Data sheet

VTPS800

Hydrogen Temperature Sensor

FEATURES

- 2-wire output 4-20mA (can be stacked with the Hart protocol or485 Protocol)
- Large measurement range (-200~600 ℃)
- Strong anti-interference ability
- Small size, high cost-effectiveness, long term stability, and high sensitivity
- Diversified threads and electrical interfaces facilitate installation under various working conditions
- Multiple range and pressure types selection
- Hydrogen compatible stainless steel protected welded pipes
- Customization available

PRODUCT INTRODUCTION

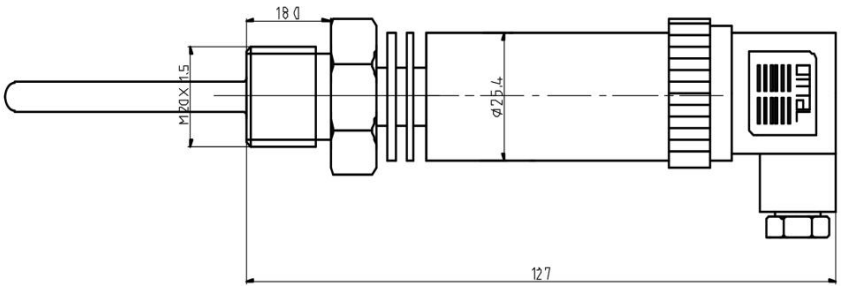
The VTPS80 series hydrogen-specific temperature transmitter operates by generating an unbalanced signal across its temperature transmitter bridge. Specifically engineered for use with hydrogen gas, the temperature sensors built with H2 compatible steel alloys to prevent leak points within a system.

APPLICATIONS

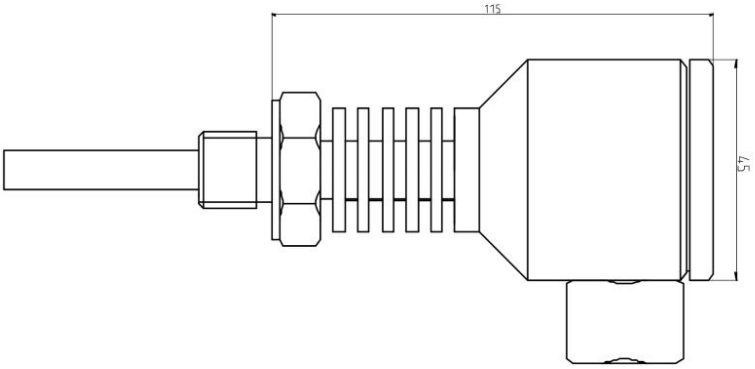
- PEM fuel cells
- Hydrogen refueling station, hydrogen storage
- Hydrogen fuel vehicles
- Backup power
- Test bench
- Train brakes

