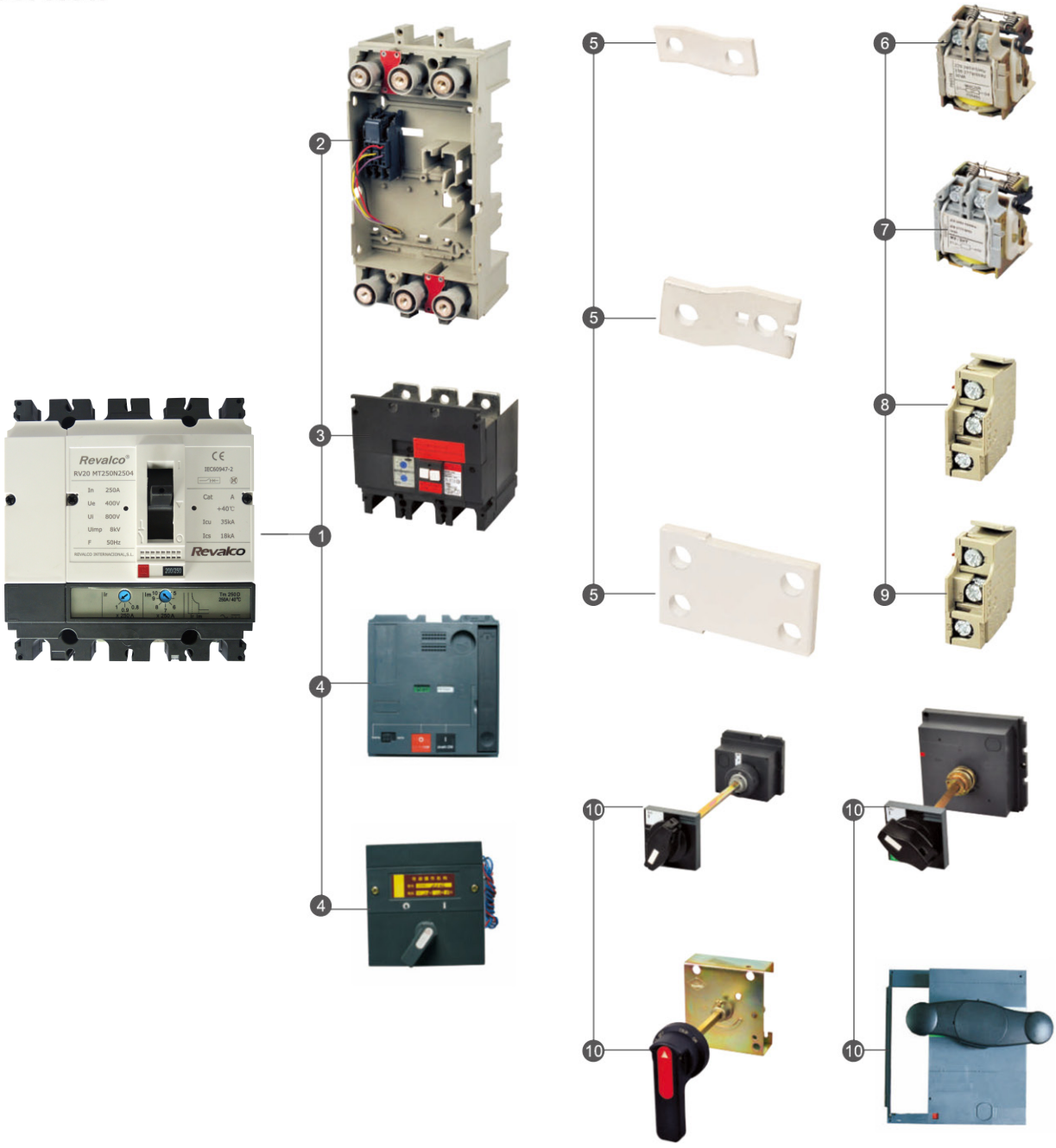
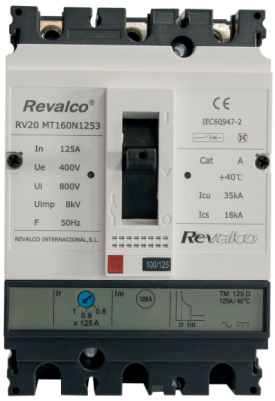
Overview



