

Product overview

The TIT series integrative temperature transmitter is a perfect combination of temperature sensor and transmitter, and converts the temperature signal within the scope of $-200\sim 1600^{\circ}\text{C}$ into two-wire system $4\sim 20\text{mA}$ DC electrical signal in a very simple way to be transmitted to the display, regulator, recorder and DCS to realize accurate measurement and control of temperature. It's an upgrading product for temperature measurement and control of modern industrial sites and scientific research institutions and a prerequisite product of total distributed system and digital bus system.

Product features

- The thermocouple temperature variation is used to lower the cost without compensating lead wire;
- Two-wire system $4\sim 20\text{mA}$ DC output. Far transmission distance and strong capacity of resisting disturbance;
- Multiple indicator functions (such as liquid crystal display, digital tube and pointer) facilitate the timely on-site monitoring;
- High measurement precision and good long-term stability;
- Explosive-proof grade: dII BT4 and dII BT5;
- Cold side, temperature excursion and nonlinear automatic compensation;
- Mechanical protection IP65 and level of protection: IP54;
- Subminiature (module $\Phi 44\times 18$) integration and strong universality;
- The epoxy resin casting process is used in the temperature module which can be used in various bad and dangerous places;
- It's of integrated design and simple and reasonable structure and can directly replace common fabricated thermocouple and thermal resistance;
- In case of on-site ambient temperature $> 70^{\circ}\text{C}$, the transmitter and field display can be of separation (isolation) type installation.

Technical indicators

Type	IS modular temperature change	IE integrated temperature change
Precision	$0.2\%\cdot\text{FS}$	$0.5\%\cdot\text{FS}$
Input	Thermocouple: E, S, K, T and J Thermal resistance: Pt100, Pt10, Cu100 and Cu50	
Output	Two-wire system $4\sim 20\text{mA}$ DC	
Operating temperature	$-25^{\circ}\text{C}\sim 85^{\circ}\text{C}$ (integrated LCD gauge head: $0\sim 60^{\circ}\text{C}$)	
Temperature influence	$\leq 0.05\%/^{\circ}\text{C}$	
Humidity	$5\sim 95\%\text{RH}$	
Status display	Without	$3\frac{1}{2}$ LED $3\frac{1}{2}$ LCD $0\sim 100\%$ evenly divided scale
Precision display	Without	Digital type: Level 0.5 Pointer type: Level 2.0
Load capacity	< 6000 (rated load: 2500)	
Boundary dimension	$\Phi 44\times 18$	$\Phi 70\times 100$ (relay box)

Product model selection

TIT	Integrated temperature transmitter									
TIT-	Type									
	R Thermocouple									
	Z Thermal resistance									
	Signal system									
	2 Two-wire system									
	3 Three-wire system									
	Graduation number									
	1 K 2 J 3 E 4 T 5 S 6 pt100 7 pt10 8 Cu100 9 Cu50									
	Form									
	IS Modular type IE Integrated type									
	Display									
	N No display C $3\frac{1}{2}$ LCD M $0\sim 100\%$ pointer type E $3\frac{1}{2}$ LED									
	Installing form									
	1 No fixation 2 Fixing thread 3 Movable cutting sleeve thread									
	4 Fixed flange 5 Loose type flange 6 Movable cutting sleeve flange									
	Junction box									
	1 Ordinary type 2 Water-proof type 3 Explosion-proof type									
	Pipe diameter									
	12 $\Phi 12$ 16 $\Phi 16$ 20 $\Phi 20$ 160 $\Phi 16$ variable diameter									
TIT-										