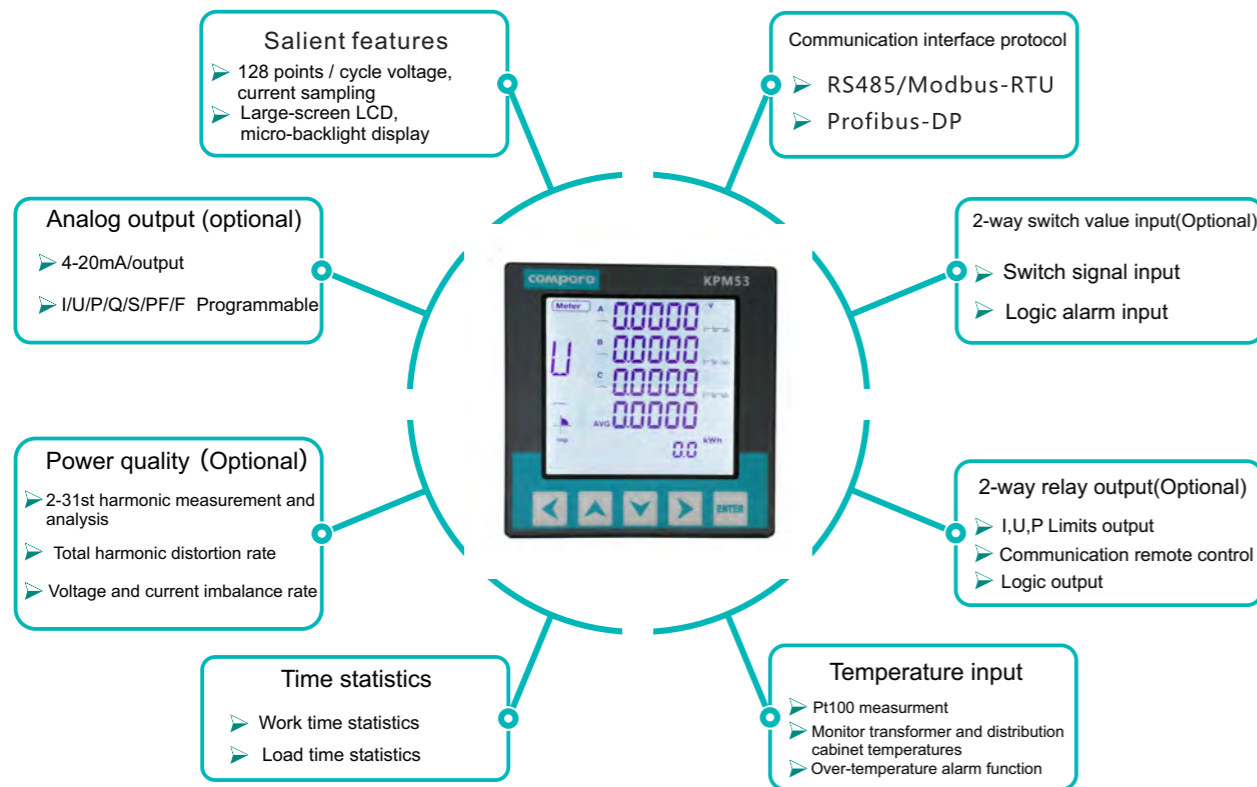


KPM53 Three-phase smart power meter



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

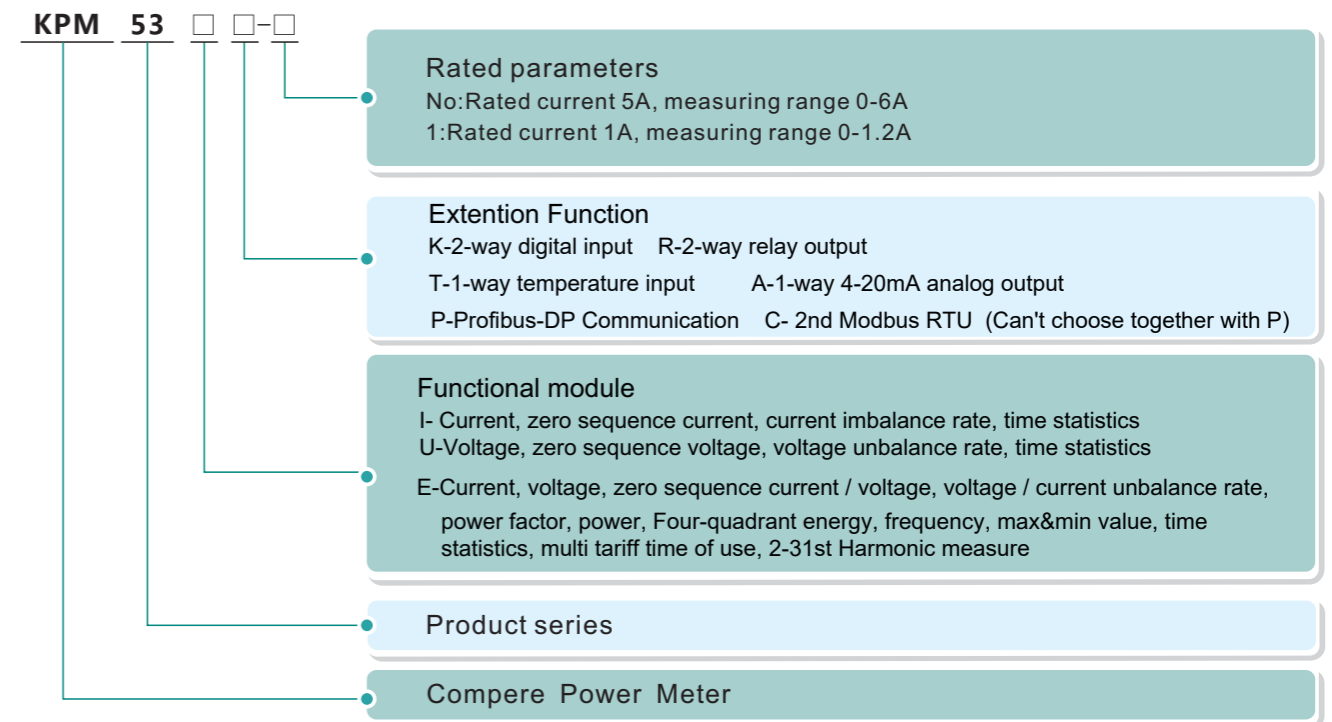


Function features



- Measuring three-phase AC voltage, current, voltage / current unbalance rate, four-quadrant power, active / reactive power, power factor, frequency, demand
- Voltage / current ratio programmable
- Working hours, load time statistics
- Support up to 31st harmonic calculation
- Default RS485 port, Modbus RTU communication protocol; Optional Profibus-DP or 2nd Modbus RTU communication port