1	Body
2	Plugin bottom base
3	Residual current protecting module
4	Electrical operating module
5	External wiring board

6	Shunt tripe
7	Undervoltage trip
8	Auxiliary contact
9	Alarm contact
10	Rotatory handle



Application

Integrated with international Hi-tech, RV20 series moulded case circuit breaker is a new type of circuit breaker which designed by our company. It's compact, modularized, with high breaking capacity, zero-arc, completely environment friendly. RV20 circuit breaker mainly applies to distribution systems with 50/60Hz, rated voltage up to 690V, rated current 12.5~1600A, its purpose lays in power distributing & protecting system against malfunctions such as overload, short-circuit, undervoltage, etc. it can also work as an infrequent ON/OFF switch under systems working innormal condition.

RV20 circuit breaker equips with intelligent controller as well, which not only makes its current adjustable but also grants protection against overload(long delay), short-circuit(short delay), short-circuit(instantaneous) & undervoltage. it'll certainly improve the entire power system's reliability, continuity & security. RV20 circuit breaker also obtains isolating function —/ix—

RV20 circuit breaker complies to GB14048.2, IEC60947-2 standards, with CCC, CE, CB, TSE certificate approved.

Work & Install Circumstance

1. Altitude of the installation place shall not exceed 2000m.
2. Circumstance temperature shouldn't be higher than +40℃ (+45℃ for marine type) or lower than -5℃ average temperature of 24h shall not exceed +35℃ .Relative atmosphere humidity shall not exceed 50% when circumstance temperature is at 40℃ , relative humidity could be higher if temperature drops, the average humidity of the most humid month shall not exceed 90%, in the meantime, average temperature of this month shall not be lower than +25℃ ,condensation on product surface due to temperature changing should be taken into conside-ration as well.
3. Working circumstance of the product shall not contain any explosive, metal corrosive or conductivemedia.
4. Vertical inclination against the installation surface should not exceed 50.
5. Working area ought to be rainproof and doesn't contain too much amount of vaporin air.
6. Working area must be stable.
7. Install type: III
8. Pollution class: 3
9. There are two basic install methods: vertical connecting & horizontal connecting.
10. There are two wiring methods: upper wiring & lower wiring.
11. Breaker can be defined as fixed type circuit breaker & plugin circuit breaker.

Model Code

RV 20 □ - □ □ / □ □ □ □ □

- Operating method(d)
- Application code(c)
- Trip type & accessory code(refer to Diagram 1)
- Phase(b)
- Rated short-circuit breaking capacity code(a)
- Structural level rated current
- ST for Intelligent trip, no code for thermalmagnet type(e)
- Design code
- Company code

a. Rated short-circuit breaking capacity: D-Economic type, N-Standard type,H-High breaking capacity type
b. Phase: 2-2P, 3-3P, 4-4P.
c. Application code: no code for distribution type, "2" for motor protection type.
d. Operating method: no code for manual(default handle) type, "P" for electrical operating type
"Z" for rotatory handle type
e. "L" for residual current protecting function.
f. 4P with N pole adjustable:
4A: N pole without over-current release, N pole always closes;
4B: N pole without over-current release, N pole closes and opens together with 3-L pole(N pole closes first and open last).

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4C: N pole with over-current release, N pole closes and opens together with 3-L poles(N pole closes first and open last), operating value 1.0Ir;

4D: N pole with over-current release, N pole always closes, operating value 1.0Ir.

