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**INDUSTRY STANDARD OF THE
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**Calibration Specification for Cup Wind Speed Transducers of
Automatic Weather Stations
(English Translation)**

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Introduction

JJF 1071-2010 "Rules for Compilation of National Metrology Calibration Standards", JJF 1001-2011 "General Metrology Terminology and Definition", JJF 1059.1-2012 "Evaluation and Expression of Measurement Uncertainty" jointly constitute the support for the formulation of this specification the basic series of specifications:

This specification is published for the first time:

Calibration specification for cup-type wind speed sensor in automatic weather station

1 Scope

This specification applies to the calibration of automatic weather station cup-type wind

speed sensors (hereinafter referred to as wind speed sensors): other cup Type wind speed sensor can refer to implementation:

2 References

This specification references the following documents:

JJG431-2014 Portable three-cup wind direction anemometer JJF 1001-2011 general measurement terms and definitions JJF 1094-2002 Evaluation of Measuring Instrument Characteristics for dated references, only the dated version applies to this specification; for undated references document, its latest version (including all amendments) applies to this specification:

3 Terminology and units of measurement

3.1 Terminology

3.1.1 Starting wind speed the wind cup changes from stationary to continuous rotation, and the anemometer can indicate or display the minimum wind speed at which the speed changes:

3.2 Units of measurement the legal measurement unit used for wind speed is meter per second, and the symbol is m/s:

4 Overview

The wind speed sensor is mainly composed of a wind speed sensing rotating part and a signal generating output part: The wind speed sensing part consists of 3 the wind cup is composed of two wind cups, and the wind cup is driven by the wind force, and the rotation speed of the wind cup increases with the increase of the wind speed: its angular velocity and wind the speed is directly proportional, the rotation of the wind cup generates pulses through mechanical transmission and photoelectric induction, and the output part of the signal generates pulses the pulse is converted into a frequency output electrical signal: The wind speed sensor is mainly used for wind speed and meteorological elements in the fields of meteorology, aviation, environmental protection, etc:

automatic observation:

5 Metrological characteristics

5.1 Start wind speed

5.2 Indication error

6 Calibration conditions

6.1 Environmental conditions Temperature: (15~30)°C;

Relative humidity: ≤85%: