

ICS 17.200
CCS A 61

JJF

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JJF 1076-2020

Replacing JJF 1076-2001

**Calibration Specification for Digital Temperature-hygrometers
(English Translation)**

Issued on: November 26, 2020

Implemented on: May 26, 2021

Issued by: State Administration for Market Regulation

Table of Contents

Introduction (II)	
1 Scope (1)	
2 Overview (1)	
3 Measurement characteristics (1)	
3.1 Correction value of thermometer and hygrometer (1)	
3.2 Humidity stability of thermometer and hygrometer (1)	
4 Calibration conditions (1)	
4.1 Environmental conditions (1)	
4.2 Measurement standards and other equipment (1)	
5 Calibration items and calibration methods (1)	
5.1 Installation of calibration equipment (1)	
5.2 Correction value of thermometer and hygrometer (1)	
5.3 Humidity stability of thermometer and hygrometer (2)	
6 Expression of calibration results (2)	
7 Re-calibration interval (3)	
Appendix A Original Record Format of Thermohygrometer Calibration (4)	
Appendix B: Internal page format of calibration certificate (6)	
Appendix C Examples of Uncertainty Evaluation of Calibration Results of Digital Thermohygrometer (8)	

3 Measurement characteristics (1)

3.1

Correction value of thermometer and hygrometer (1)

3.2

Humidity stability of thermometer and hygrometer (1)

4 Calibration conditions (1)

4.1

Environmental conditions (1)

4.2

Measurement standards and other equipment (1)

5 Calibration items and calibration methods (1)

5.1

Installation of calibration equipment (1)

5.2

Correction value of thermometer and hygrometer (1)

5.3

Humidity stability of thermometer and hygrometer (2)

7 Re-calibration interval (3)

Appendix A Original Record Format of Thermohygrometer Calibration (4)

Appendix B: Internal page format of calibration certificate (6)

Appendix C Examples of Uncertainty Evaluation of Calibration Results of Digital Thermohygrometer (8)

Introduction

This specification is compiled in accordance with the requirements of JJF 1071-2010 "Rules for Compiling National Metrology and Calibration Specifications": digital Part of the measurement performance and calibration methods of the type thermometer and hygrometer refer to the "Humidity" of the British National Physical Laboratory (NPL) "Measurement method guide" (AGuidetotheMeasurementofHumidity) in the requirements:

Compared with JJF 1076-2001, in addition to editorial changes, the main technical changes of this specification are as follows:

---Added the technical requirements and calibration methods for temperature calibration of thermometers and hygrometers (see 5.2);

---Clarified that the temperature and humidity standard box can be used as a humidity generator to calibrate a thermometer and hygrometer (see 4.2:3);

--- Deleted the temperature coefficient, response time and hysteresis characteristics of the thermometer and hygrometer;

---Added an example of uncertainty evaluation (see Appendix C):

The previous releases of this specification are as follows:

---JJF 1076-2001:

Calibration specification for digital thermometer and hygrometer

1 Scope

This specification applies to electrical parameter digital thermometers and hygrometers, temperature and humidity sensors, temperature and humidity transmitters, temperature and humidity monitoring Calibration of instrument, temperature and humidity recorder, temperature and humidity memory, etc: Thermohygrometers of other principles can also be implemented by reference:

2 overview

A digital thermometer and hygrometer (hereinafter referred to as a thermometer and hygrometer) is composed of temperature measuring components, humidity sensitive components and circuits:

Thermohygrometer that can directly display temperature and relative humidity values, or can output signals such as current, voltage, and frequency Sensor or transmitter, or a temperature and humidity recorder or memory that stores temperature and humidity values in the instrument:

3 Metrological characteristics

3.1 The correction value of the thermometer and hygrometer

3.2 The humidity stability of the thermometer and hygrometer

4 Calibration conditions

4.1 Environmental conditions Ambient temperature: (20~30)°C; Ambient humidity: 5
Calibration items and calibration methods Calibration items can be selected and used according to the intended use of the calibrated instrument: Deviations from the calibration specification shall be Indicated in the book:

5.1 Calibration equipment installation Put the calibrated thermometer and hygrometer into the test room of the humidity generator or the center of the temperature and humidity standard box, and at the same time Put the dew point sensor of the standard thermometer and precision dew point meter (or pass the moisture in the test room through the wall thickness not less than 1mm PTFE tube is introduced into the dew point sensor outside the test room):

5.2 Correction value of thermometer and hygrometer

5.2.1 When calibrating, first set the temperature value of the humidity generator (for example: 20°C or 25°C): When the temperature is balanced, set the humidity value of the constant humidity generator is generally from low humidity (for example: 10% RH) to high humidity (for example: 90% RH),