



## Multifunctional Smart Circuit Breaker

# MT61GP (GR)



# MT61GP/GR

## Multifunctional Smart Circuit Breaker

With the rapid development of distributed new energy, the power supply and load sides have put forward higher intelligent requirements for power distribution device. The power supply side needs to have functions such as bidirectional measurement, no-voltage protection, and leakage protection, while the load side requires electrical parameter metering, multi-tariff metering, demand analysis, and comprehensive protection, while supporting remote control and automatic reclosing. In response to these requirements, we upgraded the hardware and firmware of the MT61GP(GR) product to adapt to multi-scenario applications.

- The multifunctional smart circuit breaker is specially designed for distributed renewable energy with the following advantages:
- 1. Flexible installation: Single-phase and three-phase devices, guide rail installation.
  - 2. Comprehensive functions: Integrated power metering, multi-tariff metering, demand analysis, remote control and automatic reclosing functions to meet the needs of both the power supply and load sides.
  - 3. Standardized communication: Modbus protocol is used to enable rapid device access to the monitoring platform, facilitating integration and management.



Measurement



Metering



Remote control

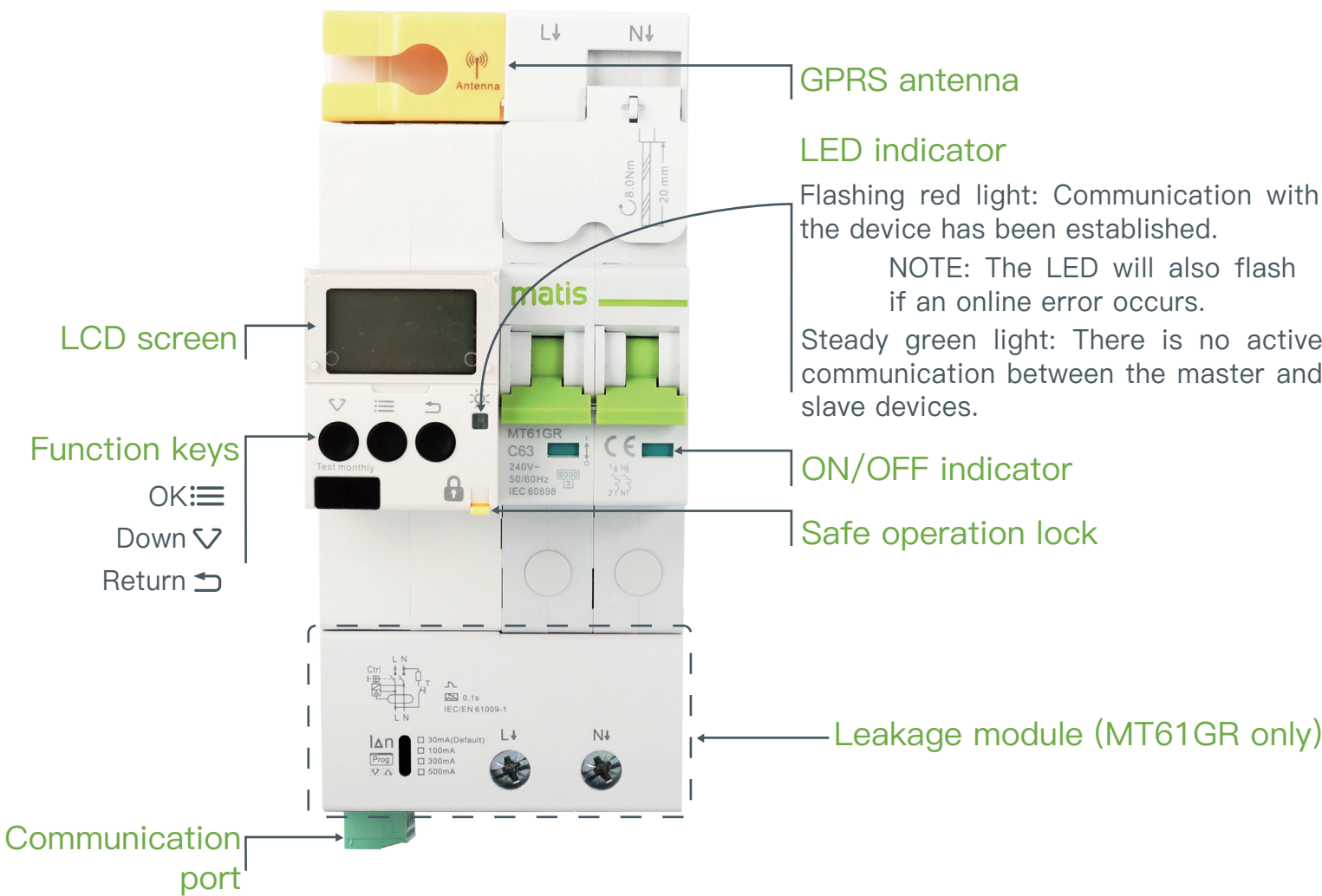


Automatic reclosing





# MT61GP/GR Interface

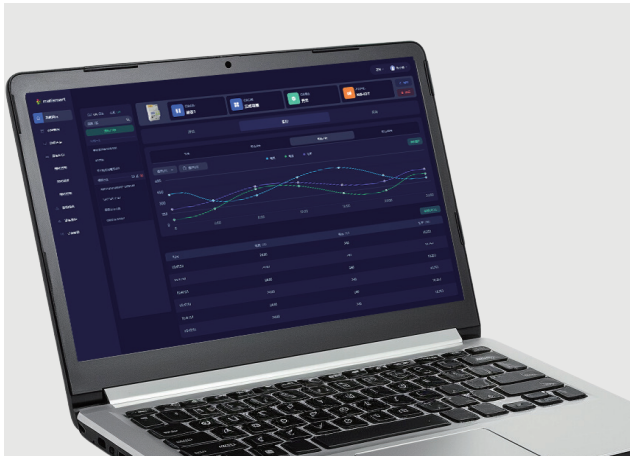


