

4180, 4181

Precision Infrared Calibrator

Safety Information



1-year limited warranty. See the Operators Manual for the full warranty.

Introduction

The Fluke Calibration 4180, 4181 Precision Infrared Calibrator (The Product) is a portable instrument or bench-top temperature calibrator used to calibrate point IR thermometers. The Product is small enough to use in the field, and accurate enough to use in the lab.

Contact Fluke Calibration

Fluke Corporation operates worldwide. For local contact information, go to our website:
www.flukecal.com

To register your product, view, print, or download the latest Operators Manual or manual supplement, go to our website.

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Safety Information

A **Warning** identifies conditions and procedures that are dangerous to the user.



To prevent possible electrical shock, fire, or personal injury:

- Read all safety information before you use the Product.
- Carefully read all instructions.
- Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.
- Use this Product indoors only.
- Replace the mains power cord if the insulation is damaged or if the insulation shows signs of wear.
- Disable the Product if it is damaged.
- Do not use the Product if it operates incorrectly.
- Use only the mains power cord and connector approved for the voltage and plug configuration in your country and rated for the Product.
- Do not touch the IR target surface. The temperature of the IR target surface is the same as the actual temperature shown on the display. If the Product is set at 500 °C and the display reads 500 °C, the target surface is at 500 °C.
- Do not operate near flammable materials.
- The sheet metal of the Product may exhibit extreme temperatures for areas close to the IR target surface.
- Overhead clearance is required. At least 1 m (39 in) overhead and 15 cm (6 in) around the instrument is recommended. Do not place the Product under a cabinet or other structure.
- Do not use this Product for any application other than calibration work.
- Use caution when you use of this instrument at high temperatures for extended periods of time.
- Do not turn off the Product at temperatures >100 °C. Select a set-point <100 °C and allow the Product to cool before you turn it off.
- If this Product is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not face the target towards a wall or other objects. The target emits high amounts of heat and will cause burn and fire hazards.
- Do not operate the Product in excessively wet, oily, or dirty environments.
- Do not operate the Product in any orientation other than vertical (target face perpendicular to installation surface).
- The Product has a Block Temperature indicator (front LED HOT indicator). The flashing light means the Product is disconnected from power and the temperature of the block is >50 °C. The solid light means the Product is powered on and the temperature is >50 °C

- Do not put the Product where access to the mains power cord is blocked.
- Do not use an extension cord or adapter plug.
- Do not keep the Product in operation and unattended at high temperatures.
- Connect an approved three-conductor mains power cord to a grounded power outlet.
- Do not use and extension cord or adapter plug.
- Have an approved technician repair the Product.
- Use only specified replacement fuses.

Symbols

Symbol	Description
	WARNING. RISK OF DANGER.
	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.
	WARNING. HOT SURFACE. Risk of burns.
	Consult user documentation.
	AC (Alternating Current)
	Fuse
	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.

Safety Specifications

Complete specifications are in the Operators Manual.

	4180	4181
Temperature range (@ 23 °C ambient, 0.95 emissivity)	-15 °C to 120 °C	35 °C to 500 °C
Power	115 V ac (±10%), 50/60 Hz, 250 W 230 V ac (±10%), 50/60 Hz, 250 W	115 V ac (±10%), 50/60 Hz, 1100 W 230 V ac (±10%), 50/60 Hz, 1100 W
Size (HxWxD)	356 x 241 x 216 mm (14 x 9.5 x 8.5 in)	
Weight	9.1 Kg (20 lb)	9.5 Kg (21 lb)
Ambient temperature	5 °C to 35 °C (41 °F to 95 °F)	
Ambient relative humidity	maximum 80% for temperature <31 °C, decreasing linearly to 50 % at 40 °C	
Altitude	<2000 meters	
Fuse(s)	115 V: T 6.3 A, 250 V 230 V: T 3.15 A, 250 V	115 V: F 10 A, 250 V 230 V: F 5 A, 250 V
Safety	IEC 61010-1: Overvoltage Category II, Pollution Degree 2 IEC 61010-2-010	
Electromagnetic Compatibility (EMC)	International..... IEC 61326-1: Basic Electromagnetic Environment CISPR 11: Group 1, Class A <i>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.</i> <i>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.</i> <i>Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.</i> Korea (KCC) Class A Equipment (Industrial, Broadcasting, & Communication Equipment) <i>Class A: Equipment meets requirements for industrial electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and not to be used in homes.</i> USA (FCC) 47 CFR 15 subpart B. This product is considered an exempt device per clause 15.10	