

# 725Ex












## Multifunction Process Calibrator

### Safety Information

A **Warning** identifies conditions and actions that pose hazard(s) to the user; a **Caution** identifies conditions and actions that may damage the Calibrator or the equipment under test.

Safety and electrical symbols used in this sheet and on the Calibrator are displayed in Table 1.


**Table 1. International Electrical Symbols**

Symbol	Meaning	Symbol	Meaning
	Power ON/OFF		Double insulated
	Earth ground		Conforms to relevant Canadian and US Standards. Certification # LR110460-2
	Risk of Danger. Important information. Refer to manual.		Conforms to relevant European Union directives.
	Battery		Direct current
	Hazardous Voltage		Pressure
	Conforms to ATEX requirements		

Read the entire Users Manual and the 725Ex Multifunction Process Calibrator CCD (Concept Control Drawing) before using the Calibrator.

### ⚠ ⚠ Warnings and Cautions

To avoid electric shock, injury, damage to the Calibrator, or ignition of an explosive atmosphere, follow all equipment safety procedures.

- Use the Calibrator only as described in this User Manual and the Fluke 725Ex CCD (Concept Control Drawing) or the protection provided by the Calibrator may be impaired.
- Inspect the Calibrator before use. Do not use it if it appears damaged.
- Check the test leads for continuity, damaged insulation, or exposed metal. Replace damaged test leads.
- When using probes, keep fingers behind the finger guards on the probes
- Never apply more than 30.0 V between the input terminals, or between any terminal and earth ground.
- Applying more than 30.0 V to the input terminals invalidates the Calibrator's Ex Approval and may result in permanent damage to the unit so it can no longer be used.
- Use the proper terminals, mode, and range for the measuring or sourcing application.
- To prevent damage to the unit under test, be sure the Calibrator is in the correct mode before connecting the test leads.
- When making connections, connect the COM test probe before the live test probe. When disconnecting, disconnect the live probe before the COM probe.
- Never open the Calibrator case. Opening the case invalidates the Calibrator's Ex Approval.
- **Make sure the battery door is closed and latched before entering an Ex hazardous area or using the Calibrator. See "Ex Hazardous Areas".**
- Replace the battery as soon as the  (low battery) symbol appears to avoid false readings that can lead to electric shock. Remove the Calibrator from the Ex-hazardous area before opening the battery door. See "Ex Hazardous Areas".
- Remove test leads from the Calibrator before opening the battery door.
- Measurement Category I (CAT I) is defined for measurements performed on circuits not directly connected to the mains.
- Turn off circuit power before connecting the Calibrator mA and COM terminals in the circuit. Place Calibrator in series with the circuit.
- When servicing the Calibrator, use only specified replacement parts. Do not open the Calibrator case. Opening the case invalidates the Calibrator's Ex Approval.
- Do not allow water inside the case.
- Before each use, verify the Calibrator's operation by measuring a known voltage.
- Never touch the probe to a voltage source when the test leads are plugged into the current terminals.
- Do not operate the Calibrator around explosive dust.
- When using a pressure module, make sure the process pressure line is shut off and depressurized before connecting it or disconnecting it from the pressure module.
- Use only 4 AA batteries listed in Table 8, properly installed in the Calibrator case, to power the Calibrator.

- **Disconnect test leads from the circuit under test before changing to another measure or source function.**
- **When measuring the pressure of toxic or flammable gases, care must be taken to minimize the possibility of leakage. Confirm that all pressure connections are properly sealed.**

**⚠ Caution**

To avoid possible damage to Calibrator or to equipment under test:

- **Disconnect the power and discharge all high-voltage capacitors before testing resistance or continuity.**
- **Use the proper jacks, function, and range for the measurement or sourcing application.**

### **Faults and Damage**

Applying a voltage greater than 30 V to the input of the Calibrator invalidates its Ex Approval and may impair its safe operation in an Ex-hazardous area. See “Ex Hazardous Areas”.

If there is any reason to suspect that the safe operation of the Calibrator has been affected, it must be immediately withdrawn from use, and precautionary measures must be taken to prevent any further use of the Calibrator in an Ex-hazardous area. See “Ex Hazardous Areas”.

Fully observe all instructions, warnings, and cautions contained in this manual. In case of doubt due to translation and/or printing errors, refer to the original English users manual.

The safety features and integrity of the unit may be compromised by any of the following:

- External damage to the housing
- Internal damage to the Calibrator
- Exposure to excessive loads
- Incorrect storage of the unit



- Damage sustained in transit
- Correct certification is illegible
- Functioning errors occur
- Permitted limitations are exceeded
- Functioning errors or obvious measurement inaccuracies occur which prevent further measurement by the Calibrator
- Opening the case

### **Safety Regulations**

The use of the Calibrator meets the requirements of the regulations providing that the user observes and applies the requirements as stated in the regulations and that improper and incorrect use of the unit is avoided.

- Use must be restricted to the specified application parameters.
- Do not open the Calibrator.
- Do not remove or install the batteries within the Ex-hazardous area. See “Ex Hazardous Areas”.
- Do not carry additional batteries within the Ex-hazardous area. See “Ex Hazardous Areas”.
- Use only type tested batteries. The use of any other batteries will invalidate the Ex-certification and present a safety risk.
- Do not use the Calibrator in any circuit where the voltage or transients may exceed 30 V.
- Only use the Calibrator in circuits with compatible entity parameters. When the calibrator is used in an Ex hazardous area, unless the area is known to be safe, do not connect to any circuits that exceed the entity parameters defined on control drawing 6800032. See “Ex Hazardous Areas”.

**Certification Information**

- CE  II 1 G EEx ia [ia] IIB 171 °C  
0344 KEMA 04ATEX1303X
-  Class I Div. 1 Groups B,C, and D  
LR110460 Class I Zone 0 Aex/Ex ia [ia] IIB 171 °C  
2004.1573226
- Ta = -10 °C... +55 °C
- Manufactured by Martel Electronics, Inc., 1F Commons Drive  
Londonderry, NH, USA

**Approved Batteries**

Battery Manufacturer (All Batteries Alkaline- AA 1.5 V)	Type
Duracell	MN1500
Eveready (Energizer)	E91
Panasonic Powerline	LR6A
Rayovac	815
Varta	4906
Ucar Gold	LR6

**Contacting Fluke**

To contact Fluke, call one of the following telephone numbers:

USA: 1-888-44-FLUKE (1-888-443-5853)

Canada: 1-800-36-FLUKE (1-800-363-5853)

Europe: +31 402-675-200

Japan: +81-3-3434-0181

Singapore: +65-738-5655

Anywhere in the world: +1-425-446-5500

For USA Service: 1-888-99-FLUKE

(1-888-993-5853)

Or, visit Fluke's Web site at [www.fluke.com](http://www.fluke.com).

To register your product, visit [register.fluke.com](http://register.fluke.com)

**LIMITED WARRANTY AND LIMITATION OF LIABILITY**

This Fluke product will be free from defects in material and workmanship for one year from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

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