

## Pressure Calibrator CA700

Regular inspection of various sensors and meters scattered over the field is essential for stable plant operation.

The pressure calibrator CA700 is a highly accurate and functional pressure calibrator specialized for calibration of differential pressure and pressure transmitters.

Recently differential pressure and pressure transmitters have been remarkably improved in their accuracy and functionality. The CA700 has world-class accuracy and measurement range as a portable calibrator, and offers highly accurate unprecedented field calibration.



### MAJOR FEATURES

#### ■ High accuracy and long-term stability

The CA700 is equipped with a silicon resonant sensor for which Yokogawa has technological capability, and has achieved world-class accuracy of 0.01%rdg for pressure measurement and 0.015%rdg for generation and measurement of current and voltage as a portable calibrator. These performances are satisfactory for inspections of differential pressure and pressure transmitters in which their input and output values are measured and their relative errors are evaluated.

#### ■ Rangeability

The resolution of CA700 is 0.001 kPa when measured with a 200 kPa range, which demonstrates 10 times better resolution than that of normal field-use calibrators. The excellent sensing characteristics of the silicon resonant sensor achieve such an extremely wide range that a single CA700 can substitute for several normal field-use calibrators.

#### ■ User assistance

Calibration procedures for differential pressure and pressure transmitters are built into the CA700, and usual 5-point calibration with 50% up and down steps and 9-point calibration with 25% up and down steps are available. Users can quickly conduct calibration work by operating it in accordance with the navigation, improving the efficiency during calibration in the field. The measured data are automatically stored in the CA700 itself and can be transferred to PCs via a USB flash drive or USB cable.

#### ■ Field use

During the calibration work of differential pressure and pressure transmitters, calibrators are used at sites surrounded by lots of piping or handrails, and used under harsh environments exposed to water drops or puddles.

To respond to such environments, the CA700 has a robust housing and conforms to the IP54 standard for solid particle and liquid ingress protection. Considering tasks while moving from place to place in the field, it is also equipped with a shoulder belt to enhance the portability. By adopting a LCD display with good visibility even during outdoor work under direct sunlight, a tilt stand, and others in addition, the CA700 offers various usages ranging from use in a field to that at a workbench.

### MAJOR SPECIFICATIONS

#### ■ Basic accuracy

- Pressure (measurement): 0.01%rdg
- Current (generation/measurement): 0.015%rdg
- Voltage (generation/measurement): 0.015%rdg

#### ■ Measurement range

- Pressure: -80.000 to 200.000 kPa (gauge pressure),  
-80.00 to 1000.00 kPa (gauge pressure),  
-80.00 to 3500.00 kPa (gauge pressure)
- Current (DC): 20.000 mA/100.00 mA  
Input resistance: 10 Ω or less.  
The maximum display is 1.2-fold of range.

- Voltage (DC): 5.0000 V/50.000 V  
Input resistance: approx. 1 MΩ.  
The maximum display is 1.1-fold of range.

#### ■ Generation range

- Current output (DC): 0 to 20.000 mA  
Compliance voltage: 24 V,  
The maximum setting is 1.2-fold of range.
- Current Simulation (Sink): 0 to 20.000 mA  
External power supply: 5 to 28 V,  
The maximum setting is 1.2-fold of range.
- Voltage output (DC): 0 to 5.0000 V  
Load resistance: 5 kΩ or higher,  
The maximum setting is 1.1-fold of range.

- Loop power supply:  
24 ± 1 V (load current: 24 mA),  
when the communication resistance switch is OFF.  
24 ± 6 V (load current: 20 mA),  
when the communication resistance switch is ON.

#### ■ Display: Dot matrix LCD (320 × 240)

#### ■ Display refresh rate: approx. 300 ms (3 times/sec)

#### ■ Warm-up time: approx. 5 minutes

#### ■ Operating temperature and humidity: -10 to 50 °C, 20 to 80% (with no condensation)

#### ■ Battery: Six AA size alkaline batteries

#### ■ Battery life: approx. 35 H, when 24 V loop power supply is off and current is measured. approx. 10 H, when 24 V loop power supply is on.

#### ■ External dimensions: approx. 264 (W) × 188 (H) × 96 (D)

#### ■ Weight: approx. 2 kg (including batteries)

### Contact us:

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