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

GB 30439.5-2013

**Safety requirements for industrial automation products - Part 5:
Safety requirements for flowmeter**

工业自动化产品安全要求 第5部分: 流量计的安全要求

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Foreword

All technical content of this part of GB 30439-2013 is mandatory. GB 30439 "Industrial Automation product safety requirements" is divided into 18 sections as follows:

- Part 1. General;
- Part 2. pressure/differential pressure transmitter safety requirements;
- Part 3. Temperature Transmitter safety requirements;
- Part 4. Safety requirements for the control valve;
- Part 5. flowmeter safety requirements;

- Part 6. solenoid valve safety requirements;
- Part 7. loop controller safety requirements;
- Part 8. Safety requirements for electric actuators;
- Part 9. Digital display instrument safety requirements;
- Part 10. recording instrument safety requirements;
- Part 11. Programmable Controller safety requirements;
- Part 12. Echo Ranging (TOF) Level Meter safety requirements;
- Part 13. magnetostrictive level gauge safety requirements;

1 Scope

GB 30439.5-2013 is the Chinese national standard on safety requirements for industrial automation products - part 5: safety requirements for flowmeter, in the field of manufacturing engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 31 December 2013 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2015. Classification: ICS 25.040.01, CCS N10. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

GB 30439 of the provisions of this part of the electric shock and industrial processes using flowmeter burns, mechanical hazards, excessive heat, flames from the stream Spread out within a meter, safety requirements affect fluid and fluid pressure, explosion and implosion. This section does not include security-related equipment and reliable function, performance or other characteristics, the effectiveness of transport packaging, electromagnetic compatibility (EMC) requirements for an explosive environment protection measures, maintenance (repair), protective maintenance (repair) personnel. This section applies to flowmeters have electrical outputs. This section does not apply to countries to withstand radioactive specific working conditions Flowmeter. This section does not apply to differential pressure flowmeter and ultrasonic flowmeter.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references,

the latest edition (including any amendments) applies to this document. Determination of

GB/T 1633-2000 thermoplastics Vicat softening temperature (VST) of

GB/T 4207-2003 solid insulating materials under moist conditions index tracking of the measuring method and the proof tracking index compared

GB 4208-2008 shell protection (IP code)

GB 4793.1-2007 measurement, control and laboratory safety requirements for electrical equipment - Part 1. General requirements

GB 5013 (all parts) rated voltage 450V/750V and below rubber insulated cables

GB 5023 (all parts) rated voltage 450V/750V and below PVC insulated cables

GB/T 5169.16-2008 Fire hazard testing for electric and electronic products - Part 16. Test flames - 50W horizontal and vertical flame experiment method

GB/T 11021-2007 heat resistance, electrical insulation rating

GB/T 12113-2003 touch current and protective conductor current measurement methods

GB/T 16842-2008 housing for people and equipment protection test with a test

GB/T 16927 (all parts) high-voltage test techniques

IEC 60027 electrical technology text symbols
(Lettersymbolstobeusedinelectricaltechnology)

IEC 60270 partial discharge measurements (Partialdischargemeasurements)

3 Terms and Definitions

GB 4793.1-2007 defined in the following terms and definitions apply to this document. For ease of use, the following listed repeatedly GB 4793.1-2007 certain terms and definitions.
Category

3.1 Equipment and devices

3.1.1 Stationary equipment fixedflowmeter Fixed to the support member or an additional fixture at a specific location. [GB 4793.1-2007, the definition 3.1.1]

3.1.2 PERMANENTLY CONNECTED EQUIPMENT permanentlyconnectedflowmeter Only method of permanent connection with the tool to disconnect the power supply and electrical connection devices. [GB 4793.1-2007, the definition 3.2.2]

3.1.3 Tools tool , Including keys and coins, including an external device to help people to perform some kind of mechanical function and use. [GB 4793.1-2007, the definition 3.1.5]

3.2 Parts and Accessories

3.2.1 Terminal terminal For the apparatus (device) connected to an outer conductor provided in one kind of element. It may contain one or more terminal contacts, so that the term also includes sockets, connectors and the like. [GB 4793.1-2007, the definition 3.2.1]

3.2.2 Functional ground terminal functionalearthterminal To a point directly measuring or control circuit, or directly with a shield portion is electrically connected, but also reservations To be used for any function other than safety purposes purpose a ground terminal. [GB 4793.1-2007, the definition 3.2.2]

3.2.3 Protective Conductor Terminal protectiveconductortriennial For security purposes with the conductive parts of equipment are connected, but also with a predetermined external terminal connected to protective earthing system. [GB 4793.1-2007, the definition 3.2.3]

3.2.4 Housing enclosure Protect the unit against certain external influences and prevent parts from any direct contact with the direction provided. [GB 4793.1-2007, the definition 3.2.4]

3.2.5 Baffle barrier Prevent parts from any direction normal close direct contact provided.

Note. The housing and bezel provides flame spread protection [see 9.2.1b)]. [GB 4793.1-2007, the definition 3.2.5]

3.3 Electrical values

3.3.1 Rated (value) rated (value) Usually by the manufacturer for the components, apparatus, or device reaches a given magnitude of working status. [GB 4793.1-2007, the definition 3.3.1] Rating rating A set of ratings and working conditions. [GB 4793.1-2007, the definition 3.3.2]

3.3.2 Operating voltage workingvoltage When the device is supplied at rated voltage, maximum voltage AC or DC voltage values on any particular insulation can occur.

Note 1. The instantaneous value is not considered.

Note 2. The open circuit conditions and normal operating conditions are to be considered. [GB 4793.1-2007, the definition 3.3.3]

3.4 Test

3.4.1 Type test typetest For a particular design, in order to prove that the design and structure is able to meet one or more requirements of this part and of one or more devices Taiwan sample (or device components) tests carried out. [GB 4793.1-2007, the definition 3.4.1]

3.4.2 Routine tests routinetest After fabrication or manufacture to determine the means