- Can be extended 2-way passive digital 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:KPM53ER-1 : Rated current 1A, full basic functions, 2 relay outputs, three-phase smart power meter.

Application occasion

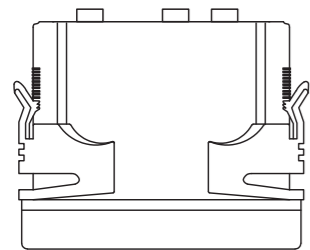
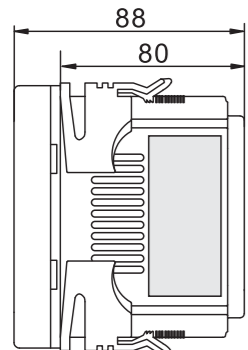
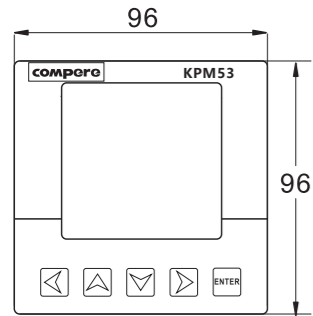
Alternative analog pointer table

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

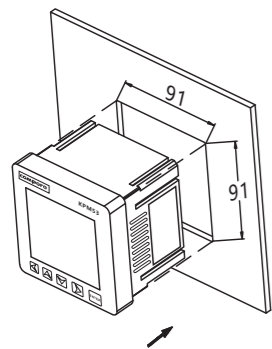
Collect energy consumption data that cost center analysis needs

