

# PGK 300/600/900/1200V 20A 1P/2P/3P/4P NP DC Breaker

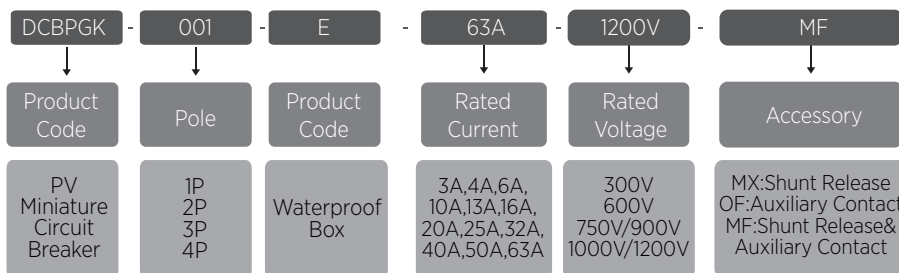
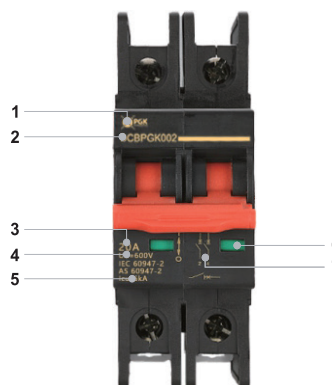
DCBPGK001, DCBPGK002, DCBPGK003, DCBPGK004

## PGK PV Miniature Circuit Breaker

PGK PV DC mini-circuit breaker is mainly used in PV power generation and distribution system, that is, photovoltaic bus box, inverter and other DC electrical equipment. Rated working voltage up to 1200V DC, rated working current up to 63A, scientific arc extinguishing and current limiting system, can quickly disconnect the DC distribution system fault current, and can achieve counter-current protection, to ensure the reliable operation of photovoltaic power generation system.

- Nonpolarity
- High short-circuit/breaking capacity
- Overload, Short circuit, Unfrequent operation and Anti-reflux protection
- Rated Voltage: 1200V DC
- Body lengthening, Increase electrical clearance and creepage distance
- Rated Current: 63A
- Comply with: IEC 60947-2/AS 60947-2

1. Brand
2. Type
3. Rated Current
4. Rated Voltage
5. Standard Code
6. Indicator
7. Wiring Diagram



### Electrical Characteristics

Comply with	IEC 60947-2 /AS 60947-2			
Pole	1P	2P	3P	4P
Rated Working Voltage (Ue)	300V	600V	750V	1000V
			900V	1200V
Max Rated Current (Ith)	63A			
Rated Current (In)	3A,4A,6A,10A,13A,16A,20A,25A,32A,40A,50A,63A			
Rated Insulated Voltage (Ui)	1200V DC			
Rated Impulsed Voltage (Uimp)	6kV			
Ultimate Breaking Capacity (Icu)	6kA			
Run Breaking Capacity (Ics)	6kA			
Tripping Type	Thermal Magnetic Type			

### Service Life & Cycle Operation


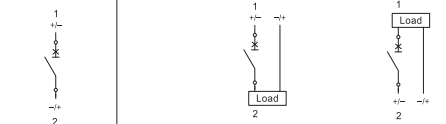

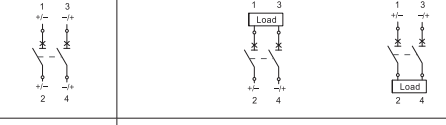
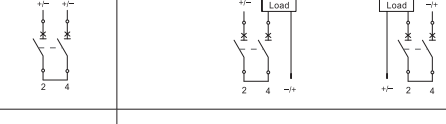

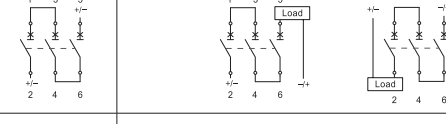
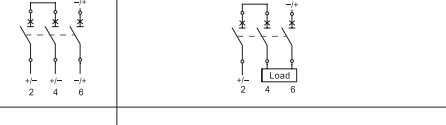
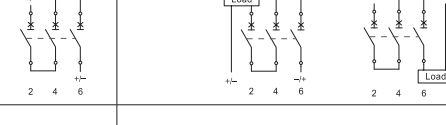
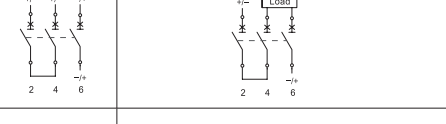