Diagram 1 accessory code

Accessory name / Accessory code / Tripping unit	No accessory	Alarm contact	Shunt+trip	Shunt+Alarm	Auxiary+contact(1 set)	Auxiary+Alarm	Undervoltage trip	Undervoltage +Alarm	Auxiary+Shunt	Shunt+Aux.+Alarm	Auxiary+contacts(2 sets)	Auxiary(2)+Alarm	Undervoltage + Alarm	Aux.+Undervoltage+Alarm
Instantaneous trip only (Electromagnet trip)	200	208	210	218	220	228	230	238	240	248	260	268	270	278
Duplex trip (Thermalmagnet trip)	300	308	310	318	320	328	330	338	340	348	360	368	370	378
Intelligent trip	400	408	410	418	420	428	430	438	440	448	460	468	470	478

Technical Data

Model		RV20 -100	RV20MT-100	RV20 -160	RV20MT-160	RV20 -250
Phase		3P,4P		3P,4P		3P,4P
Structural max rated current Inm (A)		100		160		250
Rated current In (A)		12.5,16,20,25 32,40,50,63 80,100	40,100	16,20,25,32, 40,50,63,80 100,125,160	160	20,25,32,40,50 63,80,100,125,160, 180,200,225,250
Rated voltage Ue (V)		AC400,AC690		AC400,AC690		AC400,AC690
Rated insulating voltage Ui (V)		690		690		690
Rated withstand voltage Uimp (kV)		6		6		6
Rated ultimate short-circuit breaking capacity Icu(kA)		Model N: 35 Model H: 70		Model N: 35 Model H: 70		Model N: 35 Model H: 70
Rated working short-circuit breaking capacity Ics(kA)		Model N:18 Model H:Ics=75%Icu		Model N:18 Model H:Ics=75%Icu		Model N:18 Model H:Ics=75%Icu
Application type		A		A		A
Tripping unit		Thermalmagnet	Intelligent	Thermalmagnet	Intelligent	Thermalmagnet
Residual current protection		With residual current protection module				
Working Lifespan	Mechanical	8500		8500		7000
	Electrical	1500		1500		1000
Operating method	Manual	Yes		Yes		Yes
	Rotatory handle	Yes		Yes		Yes
	Electrical operating	Yes		Yes		Yes
Install method	Fixed(front panel)	Yes		Yes		Yes
	Fixed(back panel)	Yes		Yes		Yes
	Drawable(front panel)	Yes		Yes		Yes
	Drawable(back panel)	Yes		Yes		Yes

CB CE RoHS

Following diagram on previous page Technical data

Model		RV20-250	RV20MT-400	RV20-630	RV20MT-1600
Phase		3P,4P	3P,4P	3P,4P	
Structural max rated current Inm (A)		250	400	160	
Rated current In (A)		250	400	630	800,1000,1250,1600
Rated voltage Ue (V)		AC400,AC690		AC400,AC690	
Rated insulating voltage Ui (V)		690		690	
Rated withstand voltage Uimp (kV)		6		6	
Rated ultimate short-circuit breaking capacity Icu(kA)		Model N: 35 Model H: 70	Model N: 45 Model H: 85	Model N: 45 Model H: 85	65
Rated working short-circuit breaking capacity Ics(kA)		Model N:18 Model H:Ics=75%Icu	Model N:22.5 Model H:Ics=75%Icu	Model N:22.5 Model H:Ics=75%Icu	48
Application type		A		A	
Tripping unit		Intelligent	Intelligent	Intelligent	Intelligent
Residual current protection		With residual current protection module			
Working Lifespan	Mechanical	7000	5000	5000	2500
	Electrical	1000	1000	1000	500
Operating method	Manual	Yes	Yes	Yes	Yes
	Rotatory handle	Yes	Yes	Yes	Yes
	Electrical operating	Yes	Yes	Yes	-
Install method	Fixed(front panel)	Yes	Yes	Yes	Yes
	Fixed(back panel)	Yes	Yes	Yes	-
	Drawable(front panel)	Yes	Yes	Yes	-
	Drawable(back panel)	Yes	Yes	Yes	-

Attention: a. Right now only Model N & Model H products are available, Icu & Ics represent breaking capacity at AC400V.
b. Default product applies to fixed(front panel) install method & manual operating method, do state out in your order if different requirements are demanded,
c. We supply breakers with residual current protection to 630A(max).

