PRODUCT DATA SHEET

Explosion-Proof Temperature Sensor Thermocouple / RTD | Direct Insertion Type

Parameter	Specification
Product Type	Explosion-Proof Thermocouple / RTD (Direct Insertion)
Working Principle	Seebeck Effect (Thermocouple) / Resistance Change (RTD)
Power Supply	12~36V DC, Loop-Powered (2-Wire)/ Intrinsically Safe Low-Energy Supply
Measurement Range	-200°C ~ +1300°C (Thermocouple: K/E/J/T/N; RTD: Pt100/Pt1000)
Accuracy	Thermocouple: Class 1 / Class 2 (IEC 60584)/RTD Pt100: Class A / Class B (IEC 60751)
Response Time	Transmitter: ±0.1%FS / ±0.2%FS / ±0.5%FS (Optional) t0.5 ≤ 10s (depends on thermowell diameter & type)Fast-response type: t50 = 3s, t90 = 7s
Output Signal	4~20mA (2-Wire) / HART Protocol / RS485 Modbus RTU (Optional)
Ambient Temperature	-40°C ~ +85°C
Protection Rating	IP65 / IP66 / IP67
Process Connection	M20×1.5, G1/2, NPT1/2, DN50 Flange(Customizable threads available)
Electrical Connection	Flameproof Junction Box / 1/2" NPT or M20×1.5 Cable Gland
Sheath Material	304/316/321 SS (max. 800°C) /2520/3039 Alloy (max. 1200°C)
Sheath Diameter	φ6mm (1.6MPa static) / φ8mm (2.5MPa) /φ10mm Armored / Customizable
Insertion Length	50mm ~ 2000mm+ (Customizable)
Max. Process Pressure	Up to 100 bar (static, depends on configuration)
Insulation Resistance	≥ 100MΩ @ 250V DC
Explosion-Proof	Ex d IIC T6 Gb / Ex tb IIIC T80°C Db (Flameproof) / Ex ia IIC T6 (Intrinsically Safe)
Certifications	ATEX 2014/34/EU (II 2G) / IECEx / NEPSI / GB/T 3836
Weight	Approx. 0.5 ~ 3.0 kg (depends on configuration)

Application Fields

Petroleum Refining & Petrochemical | Chemical Production | Metallurgy & Steel | Pharmaceutical & Food | Power Generation | Rubber & Plastic

Ordering Information — Key Parameters to Confirm

1. Sensor Type (Thermocouple/RTD)
2. Temperature Range
3. Output Signal
4. Sheath Material & Diameter
5. Insertion Length
6. Process Connection
7. Electrical Connection
8. Explosion-Proof Rating

Standards: IEC 60584 (Thermocouples) | IEC 60751 (RTDs) | ATEX 2014/34/EU | IECEx | GB/T 3836 | GB/T 16839 | GB/T 30121

Note: Specifications are subject to change without notice. Custom configurations available upon request.