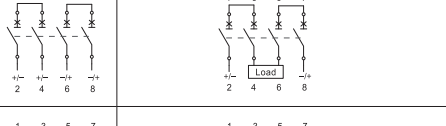
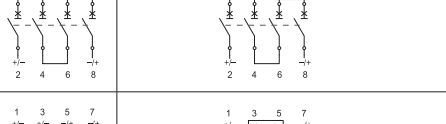
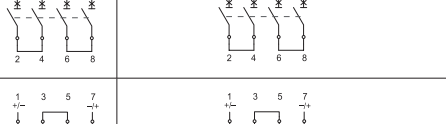
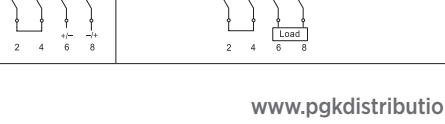
Mechanical	Actual Value	10000
	Standard Value	9700
Electrical	Actual Value	1000
	Standard Value	300

### Installation Environment

Ingress Protection	All Sides IP40, Connection Terminal IP20
Terminal Cross Section	2.5-25mm <sup>2</sup>
Product wiring torque M5	2N·m-2.5N·m
Working Temperature	-25°C-+70°C
Storage Temperature	-40°C-+85°C
Resistance to Humidity and Heat	II (Humidity 55°C, relative humidity 95%)
Fixed installation	Fixed to the 35mm guide rail

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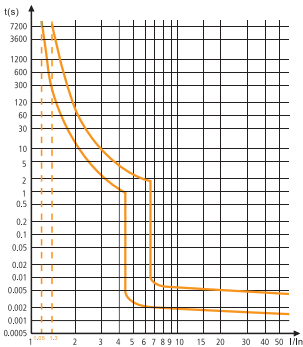
Type	Pole	Wiring Diagram	
 DCBPGK001	1P	1A	
	 DCBPGK002	2P	2A
2B			
2C			
 DCBPGK003	3P	3A	
		3B	
		3C	
		3D	
 DCBPGK004	4P	4A	
		4B	
		4C	
		4D	

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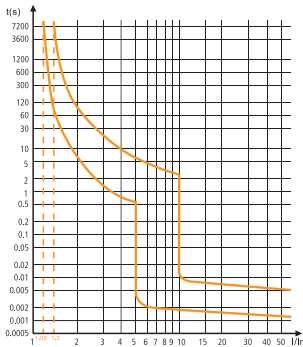
## Characteristic Curve

B curve:(4.4-6.6)I<sub>n</sub>



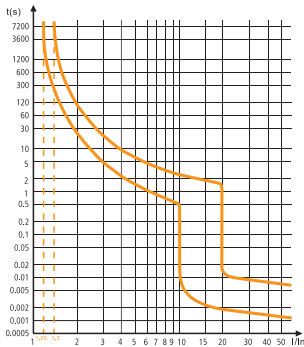
- 1)  $I = 1.05I_n, t \geq 1h$ , not trip;
- 2)  $I = 1.3I_n, t < 1h$ , trip;
- 3)  $I = 2.55I_n, t \geq 1-60s (I_n = 3-63A)$ ;
- 4) Instantaneous trip:  $(4.4-6.6)I_n$ .

C curve:(5-10)I<sub>n</sub>



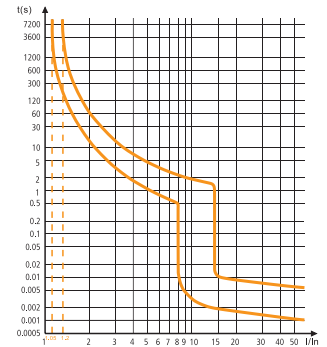
- 1)  $I = 1.05I_n, t \geq 1h$ , not trip;
- 2)  $I = 1.3I_n, t < 1h$ , trip;
- 3)  $I = 2.55I_n, t \geq 1-60s (I_n = 3-63A)$ ;
- 4) Instantaneous trip:  $(5-10)I_n$ .

