration of circuit breakers in power distribution networks.

Operating Environment

- The product has passed environmental tests including dry cold, dry heat, and damp heat, ensuring reliable operation in non-standard environments.
- The product meets the test requirements of GB/T 2423. 1 (Low-Temperature Testing of Electrical and Electronic Products) and GB/T 2423.2 (High-Temperature Testing of Electrical and Electronic Products), and can be used within a temperature range of -35°C to 70°C. When the temperature is below -5°C or above 40°C, calculations must be performed using the temperature compensation coefficient table provided in the catalog.
- The normal operating altitude is 2000 m or below. At altitudes exceeding 2000 m, factors such as reduced dielectric strength and colder air must be considered; please apply corrections using the altitude-dependent derating factor table provided in the catalog.
- The product can operate reliably in pollution degree 3 environments as defined by IEC/EN 60947-1 and IEC 60664-1 (industrial environments).
- The product complies with the requirements of the IEC 60529/GB/T 4208 (Enclosure Protection Rating) standard. Product body: Protection rating is IP30 (excluding terminal blocks)

Selection Guide																	
RDM5		RT		-	160		H	Z	/	3	300	2	A	Q1	D	Q	2
Product Code		Adjustable Type			Frame Class			Breaking Capacity									
RDM5		RT			160			C									
Molded-case circuit breaker	RT stands for thermomagnetically adjustable T/A stands for single adjustable (i.e., thermally adjustable/magnetically fixed (Fixed))							C	S	M	H						
				160			160	25/15	35/25	50/35	/						
				250			250	25/18	35/25	50/35	/						
				630			630	/	35/25	50/35	75/50						
				800			800	/	35/25	50/35	75/50						
Operating Method		Poles			Trip Mechanism and Internal Components					Rated Current A							
P		4			300					125A							
P: Electric operation Z: Rotary handle W: Direct operation D: Electric operation DC1, DC2, Dc3		2: 2-pole 3: 3 -pole 4: 4 -pole			The first digit indicates the trip mechanism type 2: Instantaneous trip only 3: Dual-stage trip unit Note: The last two digits are the accessory code (see attachment table)					160	32, 40, 50, 63, 80, 100, 125, 140, 160						
										250	100, 125, 140, 160, 180, 200, 225, 250						
										630	250, 315, 350, 400, 500, 630						
										800	500, 630, 700, 800						
Application		Available Part Numbers For 4-pole Products															
2		B															
1: For power distribution 2: For motor protection		A: N-pole without protection, cannot close or open A B: N-pole without protection, can be closed and opened															
Accessory voltage			Motor operating voltage				Mounting method			Is a terminal block installed?							
Q1			D1				Q			2							
Undervoltage Trip Unit UVT	Shunt Trip Unit	Auxiliary Alarm	DC1		DC3		Q: Front of board H: Rear CQ: Plug-in Front panel CH: Plug-in Rear panel			Install 1: Do not install 2: Installed							
Q1: AC220V	F1: AC220V J1: Ac125	J1: AC125V	D1: AC220V		D5: AC230V												
Q2: AC 240V	F2: AC380V	J2: AC 250V	D2: AC 230V		D6: AC 110 V												
Q3: AC 380V	F3: DC 110 V	J3: DC 125V	D3: AC 380V		D7: DC 220												
			D4: AC 400V		D8: DC 110												
					D9: AC 110–240 V												
Q4: AC 415V	F4: DC 24V	J4: DC 24V			D10: DC 100–220 V												
			Note: When selecting electric operation, refer to the external accessories section														

Accessories					
Model		RDM5T/A, RT-160	RDM5T/A, RT-250	RDM5T/A, RT-630	RDM5T/A, RT-800
Breaking Capacity		C, S, M	C, S, M	S, M, H	S, M, H
Pole		3,4	3,4	3,4	3,4
Attachment Code	Attachment Name				
208, 308	Alarm switch				
210, 310	Shunt Trip Unit				
220, 320	Auxiliary switch				
230, 330	Undervoltage release				
240, 340	Shunt trip unit and auxiliary switch				
260, 360	Two sets of auxiliary switches				
270, 370	Auxiliary switch, undervoltage trip unit				
218, 318	Shunt trip unit and alarm Switch				
228, 328	Auxiliary switch Alarm switch				
238, 338	Undervoltage trip unit alarm switch				
248, 348	Shunt trip unit, auxiliary switch, alarm switch				
268, 368	Two sets of auxiliary switches and alarmswitches				
278, 378	Auxiliary switch, undervoltage trip unit, alarm switch				
280, 380	Two sets of auxiliary switch shunt trip units				