## Electronic Display

The multifunctional circuit breaker is equipped with an LCD graphic display and menu buttons for easy operation. Users can view information and set parameters through the front panel, and it supports flexible configuration of multi-tariff functions to meet the needs of electricity fee management in multiple scenarios.

## Compact and Easy to Install

The multifunctional smart circuit breaker has built-in CT module and circuit breaker. The integrated design eliminates wiring, simplifies installation, and saves space and time.



## Real-time Monitoring of Energy Consumption

The multifunctional smart circuit breaker supports accurate monitoring of power consumption by usage, area or feeder, and is suitable for scenarios such as main distribution boards, main power supplies and distributed power supplies in distribution cabinets, home power supplies, charging piles and communication base stations.

# Multifunctional Smart Circuit Breaker

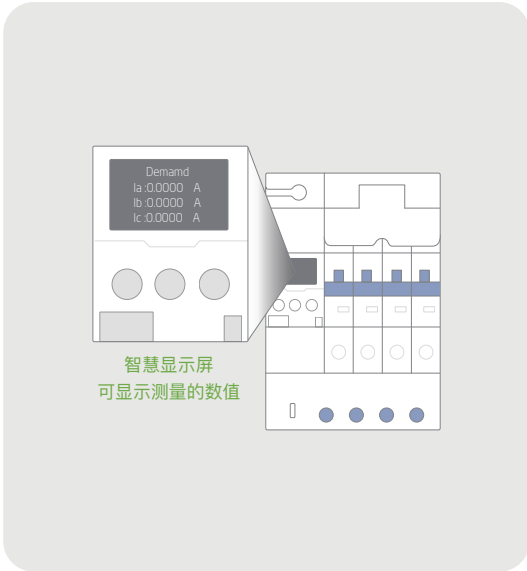


## Measurement

- 1. Basic electrical parameters, power factor;
- 2. The most value: the maximum / minimum value of the basic electrical parameters;
- 3. Phase angle.

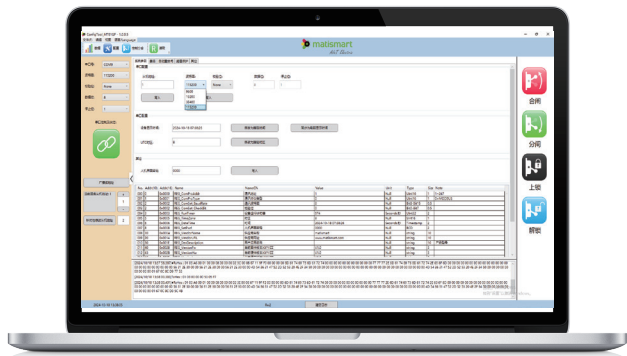


Improve the efficiency, stability and reliability of power systems through monitoring. It can help you formulate more reasonable energy management strategies and realize energy saving and consumption reduction.



