



DGM2 Series Moulded Case Circuit Breaker

Product Description

● CHT 's DGM2 Series Molded Case Circuit Breaker is designed to provide protection for low voltage distribution systems. The device has very small size, high bearing capacity, short flashover and anti-vibration function. The insulation voltage of this model is 800V. It can be used as an infrequent switch or an infrequent starter of motor in an alternating circuit with 50/60Hz frequency and 690V maximum rated voltage. It protects conductors against overloads and conductors and connected apparatus, such as motors and motor starters, against short circuits. It complies with IEC 60947-2 and GB 1408-2 standard.

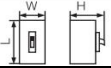
Features

- Attractive appearance
- Wide models which can match different auxiliaries
- High reliability and long duration
- Accurate tripping unit
- Advanced extinguishing arc system, high breaking capacity and good anti-vibration
- Good insulation

Working Environment

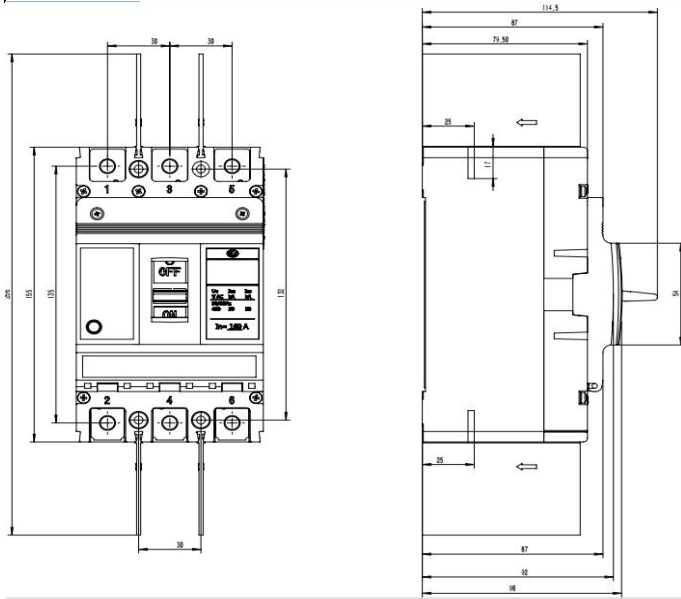
- Ambient Temperature: -5°C — -40°C , and the average temperature within 24 hours can not exceed 35°C .
- Altitude: The altitude of the installation site of this device can not exceed 2000M.
- Air Condition: The humidity can not exceed 50°C while the temperature is at 40°C , and the device can stand higher humidity if temperature is low. In the most humid month, when the average temperature is 25°C , the average humidity can not exceed 90°C and the condensation matter should be considered in this situation.
- Safety: To ensure the safety, it should have no explosive danger, no conductive dust, no severe metal corrosion and no damage to the insulation in the working environment of the device.
- Pollution: Class III, but it is only Class II of the auxiliaries inside the device.
- Installation Type: The installation type is III for main circuit and is II for auxiliary circuit and control circuit.
- Installation Conditions: The device should be installed vertically and the inlet wire should be from upside other than underside. And the magnetic field at any directions in the installation site can not exceed 5 times of the geomagnetic field.

Technical Specifications							
			DGM2-100	DGM2-160	DGM2-250	DGM2-400	DGM2-630
Poles			3P/4P	3P/4P	3P/4P	3P/4P	3P/4P
Operation Type	Rotary handle operation		YES	YES	YES	YES	YES
	Motor-driven operation		YES	YES	YES	YES	YES
Connection	Fixed type	Front connection	YES	YES	YES	YES	YES
		Rear connection	YES	YES	YES	YES	YES
	Plug-in type	Front connection	YES	YES	YES	YES	YES
		Rear connection	YES	YES	YES	YES	YES
	Drow-out type	Front connection	NO	YES	YES	YES	YES
		Rear connection	NO	YES	YES	YES	YES
Electrical Characteristics							
Rated Current (In) 40℃			10,16,20,25,32,40,50,63,80,100	100,125,,140,160	100,125,160,180,200,225,250	225,250,315,350,400	400,500,630
Rated operating voltage(V) Ue AC50/60Hz			400/690	400/690	400/690	400/690	400/690
Rated insulation voltage(V) Ui 800			800	800	800	800	800
Rated impulse withstand voltage(kV) Uimp			8	8	8	8	8
Rated ultimate short-circuit breaking capacity(kA)							
Icu AC50/60Hz			400V	50	50	50	50
			690V	15	15	15	20
Rated operating circuit breaking capacity(kA)							
Icu AC50/60Hz			400V	50	50	50	50
			690V	10	10	10	15
Flashover distance(mm)			≦ 50	≦ 50	≦ 50	≦ 50	≦ 50
Isolation function			YES	YES	YES	YES	YES
Application type			A	A	A	A	B
Life time (C/O)	Mechanical life		20000	20000	20000	15000	15000
	Electric life	400V In	8000	8000	8000	7500	7500

