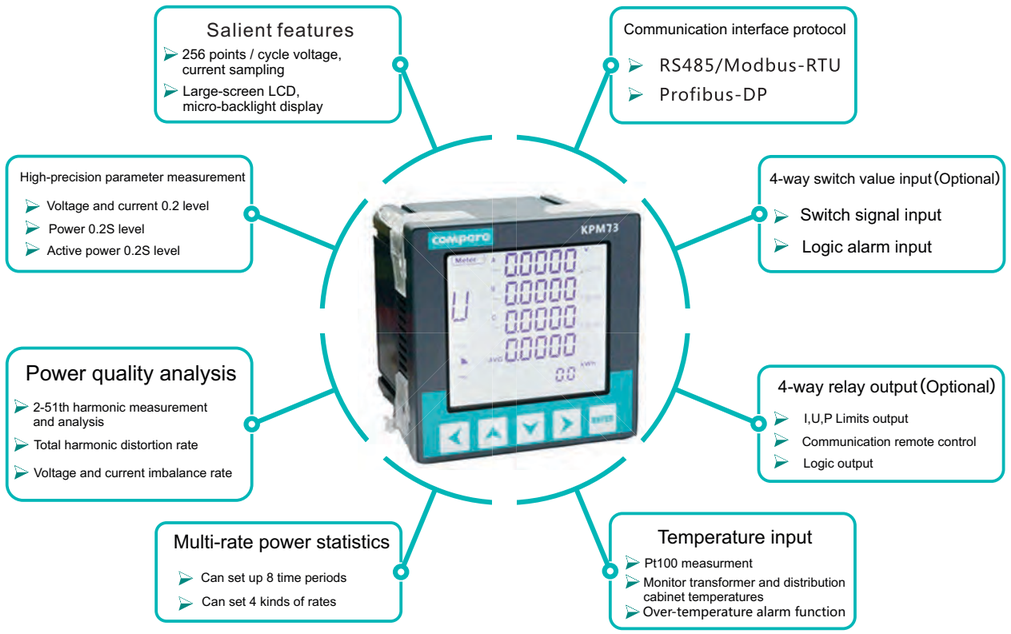
KPM73 Multifunction instruments

KPM73 Series Multifunction Meter with accurate measurement of power parameters, bi-directional four-quadrant energy measurement, statistics, recording functions, using advanced ARM processor and digital signal processing technology. Set a comprehensive three-phase electrical parameters measurement / display, energy accumulation, power quality analysis, multi rates statistics, digital input / output and communications networks in one. Has a fine manufacturing process, good electrical insulation and electromagnetic compatibility, large-screen LCD liquid crystal display, etc

Product Features



Function features

- Measure over 30 kinds of basic electricity such as phase / line voltage, three-phase current, zero sequence voltage, zero sequence current, active power, reactive power, apparent power, active energy, reactive energy, power factor, frequency
- Measure and display the average power factor of the last three months and accurately grasp the amount of monthly reactive energy consumption
- 0.5S grade four quadrant power statistics and multi-rate statistics
- Demand statistics and record the maximum value, minimum value
- Working hours, load time statistics
- Time recording function, can record 100 events
- Support up to 51th order harmonic calculation, total harmonic distortion rate calculation, unbalance rate, current K factor calculation
- Out of setting alarm function
- Standard 1 –way RS485 communication interface, Modbus-RTU protocol, Optional Profibus-DP Communication module.
- Can be extended 4-way passive switch value input
- Extension 4-way reply output
- Can be extended 1-way 4-20mA analog output
- 1 road passive optical coupler collector active pulse output
- Can be extended 1-way PT100 temperature input
- 256 points / cycle voltage, current sampling, to ensure measurement accuracy
- FSTN large screen LCD, bright LED backlight uniform display, in the bright light and large viewing angle environment to obtain a good visual effect

Products list

KPM 73 □ □ – □

Rated parameters
No:Rated current 5A, measuring range 0-6A
1:Rated current 1A, measuring range 0-1.2A

Extension function
H-Harmonic measurement DM-Demand statistics
P-Profibus-DP communication

functional module
N-Basic type (see KPM series list for specific function)
A-Basic type +4-way relay output+4-way switch value input
B-Basic type +4-way relay output+4-way switch value input+1-way temperature input
C-Basic type +4-way relay output+4-way switch value input+1-way 4-20mA output

Product series

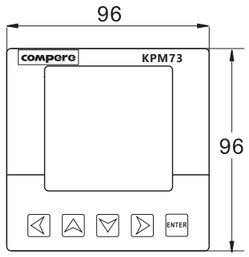
Compere Power Meter

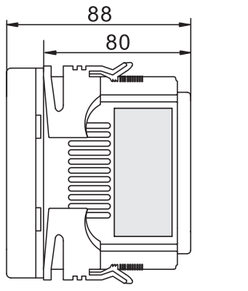
◆ Example : KPM73BH-1 : Rated current1A,4-way switch value input, 4-way relay output, 1-way temperature input Harmonic measurement multifunction instruments

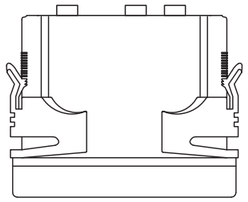
Application occasion

Measure, monitoring power distribution system parameters | Collect energy consumption data that cost center analysis needs | Limit monitor alarm (such as over voltage, power consumption) | Power quality analysis | DC/Green building or DC