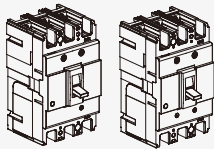
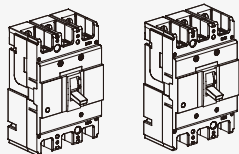
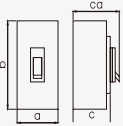


● Alarm Switch ○ Auxiliary Switch □ Shunt Trip ■ Undervoltage Trip Unit

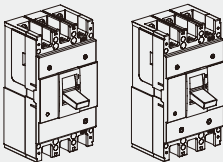
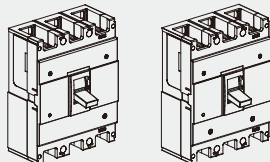
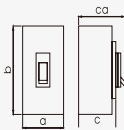
Note:

1. The company offers three new products—right auxiliary switch, left shunt, and left undervoltage—for customers to choose from.

2. For the 220, 320, 240, 340, 270, and 370 models, two sets of auxiliary switches are available; please specify this when ordering.

Main Technical Parameters									
Model		RDM5T/A、 RT-160			RDM5T/A、 RT-250				
Frame rating rated current Inm(A)		160			250				
Number of poles		3,4			3,4				
Product Image									
Rated Current In (A), 40°C, 50°C, 55°C		63, 80, 100, 125, 160			125,140,160,180,200,225,250				
Rated operating voltage Ue (V), AC 50/60 Hz		400/415			400/415				
Rated insulation voltage Ui (V)		800			800				
Rated impulse withstand voltage Uimp (kV)		8			8				
Breaking capacity code		C	S	M	C	S	M		
Short-circuit breaking capacity Icu/Ics (kA)AC 400/415 V		25/15	35/25	50/35	25/18	35/25	50/35		
Selection Category		A	A	A	A	A	A		
Number of operating cycles		Power ON 3000			3000				
		Power Off 9000			9000				
Trip Mechanism Types and Protection Classes	Electromagnetic trip	Power Distribution Protection	●	●	●	●	●	●	
		Motor protection	●	●	●	●	●	●	
	Thermal-magnetic trip	Power Distribution Protection	●	●	●	●	●	●	
		Motor protection	●	●	●	●	●	●	
Accessories	Auxiliary Contacts		●	●	●	●	●	●	
	Alarm Contacts		●	●	●	●	●	●	
	Shunt Trip Unit		●	●	●	●	●	●	
	Undervoltage trip		●	●	●	●	●	●	
	Manual operating mechanism		●	●	●	●	●	●	
	Electric operating mechanism		●	●	●	●	●	●	
	Rear Panel Wiring		●	●	●	●	●	●	
	Plug-in		●	●	●	●	●	●	
	Connection plate		●	●	●	●	●	●	
	Phase separator		●	●	●	●	●	●	
Dimensions (mm) (a-b-c-ca)		3-pole (3P)	90-155-2017-95		90-155- 84.9-109.2	105-165-71-95.8		105-165- 93.4-118.6	
		4-pole (4P)	120-155-70.7-95		120-155- 84.9-109.2	140-165-71-95.8		140-165- 93.4-118.6	

Note: A d d ● indicates optional accessories; a d d - indicates no optional accessories

