

KPM37 Three Phase Rail Smart Power Meter

Brief introduction



KPM37 Three Phase Rail Smart Power Meter adopts DIN 35MM rail type installation structure and LCD display. It integrates three-phase electric parameter measurement, 2~31th harmonic analysis and time statistics. It is equipped with 1 RS485 communication interface. The network management of the instrument can be realized through the Modbus communication protocol. The meter can also expand 2-way digital input and 2-way relay output.

KPM37 has the advantages of small size, high accuracy, high reliability, easy installation, etc. It is mostly used for projects for system integration, wire line modification and in limited or inconvenient installation space, etc.

1. Application occasion

- Energy management system integration
- Old project or wire line modification
- Projects with limited space or inconvenient installation
- Electric power quality analyzer and energy consumption statistics

2. Function features

- Measuring three-phase AC voltage, current, four-quadrant energy, active / reactive power, apparent power, power factor, frequency, demand, max & min value etc.
- Running time, loading time statistics
- 2-31th harmonic calculation & analysis
- 1 * RS485 port with Modbus communication protocol
- Expandable 2* DI
- Expandable 2* DO
- Excellent temperature characteristics and work stability
- 7+1 digits LCD screen display

3. Product Features

Communication interface protocol

- RS485/Modbus-RTU

Power quality analysis

- 2-31th harmonic measurement and analysis
- Demand vaule, Max & Min vaule statistics

Time statistics

- Running time statistics
- Loading time statistics

2-way relay output (Optional)

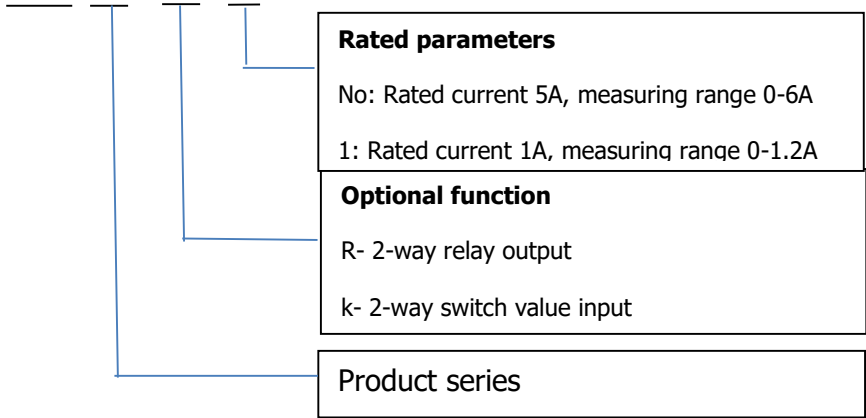
- I,U,P Limits output
- Communication remote control
- Logic output

2-way switch value input (Optional)

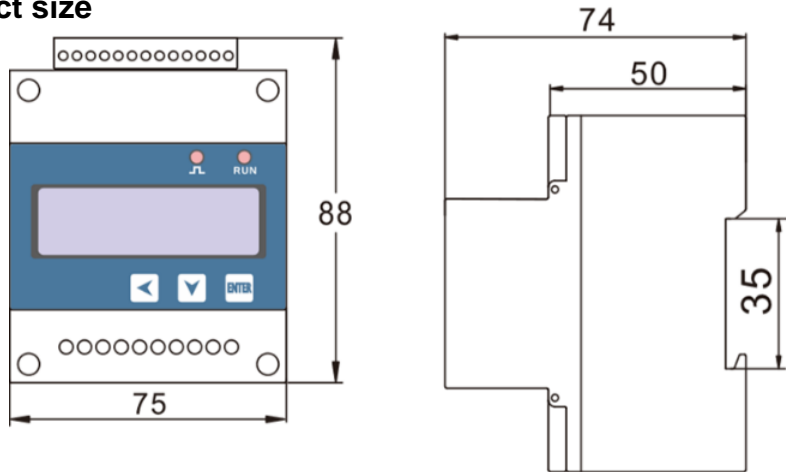
- Switch signal input
- Logic alarm input

