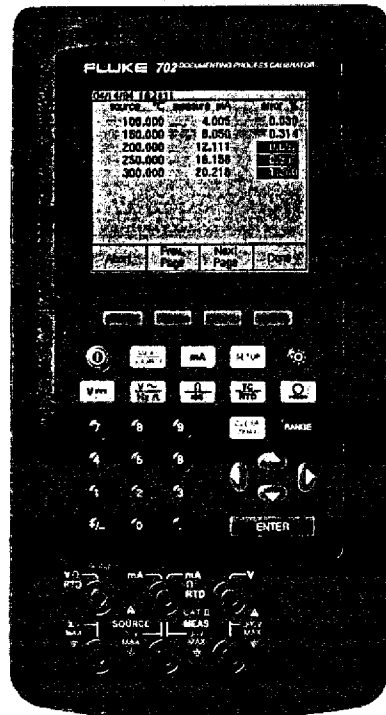


## 701/702 Documenting Process Calibrators



Fluke 702

The Fluke 701 and 702 are easy-to-use field calibrators designed specifically for use on control instrumentation in process plants. Rugged packaging allows the calibrators to perform dependably despite rough handling and hostile plant environments, while automatic documentation capabilities save time and ensure accurate results. Because the 701/702 are multipurpose tools, you can use them for troubleshooting and maintenance as well as calibration.

- One light, compact, rugged tool replaces several other calibrators
- Calibrate temperature, pressure, voltage, current, resistance, and frequency
- Simultaneously measure and source
- Automatically capture calibration results
- Document procedures and results to meet ISO 9000, EPA, FDA, OSHA and other requirements
- Measure/simulate eleven types of thermocouples and eight RTDs
- Store up to 8,000 readings in data logging mode (702 only)
- Operate at temperatures from -10°C to 50°C
- Protected against dirt, dust, and moisture; unaffected by vibration
- PC interface available (702 only)
- Easy-to-read graphical LCD; on-screen information available in English, French, German, Italian, and Spanish
- One- and two-year calibration cycles
- Three-year warranty (one year for pressure modules)

### Easy to Use

The 701/702 calibrators feature a simple front panel, with an easy-to-read graphical LCD and handy grouping of dedicated keys. The user interface is the same for all functions, minimizing training time. Learning time is further reduced by the simple menu structure, use of operator prompts, and built-in, pre-programmed procedures.

### 701: A Complete Documenting Calibrator

The 701 is the economical choice for plants that don't use PCs or require traditional paper forms. It has enough storage capacity to hold more than a day's calibration and measurement data. When you're back at the shop, you can recall the data on screen to fill out calibration forms.

### 702: More Memory, Plus a PC Interface

The 702 has all the capabilities of the 701 plus a PC interface that lets you load procedures, lists, and instructions created with DPC/TRACK software - or unload data for printing, archiving, and analysis. With its expanded memory, the 702 can hold a full week of calibrations and procedures. The 702 also offers improved accuracy compared to the 701.

### DPC/TRACK Software for Instrumentation Management

Manage your instruments and your calibration data with this easy-to-use instrumentation management database. Create calibration procedures, lists, and instructions on your PC and load them to the 702. Unload your calibration data back to your PC. Print reports or export data in standard ASCII format.

The 702 is also supported by popular instrumentation management software to our Cornerstone, Honeywell Lowland, Sand Cove, and others.

### Pressure Modules

An optional set of external pressure modules provides pressure calibration and measurement capabilities. Twenty-one modules are compatible with the 701 and 702, with total uncertainty specs to 0.05%. Ranges start at 0-10" H<sub>2</sub>O (0-2.5 kPa) and go to 0-10,000 psi (0-70,000 kPa).

# Process Calibrators

## 701/702 Documenting Process Calibrators

### General Specifications

Size: 130 x 236 x 61 mm (5.1 x 9.3 x 2.4 in)

Weight: 1.4 kg (3 lb 1 oz)

Internal Battery Pack: NiCd, 7.2V, 1700 mAh

Battery Life: Typically over eight hours

Battery Replacement: Via snap-shut door without opening calibrator; no tools required

### Ordering Information

#### Models

**Fluke 701** Documenting Process Calibrator

**Fluke 702** Documenting Process Calibrator

**Fluke-700SW** DPC/TRACK Software

#### Included with Instrument

Every Fluke 701 and 702 comes with two sets of TL24 industrial test leads, two sets of AC20 test clips, one set of TP20 test probes, a BP7217 battery pack, a BC7210 battery charger, and an instruction manual.

DPC/TRACK software includes software disks, an instruction manual, a serial port cable, and a DB9 to DB25 (9-pin to 25-pin) adapter.

