718Ex 30G/100G/300G Pressure 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 manual 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	CSA C US	Conforms to relevant Canadian and US Standards.
εx	Conforms to ATEX requirements.	CE	Conforms to relevant European Union directives.
▬	Battery		Pressure
⚠	Hazardous Voltage	⚠	Risk of Danger. Important information. Refer to manual.
N10140	Conforms to relevant Australian standards.		Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information

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⚠⚠ Warning

To avoid electric shock, injury, or damage to the Calibrator:

- **Use the Calibrator only as described in this User Manual and the Fluke 718Ex 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 use the Calibrator with the red holster removed.**
- **Never open the Calibrator case. Opening the case invalidates the Calibrator's Ex Approval.**
- **Make sure the battery door is closed before using the Calibrator.**
- **Replace the battery as soon as + (low battery) appears to avoid false readings that can lead to electric shock. Remove the Calibrator from the Ex-hazardous area before opening the battery door.**
- **Remove test leads from the Calibrator before opening the battery door.**
- **This equipment is specified for use in measurement category I (CAT I) pollution degree 2 environments and should not be used in CAT II, CAT III, or CAT IV environments. Voltage transients should not exceed 300 volts for the CAT I applications where this product is used. Measurement transients are defined in IEC1010-1 as 2 µs rise time with a 50 µs duration at 50 % of the maximum amplitude height.**
- **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.**
- **Do not use in a damp or wet environment.**
- **When using the Calibrator's internal pressure sensor, do not connect a pressure module at the Calibrator to avoid misleading readings. If both a pressure module and the internal pressure sensor are connected, the Calibrator displays ONLY the pressure module measurement. To avoid misleading readings, disconnect the pressure module connector at the Calibrator.**

- **To avoid a violent release of pressure in a pressurized system, shut off the valve and slowly bleed off the pressure before attaching or detaching the internal pressure sensor or pressure module fitting to the pressure line.**
- **To avoid overpressure damage, do not apply pressure to the internal pressure sensor input that exceeds the following:**
  - **Model 718Ex 30G: 30.000 psi, 206.85 kPa, or 2.0685 bar. OL appears at 33 psi.**
  - **Model 718Ex 100G: 100.00 psi, 689.5 kPa, or 6.895 bar. OL appears at 120 psi.**
  - **Model 718EX 300G: 300.00 psi, 2068 kPa, or 20.68 bar. OL appears at 360 psi.**
- **When measuring the pressure of potentially hazardous gases, care must be taken to minimize the possibility of leakage:**
  - **Confirm that all pressure connections are properly sealed.**
  - **Confirm that the Pressure/Vacuum Release Control is in the closed position (fully clockwise) and the Pressure/Vacuum switch is in the + position (fully clockwise).**
  - **If the Calibrator has been dropped or subjected to rough handling, remove the Calibrator to a safe area and check for leaks to confirm the integrity of the internal pneumatic components.**
- **Do not use a Model 718Ex (including 718Ex 300G) to measure potentially hazardous gases at pressure greater than 100 psi (6.9 bar).**
- **Do not use in a damp or wet environment.**

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.

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.

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
- Using the product with the red holster removed
- 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 battery within the Ex-hazardous area.
- Do not carry additional batteries within the Ex-hazardous area.
- 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 an Ex-hazardous area unless it is completely and securely fitted in its accompanying red holster.
- Only use the Calibrator in circuits with compatible entity parameters.

Approved Batteries

Battery	Brand	Type
Alkaline, 9 volt	Duracell	6LR61/MN1604
Alkaline Ultra, 9 volt	Duracell	6LR61/MX1604
Alkaline Energizer, 9 volt	Eveready	6LR61/522
Alkaline Power Line Industrial Battery, 9 volt	Panasonic	6LR61.9V

General Specifications

Maximum voltage applied between either mA terminal and earth ground or between the mA terminals: 30 V
Pressure sensor media: Non-corrosive gasses only
Storage temperature: -40 °C to 71 °C
Operating temperature: -10 °C to 55 °C
Relative humidity: 95 % up to 30 °C, 75 % up to 40 °C, 45 % up to 50 °C, and 35 % up to 55 °C
EMC: Complies with EN61326, Criteria C
Protection Class: Pollution Degree II

Product Compliance Markings

CE 0344

Ex II 1 G EEx ia IIC T4
Kema 04ATEX1061 X

SP US LR110460

Class I Div. 1 Groups A-D T4
AEx ia IIC T4

Ta = -10 °C… +55 °C

N10140 Conforms to relevant Australian standards.

Manufactured by Martel Electronics Inc., 1 F Commons Drive, Londonderry, NH USA

Additional Safety Information: Complies with CAN/CSA C22.2 No. 1010.2:1995. Complies with ANSI/ISA S82.01-1995. Complies with IEC 61010-1-95 CAT I, 30 V

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for three years (one year for pump assembly) from the date of purchase. This warranty does not cover fuses, disposable batteries or damage from accident, neglect, misuse 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, send your defective Calibrator to the nearest Fluke Authorized 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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