4. Standard of optional type :

KPM 37



5. Product size



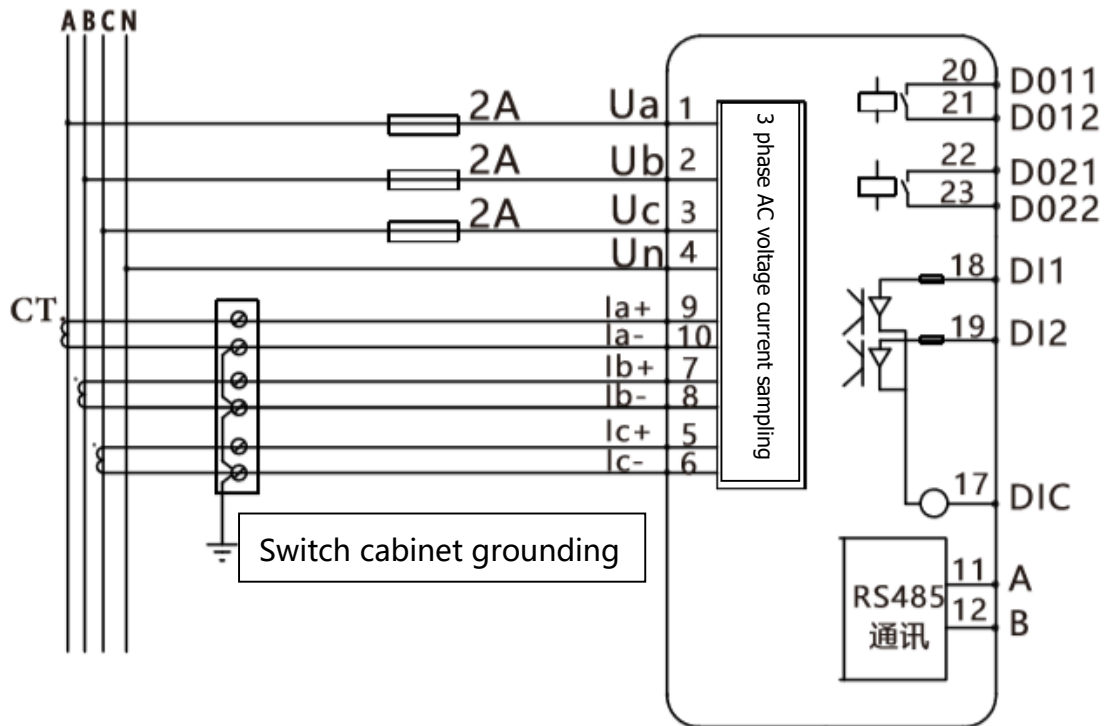
6. Technical Parameters

KPM37 Three Phase Rail Smart Power Meter-Technical parameters		
Working power source	Operating Voltage	AC85~265V/DC80~300V
	Rated power	< 3VA
Input voltage	Rated voltage	3* 57.7/100VAC, 3* 220/380VAC
	Overload capacity	1.2 times rated voltage allowed, continuous work; 2 times the rated voltage allowed 1second
	Power consumption	< 0.5VA/phase (rated)
	Measurement range	LN 5~260VAC, LL 90~450VAC
	Frequency range	45~65Hz
Input current	Rated current	Default 5A, Input range 1-6A; Optional 1A, Input range 1-1.2A
	Overload capacity	1.2 times rated current allowed, continuous work; 20 times the rated current allowed 1 second
	Power consumption	< 0.75VA/phase (Rated current 5A) ; < 0.25VA/phase (Rated current 1A)
	Frequency range	45~65Hz
Input/Output	Switch input	2-way passive main line contact DI input, internal supply DC24V power source
	Relay output	2-way DO output, Contact capacity 250VAC/5A, 30VDC/5A
Power quality monitor	Harmonic measurement	Voltage/current 2~31th harmonic distortion rate、 total harmonic distortion rate.
Measurement accuracy	Voltage	±0.2%(0.01V)
	Current	±0.2%(0.01A)
	Active power	±0.5%(0.1W)
	Reactive power	±2.0%(0.1kvar)
	Apparent power	±0.5%(0.1VA)
	Active energy	0.5S(0.1kWh)
	Reactive energy	±2.0%(0.1kvarh)
	Power factor	±0.5%(0.001)
Frequency	±0.02Hz(0.01Hz)	
Communication	Communication interface	RS485
	Communication protocol	Modbus-RTU, 1200~19200bps
Electrical insulation	Power frequency withstand voltage	AC2kV/min~1mA Input-output-power source
	Insulation resistance	> 50MΩ
	Impact voltage	5kV (Peak) , 1.2/50us
Working environment	Operating temperature	-25°C ~ +70°C
	Relative humidity	5%~95% No condensation
	Storage temperature	-30°C ~ +75°C
	Altitude	No more than 3000m
Electromagnetic Compatibility	Surge (impact) immunity	IEC61000-4-2, level 4
	Fast pulse group immunity	IEC61000-4-5, level 4
	Electrostatic discharge immunity	IEC61000-4-4, level 4
	Power frequency magnetic field immunity	IEC61000-4-8, level 4

7. Typical wiring

Star system wiring

Four lines star system: Direct wiring without voltage transformer(PT)



Triangle system

No voltage transformer(PT), 3 current transformers(CT)

(device is set to P3L3)