Main Technical Parameters									
Model			RDM5T/A、RT-630			RDM5T/A、RT-800			
Frame Size Rated Current Inm (A)			630			800			
Number of poles			3,4			3,4			
Product Images									
Rated current In (A), 40°C, 50°C , 55°C			250,315,350,400,500,630			500,630,700,800			
Rated operating voltage Ue (V), AC 50/60 Hz			400/415			400/415			
Rated insulation voltage Ui (V)			800			800			
Rated impulse withstand voltage Uimp (kV)			800			8			
Breaking capacity code			S	M	H	S	M	H	
Short-circuit breaking capacity Icu/Ics (kA) AC 400/415 V			35/25	50/35	75/50	35/25	50/35	75/50	
Selection Category			A	A	A	A	A	A	
Number of operating cycles	Power ON		2000			1500			
	Power Off		6000			4000			
	Electromagnetic Trip	Power Distribution	●	●	●	●	●	●	
Protection		●	●	●	●	●	●		
Trip Mechanism Type and Protection Class	Thermal-magnetic trip	Motor protection	●	●	●	●	●	●	
		Power Distribution Protection	●	●	●	●	●	●	
		Motor protection	●	●	●	●	●	●	
Accessories	Auxiliary Contacts		●	●	●	●	●	●	
	Alarm Contacts		●	●	●	●	●	●	
	Shunt Trip Unit		●	●	●	●	●	●	
	Undervoltage trip		●	●	●	●	●	●	
	Manual operating mechanism		●	●	●	●	●	●	
	Electric operating mechanism		●	●	●	●	●	●	
	Rear Panel Wiring		●	●	●	●	●	●	
	Plug-in		●	●	●	●	●	●	
	Connection plate Phase separator		●	●	●	●	●	●	
Dimensions (mm) (a-b-c-ca)			3-pole (3P)	140-257-107.5-156			210-275-114.3-162.5		
			4-pole (4P)	185-257-107.5-156			280-275-114.3-162.5		

Note: A d d ● indicates optional accessories; a d d - indicates no optional accessories

Operating Characteristics

1. The inverse-time operating characteristics of distribution circuit breakers with no humidity compensation, when all poles are energized simultaneously at an ambient air temperature of +40°C, are shown in the table below:

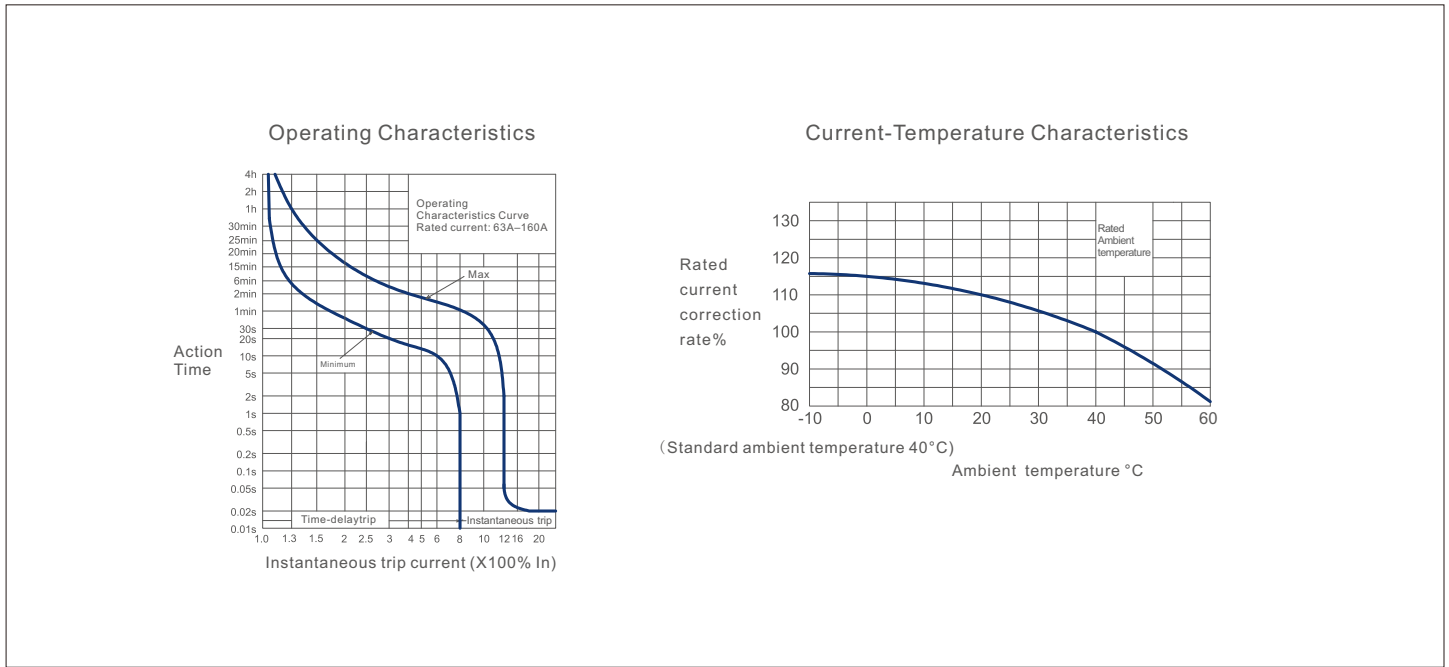
Test Current Name	Setting current multiplier	Conventional Time	Initial State
		$I_n \leq 63$ $I_n > 63$	
Agreed non-trip current	1.05	$\geq 1h$ $\geq 2h$	Cold state
Rated tripping current	1.30	$< 1h$ $< 2h$	Hot state

