

**NEW**

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**YOKOGAWA** ◆

35 Vantage Point Drive // Rochester, NY 14624 // Call 1.800.800.5001

# Process Multimeter

**CA450**

## Loop Power and 4 to 20mA Output function in a DMM

From daily inspection to troubleshooting of measurement instruments—  
all in a single unit!

### Features

#### ■ Loop check functions

- Simultaneous 24 V loop power and mA measurement
- HART mode setting with loop power (250 OHM resistance)

#### ■ Generation functions

- SIMULATE (SINK) function simulates transmitters
- 4-20 mA span/step/auto-step/sweep output

#### ■ Measurement functions

- High accuracy signal measurement:  
DC mA 0.05%/30.000 mA
- Handheld DMM function
- Peak/Hold function for DCS power peak-to-peak measurement
- Dedicated sensor modes for direct reading of many sensor signal types

#### ■ Safer—helps eliminate electric shocks

- Current terminal shutter prevents incorrect connections
- Sensor function handles AC load current measurement
- Meets 600 V CAT. IV, 1000 V CAT. III safety standards

#### ■ Linking with a PC

- Transfer data to a PC via IR-USB



**3**-Year Warranty 

Yokogawa Meters & Instruments Corporation

LF CA450E

Accessories (Sold separately)

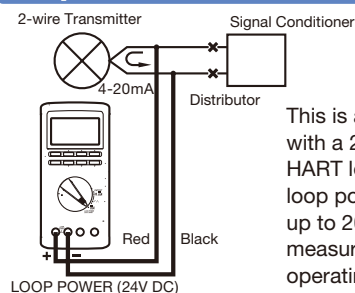
Name	Model Code	Detail
1to5V Adapter set	99031	Converts 4-20mA to 1-5V
DMM Communication Package	92015	USBcommunication adapter + USBcommunication cable + Application Software
Alligator Test Lead	99014	1000V CAT III, 600V CAT IV Red Black 1 set
Carrying case	93029	Capable for communication package
AC/DC Current clamp probe	96095	DC180A, AC130A output 10mV/A
Current Clamp Probe	96001	AC400A
	96030	AC200A
	96031	AC500A
	96032	AC700A
	96033	AC50A
	96034	AC3000A
96035	AC3000A	

Spare parts

Test Lead	98015	1000V CAT III, 600V CAT IV Red Black 1 set
Lead Cable	98064	Alligator clip, Cat I, for control signal only (under 50V)
Fuse	99042	440mA/1000V 10kAcut off 1piece

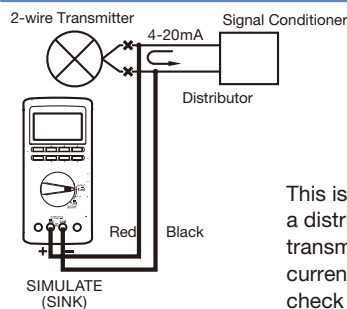
Main Functions

Loop Check function



This is an example of a connection with a 2-wire transmitter. When the HART load resistance is ON with a loop power of 24 V, there is a load of up to 20 mA. Therefore, you can measure outputs of 4-20 mA while operating the 2-wire transmitter.

Transmitter simulator function



This is an example of a connection to a distributor used with a 2-wire transmitter. You can simulate (sink) current of an up to 48 V supply to check the loop circuit.

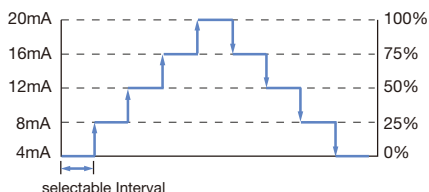
Span/Step/Sweep Output function

4-20 mA span generator function

Switch output settings from 4 to 20 mA with the touch of a button for easy operational checks on valves and other devices.

4-20 mA step generator function

You can switch the output setting value between 4 and 20mA in 4mA steps. at the touch of a button or automatically with selectable interval time to improve efficiency.



Product Model code

Name	Model Code	Suffix code
Process Multimeter	CA450	-E

Main Specifications

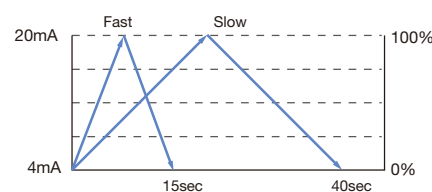
Operating Environment

Ambient temp.: 23°C ±5°C, relative humidity: 45 to 75% no condensation)  
Measuring accuracy: ±(% of reading + digits)

	Specification	Accuracy and Range
Measurement	DC voltage	0.09% rdg+1 dgt 600.0 mV to 1000 V
	Current voltage (true rms value)	0.5% rdg+5 dgt 600.0 mV to 1000 V (45 to 500 Hz)
	DC current (mA)	0.05% rdg+2 dgt/30.000 mA 0.05% rdg+2 dgt/100.00 mA
	Impedance	0.2% rdg + 1 dgt 600.0 Ω to 60.00 MΩ
	Frequency	0.005% rdg + 1 dgt 199.99 Hz to 19.999 kHz
	Diode test	1% rdg + 2 dgt 2.000 V
	Continuity	Beeps under 50 ±30 Ω
	Display update rate (times/sec.)	2.5 to 5
	Data hold	○
	Peak hold (DCV)	○
Source	Standard deviation	○
	Max/min	○
	DC current (mA)	0.05% to span of 20.000mA 0.001mA to 25.000mA, Max. load 28 V
	Simulate (Sink)	0.05% to span of 20.000mA 0.001mA to 25.000mA, Ext. power 15 to 48 Vdc
	Loop power function	24V with 250 Ω resistance ON/OFF function
General	Auto-step	○
	Auto-sweep	○
	Step (manual)	○
	Safety standard	EN61010/1000V CAT III, 600V CAT IV
	Communication (optional)	IR-USB
	Backlight	○
	Operating temperature	-20 to +55°C
Storage temperature	-40 to +70°C	
Current terminal shutter prevents incorrect connections	○	

4-20 mA sweep generator function (sweep)

Increases/decreases the output value at a constant rate until reaching a set value. Switch between step and sweep, and between 15/40 second speeds.



IR-USB communication function (dedicated adapter sold separately)

Using the IR-USB communication function, you can send measured values to a PC, or transfer settings for measurement of generated current from the PC to the main unit.

NOTICE

- Before using the product, read the instruction manual carefully to ensure proper and safe operation.

Represented by:

**YOKOGAWA**   
Yokogawa Meters & Instruments Corporation

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