Breaker's overload long delay & short-circuit instantaneous protection features refer to diagram below

Serial No.	Distribution system breaker			Circumstance temperature
	Testing current(times)	Tripping time	Status	
1	1.05In	1h non-tripping(In≤63A), 2h non-tripping(In>63A)	Initial	±40℃ ±2℃
2	1.3In	1h tripping(In≤63A); 2h tripping (In>63A)	Following serial 1	
3	10In	≤0.2s tripping	Initial	Any suitable temperature

Serial No.	Motor protection breaker			Circumstance temperature
	Testing current(times)	Tripping time	Status	
1	1.05In	2h non-tripping	Initial	±40℃ ±2℃
2	1.3In	2h tripping	Following serial 1	
3	1.5In	4min tripping	under serial 1 current till breaker reach thermal balance	
4	7.2In	2~10s tripping	Initial	
5	12In	≤0.2s tripping	Initial	Any suitable temperature

Moulded Case Circuit Breaker
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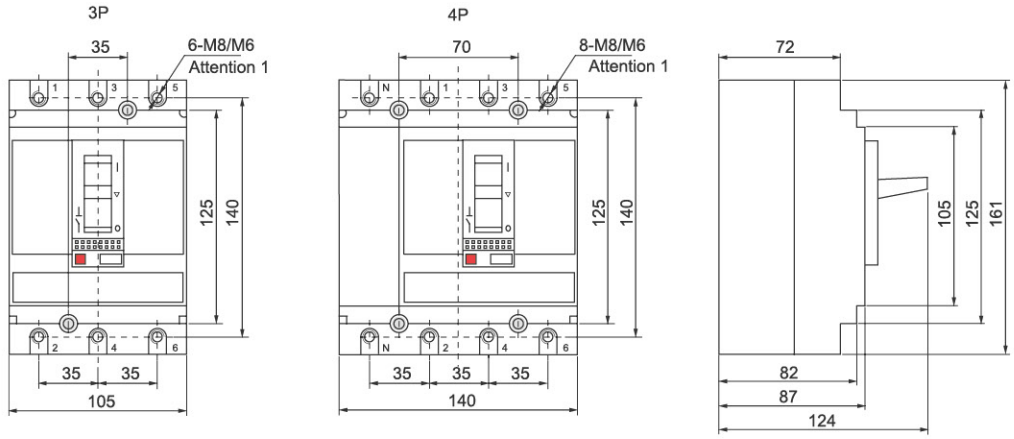
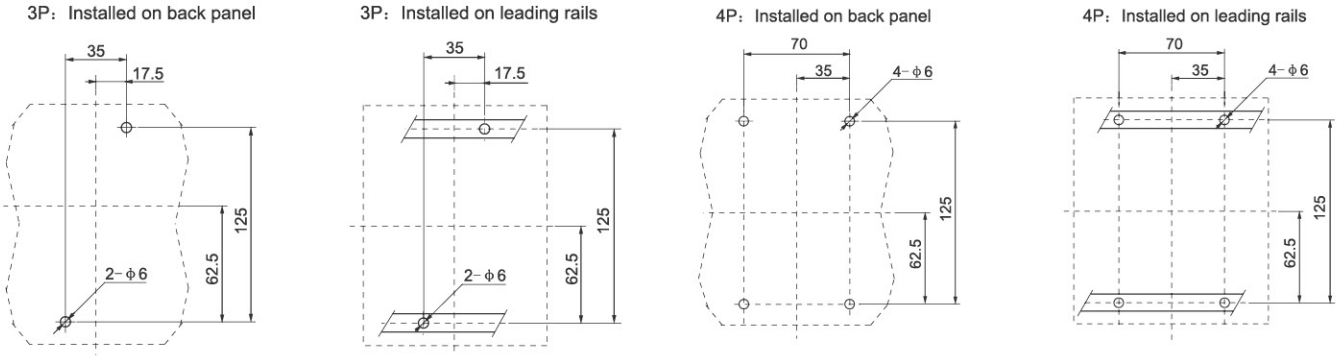
Shape & Dimension