DC/Green building or DC

Product size Technical Parameters



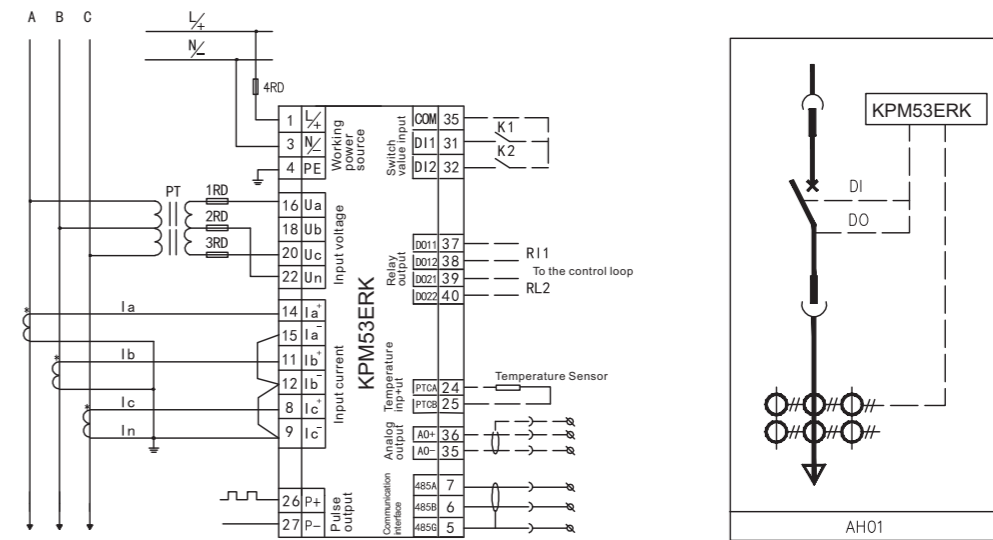
Installation instructions



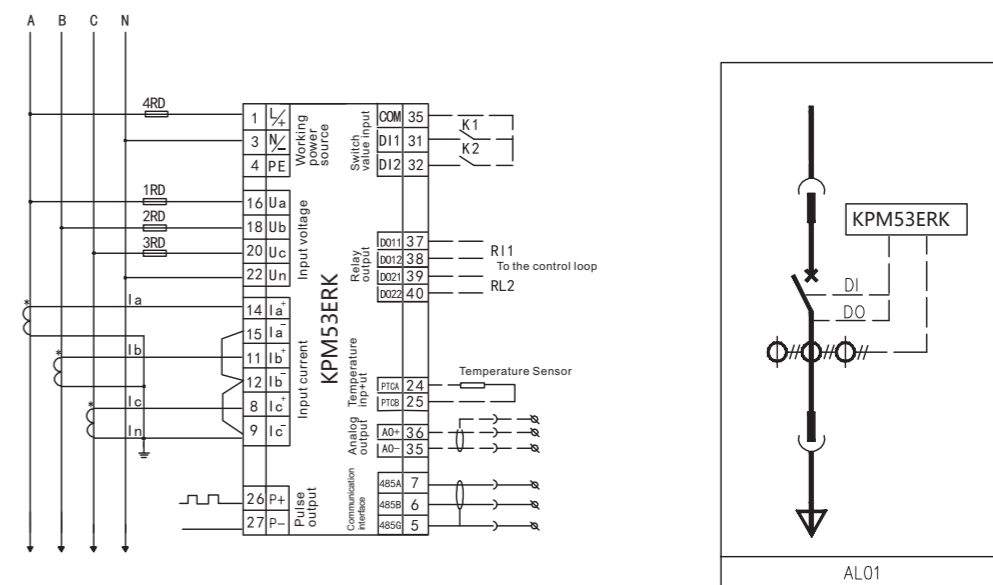
Working power source	Operating Voltage	AC 85-270V/DC 80-300V
	Rated power	< 3VA
Input voltage	Rated voltage	57.7/100V, 220/380V, 380/660V(Customized)
	Sill value	5V
	Overload capacity	1.2 times rated voltage allowed, continuous work; 2 times the rated voltage allowed 1second
	Power consumption	<0.5VA/phase (rated)
	Measurement range	LN 50~270VAC, LL 90-480VAC
Input current	Frequency range	45~65Hz, 400Hz (customized)
	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
Power quality monitor	Temperature input	Measure range 0°C~100°C
	Harmonic measurement	Voltage/current 2~31st harmonic distortion rate, total harmonic distortion rate.
	Harmonic distortion rate	Phase voltage, line voltage
Measurement accuracy	Imbalance rate	Voltage, current
	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)
Communication	Power factor	±0.5%(0.001)
	Frequency	±0.02Hz(0.01Hz)
	Temperature	±1°C(1°C)
	Communication interface	RS485, Photoelectric isolation interface
Electrical insulation	Communication protocol	Modbus-RTU, 1200~38400bps
	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
	Relative humidity	5%~95% No condensation
Electromagnetic Compatibility (EMC)	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
	Electrostatic discharge immunity	IEC61000-4-3, Level4
Power frequency magnetic field immunity	IEC61000-4-8, Level4	

Typical wiring

KPM53ERK High-voltage three-phase three-wire typical wiring diagram



KPM53ERK 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.