D curve:(10-20)I<sub>n</sub>



- 1)  $I = 1.05I_n, t \geq 1h$ , not trip;
- 2)  $I = 1.3I_n, t < 1h$ , trip;
- 3)  $I = 2.55I_n, t \geq 1-60s (I_n = 3-63A)$ ;
- 4) Instantaneous trip:  $(10-20)I_n$ .

K curve:(8-14)I<sub>n</sub>



- 1)  $I = 1.05I_n, t \geq 1h$ , not trip;
- 2)  $I = 1.3I_n, t < 1h$ , trip;
- 3)  $I = 2.55I_n, t \geq 1-60s (I_n = 3-63A)$ ;
- 4) Instantaneous trip:  $(8-14)I_n$ .

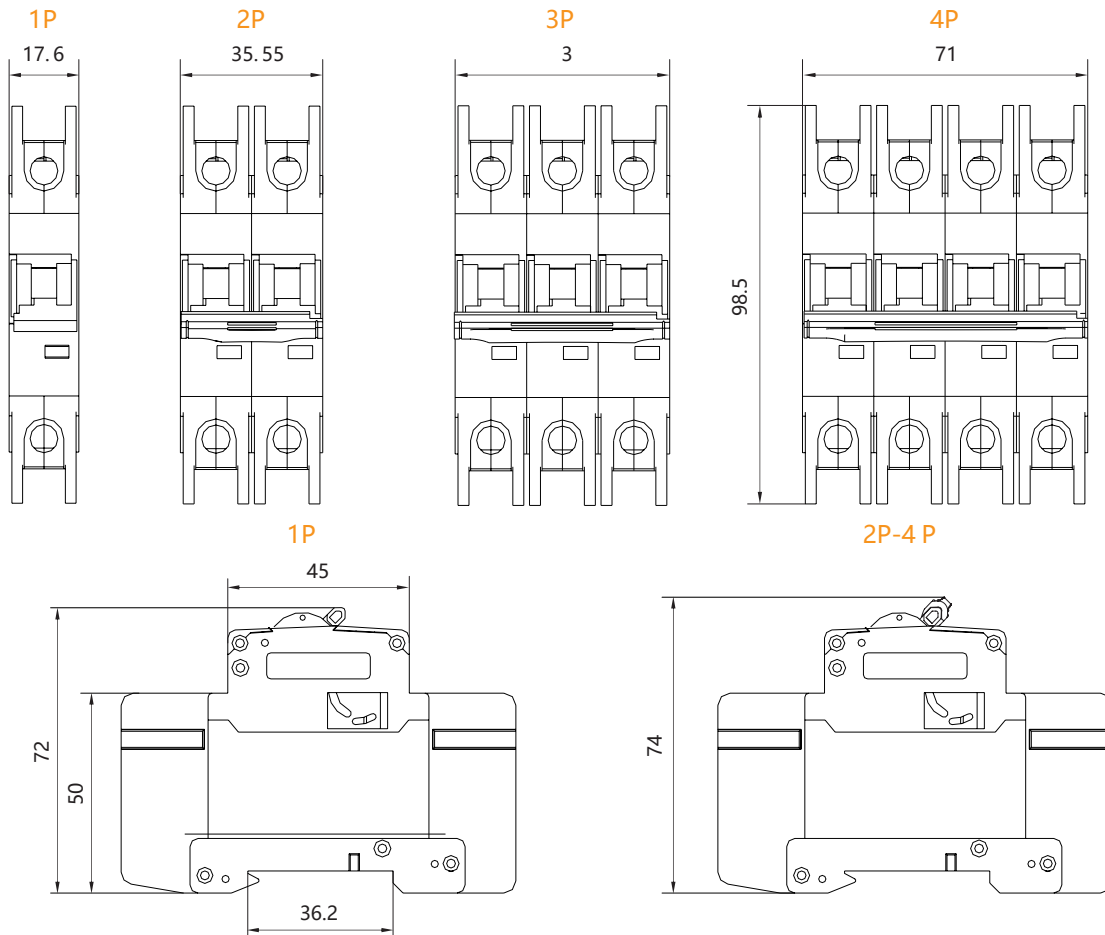
		Temperature										
		-25°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
Type	DCBPGK001											
	DCBPGK002	115%	110%	105%	100%	100%	100%	100%	100%	95%	90%	85%
	DCBPGK003											
	DCBPGK004											
		Proportion										

