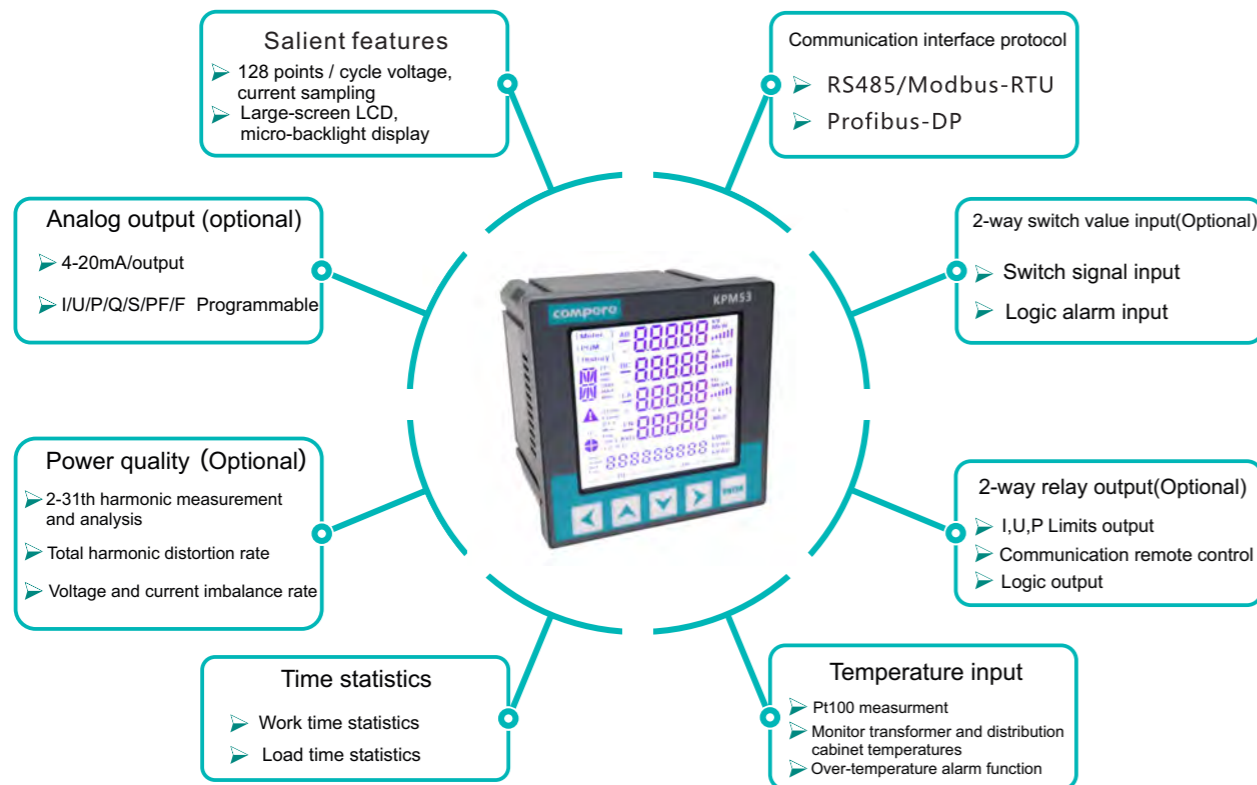


# KPM53 Three-phase smart power meter



KPM53 series of three-phase smart power meter with accurate measurement of power parameters, the instrument uses advanced ARM processor and digital signal processing technology designed from the set of three-phase electrical parameters measurement, display, power statistics, power quality analysis, digital input / Output and network communications in one; with high precision, strong isolation, stable performance, anti-interference ability and a little; the instrument also has a very strong expansion capabilities, such as monitoring of external switching action, 4-20mA analog output, but also The network management of the instrument can be realized through RS-485 / Modbus communication protocol

