

ProMax LB05 Multifunction Process Calibrator is an advanced high-precision multifunction process calibrator, you can easily source and measure almost any process parameter and process device sensors, it also includes a Modbus Master, and slave, process controlling signal generator calibrator, digital multimeter function all in one. This is an upgraded premium version of the LB02 process calibrator.

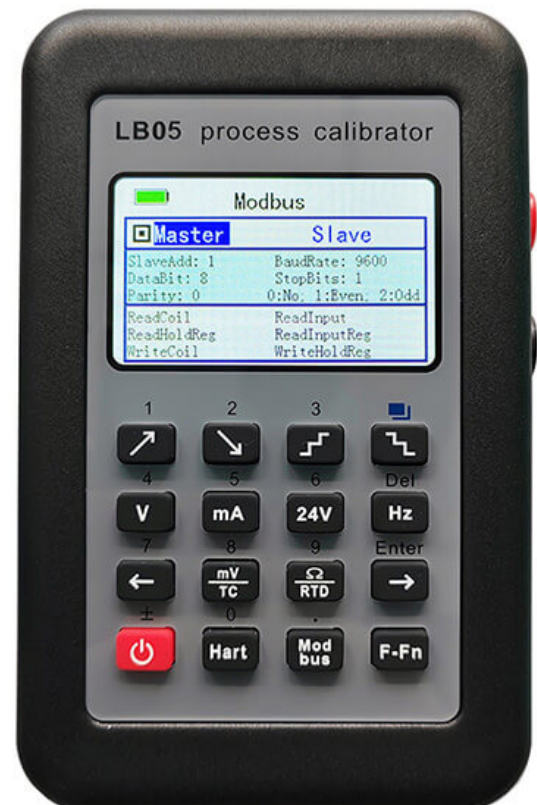
Whether you're calibrating instruments, troubleshooting a problem or running routine maintenance, ProMax LB05 process calibrators can help you get the job done faster. It does so many different tasks, so quickly and so well, it's the only process calibrator you need to carry

ProMax LB05 can generate the following signals:

- DC Voltages from 0 to 11V & DC Mini Voltages from 0 to 110mV
- Current Signals from 0 to 24mA
- Resistance from 0 to 2200 ohms
- Frequency 0 to 10Hz
- Thermocouple Simulation Signal
- RTD like PT100, PT1000, Cus50
- 24V Fixed Voltage for Testing

ProMax LB05 can Measure the following signals:

- DC Voltages from -30 to 30V & DC Mini Voltages from -150 to 150mV
- Current Signals from -30 to 30mA
- Resistance from 0 to 2500 ohms
- Frequency 0 to 10Hz
- Thermocouple Simulation Signal
- RTD like PT100, PT1000, Cus50



ProMax LB05 is ready to perform as a powerful, yet easy-to-use field calibrator. Its simple controls, with menus, make operation easy and the backlit display provides better visibility in poor light. It features a small, streamlined shape and a rugged, reliable design that makes it ideal for standing up to harsh field conditions.

Modbus Functions: support Modbus master and Modbus slave

Applications

- **Multifunctional Sensor Calibrator:** Calibrate temperature, pressure, voltage, current, resistance, and frequency. Since it both measures and sources, you can troubleshoot and calibrate all with one rugged tool
- **Multifunctional Sensor Simulator:** Simulate multiple sensors for troubleshooting and debugging systems. Engineers can use this calibrator to identify the faults in the sensor, controller, or wiring by simulating sensor output signals and carrying out test procedures.
- **Process Automation:** Communicate MODBUS Master, MODBUS Slave, and communicator/operator function.
- **Hand-Held Operation.** Small enough to fit easily into a tool bag and to use in tight spaces. Runs an entire shift on a rechargeable Li-ion battery pack. Great for testing on the field.
- **2 operating modes:** Measure & Source (generate) —enable technicians to troubleshoot, calibrate, or maintain instrumentation with just one tool.
- The signal calibrator can output a user-defined signal when a user enters a signal value through digit buttons.
- Simulation and measurement of thermocouples and temperature sensors like PT100, PT1000, CU50.. etc.
- Debugging of industrial field PLCs
- Process Instrumentation: Signal Generators, Signal measurement, Valve Adjustment, Inverter control
- PLC & Control Panel debugging by bypassing sensors and sensor calibrations
- LED & Equipment Testing or Control

Versatile Troubleshooting Tool

Engineers can power Sensor Transmitters under test using the inbuilt 24V loop supply with simultaneous mA measurement so you can test a transmitter out of the circuit and better isolate problems.

Source mA with simultaneous pressure measurement to conduct valve and I/P (Input current/Output pressure) tests in a single device. You can also test flow meters with frequency and CPM (counts per minute) functions and perform fast linearity tests with auto-step and auto-ramp features so you can quickly verify the mA signal at different output levels.

