

## TCM-2050 Series Flexible Clamp Power Meter



### I . Characteristic

TCM-2050 series flexible clamp-on power meter is a kind of power meter carefully developed by our company for on-site measurement of three-phase AC voltage, current, leakage current, phase between voltages, phase between voltage and current, frequency, phase sequence, electric energy, active power, reactive power Multi-function, digital, smart meter for power, apparent power, power factor, total power, etc., using flexible coil sensor with diameter of  $\phi 150\text{mm}$  or  $\phi 300\text{mm}$ , easy to use and flexible, can replace traditional bulky clamp leakage current meter and power clamp meter It can also be used to identify transformer wiring groups, inductive and capacitive circuits, read out the phase relationship between CTs of each group of differential protection, check whether the wiring of the watt-hour meter is correct or not, and repair line equipment, etc. Electric inspectors provide a new type of electric power meter that is safe, accurate and more convenient.

Using advanced Rockwell coil (or Rogowski coil) technology, it is a toroidal coil that is evenly wound on non-ferromagnetic materials, with no hysteresis effect, no magnetic saturation phenomenon, high linearity, and strong anti-interference ability. The output signal is the differential of current to time. By integrating the output voltage signal, the input current can be truly restored, and the measurement current range can be from milliamps to tens of thousands of amperes. There is no exposed metal conductor in the coil part of the flexible current clamp, non-contact measurement, safe and fast; its small size, light weight, beautiful appearance, soft and flexible, suitable for narrow environments and places with dense wiring; high measurement accuracy, strong reliability, response frequency bandwidth.


The instrument also has the functions of backlight, data retention, data storage, etc. It is easy to use and is an essential tool for electrical safety testing.

### II . Model Specification

Model	TCM-2050	TCM-2050E
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Coil length	470mm	950mm
Coil inner diameter	φ150mm	φ300mm

### III. Technical Specification

Features	Three-phase AC voltage, leakage current, current, active power, reactive power, apparent power, total power, phase of current and voltage, phase between phase voltages, frequency, electrical energy, phase sequence, etc.		
Power supply	DC4.5V AA alkaline battery (1.5V AAA×3)		
Measurement method	Flexible CT, three-phase voltage clamp		
AC voltage	0.00V~600V	Resolution: 0.01V	Accuracy: 1.5%FS
Alternating current	0.0A~3000A	Resolution: 0.1A	Accuracy: 2%FS
Frequency range	45.0~65.0Hz	Resolution: 0.1Hz	Accuracy: ±0.6Hz
Phase angle	0.0~360.0°	Resolution: 0.1°	Accuracy: ±2.0°
Power factor	0.000~1.000	Resolution: 0.001	Accuracy: ±0.030
Active power	0.00W~1800kW	Resolution: 0.01W	Accuracy: ±3.5%FS
Reactive power	0.00VAR~1800kVAR	Resolution: 0.01kVAR	Accuracy: ±3.5%FS
Inspecting power	0.00VA~1800kVA	Resolution: 0.01kVA	Accuracy: ±3.5%FS
Energy range	0.0001~180000kWh	Resolution: 0.0001 kWh	Accuracy: ±3.5%FS
Jaw size	φ150mm/φ300mm		
Wire position	The conductor to be measured is in the center of the flexible coil		
Data storage	200 groups, displaying "FULL" symbol indicates that the storage is full		
Frequency	50Hz/60Hz automatic recognition		
Shift	Fully automatic switching		
Sample rate	About 2 times/sec		
Line voltage	Line measurement below AC 600V		
Display mode	LCD: 128dots×64dots; Display field: 43mm×29mm		
Meter size	Host size: width, thickness and height 151*100*35mm (without coil)		
Backlight	Have		
Low battery prompt	Have. Displays the symbol  in the upper right corner when the battery is low		
Data retention	Data hold function: "HD" symbol display		
Overflow display	Overrange overflow function: "OL" symbol display		
Automatic shut-down	After about 15 minutes of inactivity, the meter automatically shuts down to reduce battery consumption		
Battery voltage	When the battery voltage drops to about 3.4V, a low battery voltage symbol will be displayed to remind you to replace the battery		
Instrument quality	Meter: about 350g (including battery)		
Working current	100mA		
Working temperature and humidity	-10℃~40℃; below 80%rh		
Storage temperature and humidity	-10℃~60℃; below 70%rh		
Dielectric strength	AC 3700V/rms (between core and shell)		

Suitable for safety regulations	IEC1010-1, IEC1010-2-032, pollution, etc. 2, CAT III (600V)
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## IV. Packing List

Meter	1 set
Test lead	1 set (1 each of gray, yellow, green and red, 4 in total)
Test clip	1 set (4 pieces)
Instrument package	1
Detector battery	3 No. 7 dry batteries
Manual, Warranty	1 set