## Metering

- 1. Electric energy: forward / reverse and active / reactive energy, apparent energy, partial energy in different time periods (can be cleared)
- 2. Demand: power/current demand, peak demand;



## Comprehensive Electrical Protection

Over/under voltage, over current, phase loss, power failure, over current/over load, leakage protection. Leakage gear is adjustable

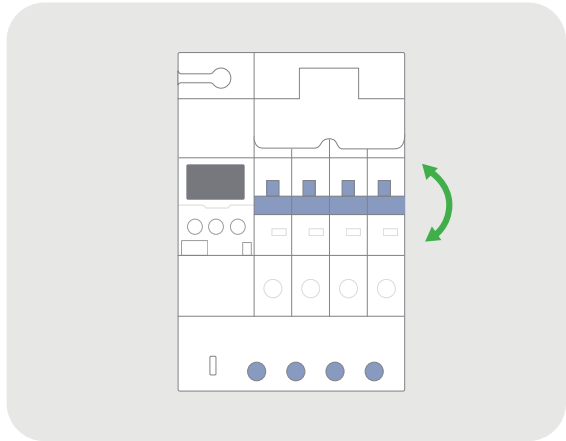


Comprehensively protect your electrical lines, prevent device from being damaged, improve the reliability of electrical systems, reduce maintenance costs, and protect your safety.



## Automatic Reclosing

When tripping is caused by leakage or current (overload, short circuit) fault, automatic reclosing can be performed according to a certain time.



Reduce the number of line outages and comprehensively improve the reliability of power supply in the power system.





Technical Parameters

Power system input	Measure voltage	230V L–N ±20%
		400V L–L ±20%
	Measure current	10 (63A)
		20 (80A)
Measurement & metering parameters	Frequency	50/60Hz±10%
	Voltage	0.50%
	Current	0.50%
	Active power	1.00%
	Reactive power	2.00%
	Active energy	1.00%
	Reactive energy	2.00%
Metering characteristic	Energy	Forward / reverse and active / reactive energy, apparent energy; partial energy (can be cleared)
	Energy pulse	600 imp/kwh
	Tariff	4–tariff
	Demand	Demand and maximum demand
	The most value	Maximum and minimum values
Protection: over / under voltage, phase loss, power outage	Overvoltage fault action	Overvoltage value 275V (default / settable)
		Overvoltage recovery value 255V (default / settable)
	Undervoltage fault action	Undervoltage value 160V (default / settable)
		Undervoltage recovery value 195V (default / settable)
	Output to associate	Output to associate: 0 = not associated; 1 = associated; Bit0 = Alarm; Bit1 = Open; Bit2 = Lock
	Phase loss action value	20V (default/settable)
	Output to associate	Output to associate: 0 = not associated; 1 = associated; Bit0 = Alarm; Bit1 = Open; Bit2 = Lock
	Overcurrent/ overload_fault action	Adjust according to actual needs
	Output to associate	Output to associate: 0 = not associated; 1 = associated; Bit0 = Alarm; Bit1 = Open; Bit2 = Lock
Leakage protection	Sensitivity IΔn	30 mA – 0.1 A – 0.3A – 0.5 A (programmable)
	Perform action	Alarm and trip optional
Input & output	Pulse output	Number of pulses/kWh:600
	Digital input	ON / OFF or customized
		Passive output


Technical Parameters

Metering characteristic	IP protection class	IP40	
	Active energy display range	999999.99 kwh	
Mechanical characteristic	Communication LED	LED flashes red	
	Impulse factor	500 imp/k(W/VAR)h	
	Weight	MT61GP 2P 478g	
		MT61GP 4P 805g	
		MT61GR 2P 617g	
		MT61GR 4P 1008g	
Environmental characteristics	Operating temperature	–15 ~ 55 °C	
	Storage temperature	–25 ~ 70 °C	
	Relative humidity	Relative humidity 5 ... 95% non–condensing	
	Altitude	Below 2000 meters above sea level	
Modbus communication	Characteristics	Valid value	Default value
		9600	
	Baud rate	19200	9600
		38400	
	Data bit	8	8
	Check mode	Odd	
		Even	No check
		No check	
	Stop bit	1	1
	Address	1–247	1