2. For motor protection circuit breakers, the inverse-time operating characteristics (without humidity compensation) when all poles are energized simultaneously at an ambient air temperature of +40°C are shown in the table below:

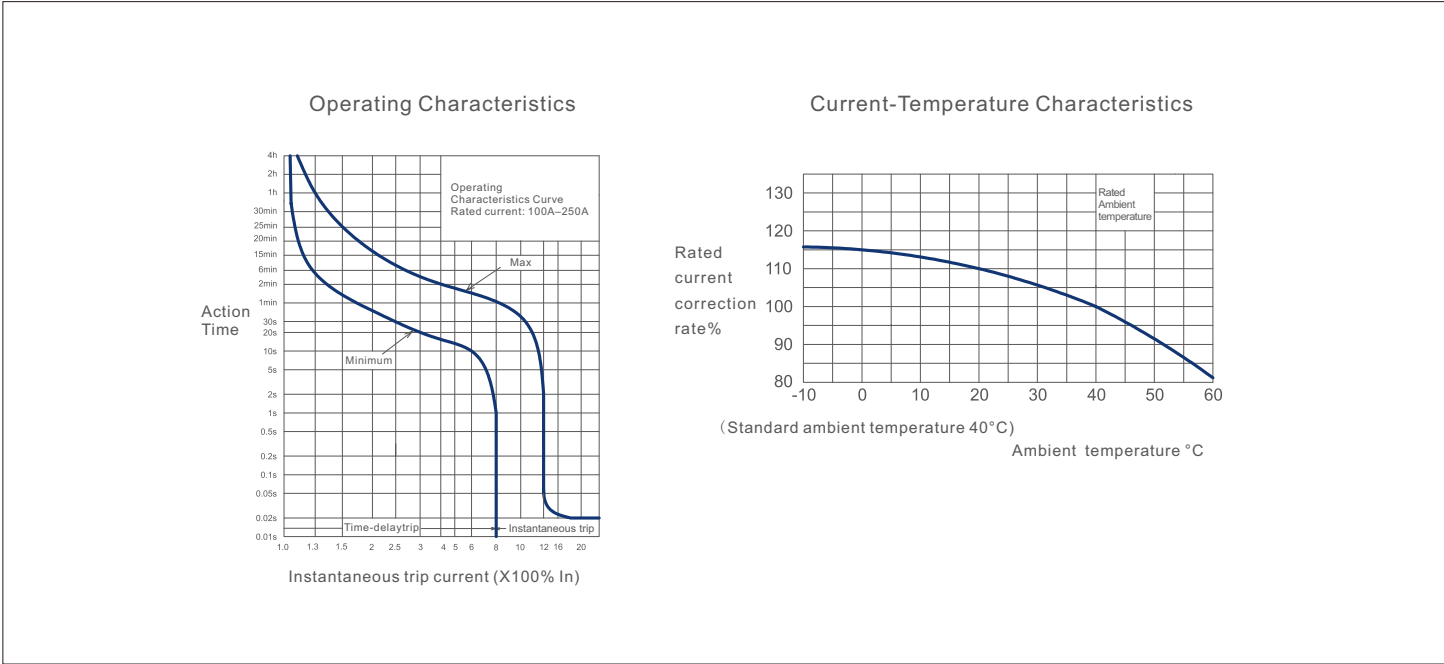
Test current name	Setting current multiplier	Specified Time	Initial State
		$I_n \leq 800$	
Agreed non-trip current	1.0	$\geq 2h$	Cold state
Rated trip current	1.2	$< 2h$	Hot state

