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**Liquid filled system thermometers**

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## Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by Japan Measuring Instruments Federation (JMIF)/Japan Pressure Gauges and Thermometers Manufacturers' Association (JPTMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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## Liquid filled system thermometers

### 1 Scope

This Japanese Industrial Standard specifies the liquid filled system thermometers (hereafter referred to as thermometers) consisting of a temperature sensitive cylinder, a conduit tube and a pressure conversion part, all of which are connected as a unit and filled with a liquid. The indicator in a round case has a single pointer and scales concentrically marked on the dial. The pressure change is caused by the volumetric change of the liquid, and in the system according to the temperature change at the temperature sensitive part is converted to a mechanical displacement of the pointer to indicate the temperature. The thermometers are used in the temperature range of  $-50\text{ }^{\circ}\text{C}$  to  $+300\text{ }^{\circ}\text{C}$ .

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0202 *Parallel pipe threads*

JIS B 0203 *Taper pipe threads*

JIS Z 8103 *Glossary of terms used in measurement*

JIS Z 8703 *Standard atmospheric conditions for testing*

### 3 Terms and definitions

For the purposes of this Standard, the following terms and definitions, and JIS Z 8103 apply.

#### 3.1 pressure system

system for converting a measured temperature into a visible displacement, consisting of a pressure conversion part, a temperature sensitive part and a conduit tube, which is filled with liquid

#### 3.2 indicator

part consisting of a pressure conversion part and a conversion mechanism connected with a temperature sensitive part via a conduit tube and a case for housing those parts, which indicates a temperature

#### 3.3 conduit tube

metal capillary connecting the temperature sensitive part with the pressure conversion part

#### 3.4 pressure conversion part