

JJF_1001-1998_通用计量术语及定义



ATITAN



WP4000
WP4000



AP2001

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- 1 International Vocabulary of basic and general terms in metrology,1993
- 2 Vocabulary of legal metrology,3rd committee draft,1997
- 3 Guide to the expression of uncertainty in measurement,1993
- 4 ISO/IEC Guide 25

3

3.1 * measurable quantity

()

1. “ ”

2.

3. GB3100 3102

3.2 system of quantities

3.3 base quantity

(3.12)

3.4 derived quantity

3.5 dimension of a quantity

$$\begin{array}{ccccccc} & & 7 & & L & M & T & I & \Theta & N & J \\ A & & \dim A = L^\alpha M^\beta T^\gamma I^\delta \Theta^\varepsilon N^\zeta J^\eta & & \dim F = LMT^{-2} & & & & & & \dim R \\ & L^2MT^{-3}I^{-2} & & & & & & & & & \end{array}$$

3.6 quantity of dimension one
dimensionless quantity

$$\begin{array}{c} (\qquad \qquad \qquad) \\ (\qquad 3.1 \qquad) \qquad \qquad 1 \end{array}$$

3.7 unit of measurement

- 1.
2. ()

3.8 symbol of a unit of measurement

- a)m
- b)A

3.9 system of units of measurement

- a)
- b)CGS

3.10 coherent derived unit of measurement

$$\begin{array}{c} 1 \\ 1N = 1\text{ kg}\cdot\text{m}\cdot\text{s}^{-2} = N(\qquad) \end{array}$$

- 1.
- 2.

3.11 coherent system of units of measurement

()

m kg s;
m² m³ Hz s⁻¹ m·s⁻¹ m·s⁻²
kg·m⁻³ N kg·m·s⁻²
Pa kg·m⁻¹·s⁻² J kg·m²·s⁻²
W kg·m²·s⁻³

3.12 (SI) International System of Units(SI)

(CGPM)

- 1.SI
2. 7

	SI	
		m
	()	kg
		s
		A
		K
		mol
		cd

3.13 base unit of measurement

3.14 derived unit of measurement

N J Pa

3.15 off system unit of measurement

- a) ($1.60218 \times 10^{-19} \text{J}$) SI
 b) SI

3.16 multiple of a unit of measurement

- a) ()
 b)

3.17 submultiple of a unit of measurement

1

3.18 value of a quantity

5.34m 534cm 15kg 10s 40

3.19 true value of a quantity

- 1.
- 2.
- 3.

3.20 conventional true value of a quantity

- a)
 b) (CODATA)1986 $6.0221367 \times 10^{23} \text{mol}^{-1}$

- 1.

7.7

2.

3.21 **numerical value of a quantity**

3.18 5.34 534 15 10 40

3.22 conventional reference scale
reference-value scale

- a)
- b) pH
- c)

4

4.1 **measurement**

1.

2.

4.2 **metrology**

4.3 **metrology**

1.

2.

3.

4.4 **principle of measurement**

- a)
- b)
- c)

d)

4.5 method of measurement

4.6 measurement procedure

()

4.7 measurand

20

()

4.8 influence quantity

a)

b)

c)

4.9 measurement signal

a)

b)

c)

4.10 transformed value of a measurand

5

5.1 result of a measurement

1.

2.

5.2 indication of a measuring instrument

1.

2.

3.

5.3 uncorrected result

5.4 corrected result

5.5 accuracy of measurement

1.

2.

5.6 repeatability of results of measurements

1.

2.

3.

5.7 reproducibility of results of measurements

- 1.
- 2.

- 3.
- 4.

5.8 experimental standard deviation

$$n \quad s$$

$$x_i \quad i \quad n$$

1. n s

- 2.
- 3.

5.9 uncertainty of measurement

- 1.
- 2.
- 3.

$$(\quad)$$

5.10 standard uncertainty

5.11 **A** **type A evaluation of uncertainty**
A

A **A**

5.12 **B** **type B evaluation of uncertainty**
B

B **B**

5.13 **combined standard uncertainty**

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5.14 **expanded uncertainty**

5.15 **coverage factor**

- 1.
- 2.

5.16 **error of measurement**

1. (3.19 3.20)
- 2.

5.17 **deviation**

5.18 **relative error**

(3.19 3.20)

5.19 **random error**

- 1.
- 2.

5.20 **systematic error**

- 1.
2. “ ”(7.25)

5.21 **correction**

- 1.
- 2.

5.22 **correction factor**

6

6.1 **measuring instrument**

6.2 **material measure**

- a)
- b)()

- c)
- d)
- e)
- f)

6.3 measuring transducer

- a)
- b)
- c)
- d)pH

6.4 measuring chain

6.5 measuring system

- a)
- b)

- 1.
- 2.

6.6 measuring equipment

6.7 displaying measuring instrument indicating measuring instrument

- a)
- b)
- c)

- 1. ()
- 2.
- 3.

6.8 recording measuring instrument

- a)
- b)
- c)

- 1. () ()
- 2. ()
- 3.

6.9 totalizing measuring instrument

- a)
- b)

6.10 integrating measuring instrument

**6.11 analogue measuring instrument
analogue indicating instrument**

**6.12 digital measuring instrument
digital indicating instrument**

**6.13 displaying device
indicating device**

- 1.
- 2.
- 3.