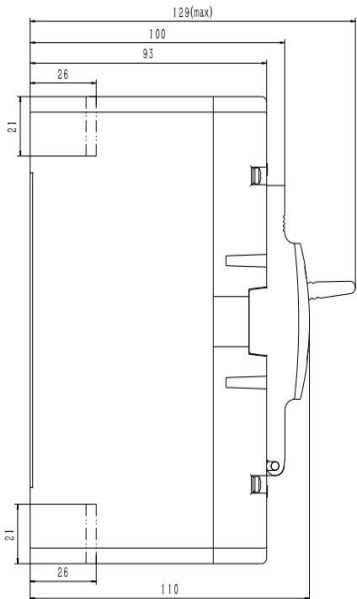
Protection						
Release	Thermomagnetic type	YES	YES	YES	YES	YES
	Electronic type	NO	NO	NO	NO	NO
Overload protection	Long time-delay	YES	YES	YES	YES	YES
Short circuit proection	Short time-delay	YES	YES	YES	YES	YES
	Instantaneous	YES	YES	YES	YES	YES
Accessories						
Alarm contact		YES	YES	YES	YES	YES
Auxiliary contact		YES	YES	YES	YES	YES
Shunt release		YES	YES	YES	YES	YES
Under-voltage modular		YES	YES	YES	YES	YES
Pre-paid modular		YES	YES	YES	YES	YES
Communication modular		YES	YES	YES	YES	YES
Overload alarm modular without function		YES	YES	YES	YES	YES
Motor driven operating system		YES	YES	YES	YES	YES
Rotary handle operating system		YES	YES	YES	YES	YES
Product Dimensions/Weight						
Dimensions(LxWxH)	 3P	155x90x114.5	165x105x114.5	165x105x114.5	257x140x153	257x140x153
	4P	155x120x114.5	165x140x114.5	165x140x114.5	257x184x153	257x184x153
Weight(kg)	3P	1.4	1.9	1.9	7	7
	4P	1.8	2.5	2.5	9	9

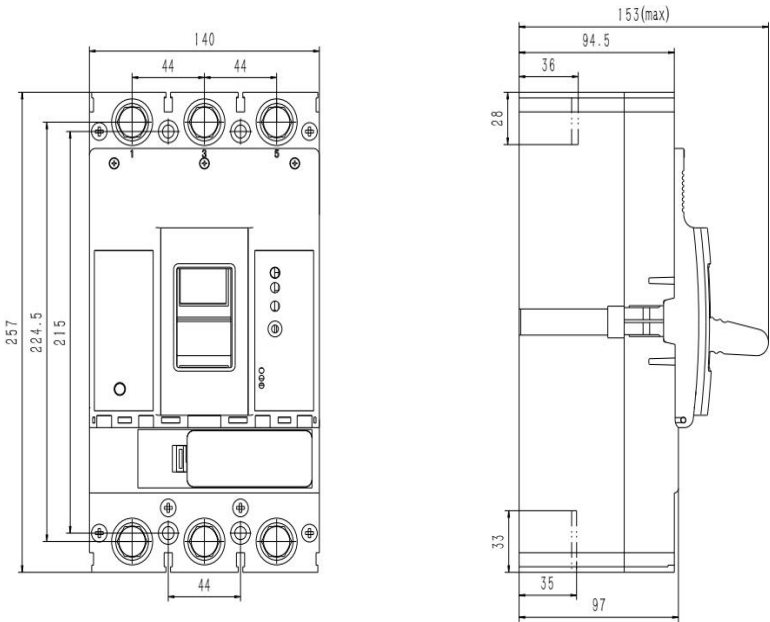
Product Dimension And Installation Diagram

