

**NEW**

YOKOGAWA 

# 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)

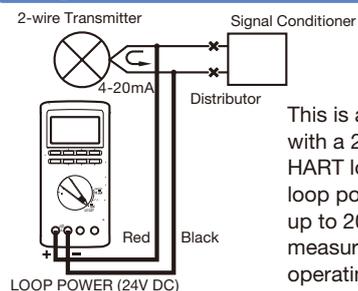
| Name                      | Model Code | Detail   |
|---------------------------|------------|--|
| 1to5V Adapter set         | 99031      | Converts 4-20mA to 1-5V  |
| DMM Communication Package | 92015      | USBcommunication adapter + USBcommunication cable + Application Software |
| Alligator Test Lead       | 99014      | 1000V CAT III, 600VCAT 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, 600VCAT 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                             |

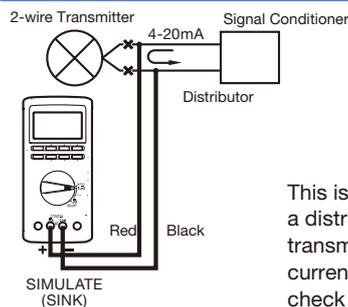
Main Functions

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.

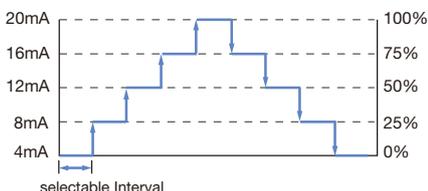
Span/Step/Sweep Output function

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

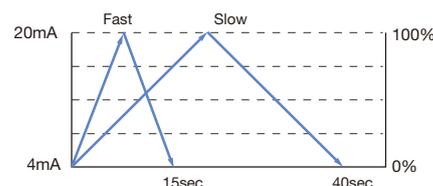
Operating Environment

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<br>600.0 mV to 1000 V                                     |
|             | Current voltage (true rms value)                        | 0.5% rdg+5 dgt<br>600.0 mV to 1000 V<br>(45 to 500 Hz)                    |
|             | DC current (mA)   | 0.05% rdg+2 dgt/30.000 mA<br>0.05% rdg+2 dgt/100.00 mA                    |
|             | Impedance   | 0.2% rdg + 1 dgt<br>600.0 Ω to 60.00 MΩ                                   |
|             | Frequency   | 0.005% rdg + 1 dgt<br>199.99 Hz to 19.999 kHz                             |
|             | Diode test  | 1% rdg + 2 dgt<br>2.000 V   |
|             | Continuity  | Beeps under 50 ±30 Ω  |
|             | Display update rate (times/sec.)                        | 2.5 to 5  |
|             | Data hold   | ○   |
|             | Peak hold (DCV)   | ○   |
| Source      | DC current (mA)   | 0.05% to span of 20.000mA<br>0.001mA to 25.000mA, Max. load 28 V          |
|             | Simulate (Sink)   | 0.05% to span of 20.000mA<br>0.001mA to 25.000mA, Ext. power 15 to 48 Vdc |
|             | Loop power function                                     | 24V with 250 Ω resistance ON/OFF function                                 |
|             | Auto-step   | ○   |
|             | Auto-sweep  | ○   |
|             | Step (manual)   | ○   |
| General     | Safety standard   | EN61010/1000VCAT III, 600VCAT 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.

**YOKOGAWA**  
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World Wide Web site at  
<http://www.yokogawa.com/MCC>

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