

INTRODUCTION

The Metravi CAL-400 is a versatile and precise mV/mA Calibrator, designed to meet the needs of professionals in testing, calibration, and troubleshooting applications.

With its wide range of functions, this device offers 100mV / 30V DC Voltage measurement, 20mA DC Current measurement, and switching value measurement, ensuring high accuracy and reliability.

In addition to measurement capabilities, the Metravi CAL-400 provides 100mV / 30V DC Voltage Output, 20mA DC Current output, and SIMULATE output, making it a powerful tool for calibration tasks.

It supports manual Step Output, Automatic Waveform Output, and allows for simultaneous display of Voltage (V), Current (mA), and percentage, offering enhanced usability and efficiency.

Equipped with a loop detection function, the calibrator can simultaneously provide a 24V Loop Power supply while measuring Current, making it ideal for loop testing in process control applications.

With built-in overload protection, the Metravi CAL-400 ensures safety and durability, making it a must-have tool for professionals in industries such as instrumentation, automation, and maintenance.



GENERAL SPECIFICATIONS

Sampling Time	2-3 times / second
Overload Protection	50mA/30V
Working Environment	0° ~ 40°C ; below 85% RH (no condensation)
Storage Environment	-20° ~ 60°C ; below 90% RH (no condensation)
Accuracy Defined as per Environment	23°±5°C ; below 75% RH (no condensation)
Temperature Coefficient	0.1 × basic precision / °C (temperature range <18°C or >28°C)
Ambient Condition for Usage	Indoor and outdoor use (not waterproof), with an elevation of 0~2000 m
Overrange Display	OL
Power Source	3 x 1.5V (LR03/AAA) Alkaline Batteries
Power Consumption	When alkaline battery is used: Loop current measurement and DC current output (SOURCE) 20mA (a load of 1000Ω): approx. 1000mVA Other work function: approx. 300mVA
Low Battery Indication	Shows battery sign
Auto Shutdown	After 15 min of non-operation
Warm-up Time	10 mins
Dimensions	151 x 75 x 42 mm
Weight	Approx. 230 gms
Calibration Cycle	One year

*Technical Specifications & Appearance are subject to change without prior notice

TECHNICAL SPECIFICATIONS

MEASUREMENT					
	Range	Measuring Range	Resolution	Accuracy	Notes
DC Voltage	100mV	-10.0mV ~ 110.0mV	100uV	0.2%+4	• Input impedance: 30V: 300kΩ (nominal value) mV:>1MΩ (nominal value) • Common mode rejection: 50Hz or 60Hz >80dB • Series mode rejection: 50Hz or 60Hz > 40dB • Overvoltage protection:30V (peak to peak value)
	30V	-5.00V ~ 30.00V	10mV		
DC Current	20mA	0.00mA ~ 22.00mA	0.01mA		• Overload protection: 50mA/30V • Load voltage: approx. 18mV/mA
OUTPUT					
	Range	Output Setting Range	Resolution	Accuracy	Notes
DC Voltage	100mV	0.0mV ~ 110.0mV	100uV	0.2%+4	• Maximum output current 1mA
	10V	0.00V ~ 11.00V	10mV		• Maximum output current 5 mA (<10V)
DC Current	20mA	0.00mA ~ 22.00mA	0.01mA		• 20mA maximum load 1kΩ
Analogue Transmitter SIMULATE	-20mA	0.00mA ~ 22.00mA	0.01mA		• External power supply: 5 ~ 28V • 20mA maximum load 1kΩ
Loop Power Supply LOOP	24V			±10%	• Maximum output current 25mA
Capacitive Load ≥ 0.01μF					

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