

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.


Warning

To prevent fire, explosion, or personal injury:

- 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.

Table 1. Symbols

Symbol	Meaning	Symbol	Meaning
	WARNING. RISK OF DANGER.		Consult user documentation.
	Battery		Pressure
	Power ON/OFF		Double insulated
	Earth ground		Certified by CSA Group to North American safety standards.
	Conforms to European Union directives.		Conforms to relevant Australian Safety and EMC standards.
	Conforms to the European Explosive Atmospheres (ATEX) directive.		
	This product complies with the WEEE Directive marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste.		

- 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.
- Never use the Calibrator with the red holster removed.
- Precautions are required to ensure that a charge-generating mechanism is unlikely to be present and/or discharge to earthed metal is improbable. The exposed metal parts are not earthed and have a capacitance of more than 3 pF with respect to an earthed conductor. If a charge-generating mechanism is present, an incandescent level of charge could migrate to these metal parts and subsequently discharge to earthed metal. Precautions are required to ensure that a charge-generating mechanism is unlikely to be present and/or discharge to earthed metal is improbable.
- 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.
- 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 use in a damp or wet environment.
- 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.
- 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).

⚠ Caution

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.

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
Carbon Zinc, 9 Volt	Eveready	1222

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

Safety: IEC 60079-0, IEC 60079-11, IEC 61010-1: Pollution Degree 2, IEC 61010-2-030: 30V Max

Electromagnetic compatibility (EMC)

International IEC 61326-1: Portable; IEC 61326-2-2;
CISPR 11: Group 1, Class A

Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself.

Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low-voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

USA (FCC) 47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.

Product Compliance Markings

CE
0344
II 1G Ex ia IIC T4 Ga
SIRA 17ATEX2295 X
IECEx SIR 17.0077X
Class I Div. 1 Groups A-D T4
AEx ia IIC T4

Ta = -10 °C... +55 °C

Entry Parameters:

mA Jack Input: Ui = 30 V, li = 80 mA, Pi = 0.60 W, Ci = 0 µF,
Li = 0 mH

mA Jack Output: Uo = 7.14 V, lo = 1.2 mA, Po = 2.0 mW,
Co = 13.5 µF, Lo = 24.7 H
Pressure Module Terminal: Uo = 7.14 V, lo = 123 mA,
Po = 218 mW, Co = 13.5 µF, Lo = 2.38 mH

Manufactured by Fluke Corporation, 6920 Seaway Blvd. Everett, WA 98203, USA

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for three years 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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