Performance Specification

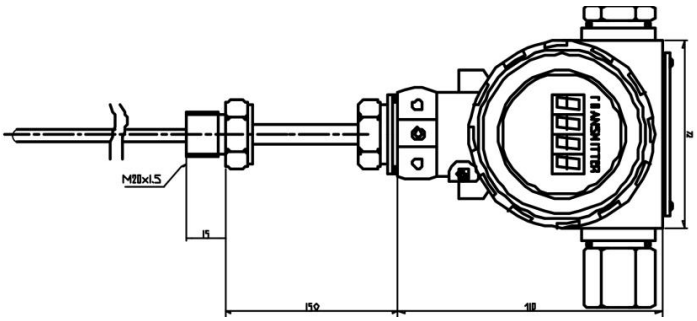
Product execution standards	IEC584 IEC1515 IEC751 JB/T7391-1994 GB3836
Measurement range and tolerance	thermal resistance Pt100 (PS8000-WZPB) : Temperature range : -200～+500℃ A-level error : ±(0.15+0.002|t|) 、B-level error: ±(0.30+0.005|t|) Thermal resistance Cu50、Cu100 (PS8000-WZCB) : Temperature range : -50～+100℃ Error : ±(0.30+0.005|t|) Thermocouple K division (PS8000-WRNB) Level I error : ±1.5℃ (-40～+375℃)、±0.004|t| (375～1000℃) Level II error : ±2.5℃ (-40～+333℃)、±0.0075|t| (333～1200℃) Thermocouple N division (PS8000-WRMB) Level I error : ±1.5℃ (-40～+375℃)、±0.004|t| (375～1000℃) Level II error : ±2.5℃ (-40～+333℃)、±0.0075|t| (333～1200℃) Thermocouple E degree (PS8000-WREB) Level I error : ±1.5℃ (-40～+375℃)、±0.004|t| (375～800℃) Level II error : ±1.5℃ (-40～+333℃)、±0.004|t| (333～900℃) Thermocouple J division (PS8000-WRFB) Level I error : ±1.5℃ (-40～+375℃)、±0.004|t| (375～750℃) Level II error : ±1.5℃ (-40～+333℃)、±0.004|t| (333～750℃) Thermocouple T division (PS8000-WRCB) Level I error : ±0.5℃ (-40～+125℃)、±0.004|t| (125～350℃) Level II error : ±1℃ (-40～+133℃)、±0.0075|t| (133～350℃) Note: t represents the actual measured temperature of the temperature sensing element
Output signal	4-20mA (can be stacked with either the Hart protocol or the 485 protocol), 1-5V output, and switch signal When the current signal is output, the load resistance is greater than 700 Ω
Accuracy	0.25, 0.5, 0.1
Power supply	24VDC±10%
Protection grade	IP65
Insulation resistance	The insulation resistance between the instrument output terminal and the casing should not be less than 50M Ω
Work Environment	Temperature: -40~+80 ℃; Relative humidity of 5-95%
Explosion proof level	Ex db IIC T6 Gb, Ex ia IIC T6 Ga, Ex tb IIIC T80℃ Db (Optional)



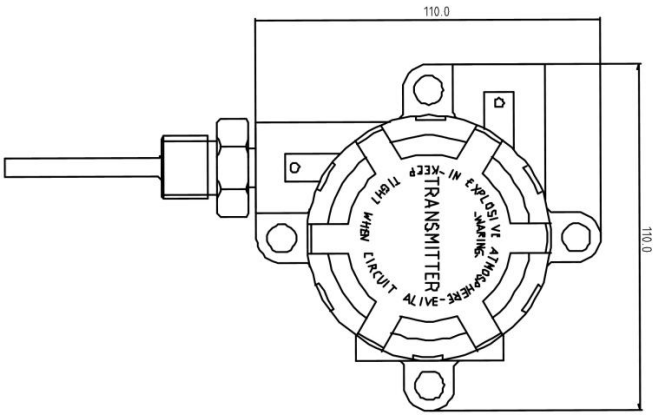
Process connector: M20 * 1.5 with plug-in depth Electrical connector: DIN Hesmann connector



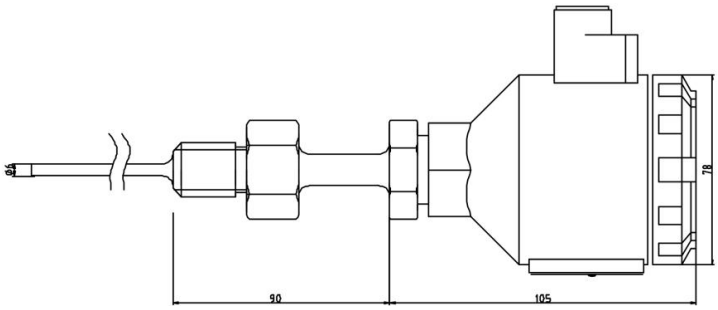
Process connector: M20 * 1.5 with insertion depth Electrical connector: stainless steel junction box



Process connector: M20 * 1.5 with plug-in depth Electrical connector: 2088 type housing with display