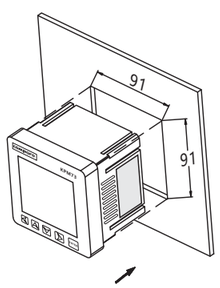
Product size







Installation instructions

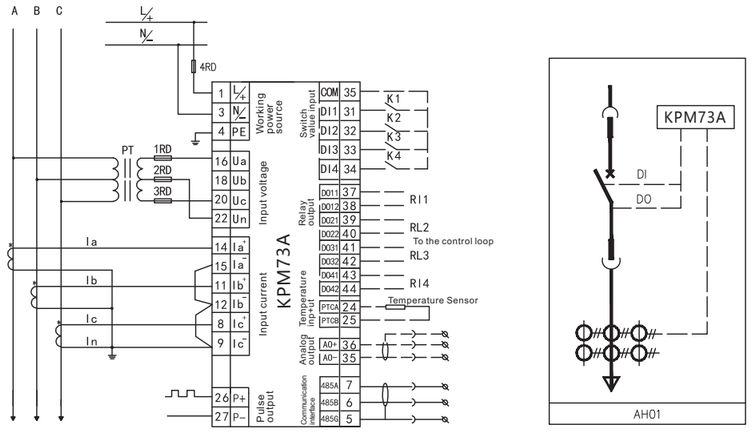


Technical Parameters

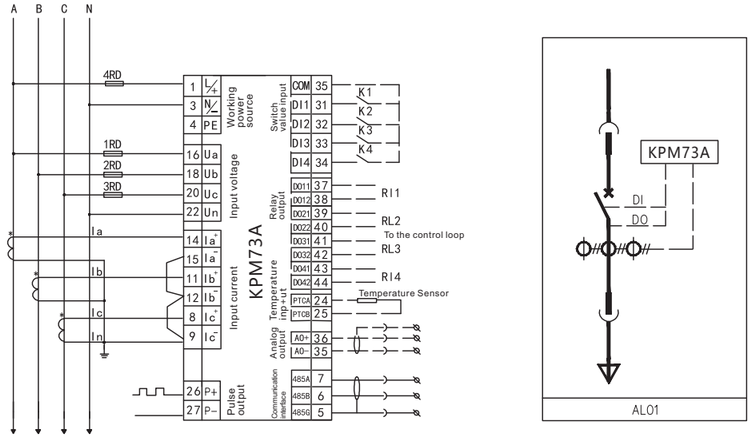
Working power source	Operating Voltage	AC 85-265V/DC 80-300V
	Rated power consumption	< 3VA
Input voltage	Rated voltage	57.7/100V,220/380V,380V/660V (Need to customize)
	Sill value	5V
	Overload capacity	1.2 times rated voltage allowed, continuous work; 2 times the rated voltage allowed 1second
	Power consumption	< 0.5VA/phase (rated)
	Measurement range	Phase voltage(LN):50~260VA,Cline voltage(LL):90~450VAC
Input current	Frequency range	45~65Hz
	Rated current	Default 5A,Input range 1-6A;Optional 1A,Input range 1-1.2A
	Sill value	5A Configuration,5mA ;1A Configuration,0.8mA
	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)
Input output	Switch value input	4-way passive main line contact DI input, internal supply DC24V power source
	Relay output	4-way DO output,Contact capacity 250VAC/5A,30VDC/5A
	Analog output	Output range 4~20mA,overload allows 1.2times
	Temperature input	Measure range 0℃~100℃
Power quality monitor	Harmonic measurement	Voltage/current2~51th harmonic distortion rate、total harmonic distortion rate.
	Harmonic distortion rate	Phase voltage, line voltage
	Imbalance rate	Voltage. current
Measure-ment accuracy	Voltage	±0.2%(0.01V)
	Current	±0.2%(0.01A)
	Active power	±0.5%(0.1W)
	Reactive power	±2.0%(0.1kvar)
	Active energy	±0.5%(0.1kWh)
	Reactive energy	±2.0%(0.1kvarh)
	Power factor	±0.5%(0.001)
	Frequency	±0.02Hz(0.01Hz)
	Temperature	±1℃(1℃)
Comm unication	Communication interface	RS485,Profibus-V1,Photoelectric isolation interface
	Communication protocol	Modbus-RTU,1200~38400bps; Probibus-DP,9600~12Mbps
Electrical insulation	Power frequency withstand voltage	AC2kV/min~1mA Input-output-power source (GB/T 13729)
	Insulation resistance	>50MΩ (GB/T 13729)
	Impact voltage	5kV (Peak) ,1.2/50us (GB/T 13729)
Working environ-ment	Operating temperature	-25℃ ~ +70℃
	Relative humidity	5%~95% No condensation
	Storage temperature	-30℃ ~ +75℃
	Altitude	No more than 4000m
Electrom-agnetic Compati-bility (EMC)	Electrical fast transient/ burst immunity test	IEC61000-4-4,Level4
	Surge immunity test	IEC61000-4-5,Level4
	Electrostatic discharge immunity	IEC61000-4-3,Level4
	Power frequency magn-etic field immunity	IEC61000-4-8,Level4

Typical wiring

KPM73A High-voltage three-phase three-wire typical wiring



KPM73A Low-voltage three-phase four-wire typical wiring



Explanation:

1.The wiring diagram is suitable for high voltage three-phase three-wire system,low voltage three-phase four-wire system, regard to other system wiring please refer to KPM73 instruction manual.

2.Analog output AO- and switch input common COM share one terminal.

3.Terminal that without function description is invalid.

4.The function of dotted lines is optional.

5.The final interpretation belongs to Compere.