DGM2-100 DGM2-160

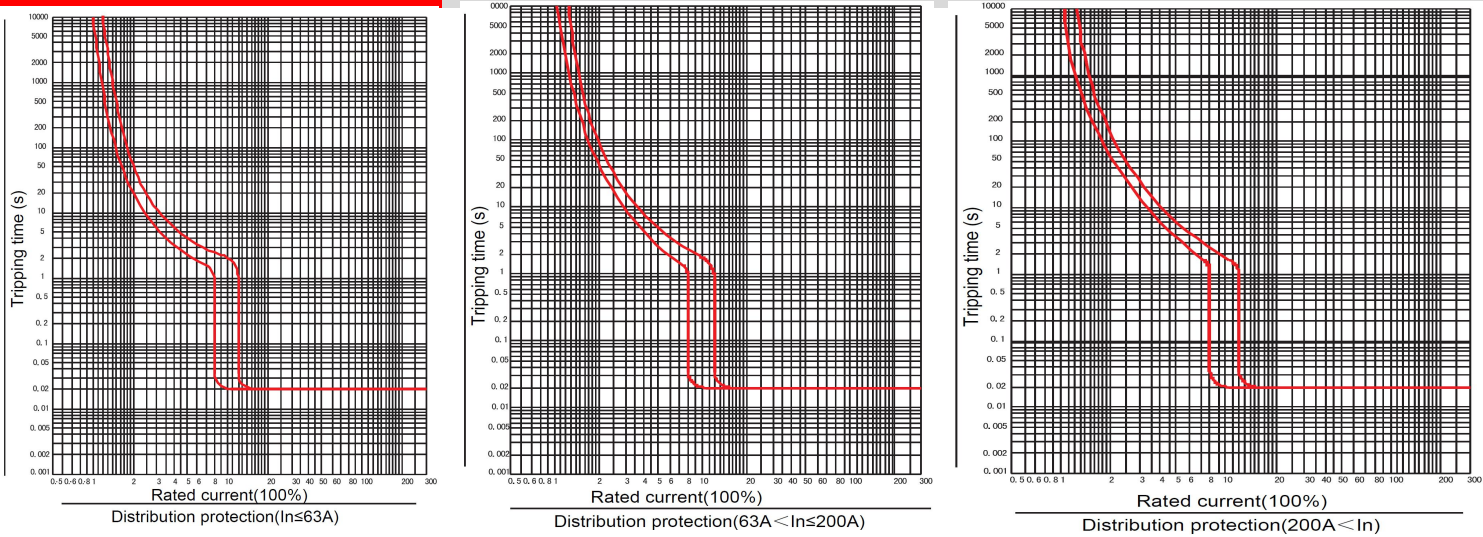


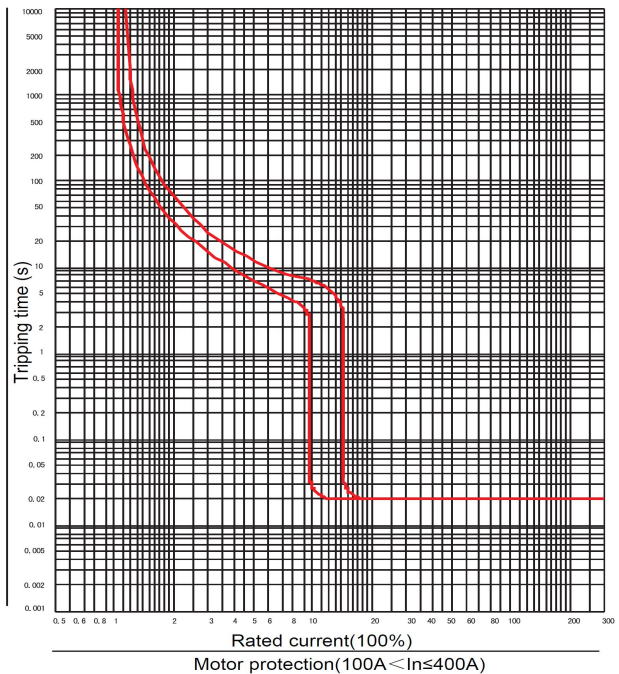
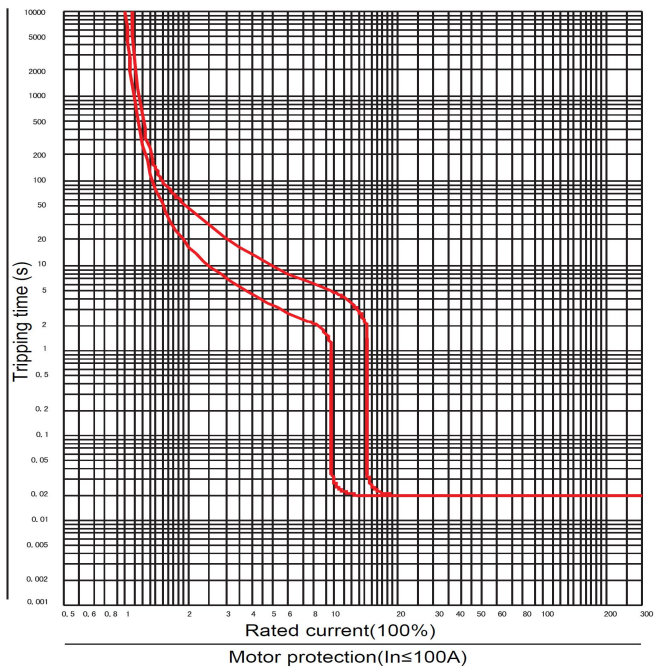
DGM2-250