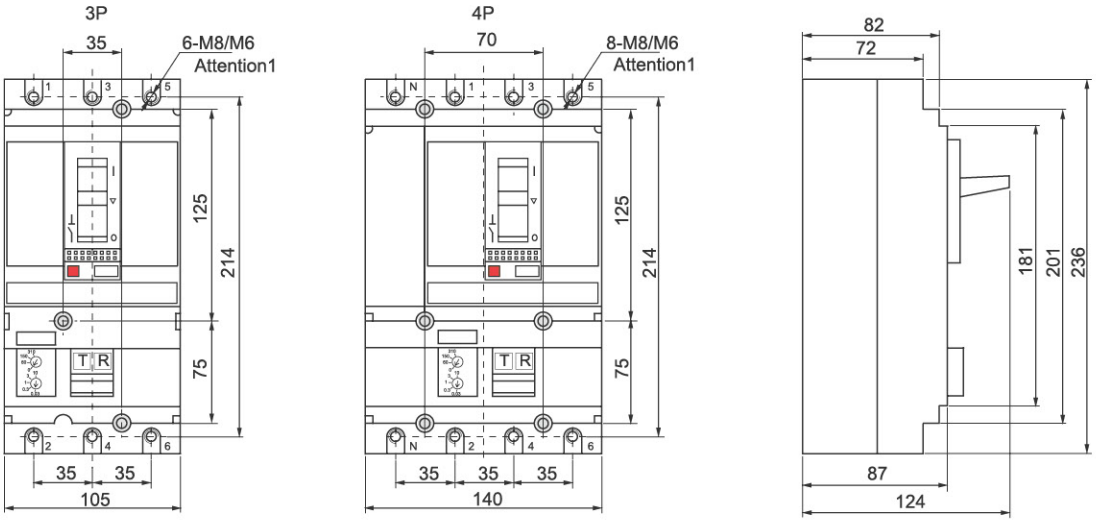
RV20-100, 160, 250 shape & dimension



Attention: when In >100A, fixing screw size should be M8, When In≤100A, fixing screw size should be M6.

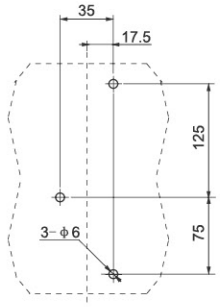


RV20-100, 160, 250 shape & dimension

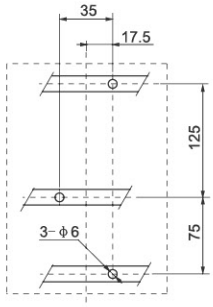


Attention: when In >100A, fixing screw size should be M8, When In≤100A, fixing screw size should be M6.