## Product Features

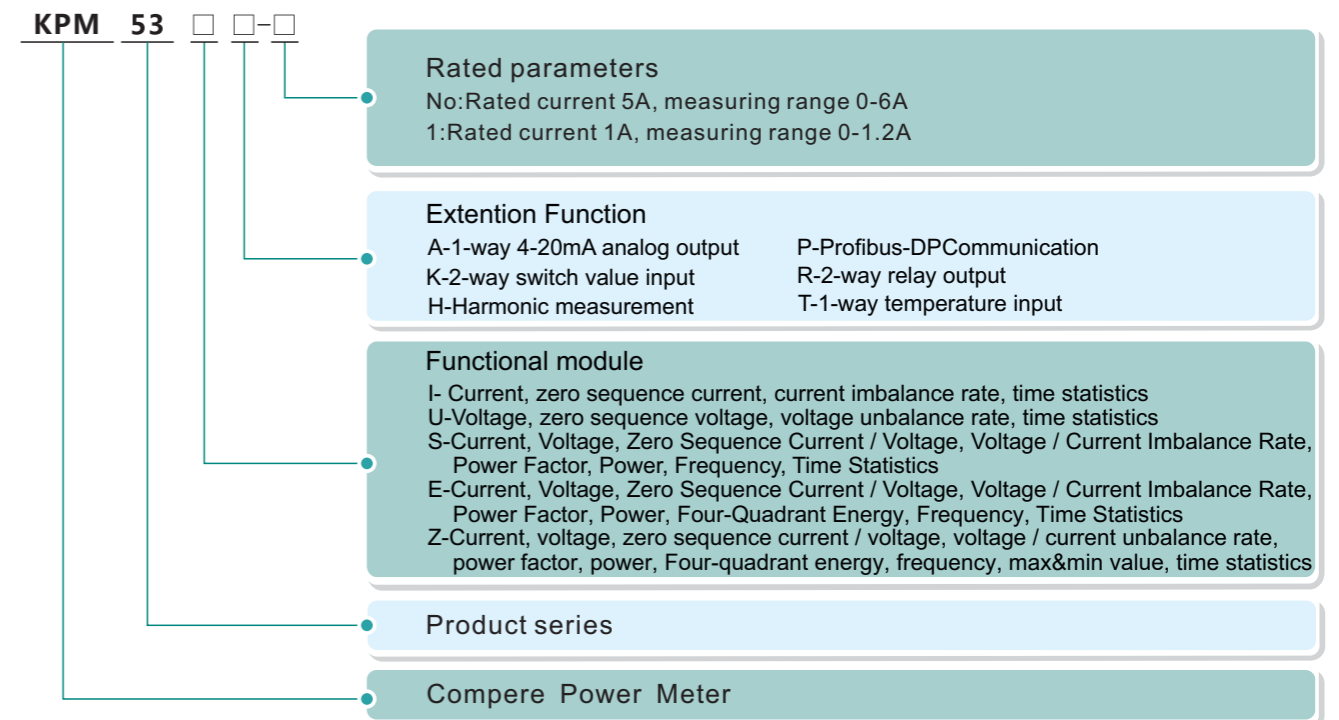


## Function features



- Measuring three-phase AC voltage, current, voltage / current unbalance rate, four-quadrant power, active / reactive power, power factor, frequency, maximum / minimum
- Voltage to current ratio programmable
- Working hours, load time statistics
- Support up to 31st harmonic calculation
- 1-way RS485 communication interface, Modbus protocol
- Can be extended 2-way passive switch value input
- Can be extended 2-way relay 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
- Excellent temperature characteristics and work stability
- 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



◆ Example:KPM53ZRH-1 : Rated current 1A, harmonic measurement function, 2 relay outputs, three-phase smart power meter.

## Application occasion

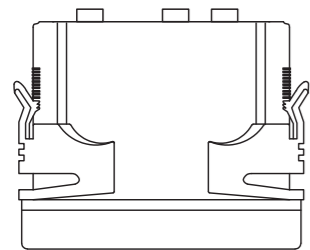
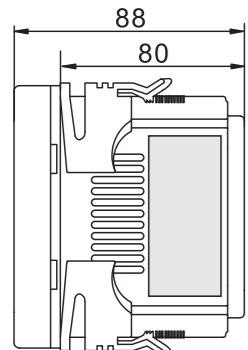
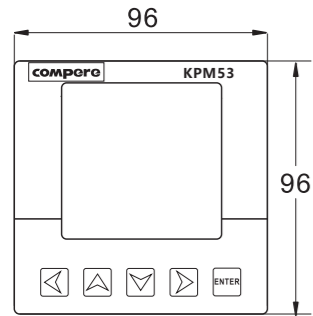
Alternative analog pointer table

Display and control of electrical parameters in mid-low voltage distribution System

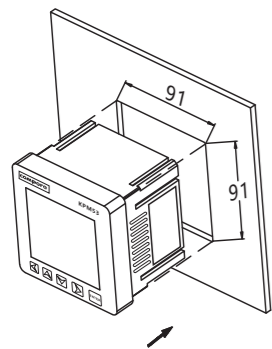
Collect energy consumption data that cost center analysis needs

