

# INCU II™ Incubator/Radiant Warmer Analyzer

## Technical Data



Protect a baby's safety by regularly performing all necessary preventive maintenance tests on infant incubators and radiant warmers. Life matters. Testing matters.

The Fluke Biomedical INCU II is an all-in-one Incubator/Radiant Warmer Analyzer that simplifies testing and ensures proper performance and safety of infant incubators, transport incubators and radiant warmers by complying to global standards (IEC 60601-2-19, IEC 60601-2-20, IEC 60601-2-21).

Portable and intuitive-to-use, the INCU II simultaneously tests temperature, airflow, sound, and humidity. Test results and parameters can be monitored in real-time on a large easy-to-read LCD screen, or be transferred to your computer wirelessly\*.

Pass/Fail indicators are displayed at the end of tests for fast and easy troubleshooting, and a general testing option allows you to complete a quick test in just 15 minutes.

The INCU II can stay in the incubator chamber up to 24 hours using its rechargeable battery, or for 48 hours on AC power, without compromising the integrity of the test environment.

### Key features:

- Enables simultaneous measurement of humidity, airflow, sound, and temperature from six different points
- Displays pass/fail indicators and real-time test results on a large LCD screen
- Wireless\* functionality supports fast and convenient downloading of test results and data
- Simplifies test set-up with color-coded temperature probes that match color of input ports
- Has both Standards-based testing and a General Testing option—which allows you to complete a test in as little as 15 minutes
- Portable and compact design, weighs less than three pounds
- Creates personalized test sequences for automatic test completion
- Able to choose from 10 different language interfaces
- Complies with all global standards, including IEC 60601-2-19, IEC 60601-2-20 and IEC 60601-2-21

\*Wireless capabilities not available in all countries. Ask your distributor for more details.

## Specifications

<b>Physical</b>	
<b>Housing</b>	
<b>Size (HxWxL without sensors)</b>	23 cm x 21 cm x 6 cm (9.0 in x 8.5 in x 2.5 in)
<b>Total weight</b>	3.9 kg (8.5 lb)
<b>Weight with sensors</b>	1.4 kg (3 lb)
<b>Pucks (5)</b>	2.5 kg (5.5 lb)
<b>Carrying case</b>	1.1 kg (2.5 lb)
<b>Power</b>	
<b>Power Adapter – Universal voltage</b>	Input: 100 V to 240 V with adaptors 50 Hz/60 Hz Output: 15V dc, 1.3 A maximum
<b>Rechargeable lithium-ion battery, internal</b>	7.4 V, 7.8 Ah, 58 Wh 24 hour battery life with 30 second sample rate
<b>Measurements and tests specifications</b>	
<b>Air convection peripheral temperature sensors for incubator (T1-T5)</b>	5 sensors
	Range: 0 °C to 50 °C
	Accuracy: ±0.05 °C
	Display resolution: 0.01 °C
<b>Air convection temperature sensors for radiant warmers, sensors in pucks (black discs)</b>	5 pucks
	Range: 0 °C to 50 °C
	Accuracy: ± 0.2 °C
	Display resolution: 0.01 °C
<b>Relative humidity</b>	Range: 0 % to 100 %,
	Accuracy: +/- 3 % RH (0 % to 100 % non-condensing)
	Display resolution: 0.1 % RH
<b>Airflow</b>	Range: 0.2 m/sec to 2.0 m/sec at 35°C, 50 % RH
	Accuracy: +0.1 m/sec
	Display Resolution: 0.01 m/sec
<b>Sound pressure</b>	30 dB(A) to 100 dB(A)
	Accuracy: ± 5 dB(A)
	Display resolution: 0.1 dB(A)
	IEC-61672-1 Class 2 from 31.5Hz to 8kHz
<b>Surface temperature</b>	-5 °C to 60 °C
	Accuracy: ± 0.5 °C
	Display resolution: 0.05 °C
<b>Skin temperature probe with reference thermometer</b>	0 °C to 50 °C
	Accuracy: ±0.05 °C
	Display resolution: 0.01 °C
<b>Environmental specifications</b>	
<b>Operating temperature</b>	10 °C to 40 °C
<b>Storage temperature</b>	-20 °C to 60 °C
<b>Humidity</b>	10 % to 90 % non-condensing
<b>Altitude</b>	2000 m
<b>Ingress protection rating</b>	IP-20

<b>Safety</b>	
IEC 61010-1	Overvoltage category none, pollution degree 2
IEC 61326-1	Basic
<b>Electromagnetic compatibility (EMC)</b>	
Emissions classification IEC CISPR11: Group 1, Class A.	Group 1 has intentionally generated and/or use conductively coupled radio-frequency energy, which is necessary for the internal functioning of the equipment itself. Class A equipment is suitable for use in nondomestic locations and/or directly connected to a low voltage power supply network.
USA (FCC) Intentional radiators	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. (15.19)
Korea (KCC) Class A Equipment (Industrial Broadcasting & Communication Equipment)	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.
<b>Wireless module listing</b>	
FCC (United States) compliant (Class A)	FCC ID: X3ZBTMOD3
IC (Industry Canada) compliant	IC: 8828A-MOD3
CE (European) certified	CE0051
802.15.1 qualified	QD ID: B019224
<b>Wireless radio</b>	
Frequency range	2412 MHz to 2483 MHz
Output power	10 mW
<b>Interface</b>	
Push navigation buttons	Power on/off, test, select, back, and arrow keys
User Preferences	Adjust backlight, display brightness, and set clock
View verification history	
Recall and run templates on tester	General and personalized test templates allow for on-board test automation
Recall past saved and stored tests results	
Templates	Time duration, frequency of data capture and tests
Select user preferences	Units of measure, view and print test results on laptop
View battery life	Indicator bar shows life remaining
Interface languages	English, French, German, Italian, Spanish, Brazilian Portuguese, Simplified Chinese, Japanese, Russian, Polish

**Ordering information**

Item#	Model	Item description
4722620	INCU II-BT	Incubator Analyzer, Wireless
4722635	INCU II-NO BT	Incubator Analyzer, Non-Wireless
<b>Standard Accessories</b>		
4720996	INCU II-Cable	K-Type Thermocouple
4721000	INCU II S Sensor	Sound Sensor
4721017	INCU II A F Sensor	Air Flow Sensor
4721021	INCU II H Sensor	Humidity Sensor
4721039	INCU II R Sensor	Red Temperature Sensor
4721042	INCU II G Sensor	Green Temperature Sensor
4721056	INCU II Y Sensor	Yellow Temperature Sensor
4721063	INCU II W Sensor	White Temperature Sensor
4721074	INCU II B Sensor	Blue Temperature Sensor
4721109	INCU II Spacers	Tripod Spacers
4721111	INCU II R Puck	Red Temperature Puck
4721127	INCU II G Puck	Green Temperature Puck
4721130	INCU II Y Puck	Yellow Temperature Puck
4721148	INCU II W Puck	White Temperature Puck
4721153	INCU II B Puck	Blue Temperature Puck
4721166	INCU II USB	Type A to Micro B, USB Cable
4721194	INCU II Adapter	AC Adapter
4715713	INCU II Pad	Placement Pad Microfiber
4715749	INCU II Carry case	Soft Carry Case
4724692	INCU II Puck case	Soft Carry Case Puck
<b>Optional accessories</b>		
4754298	INCU II ST Heater	Skin Temperature Heater Assembly

**Fluke Biomedical Regulatory Commitment**

As a medical test device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 and ISO 13485 medical device certified and our products are:

- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required

**Fluke Biomedical.**

*Trusted for the measurements that matter.*

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