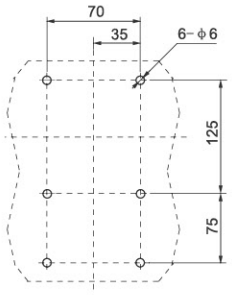
3P: Installed on back panel



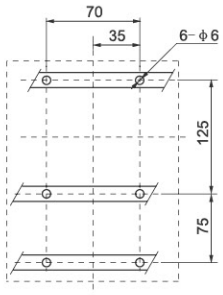
3P: Installed on leading rails



4P: Installed on back panel

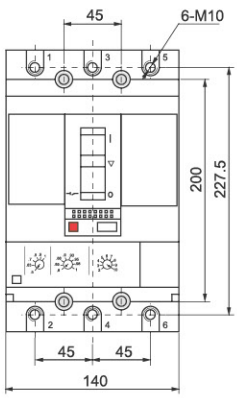


4P: Installed on leading rails

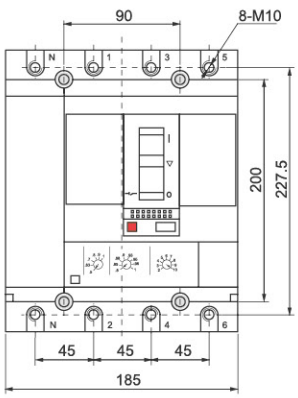


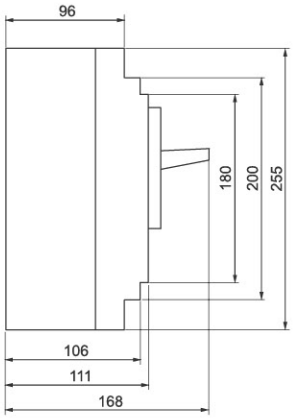
RV20MT-400, 630 shape & dimension

3P

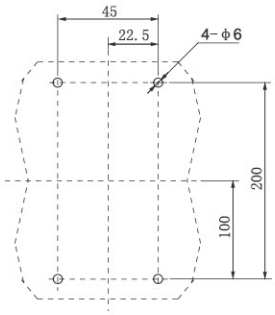


4P

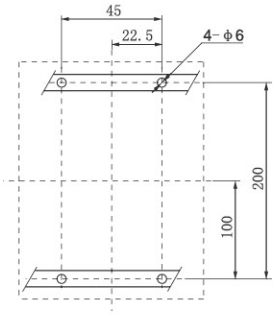




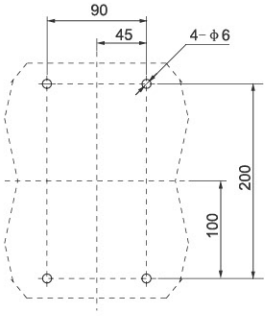
3P: Installed on back panel



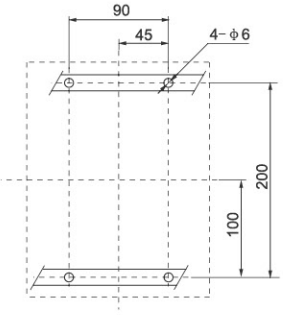
3P: Installed on leading rails



4P: Installed on back panel

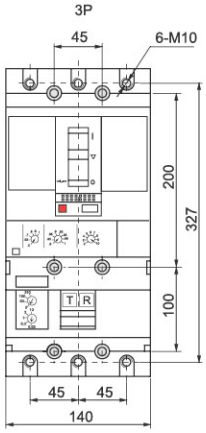


4P: Installed on leading rails



RV20MT-400, 630 shape & dimension

3P



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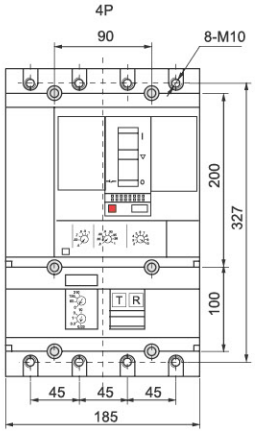

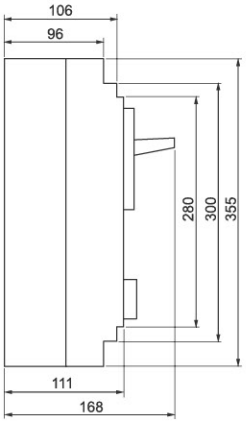

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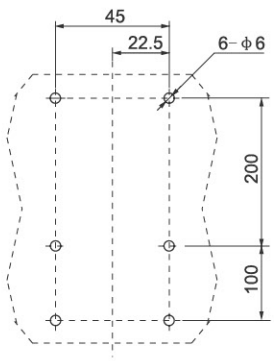
Moulded Case Circuit Breaker
RV20

