

TECHNICAL DATA

5020A Thermo-Hygrometer



Key features

- Best-in-the-world accuracy - temperature to $\pm 0.125\text{ }^{\circ}\text{C}$ and RH to $\pm 1.5\%$
- Large LCD for clear display of trend charts, statistics, real-time and historical data
- Two probe inputs for local and remote monitoring
- Two probe models to choose from for each input - the "S" ($\pm 0.25\text{ }^{\circ}\text{C} / \pm 2\%$ RH) and the "H" ($\pm 0.125\text{ }^{\circ}\text{C} / \pm 1.5\%$ RH)
- Probes contain their own calibration data for convenient, easy recalibrations
- Calculates and displays statistics, dew point, heat index, and rate of change
- On-board memory holds 400 K time/date-stamped readings; optional PC card holds millions more
- Visual and audio alarms for numerous alarm or fault conditions
- IrDA and RS-232 for easy computer and printer interface
- Optional 5020A-LW3 software logs in real time or shows graphical/statistical data from PC card
- Interfaces with Fluke MET/CAL® Plus Calibration Management Software

Product overview: 5020A Thermo-Hygrometer

Dual inputs provide exceptional accuracy

The Fluke 5020A has two inputs with removable sensing probes. Each probe stores its own calibration constants, allowing probes to be used interchangeably between channels and between 5020A units while retaining full calibration integrity.

Two types of probes are available. The "S" model provides standard accuracies of $\pm 0.25\text{ }^{\circ}\text{C} / \pm 2\%$ RH, while the "H"

model provides accuracy of $\pm 0.125\text{ }^{\circ}\text{C}/\pm 1.5\text{ \% RH}$. Both probes can be connected to optional extension cables and mounted in remote locations up to 50 feet away from the 5020A mainframe using the optional probe wall mount bracket. Alternative, one probe can be mounted directly to the top of the 5020A.

Wide variety of display configurations and parameters

The 5020A calculates dew point, heat index, and rates of change for temperature and humidity. Min, max, and a variety of other statistics are calculated and can be shown in more than 16 different user configurable display formats and more than 12 display parameters. Daily summary statistics, including min, max, and maximum rates of change are stored for the most recent 60 days.

Alarms

Alarms may be set based on temperature, RH, or on rate of change of either parameter with the Fluke 5020A. Alarms are recorded to the data file as well, giving the user the option of a visual alarm (display flashing), audible alarm (beep) enunciation, or both. In addition to the setting of alarm points from the easy-to-use keyboard and menu system of the 5020A, alarms can be set using the 5020A-LW3 configuration, logging and trending software.

Memory

The 5020A has internal memory which can store up to 400,000 time-stamped data points. An optional 64 MB flash PC memory card is available that allows the 5020A to store years of data. Data from the PC memory card or internal memory may be displayed on the 5020A display using the convenient push-button menu system or downloaded to a PC.

Security

The 5020A satisfies many regulatory requirements for security with its ability to respond to user name and password to ensure secure data. Password access to sensor information, data records, statistics, alarms and time are all built into the 5020A.

MET/CAL® Plus Calibration Software interface

The Fluke 5020A is easily interfaced to Fluke's MET/CAL® Plus, the worldwide de facto standard in calibration software. This unique feature allows MET/CAL Plus software (versions 7 or higher) to read temperature and humidity from the 5020A directly into a calibration record as you start to run a procedure. All the environmental information required for your calibration becomes a permanent part of the calibration record - without requiring you to enter the data manually or add it later when you create a report. And using the 5020A with MET/CAL Plus software is easy, allowing you even greater automation and convenience.

Multi-station, multi-room capability

MET/CAL Plus software can read multiple 5020As located in different calibration areas, providing a perfect solution for large calibration labs with multiple rooms or MET/CAL Plus software stations. Because each 5020A is assigned a unique asset number, it can be viewed from any MET/CAL software station in your system. This unique number also provides identification required for traceability in quality and regulatory records.

Optional software retrieves, stores, analyzes data

5020A-LW3 for Fluke software is a versatile application that retrieves data from the Fluke 5020A and stores it in a single database, to provide flexible, real-time and historical data management. You can view data in easily-customized graphical and statistical formats for one or both sensors at user-defined time intervals. View real-time data as it streams into a chart format customized for your particular application.

5020A-LW3 lets you perform a variety of tasks:

- Customize multi-graph displays
- Review critical statistics at a glance

- Export data to popular spreadsheet programs
- Easily import data from your PC card or from the 5020A's onboard memory
- Control and trigger alarm events
- Configure multiple user accounts and security access
- Assign or change sensor names
- Store setup files

Specifications: 5020A Thermo-Hygrometer

General Specifications	
Temperature Range	0 °C to 50 °C
Temperature Accuracy	16–24 °C ±0.125 °C (H model) 15–35 °C ±0.25 °C (S model) [Other temps from 0–50 °C: ±0.05 °C
Temperature Resolution	User selectable 0.001 °C
RH Range	0 % to 100 %
RH Accuracy	20 % to 70 % RH ±1.5 % (H model) 20 % to 70 % RH ±2 % (S model) 0 % to 20 % RH, 70 % to 100 % ±3 % (uncalibrated, typical)
RH Resolution	User selectable to 0.01 %
Probe/sensor	Each probe measures RH and temperature with self-contained calibration data making probes interchangeable to any 5020A. Probes may be assigned digital serial number by the user to satisfy regulatory requirements. May be remoted to 50 feet with optional cable. One probe included with mainframe. Polymere/Capacitive RH sensor type and thermistors temperature sensor.
Display	LCD, monochrome
Security	Assignable user name and password
User-Defined Display Content	Yes (up to 16 different display setups may be stored for easy recall)
Memory	400 K readings
Alarms	Limit, Rate of change, system fault
Data logging interval	1 sample/sec. to 1 sample/hr., user selectable
Communications	RS-232 /IRDA
Compatible with MET/CAL 7.0 > software	Yes
Power	12 V dc (9 V backup baery included)
Software	5020A-LW3
PC card interface	Compatible with flash memory PC cards (optional)
Mounting	Wall or table top (wall mount hardware included)
Operating temperature range	0 °C to 50 °C
Size (5020A)	4.9" H x 8.3" W x 2.0" D (125 x 211 x 52 mm)
Size (probe)	3.1" H x 0.75" D (7. x 19 mm)



Weight	1.5 lb (0.7 kg)
Calibration	NIST-traceable, three-point temperature cal with data and uncertainties

Ordering information



5020-H

Fluke High Accuracy Thermo-Hygrometer

- High accuracy probe
- Wall mount bracket
- RS-232 cables

5020A-S

Fluke Thermo-Hygrometer, Standard Accuracy

- Probe
- Wall mount bracket
- RS-232 cable

5020A-HKIT

Fluke Thermo-Hygrometer, High Accuracy

- High accuracy 5020-H probe
- Wall mount bracket
- RS-232 cable
- High accuracy spare probe kit
- 5027A-H and 5020A-LW34 software, single PC license

5020A-LW3

5020A software, single-PC license

5020A-LW3LIC



5020A-LW3 license (for additional PCs)



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Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

Fluke Australia
Unit 26, 7 Anella Ave
Castle Hill, NSW 2154 Australia
Phone: 61 2 8850-3333
www.fluke.com.au

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