

TEMPERATURE SENSOR



DAEHAN & DS INSTRUMENT CO.LTD



■ SPECIFICATIONS

□ Features

- Thermocouple or RTD Pt100 sensors
- Radial spring designs
- Laminated leaf spring design
- bimetallic spring design
- Integrated loop powered transmitters
- Fixed or remote junction box
- Protect on tube and thermowells
- Secondary pressure containment
- Mineral insulated cables
- Stainless steel, hasteloy, inconel etc.
- Explosion proof designs

□ Typical Applications

- Energy and power plant technology
- Process industry
- Chemical industry

□ Temperature range Pt100

- -200~+550°C, depending on application and material

□ Temperature range TC

- -200~+1200°C, depending on thermocouple type and material

■ DESCRIPTION

Temperature sensor is mainly used in chemical reactors, distillation columns, fractionators and storage tanks & vessels for profiling temperature measurements and hot-spot detection. Pt100 RTD versions are mainly used in LNG storage applications. Custom Designed to fit the application and can be of any length, and are constructed to withstand extreme working temperatures and pressures. A junction box suitable for the ambient conditional and area classification is provided with terminal connections or transmitters, an extension tube to place the junction box away from the radiated vessel heat. The process connection flange which mates the vessel instrumentation nozzle flange is welded to welded closed-end pipe well, protecting the internal thermocouples or RTD's sensors from the extreme process conditions.

□ Tolerances Pt100

- A. tolerance $\pm 0.15 + 0.002 \times t$, operating temperature -100~+450°C
- B. tolerance $\pm 0.3 + 0.005 \times t$, operating temperature -196~+600°C
- B 1/3 DIN, tolerance $\pm 1/3 \times (0.3 + 0.005 \times t)$ operating temperature -196~+600°C
- B 1/10 DIN, tolerance $\pm 1/10 \times (0.3 + 0.005 \times t)$ operating temperature -196~+600°C

□ Tolerances TC

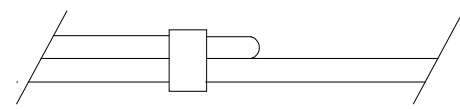
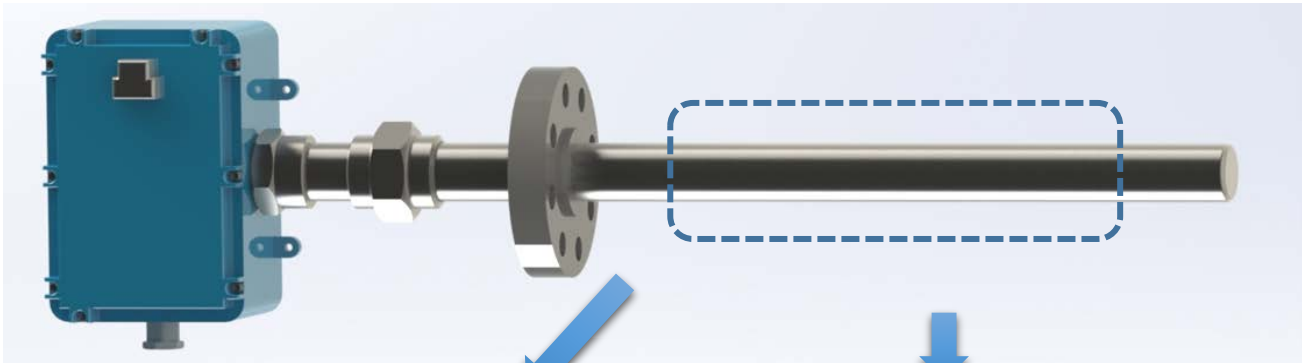
- Type J tolerance class 1 = -40 ~ 375°C $\pm 1.5^\circ\text{C}$, 375~750°C $\pm 0.004 \times t$
- Type K and N tolerance class 1 = -40 ~ 375°C $\pm 1.5^\circ\text{C}$, 375~1000°C $\pm 0.004 \times t$

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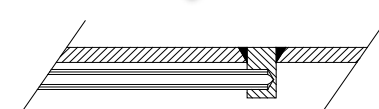
■ Multipoint Temperature Sensors Type



▶ BUNDLE SENSOR TYPE

Uses MgO insulated metal sheathed THERMOCOUPLES, RTD's, or THERMISTORS. Diameters of 1/8" and larger are available as required by bore size and number of sensing points required. Sensors can be packed either in one or two layers around a support core.

Can be mounted with or without a thermowell by use of threaded sealing fitting.

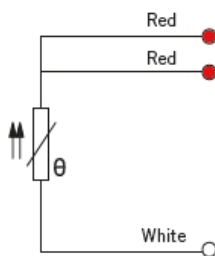


▶ GUIDE TUBE TYPE

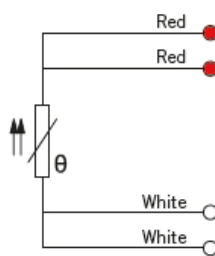
Wells have high mechanical strength for use in high pressure, high temperature, or extremely adverse environments. Individual MgO insulated metal sheathed sensors are springloaded within their respective guide tubes. Hot junction terminates directly against a plug welded to the wall of the well insuring excellent temperature transfer and fast response. Extremely long life with little maintenance, greater reliability. Sensors can be replaced individually, safely and easily without shutdown of the process.

■ Pt 100 Connections

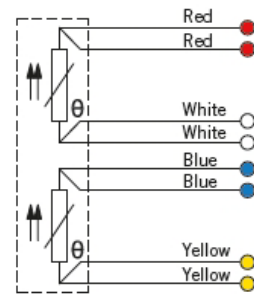
RTD Single Element, 3-wire



RTD Single Element, 4-wire

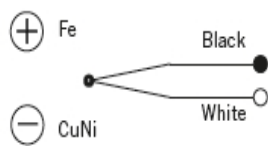


RTD Double Element, 4-wire

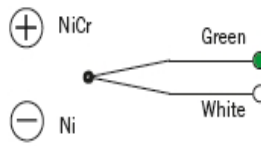


■ Thermoelement Connections

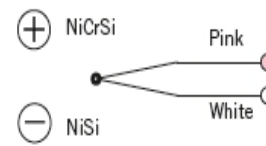
Thermocouple, Type J



Thermocouple, Type K



Thermocouple, Type N



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ORDERING INFORMATION

Main order	CODE		DESCRIPTION
1.Base Model	DHIT-R100		RTD Single
	DHIT-R200		RTD Double
	DHIT-T100		Thermocouple Single
	DHIT-T200		Thermocouple Double
2.Element	E		E (0.5)
	J		J (0.75)
	K		K (0.75)
	N		N (0.75)
	Pt		Pt 100Ω
3.Outer diameter(mm)	0		1.6
	1		3.2
	2		4.8
	3		6.4
	4		8.0
4.Head extension type and sealing location	0		Nipple & head
	1		Nipple & flange
	2		Union-Nipple & head
	3		Union-Nipple & flange
5.Number of measuring point	A		4
	B		8
	C		10
	D		12
	O		Other
6.Sheath material	1		304
	2		316
	3		Inconel 600
	4		Other
7.Protecting tube material	1		316
	2		321
	3		Inconel 600
	4		Other
8.Insert length	□□□	Length (mm)	
9.Option	0		None
	1		Accessories



(주)디앤다아이

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