3. Operating characteristics under short-circuit conditions:
The short-circuit current setting of the instantaneous trip unit for distribution circuit breakers is $10I_n$
For circuit breakers used for motor protection, the short-circuit current setting of the instantaneous trip unit is $12I_n$
The accuracy of the short-circuit current setting for the instantaneous trip unit is $\pm 20\%$

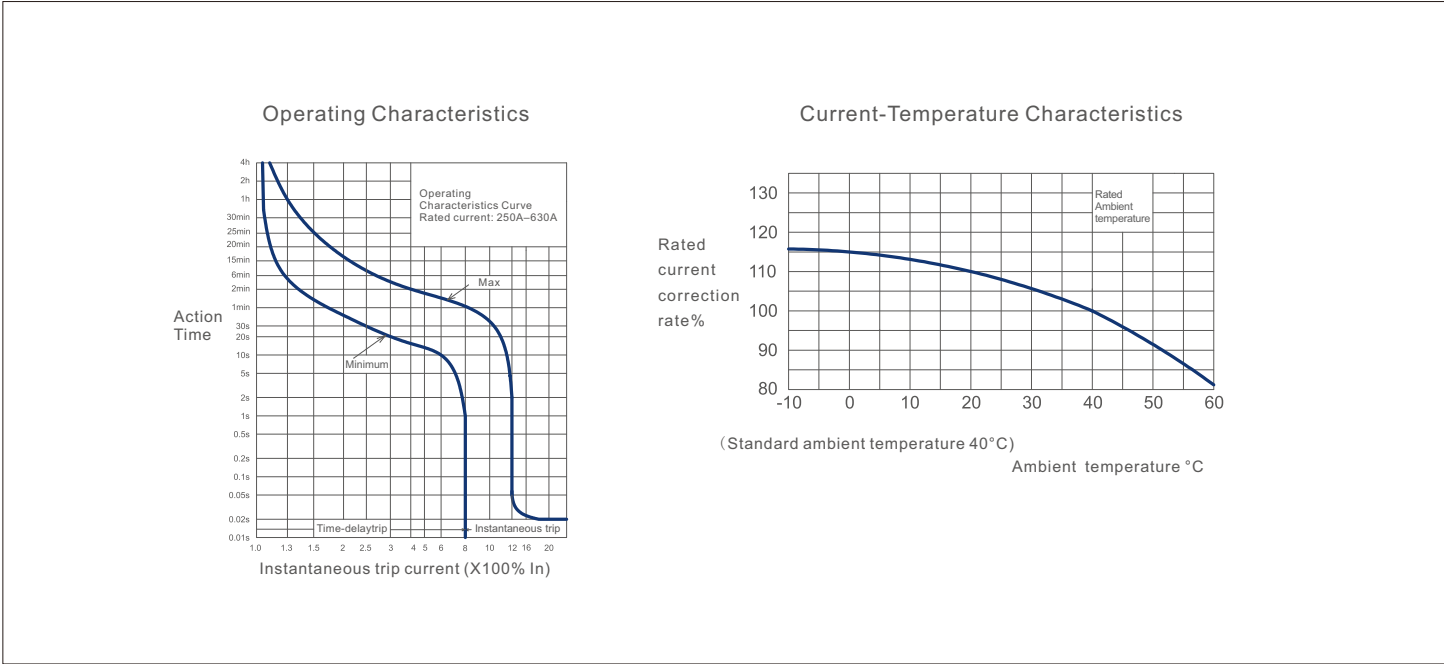
RDM5T/A、RT-160 Operating Characteristic Curve



