

Temperature Sensors for Packaging Machines

E52

Accurately Measure Seal Temperature. Temperature Sensors for Packaging Machines.

- Heat resistance (up to 375°C) and direct installation to heat bars.
- Protective tubing diameter of 1 mm for high-speed response.
- Usage together with the automatic filter adjustment function of E5□D Digital Temperature Controllers is recommended.



Ordering information

Sensor type	Sensing tube		Temperature sensor range	Cable length	Order code
	Diameter	Length			
Thermocouple J	1mm	120mm	-80...600°C	2000 mm	E52-ETJ1-120-2-P-A
		100mm	0...760°C		E52-ETJ1-100-2-P-B

Specifications

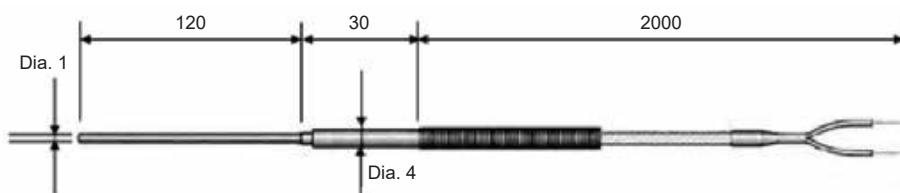
	E52-ETJ1-120-2-P-A	E52-ETJ1-100-2-P-B
Calibration/accuracy	EN 60584 class 2	
Operating temperature range	-80...600°C - Sensors head -80...350°C - Transition sleeve 0...400°C - Cable	0...760°C - Sensors head -20...375°C - Transition sleeve -50...260°C - Cable
Measuring point	Isolated (ungrounded)	
Minimum bending radius	3 times the diameter	2 times the diameter
Sheath material	AISI 316	
Cable material	Fiberglass	Kapton [®]

[®]1. This material has no Volatile Compounds, water nor organic, when exposed to 105°C; this material is classified as 0% VOC.

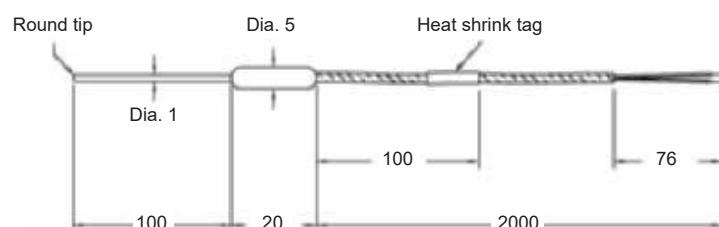
Dimensions

(Unit: mm)

E52-ETJ1-120-2-P-A



E52-ETJ1-100-2-P-B



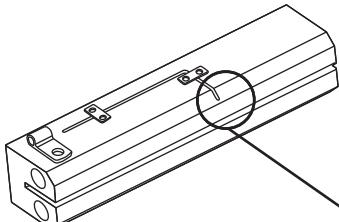
Installation Method

A Temperature Sensor for Packing Machines has a diameter of 1.0 mm.

To measure the temperature close to the seal surface, mount the Sensor as close as possible to the surface.

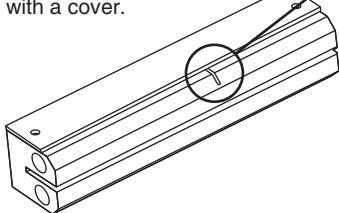
The following installation methods are assumed.

Example 1: Groove for Temperature Sensor created in heating plate and Temperature Sensor secured with mounting brackets.



To correctly measure the surface temperature, the following installation conditions are recommended.

Example 2: Groove for Temperature Sensor created in heating plate and Temperature Sensor secured with a cover.



Enlargement

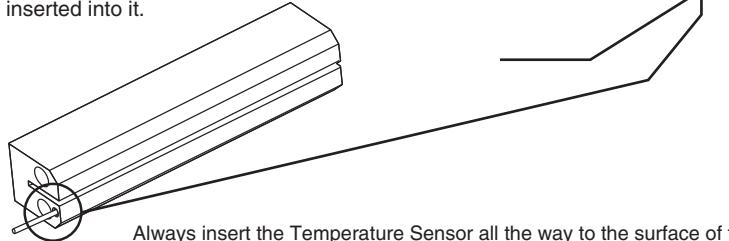
Bend to a radius of 3 mm or larger.

Insert the end by 8 mm or longer.

Approx. 1 to 3.5 mm

There is a temperature sensing element at the tip of the Sensor. Always press the tip against the heating plate.

Example 3: Lateral hole for the Temperature Sensor created in the heating plate and the Temperature Sensor inserted into it.

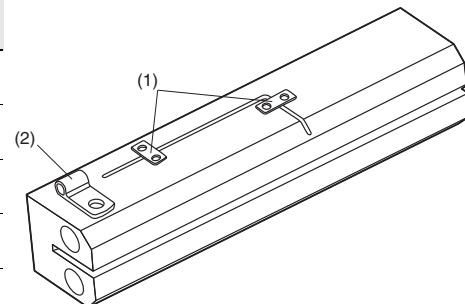


Always insert the Temperature Sensor all the way to the surface of the packing material.

Use the following brackets or the equivalent to mount a Temperature Sensor for Packaging Machines to a hot plate.

Mounting bracket	Application	Manufacturer	Model number
(1)	1-mm-dia. protective tube bracket	Misumi Corporation	Square Shims ASFCS-series
(2)	Sleeve bracket (S1)	Misumi Corporation	Cable Clips COPU3-20P
		Digi-Key	Cable Clamp RPC1156-ND
	Sleeve bracket (S2)	Misumi Corporation	Cable Clips COPU4-20P
		Digi-Key	Cable Clamp RPC1474-ND

Note: All of the above mounting brackets are SUS304.



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