#### Accessories

**Fluke-700-Pxxx** Pressure Modules

**Fluke-700-IV** Current Shunt

**Fluke-700PCK** Pressure Calibration Kit

**Fluke-700PMP** Pressure Pump

**Fluke-700TC1** Thermocouple Connector Kit

**Fluke-700TC2** Thermocouple Connector Kit

**C700** Hard Carrying Case

**C789** Soft Carrying Case

**C781** Soft Carrying Case

**C75** Test Lead Case

**BE9005** Battery Eliminator

**BP7217** NiCd Battery Pack

**BC7210** Battery Charger

**80CJ-M** Mini Thermocouple Connector, Type J

**80CK-M** Mini Thermocouple Connector, Type K

**80PK-1** Type K Bead Thermocouple Probe

**80PK-2A** Type K Immersion Probe

**80PK-3A** Type K Surface Probe

**80PK-IR** Infrared Temperature Probe

**80T-IR** Infrared Temperature Probe

**80T-150U** Universal Temperature Module

**80I-500s** Clamp-on AC Current Probe

**80I-1000s** Clamp-on AC Current Probe

**I-410** Clamp-on AC/DC Current Probe

**I-1010** Clamp-on AC/DC Current Probe

Visit Fluke on the world wide web at:  
<http://www.fluke.com>

### Summary Accuracy Specifications (Model 702 for 1 Year)

| Measure             |  | Source             |  |
|---------------------|--|--------------------|--|
| Range (full scale)  | Accuracy<br>(% of reading ± % of full scale) | Range (full scale) | Accuracy<br>(% of reading ± % of full scale) |
| 110.000 mV dc       | 0.025% + 0.015%                              | 110.000 mV         | 0.01% + 0.005%                               |
| 1.10000V dc         | 0.025% + 0.005%                              | 1.10000V           | 0.01% + 0.005%                               |
| 11.0000V dc         | 0.025% + 0.005%                              | 11.0000V           | 0.01% + 0.005%                               |
| 110.000V dc         | 0.05% + 0.005%                               |                    |  |
| 300.00V dc          | 0.05% + 0.005%                               |                    |  |
| Vac, 20 to 40 Hz    | 2% + 10 counts                               |                    |  |
| Vac, 40 to 500 Hz   | 0.5% + 5                                     |                    |  |
| Vac, 500 to 1 kHz   | 2% + 10                                      |                    |  |
| Vac, 1kHz to 5 kHz  | 10% + 20                                     |                    |  |
| 30.000 mA dc        | 0.025% + 0.025%                              | Source 22.000 mA   | 0.01% + 0.04%                                |
| 110.00 mA dc        | 0.05% + 0.05%                                | Simulate 22.000 mA | 0.25% + .05%                                 |
| 11.000Ω             | 0.05% + 50 mΩ                                | 11.000Ω            | 0.01% + 20 mΩ                                |
| 110.00Ω             | 0.05% + 50 mΩ                                | 110.00 Ω           | 0.01% + 40 mΩ                                |
| 1.1000 kΩ           | 0.05% + 0.5Ω                                 | 1.1000 kΩ          | 0.02% + 0.5Ω                                 |
| 11.000 kΩ           | 0.1% + 10Ω                                   | 11.000 kΩ          | 0.03% + 5Ω                                   |
| 1.00 to 109.99 Hz   | 0.05 Hz                                      | 2.00 to 109.99 Hz  | 0.01 Hz                                      |
| 110.0 to 1099.9 Hz  | 0.5 Hz                                       | 110 to 1099 Hz     | 1 Hz   |
| 1.100 to 10.999 kHz | 5 kHz  | 1.1 to 10.9 Hz     | 0.1 kHz                                      |
| 11.00 to 50.00 kHz  | 50 kHz                                       | 11 to 50 kHz       | 2 kHz  |

### Temperature, RTDs and Thermocouples

| Device        | Measure Accuracy | Source Accuracy |
|---------------|------------------|-----------------|
| 10Ω Cu(427)   | 2°C              | 1°C             |
| 100Ω Pt(3916) | 0.3°C            | 0.1°C           |
| 100Ω Pt(3926) | 0.3°C            | 0.1°C           |
| 100Ω Pt(385)  | 0.3°C            | 0.1°C           |
| 200Ω Pt(385)  | 0.3°C            | 0.1°C           |
| 500Ω Pt(385)  | 0.3°C            | 0.1°C           |
| 1000Ω Pt(385) | 0.3°C            | 0.1°C           |
| 120Ω Ni(672)  | 0.3°C            | 0.1°C           |
| E             | 0.3°C            | 0.2°C           |
| N             | 0.5°C            | 0.3°C           |
| J             | 0.3°C            | 0.2°C           |
| L             | 0.3°C            | 0.2°C           |
| K             | 0.3°C            | 0.3°C           |
| T             | 0.3°C            | 0.3°C           |
| U             | 0.3°C            | 0.3°C           |
| B             | 0.9°C            | 0.8°C           |
| R             | 1.0°C            | 0.9°C           |
| S             | 0.9°C            | 0.9°C           |
| C             | 0.6°C            | 0.6°C           |

Resolution: 0.1°C, except 1°C for 10Ω Cu. Best case, mid-range accuracies. Sensor in-accuracies not included. For 2-wire and 3-wire RTD measurements, add 0.4°C. Thermocouple accuracies with external cold junction; for internal junction add 0.2°C.

|                      |  |
|----------------------|--|
| <b>Data Log</b>      | Measure V, mA, ohms, frequency, temperature, pressure<br>1 to 60 readings per minute, 8000 readings max  |
| <b>Ramp</b>          | Source V, mA, Ω, frequency, temperature<br>4 steps/second; trip detect on continuity or voltage  |
| <b>Loop Power</b>    | Selectable, 24V or 28V; 22 mA max  |
| <b>Environmental</b> | 701/702 specifications apply from +18°C to +28°C<br>Operating Temperature, -10°C to 50°C [Typical specs to -20°C]<br>Storage Temperature, -20°C to 60°C<br>Pressure modules are totally compensated and specs apply 0° to 50°C<br>Enclosure designed to meet IEC 529 IP52 (normal operating vacuum for dust) |