It can output and measure 4 to 20mA Current, Voltage, Frequency Pulses, Thermocouple, and RTD Sensor. It is widely used as an mV mA calibrator, temperature calibrator, frequency signal calibrator, 4-20mA loop calibrator, multimeter, etc. It supports full-function operating mode and user-defined output settings.

Can be used in process and instrumentation systems like automation and industrial applications through MODBUS Master, and MODBUS Slave communicator/operator functions.

Modbus Functions: support Modbus master and Modbus slave

Features

- High accuracy of 0.025% +1/2 digits; widely used as frequency calibrator, mA mV loop calibrator, temperature calibrator, etc.
- Have a full-function operating mode, the user can enter any value through digits buttons, and the calibrator outputs a signal directly
- Standard MODBUS Master, MODBUS Slave function.
- Signal output simulation and measurement: 0-10KHz frequency, 4-20mA source or passive signal, 0-11V, 0-110mV, 20-400Ω, standard R, E, S, K, J, B, T, N type thermocouple, PT100, CU50, 24V outputs, etc.
- Offers easy and convenient handheld operation. 2200mAH rechargeable battery inside has a battery status indicator, very suitable and convenient to use indoors or outdoors in industrial sites.
- High-resolution colour LCD, has a backlight for different lighting conditions, large screen clear display
- Can be used as a signal generator, frequency calibrator, and multifunction process calibrator.
- Have description in Hz, V, mV, mA, RTD, TC, Step, and Ω keys, which enables the user to operate it easily
- Internal polarity Reverse connection and Over current protection; Protection voltage 30V

Technical Specifications

Output Parameters

FUNC	OUT UNIT	RANGE	SET STEP	ACCURACY (SP: setting point)
DC. V	V	0~11.00V	0.01/0.1/1	±0.025%SP ±0.004V
DC. mV	mV	0~110.00mV	0.1/1/10	±0.025%SP ±0.02mV
DC. mA	Sink/Source/Program	0~24.00mA	0.01/0.1/1/4	±0.025%SP ±0.004mA
Ohm	Ω	0~400Ω	1/10/0100	±0.025%SP ±0.3Ω
		400~2200Ω	1/10/0100	±0.05%SP ±1.5Ω
Frequency	KHz	0-10	0.01/0.1/1	±0.05%SP ±2Hz
TC	R	0~1700℃	1/10/0100	
	S	0~1600℃		
	B	500~1800℃		±0.1%SP ±3℃
	K	-200~1370℃		
				±0.05%SP ±0.5℃ (K)
				±0.05%SP ±0.3℃ (E)

Modbus Functions: support Modbus master and Modbus slave

				±0.05%SP ±0.4°C (J)
	E	-200~1000°C		
	J	-200~1200°C		±0.05%SP ±0.5°C(T)
	T	-200~400°C		
	N	-200~1300°C		±0.05%SP ±0.8°C (N)
RTD	PT1000	-50~300°C	1/10/0100	±0.1%SP ±0.5°C
	Pt100	-200~850°C		±0.1%SP ±0.8°C
	Cu50	-50~150°C		±0.1%SP ±1.5°C
24V	24V	24V: Cannot be set. Current measurement:0~24.0 00 mA	NONE	
	mA			

Measurement Parameters

FUNC	UNIT	RANGE	RESOLUTION	ACCURACY (RD: Read number)
DC.V	V	-30~30.000V	0.001V	±0.025%RD ±0.004V
DC. mV	mV	-150~150.00mV	0.01mV	±0.025%RD ±0.02mV
DC. mA	mA	-30~30.000mA	0.001mA	±0.025%RD ±0.004mA
Ohm	Ω	0~999.9Ω	0.1Ω	±0.025%RD ±0.2Ω
		1000-2500	1Ω	±0.025%RD ±1Ω
Frequency	KHz	0-10	0.001	±0.05%RD ±2Hz
TC	R	0~1700°C	0.1°C	±0.1%RD ±3°C (R,S,B)
	S	0~1600°C		
	B	500~1800°C		
	K	-200~1370°C		±0.025%RD ±0.5°C (K) ±0.025%RD ±0.3°C (E) ±0.025%RD ±0.4°C (J) ±0.05%RD ±0.5°C(T) ±0.025%RD ±0.8°C (N)
	E	-200~1000°C		
	J	-200~1200°C		
	T	-200~400°C		
	N	-200~1300°C		
RTD	Pt1000	-50~300°C	0.1°C	±0.1%RD ±0.5°C
	Pt100	-200~850°C		±0.1%RD ±0.8°C
	Cu50	-50~150°C		±0.1%RD ±1.5°C
Range switch	mA	0~9990 engineering unit (for current measurement and measure the current	related to engine	

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		of 24V output)		
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