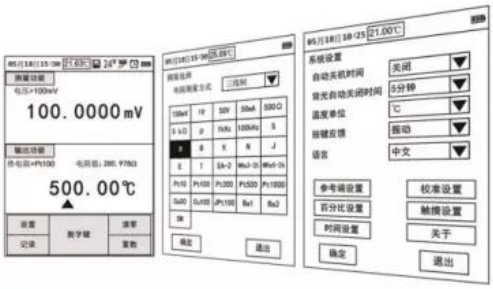
PR233 Series Portable Process Calibrator

PR233 series portable process calibrator has simultaneous measurement and analog voltage, resistance, current, thermocouple, thermal resistance, frequency, switching and other signals
The function. Compared with the PR231 series multi-function calibrator, the PR233 series products are very simple in function and operation. They are compact in design and easy to carry, which is very suitable for field applications.

Product features

1.The analog resistor/thermal resistor function is highly adaptable and can be a circular chart recorder.
2.A secondary instrument such as a balance recorder provides a stable signal.
3.The measurement and output functions are isolated from each other and can be used simultaneously.
Industrial-grade resistive touch screen + mechanical button human-computer interaction operation, can Intuitive and convenient setup via touch screen, or mechanical press The keys perform common operations.
4.The resistance measurement function can select three-wire, three-wire and four-wire resistance measurement methods.
5.Built-in high-precision reference temperature compensation and thermocouple quick interface (PR23C does not have this function)
6.Recording function, can realize on-site paperless recording
7.Built-in isolated 24V power supply for easy verification of temperature transmitters



Basic Parameters

Weight	510g	Charging power source	100~240V AC, 50~6HZ
Size	175mm×90mm×52mm	Working Temp.	-10℃~50℃
Battery type	7.8V 2200mAh Rechargeable lithium battery	Charging temp.	5℃~35℃
Working hours	10~15h, Loop power off	Humidity	0~80%,Non condensing
	4~6h, Loop power on	Preheating time	Preheat 10 minutes
Charging time	3 hours	Calibration period	1 year

What is process calibration

Process industries are those in which the final product, once manufactured, can't be separated into its individual components. Examples include the pharmaceutical, petrochemical, electrical power, and semi-conductor industries. Calibrations performed within these industries may happen on a bench in a calibration laboratory; they can also happen out in the plant or in the field. We refer to both bench and field calibration practices that happen within process industries as "process calibration."

Application

Process calibration professionals can include metrologists, instrumentation and control (I&C) or electrical and instrumentation technicians, electrical technicians, or engineers. Some of these professionals work in a metrology lab. Others work in an instrument shop, and still others work out on the plant floor.

Source and measure accuracy

Source Accuracy

Function	Range	Measurement range	Resolution	Accuracy	Remarks
Voltage	100mV	-5mV～120mV	0.1uV	0.005%RD+5uV	Input impedance ≥50mΩ
	1V	-50mV～1.2V	1uV	0.005%RD+0.005%FS	
	50V	-0.5V～50V	0.1mV		Input impedance ≥1mΩ
Current	50mA	-5mA～50 mA	0.1uA	0.005%RD+0.005%FS	Internal resistance =10Ω
Resistance	500Ω	0Ω～500Ω	1mΩ	0.005%RD+0.005%FS	Output 1mA current
	5kΩ	0kΩ～5kΩ	10mΩ		Output 0.1mA current
Thermocouple	S,R,B,K,N,J,E,T,EA2,Wre3-25,Wre5-26		0.1℃	Note	According to ITS-90 scale
Reference	internal	-10℃~60℃	0.01℃	0.3℃	
Thermal resistance	PT10, Pt100,Pt200,Cu50,Cu100, BA1, BA2, JPt100, Pt500, Pt1000		0.01℃	Note	
ρ-value	50S	0.001%～99.999%	0.001%	0.005%	Input pulse width amplitude range：1V～50V
Frequency	1kHz	0.00001kHz ～ 1.2 kHz	0.01Hz	0.01%FS	
	100kHz	0.01kHz～120 kHz	10Hz	0.1%FS	

Main range temperature characteristics	100mV	1V	50V	50mA	500Ω	5kΩ	Need to enter the correction value
	0.3uV/℃	3uV/℃	10uV/℃	0.5uV/℃	0.7mΩ/℃	7mΩ/℃	

Measurement Accuracy

Function	Range	Measurement range	Resolution	Accuracy	Remarks

Voltage	100mV	-5mV～120mV	0.1uV	0.015%RD+10uV		Max load curren=7mA
	1V	-0.2V～1.2V	10uV	0.015%RD+0.005%FS		
	10V	-2V～12V	0.1mV			
Current	20mA	0mA～25mA	1uA	0.005%RD+0.005%FS		Max load voltage=24V
Resistance	350Ω	0Ω～350Ω	1mΩ	Note		According to ITS-90 scale
	4kΩ	0kΩ～4kΩ	10mΩ			
Thermocouple	S,R,B,K,N,J,E,T,EA2,Wre3-25,Wre5-26		0.1℃	Note		
Thermal resistance	PT10, Pt100,Pt200,Cu50,Cu100, BA1, BA2, JPt100, Pt500, Pt1000		0.01℃	Note		
Frequency	1kHz	0.00001kHz～1.2 kHz	0.01Hz	0.01%FS		Max load curren=7mA
	100kHz	0.01kHz～120 kHz	10Hz	0.1%FS		
24V output	Max voltage error:0.3V Ripple noise:35mVp-p(20MHZ bandwidth) Max load curren: 70mA Load regulation: 0.5%(load 10%~100% change)					
Main range temperature characteristics	100mV	1V	50V	50mA	500Ω	5kΩ	Need to enter the correction value
	0.5uV/℃	5uV/℃	50uV/℃	1.5uV/℃	1.5mΩ/℃	15mΩ/℃	

Accessories

Accessories			
Item	**Picture**	**Item**	**Picture**
01 Hand bag for calibrator		02 Assembled gold-plated clip (red)	
03 Assembled gold-plated test line (red)		04 Assembled gold-plated clip (black)	
05 Assembled gold-plated test line (black)		06 250V/160mA Quick-break fuse	
07 Lithium battery charger		08 24V DC professional wire	
09 Multi-function communication line		10 K type compensation wire	

Packing