

User's Manual

90020, 90021, 90022, 90023, 90024
90030, 90031, 90032, 90033
Thermocouple Type K Probes

Thank you for purchasing our Temperature Probe. This manual describes the specifications and handling precautions of the probe. Before using this product, thoroughly read this manual to obtain a clear understanding on proper use.
Store this manual in a safe place for future reference.

YOKOGAWA 
Yokogawa Meters & Instruments Corporation

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Regarding Safe Use of This Product

When operating the instrument, be sure to observe the cautionary notes given below to ensure correct and safe use of the instrument. If you use the instrument in any way other than as instructed in this manual, the instrument's protective measures may be impaired. YOKOGAWA is by no means liable for any damage resulting from use of the instrument in contradiction to these cautionary notes.

The following safety symbols are used on the instrument and in the manual:

WARNING

This indicates that the operator must refer to an explanation in the instruction manual in order to avoid the risk of serious injury or the loss of life.

CAUTION

This indicates that the operator must refer to an explanation in the instruction manual in order to avoid the risk of injury or damage to the product.

WARNING

■ To prevent a potential hazard that may result in loss of life and injury, such as an electric shock, be sure to abide by the safety precautions below.

- Do not point the tip of an injection-needle probe at anybody as it is very sharp and may result in injury.
- Check that the probe and thermometer match before use.
- Do not use a sheathed probe for an object containing electric potential since the sheath is not electrically insulated from the internal circuitry.
- Do not use a deteriorated probe or lead wire.
- Do not touch the probe immediately after measurement, as it may be extremely hot and result in a burn.
- For a standard straight probe or surface-temperature angled probe, ensure that there is no damage to or peeling on the sensor sheath.
Using such a probe is extremely dangerous.
- Model 90030 and 90031 use " polyimide " for insulation.
Prevent " polyimide " from touching food or humor, tissue (cell) of body.

CAUTION

■ To prevent potential hazard that may result in injury or damage to equipment, such as an electric shock, be sure to abide the safety precautions below.

- When using a sheathed probe, be sure to insert it into a measured object by nearly half the sheath length from the tip.
Do not insert it further, or the grip will become extremely hot, resulting in a damage.
- Do not bend a sheathed probe, as this may result in damage.
- Ensure that the grip and cable of a probe is kept within the operating temperature range during use.
They are less heat-resistant than the sheath.
- To prevent damage when using a surface-temperature probe, do NOT:
 1. Slide the tip against the surface of the measured object.
 2. Use it for a rough surface. (For a standard straight or surface-temperature angled probe, this is extremely dangerous since it may cause damage to or peeling on the sensor sheath.)
 3. Use it to measure a temperature exceeding the measurement range.

Specifications

Model	Type	Measurement Range	Sheath Diameter	Sheath Length	Tolerance Class
90020	Standard sheathed probe for liquid	-50 to 600°C	3.2 mm dia.	200 mm Long sheath	1
90021	Fast-response sheathed probe for liquid	-50 to 600°C	1.6 mm dia.	150 mm Long sheath	1
90022	Long sheathed probe for liquid	-50 to 600°C	3.2 mm dia	500 mm Long sheath	1
90023	Fast-response injection-needle sheathed probe	-50 to 500°C	1.6 mm dia	100 mm Long sheath	1
90024	Standard injection-needle sheathed probe	-50 to 500°C	2.1 mm dia	100 mm Long sheath	1
90030	Standard surface-temperature straight probe	-20 to 250°C	Diameter of thermosensitive part 15 mm dia.		2
90031	Standard surface-temperature angled probe	-20 to 250°C		2	
90032	High-surface-temperature straight probe	-20 to 500°C		2	
90033	High-surface-temperature angled probe	-20 to 500°C		2	

Thermocouple type: K

CAUTION

Precautions when attaching/detaching the surface-temperature probe protection cap

- The sensor (contact area) at the tip of the surfacetemperature probe is a precision device. Do not apply direct force to the contact area when attaching/detaching the protection cap. Otherwise, the sensor may become damaged or deformed by mechanical pressure.

- The contents of this manual are subject to change without prior notice.

- Customized models are subject to application of their respective, separate specifications.

Contacts of Services

Overseas Sales Representatives

YOKOGAWA 

Yokogawa Meters & Instruments Corporation

YOKOGAWA METERS & INSTRUMENTS CORPORATION
Global Sales Dept.
2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan
Phone: +81-422-52-6237 Facsimile: +81-422-52-6462

YOKOGAWA EUROPE B.V.

Euroweg 2 3825 HD Amersfoort,
THE NETHERLAND
SPhone: +31-88-4641000 Facsimile: +31-88-4641111