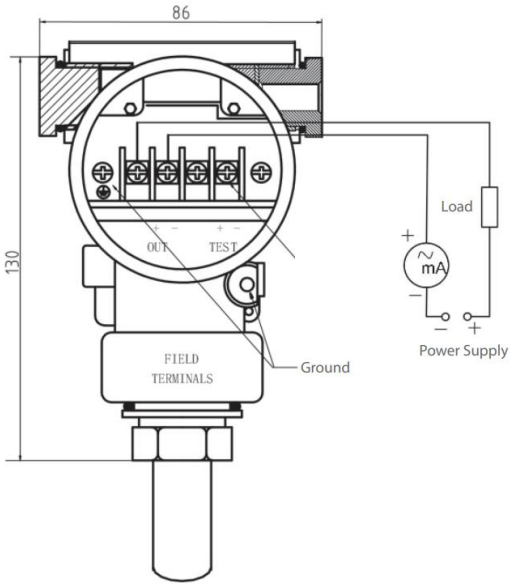
Process connector: M20 * 1.5 with insertion depth Electrical connector: wall mounted housing



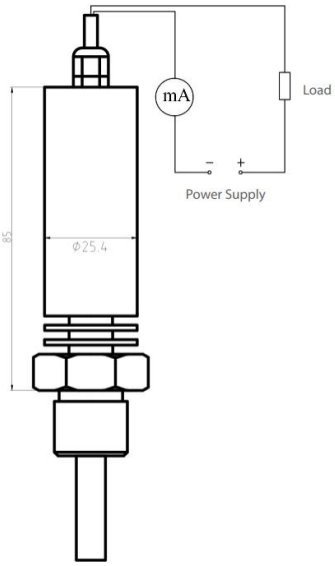
Process connector: M20 * 1.5 with insertion depth

Electrical connector: explosion-proof housing

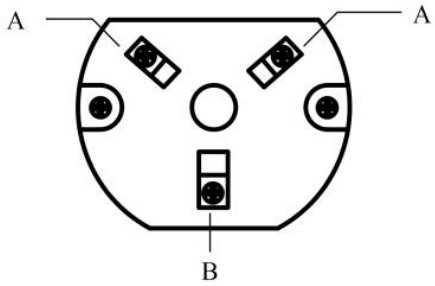
Wiring Definition



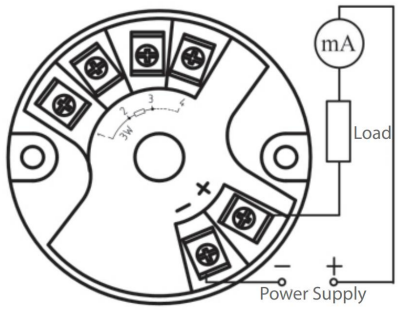
Explosion proof box packaging (with display)



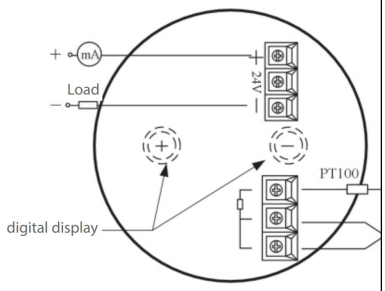
Cylindrical products



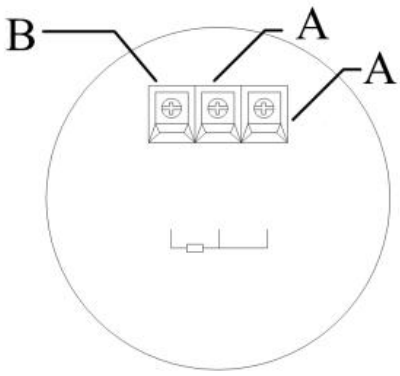
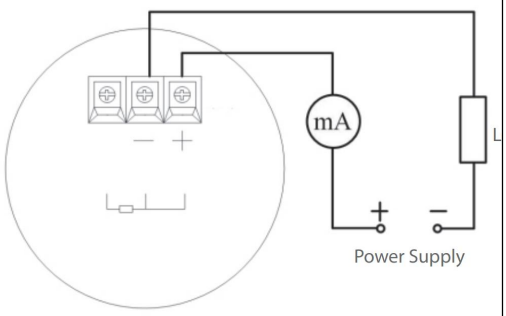
Thermal resistance product wiring diagram



Wiring diagram of transmission module



Wall mounted packaging wiring diagram

		
Wiring method of thermal resistance products (Stainless steel shell)	Wiring method for integrated temperature transmitter (Stainless steel shell)	