Protection Characteristics





Derating Application

Derating coefficients in different ambient temperature!

Temperature	40℃ (Marine 45℃)	45℃ (Marine 50℃)	50℃ (Marine 55℃)	55℃ (Marine 60℃)	60℃ (Marine 65℃)
Model	Derating Coefficient	Derating Coefficient	Derating Coefficient	Derating Coefficient	Derating Coefficient
DGM2-100	1In	0.95In	0.89In	0.84In	0.76In
DGM2-160	1In	0.95In	0.89In	0.84In	0.76In
DGM2-250	1In	0.96In	0.91In	0.87In	0.82In
DGM2-400	1In	0.94In	0.87In	0.81In	0.73In
DGM2-630	1In	0.93In	0.88In	0.83In	0.76In
DGM2-800	1In	0.88In	0.83In	0.79In	0.76In
DGM2-1250	1In	0.95In	0.91In	0.875In	0.8In
DGM2-1600	1In	0.95In	0.91In	0.875In	0.8In

Notice: Above derating coefficients are measured under rated current of each model!

High altitude derating

The electric characteristic of the device could be corrected accordingly as in following chart if the altitude is higher than 2000M.

Altitude(m)	2000	3000	4000	5000
Power frequency withstand voltage(V)	3000	2500	2000	1800
Operating current correction coefficient	1	0.94In	0.88	0.83In
short-circuit breaking capacity correction	1	0.83	0.71	0.63

Installation

- Connecting to the main circuit must be handled by trained electricians and must ensure the power supply is cut off completely before the installation.
- The connection should comply with "upper terminals for incoming and bottom terminals for outgoing", that means 1,3,5 terminal should be connected to power supply and 2,4,6 terminal should be connected to loads. Inversion is not allowed.
- The terminal post should be isolated by an insulation sleeve if there has a back-panel wiring.
- Connect the crimped wires to the poles of the breaker with screws and make it tightened.
- The flash-barriers should be installed between breakers.
- Please make sure you follow the installation steps before electrify the breakers. Make sure the connections are all secure and do repeating-test on the operating mechanism to make sure its flexible and reliable.

Conductor's cross-sectional area and their matching rated current as following chart

Rated current(A)	16 20	25	40 60	63	80	125 140	160
Conductor's cross-	2.5	6	10	16	25	50	70
Rated current(A)	160	180 200 225	250	315 350	400	500	630
Conductor's cross-	70	96	120	185	240	2x150	2x185

Rated current(A)	Electric cable		Copper busbar	
	Numbers	Conductor's cross-	Numbers	Size(mm)
500	2	150	2	30x5
630	2	185	2	40x5
700 800	2	240	2	50x5
1250	2	-	2	80x5
1600	2	-	2	-

Operation and Maintenance

- Select the right breaker for your circuit or equipment. Read the technical information of the breaker carefully and make sure it is exactly what you need.
- The characteristics and accessories of the breaker are set by manufacturer and don't change it during operation.
- Conduct a regular checking ,clean the dust on the surface to keep the device clean and in good insulation condition.
- Select the breaker with right rated current for your circuit or equipment otherwise it can not work properly.
- The maintenance work should be couducted by trained electrician.
- If there has accessories demand, please use our own accessories for our breaker, to guarantee the quality.
- Keep the device from raining and falling during operation,moving.