Altitude of Derating				
Altitude	2000m	3000m	4000m	5000m
Power frequency withstand voltage	100%	100%	100%	100%
U <sub>i</sub>	100%	100%	100%	100%
I <sub>n</sub>	100%	100%	90%	80%
U <sub>e</sub>	N/A			

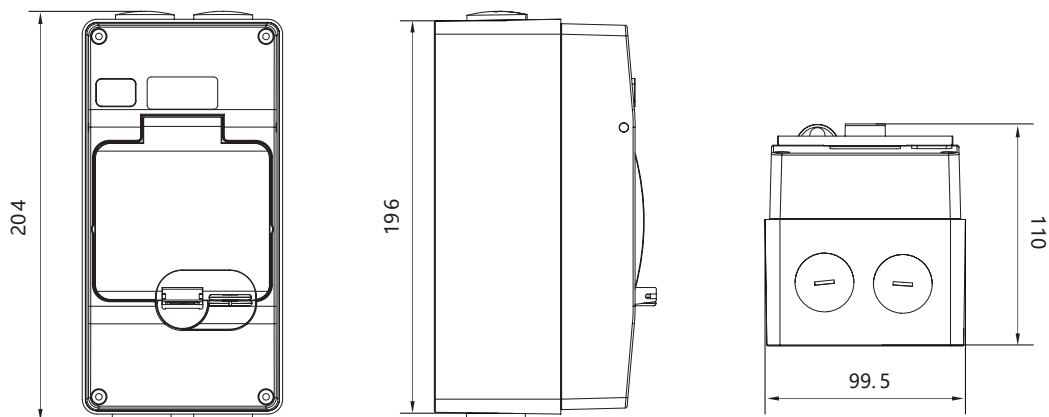
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## Dimensions (mm)



## Dimensions with IP65 Waterproof Enclosure (mm)



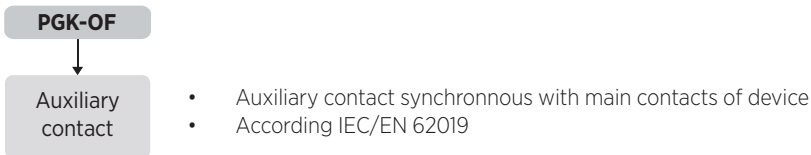
# PGK 300/600/900/1200V 20A 1P/2P/3P/4P NP DC Breaker

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## PGK-OF

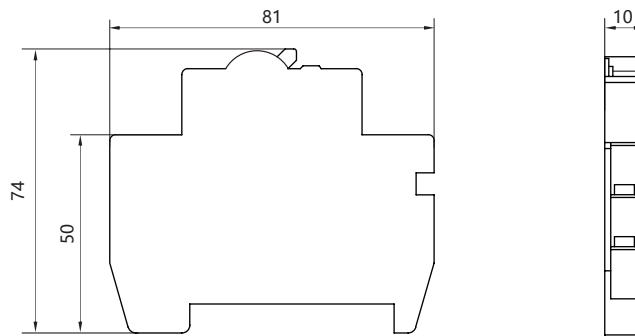
The auxiliary contact needs to access the control loop and act synchronously with the circuit breaker. It can be used to indicate breaker opening and closing, and can be used to remotely monitor the current status of the circuit breaker. Auxiliary contact is only a switch, can only load small current, can not play a large current cut-off function, rated current can not be greater than 3A, so it can only be used for control loop.

### Instruction Type



Electrical Parameters		
Contact function	Auxiliary Contact	
According	IEC/EN 62019	
Product parameters	AC 13	Ie=3A Ue=250V
	AC 15	Ie=2A Ue=250V
	DC 12	Ie=0.5A Ue=110V
Min.op.current per contact I <sub>min</sub>	10mA	
Min.op.voltage per contact U <sub>min</sub>	11V DC	
Rated frequency	50/60Hz	
Mechanical Parameters		
Mounting	Fixed to the 35mm guide rail	
Degree of protection	(DIN)IP20	
Terminals capacity	≤1mm <sup>2</sup>	
Fastening torque of terminals	0.8N·m-1N·m	
Working temperature	-25-+70°C	