6.14 **recording device**

6.15 **sensor**

- a)
- b)
- c)
- d)
- e)

6.16 **detector**

- a)
- b)

- 1.
- 2.

6.17 **index**

- a)
- b)
- c)
- d)

6.18 **scale of a measuring instrument**

6.19 **scale length**

- 1.
- 2.

6.20 **range of indication**

- 1.
 - 2.
 - 3.
- 200 100 7.2

6.21 **scale division**

6.22 **scale spacing**

6.23 **scale interval**

6.24 **linear scale**

6.25 **non linear scale**

6.26 **suppressed zero scale**

6.27 **expanded scale**

6.28 **dial**

6.29 scale numbering

6.30 adjustment of a measuring instrument

6.31 user adjustment of a measuring instrument

7

7.1 nominal range

1. 100

2. 100V

7.2 span

10V 20V

7.3 nominal value

a)	100Ω
b)	1L

7.4 **measuring range**
working range

1. “ ”
2. 7.2

7.5 **rated operating conditions**

7.6 **limiting conditions**

- 1.
- 2.

7.7 **reference conditions**

7.8 **instrument constant**

- 1.
2. 1

7.9 **response characteristic**

- 1.
2. ()

7.10 **sensitivity**

7.11 **discrimination threshold**

()

7.12 **resolution of a displaying device**

- 1.
- 2.

7.13 **dead band**

- 1.
- 2.

7.14 **stability**

- 1.
- 2.

7.15 **transparency**

- a)
- b)

7.16 **drift**

7.26 **freedom from bias of a measuring instrument**

7.27 **repeatability of a measuring instrument**

1.

2.

7.28 **fiducial error of a measuring instrument**

8

8.1 **measurement standard,etalon**

- a)1kg
- b)100Ω
- c)
- d)
- e)
- f)

1.

2.

8.2 **international measurement standard**

8.3 International measurement standard

8.4 primary standard

8.5 secondary standard

8.6 reference standard

8.7 working standard

1.

2.

8.8 transfer standard

8.9 travelling standard

8.10 traceability

1. “ ”
- 2.

8.11 calibration

- 1.
- 2.
- 3.

8.12 conservation of a measurement standard

8.13 reference material(RM)

8.14 certified reference material(CRM)

- 1.
- 2.
- 3.
- 4.

9

9.1 legal metrology

9.2 legal unit of measurement

9.3 service of legal metrology

9.4 metrological assurance

9.5 metrological control

9.6

pattern approval

)

pattern evaluation

examination for conformity with approved pattern

()

initial verification

subsequent verification

- 1)
- 2)
- 3)

periodic verification

verification certificate

rejection notice

9.18 examination of a measuring instrument

9.19 inspection of a measuring instrument

inspection in use

9.27 calibration measurement capability

$k = 2$
(best measurement capability)

9.28 metrology confirmation

9.29 hierarchy scheme

9.30 national hierarchy scheme

()

9.31 international hierarchy scheme

()

B

- 8.9
- 6.13
- 5.15
- 3.16
- 3.16
- 4.7
- 4.10
- 6.18
- 6.18
- 6.19

A
B

C

6.20
6.21
6.22
6.23
6.29
7.1
7.3
8.1
8.1
5.10
8.1
8.13
9.17
5.11
5.12

8.6
7.7
7.7
8.13
3.20
7.7
3.22
4.1
8.12
5.9
4.6
6.3
5.16
7.4
4.5
5.1
6.5
5.5
6.4
6.5
6.6
4.9
6.1
7.18
7.20

7.21
4.4

(SI)

H

J

8.2

8.2

3.12

9.31

8.3

8.3

9.30

9.30

8.7

5.13

9.14

3.13

3.13

3.3

7.22

8.4

8.1

6.10

4.9

7.6

8.1

4.2

9.4

9.7

9.5

9.8

6.1

9.6

9.28

4.3

6.14

6.8

6.15

6.16

6.16

9.18

9.12

9.16

9.19

7.11

8.11

		8.11
		8.11
		5.5
	K	
		7.26
		8.10
		5.14
		6.27
	L	
		6.9
		3.1
		7.2
		3.5
		3.6
		3.18
		3.2
		7.10
		4.5
		7.23
	M	
		6.15
		6.15
		6.11
		6.11
		6.13
	P	
		5.17
		7.25
		7.16
		5.8
		5.8
	Q	
		9.20
	S	
		6.2
		5.8
9.		26
9.		25
		6.31
		9.19
		5.2
		6.20

	9.13
	6.12
	6.12
	6.13
	3.21
	7.13
	5.19
	9.29
	8.10
	8.10
T	
	4.5
	3.1
	6.30
	3.1
	3.1
	7.15
W	
	4.5

	7.8
	5.4
	6.26
	7.28
	7.28
	4.8
	8.14
	8.14
	8.4
	3.22
	3.20
	3.20
Z	
	5.14
	3.19
	5.2
	3.20
	6.13
	6.17
	6.7
	3.15
	3.15
	9.15
	7.19
	7.21
	9.27
	3.20
A	5.11
B	5.12
OIML	9.21
OIML	9.22
OIML	9.23
OIML	9.24