3P: Installed on back panel



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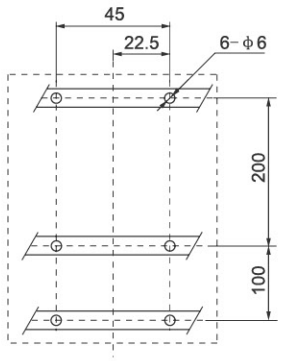

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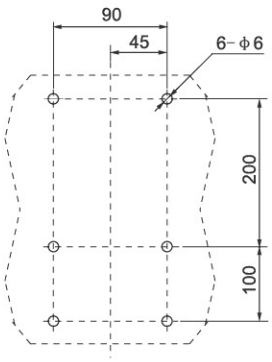
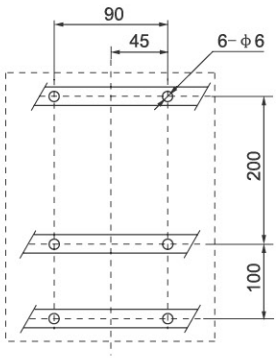
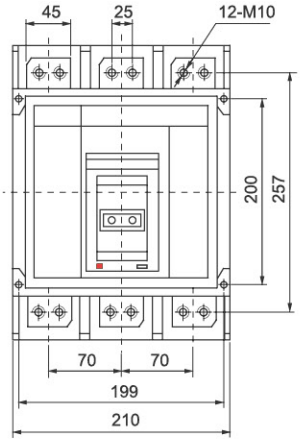


4P: Installed on leading rails

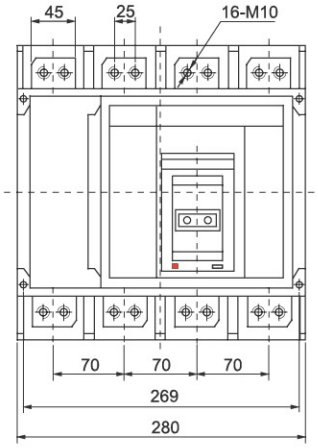


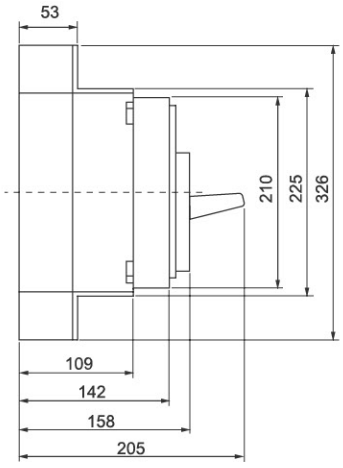
RV20MT-1600 shape & dimension

3P

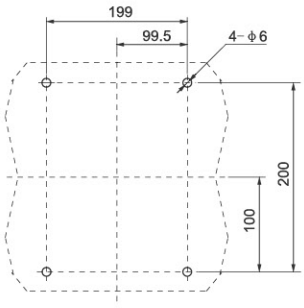


4P





3P: Installed on back panel



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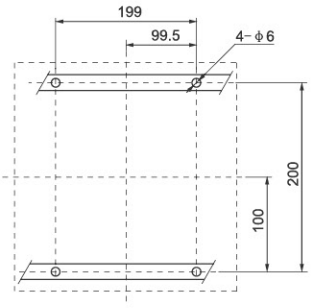

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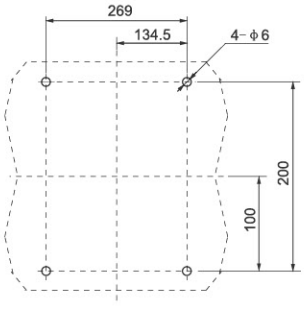

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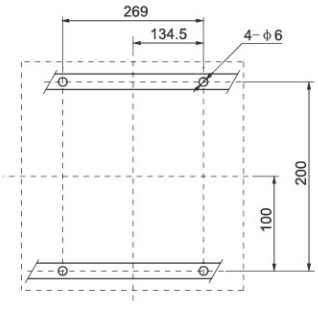

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