Model Selection

Model	Poles		Leakage function
	2P	4P	
MT61GP-RS N/2P C16~80A	√		
MT61GP-RS N/4P C16~80A		√	
MT61GR-RS N/2P C16~80A	√		√
MT61GR-RS N/4P C16~80A		√	√


Circuit breaker optional range:



Single phase/  
three phase

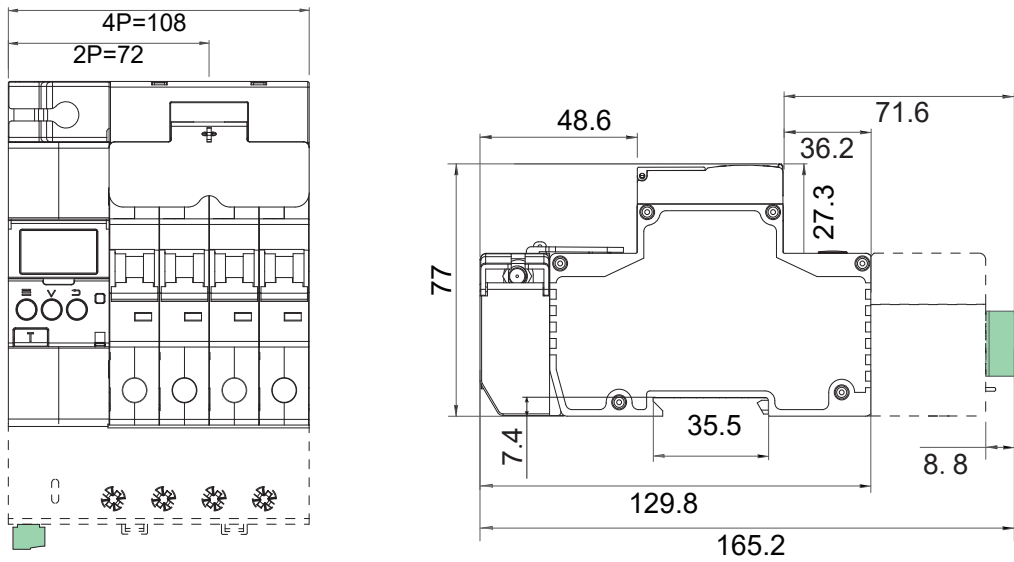


C curve



16 ~ 80A

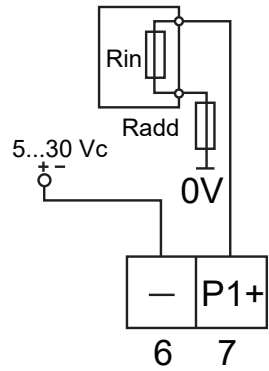
Dimensions



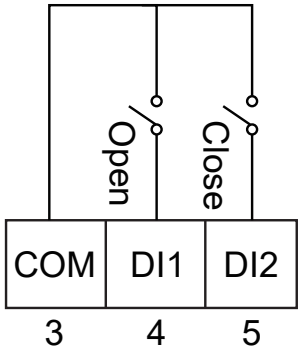
Note: The dotted part is the leakage module, only available in MT61GR series products.

Wiring Diagram

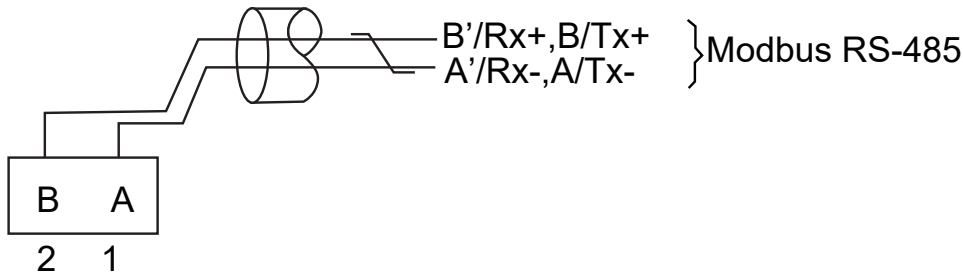
Pulse output wiring diagram



IO port wiring diagram



Modbus communication wiring diagram







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## Contact us

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