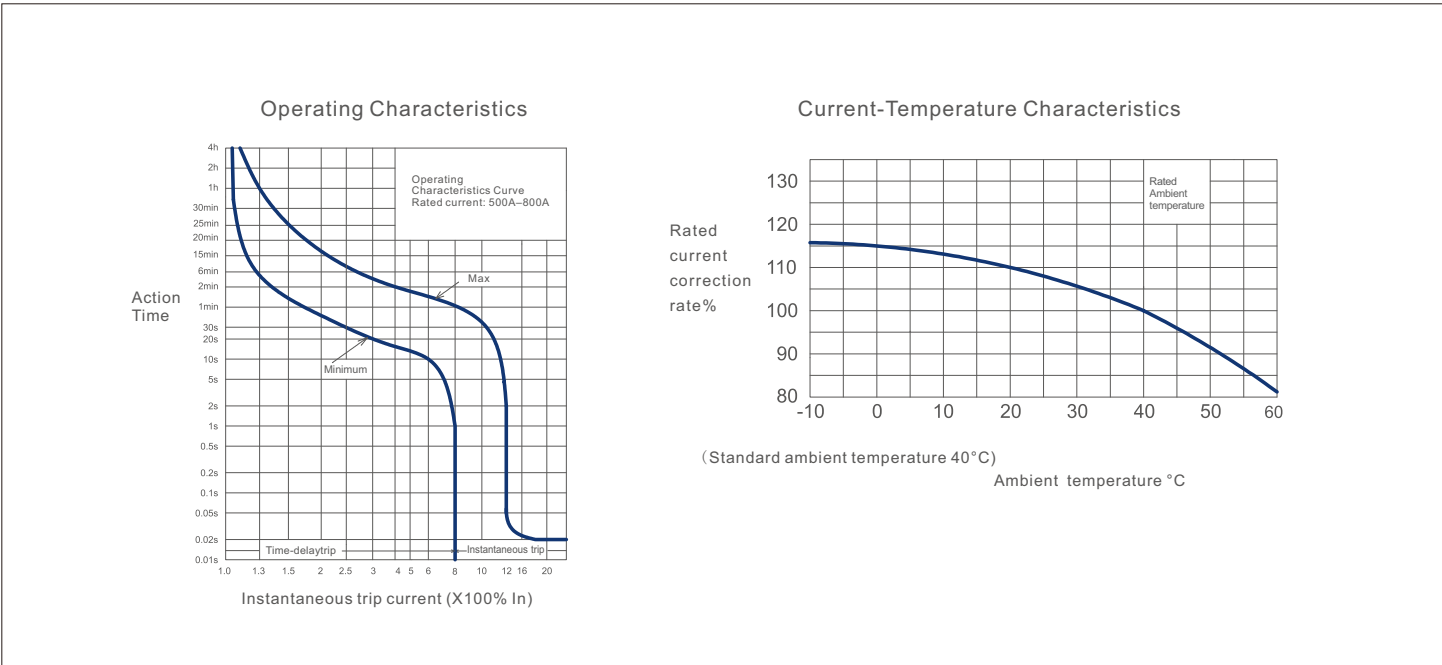
RDM5T/A、RT-250 Operating Characteristics Curve