### Dimensions (mm)



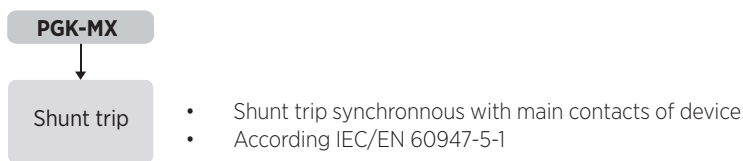
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## PGK-MX

Shunt trip an accessory to a remotely operated mini-circuit breaker that reliably disconnects the breaker when the supply voltage is equal to any voltage between 75% and 110% of the rated voltage of the shunt trip. Shunt trip is a short-time operation, the coil energized time generally cannot exceed 1s, otherwise the coil will be burned out.

### Instruction Type



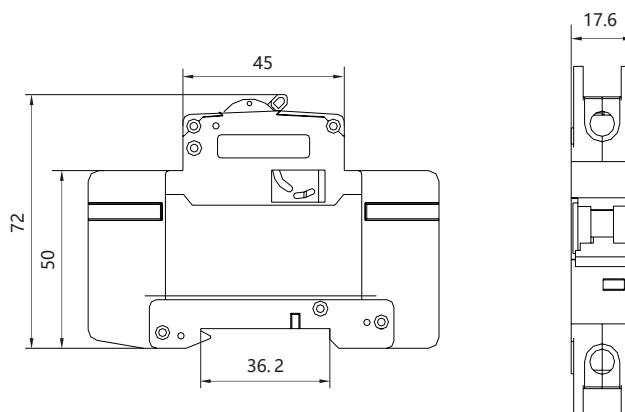
### Electrical Parameters

Contact function	Shunt trip	
According	IEC/EN 60947-5-1	
Rated op. voltage	AC	Ue=220/415V Ue=24/48V
	DC	Ue=24/48V
Conduction time	< 1s	
Min.op.voltage	Ue*75%	
Max. op. voltage	Ue*110%	
Working current	>0.5A	
Operation frequency	6 times per minute	

### Mechanical Parameters

Mounting	Fixed to the 35mm guide rail
Degree of protection	(DIN)IP20
Terminals capacity	2.5-25mm <sup>2</sup>
Fastening torque of terminals	2N-m-2.5N-m
Working temperture	-25-+70°C

### Dimensions (mm)



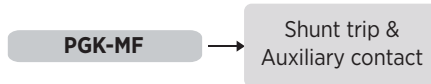
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## PGK-MF

The shunt auxiliary unit integrates the shunt tripping device and auxiliary contact, providing both shunt tripping device and auxiliary contact functions.

### Instruction Type



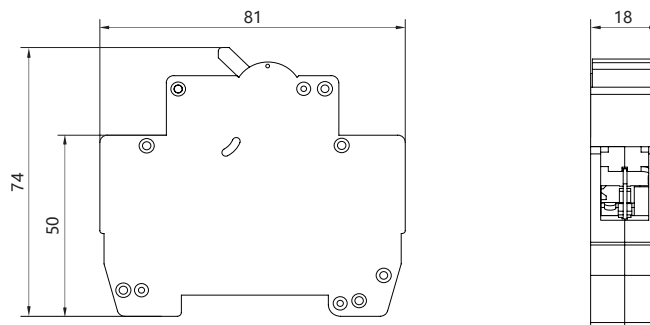
### Electrical Parameters

Contact function		Shunt trip & Auxiliary contact	
Product parameters	Shunt trip	AC	Ue=220/415V Ue=24/48V
		DC	Ue=24/48V
	Auxiliary contact	AC	Ie=3A Ue=250V Ie=2A Ue=250V
		DC	Ie=0.5A Ue=110V
		Conduction time	<1s
	Shunt trip parameters	Min.op.voltage	Ue*75%
Max. op. voltage		Ue*110%	
Working current		>0.5A	
Operation frequency		6 times per minute	

### Mechanical Parameters

Mounting	Fixed to the 35mm guide rail
Degree of protection	(DIN)IP20
Terminals capacity	≤1mm <sup>2</sup>
Fastening torque of terminals	0.8N·m-1N·m
Working temperature	-25-+70°C

## Dimensions (mm)



#### Please Note:

Please consult with your Electrician/Engineer to ensure suitability for the intended application and installation.

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