DC/Green building or DC

## Product size Technical Parameters



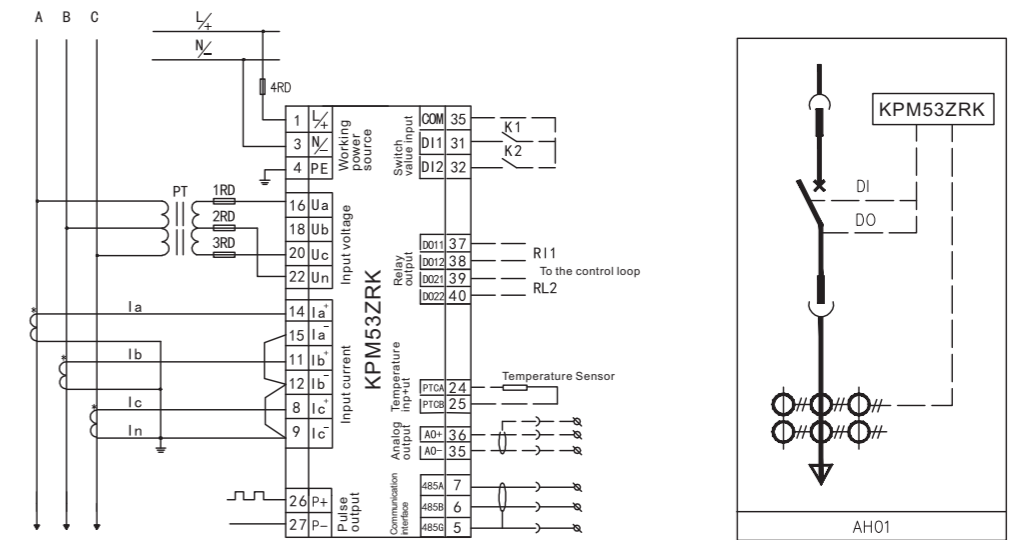
### Installation instructions



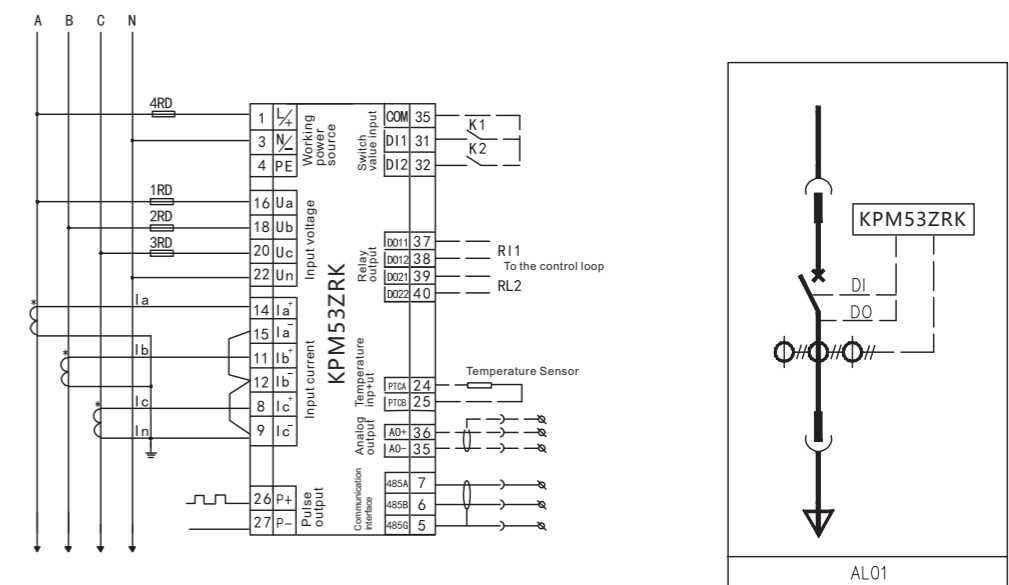
Working power source	Operating Voltage	AC 85-270V/DC 80-300V
	Rated power	< 3VA
Input voltage	Rated voltage	57.7/100V, 220/380V, 380/660V(Customized)
	Sill value	5V
	Overload capacity	1.2 times rated voltage allowed, continuous work; 2 times the rated voltage allowed 1second
	Power consumption	<0.5VA/phase (rated)
	Measurement range	LN 50~270VAC, LL 90-480VAC
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
Input output	Power consumption	<0.75VA/phase (Rated current 5A);<0.25VA/phase (Rated current 1A)
	Switch value 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
	Analog output	Output range 4~20mA,overload allows 1.2times
	Temperature input	Measure range 0°C~100°C
Power quality monitor	Harmonic measurement	Voltage/current 2~31st harmonic distortion rate, total harmonic distortion rate.
	Harmonic distortion rate	Phase voltage, line voltage
	Imbalance rate	Voltage, current
Measurement 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)
Communication	Frequency	±0.02Hz(0.01Hz)
	Temperature	±1°C(1°C)
	Communication interface	RS485,Photoelectric isolation interface
	Communication protocol	Modbus-RTU,1200~38400bps
Electrical insulation	Power frequency withstand voltage	AC2kV/min~1mA Input-output-power source (GB/T 13729)
	Insulation resistance	>50MΩ (GB/T 13729)
Working environment	Impact voltage	5kV (Peak), 1.2/50us (GB/T 13729)
	Operating temperature	-25°C ~ +70°C
Electromagnetic Compatibility (EMC)	Relative humidity	5%~95% No condensation
	Storage temperature	-30°C ~ +75°C
	Altitude	No more than 4000m
	Electrical fast transient/burst immunity test	IEC61000-4-4,Level4
	Surge immunity test	IEC61000-4-5,Level4
Electromagnetic Compatibility (EMC)	Electrostatic discharge immunity	IEC61000-4-3,Level4
	Power frequency magnetic field immunity	IEC61000-4-8,Level4

## Typical wiring

KPM53ZRK High-voltage three-phase three-wire typical wiring diagram



KPM53ZRK Low-voltage three-phase four-wire typical wiring diagram



### 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 KPM53 instruction manual.
- 2.Terminal that without function description is invalid.
- 3.The function of dotted lines is optional.
- 4.The final interpretation belongs to us.