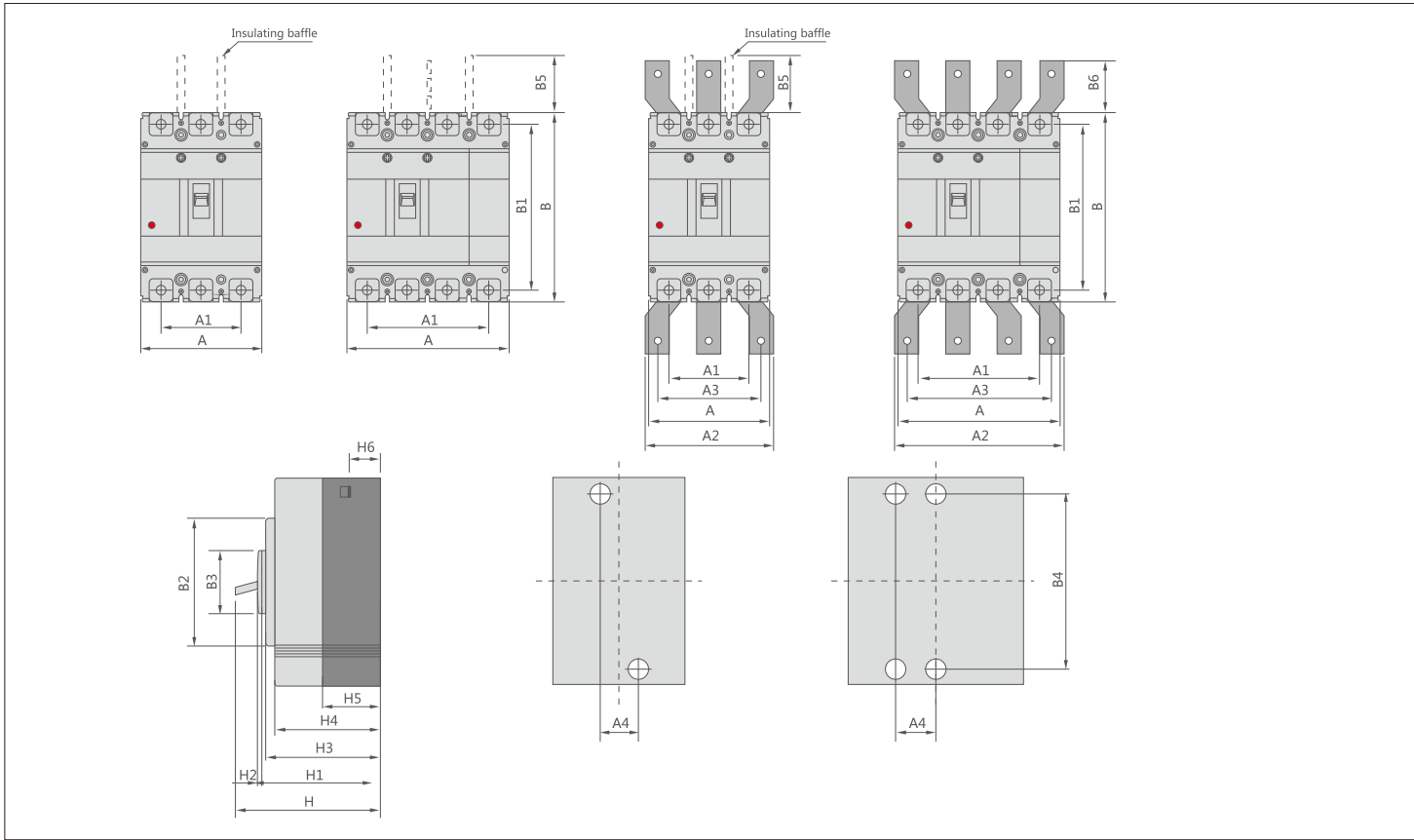
RDM5T/A、RT-630 Operating Characteristics Curve



RDM5T/A, RT-800 Operating Characteristics Curve



External Dimensions And Installation Dimensions



Molded Case Circuit Breaker	Overall Dimensions																				Installation Dimensions		Bolt	
	A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4		B4
	3P	4P	3P	4P	3P	4P	3P	4P																
RDM5RT-160CS	90	120	60	90	-	-	-	-	155	134	103	50	48	-	95	76	2.2	70.7	62.3	23.8	24.6	30	132	M8
RDM5RT-160M	90	120	60	90	-	-	-	-	155	134	103	50	48	-	109.2	90	2.2	84.9	76.4	23.1	24.9	30	132	M8
RDM5RT-250CS	105	140	70	105	-	-	-	-	165	144	102	50	97	-	95.8	75	2.8	71	62.2	22.7	23.3	35	126	M8
RDM5RT-250M	105	140	70	105	-	-	-	-	165	144	102	50	95	-	118.6	97.6	2.8	93.4	84.5	23.1	23.2	35	126	M8
RDM5RT-630 SMH 400A	140	185	88	132	140	196	112	168	257	230	179	90	103	42	156	112.1	3.5	107.5	99.6	30.9	32	44	194	M10
RDM5RT-630 SMH 630A	140	185	88	132	140	196	112	168	257	230	179	90	103	42	156	112.1	3.5	107.5	99.6	33.4	34	44	194	M10
RDM5RT-800 SMH 630A	210	280	140	210	180	250	140	210	275	243	192	90	103	87	162.5	118.4	2.7	114.3	106	28.5	30.7	70	242.5	M12
RDM5RT-800 SMH 800A	210	280	140	210	180	250	140	210	275	243	192	90	103	87	162.5	118.4	2.7	114.3	106	29.5	32.7	70	242.5	M12
RDM5RT-1250 SMH	210	280	140	210	180	250	140	210	275	243	192	90	103	87	162.5	118.4	2.7	114.3	106	31.5	34.7	70	242.5	M10