



温度 温度检测与控制

WZP-*小巧型温度变送器

用于气体、液体或蒸汽的温度测量与控制

一、概述

WZP-*小巧型温度变送器采用圆柱形不锈钢结构设计，外观精致、小巧方便。该变送器由国际知名品牌热敏元件和数字放大电路组成。国际知名品牌热敏元件，精度高、长期稳定性好；先进的生产工艺和封装检测设备降低因封装产生的精度误差，确保封装后的传感器输出精度无限接近敏感元件的初始精度。传感器配套放大器输出一个与被测温度成线性关系的二线制4...20mA电流信号或者三线制1...5V电压信号，广泛应用于工业过程温度测量与控制现场。



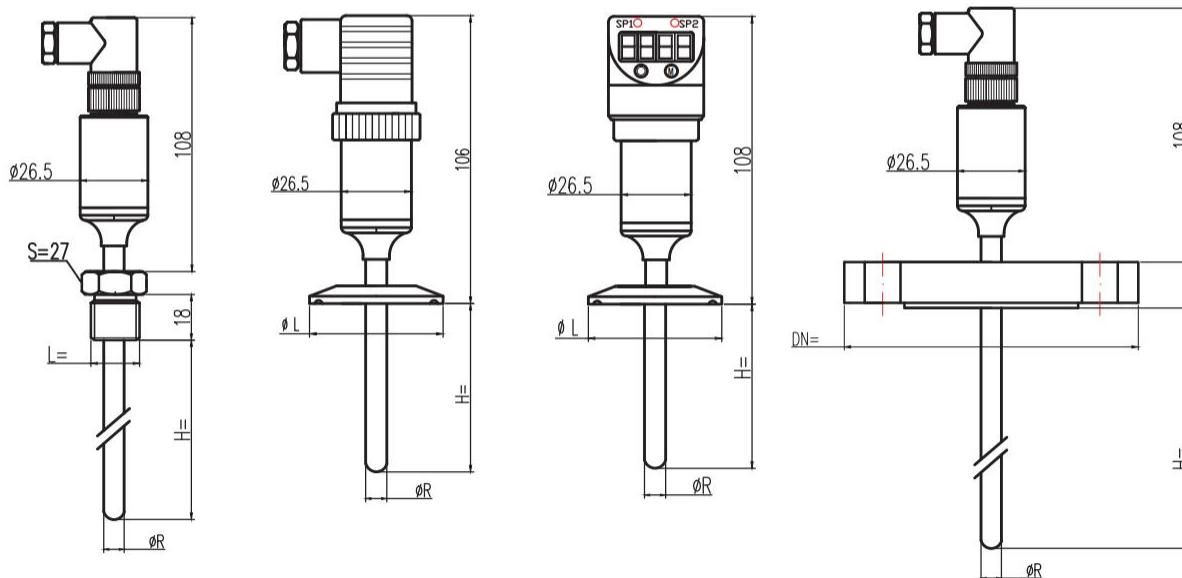
二、敏感元件分度号及测量误差

| 型号 | 分度号 | 测量范围 | 等级 | 允差 °C |
|----|-------|----------------|---------|---|
| WZ | PT100 | -200°C ~ 500°C | 1/10B 级 | $\pm (0.03^\circ\text{C} \pm 0.0005 t)$ |
| | | | AA 级 | $\pm (0.1^\circ\text{C} \pm 0.002 t)$ |
| | | | A 级 | $\pm (0.15^\circ\text{C} \pm 0.002 t)$ |
| | | | B 级 | $\pm (0.3^\circ\text{C} \pm 0.005 t)$ |

三、通用参数

| 名称 | 技术参数 | 名称 | 技术参数 |
|------|---|---------|--|
| 测量介质 | 液体、气体、蒸汽 | 探杆长度 | min. 10mm max. 3m(推荐: 10倍于探杆外径) |
| 测量范围 | -50°C ~ +150°C 标配 支持定制 | 探头外径 | min. 4mm max. 16mm |
| 供电电压 | 12-36VDC, 推荐使用 24VDC | 绝缘电阻 | $\geq 100\text{M}\Omega / 10-100\text{VAC}$ |
| 测量精度 | $\pm 0.5\%$ 、 $\pm 0.2\%$ 、 $\pm 0.1\%$ | 探杆外径与频响 | $\Phi 4$ t < 4s / $\Phi 6$ t < 10s $\Phi 8$ t < 12s / $\Phi 16$ t < 30s |
| 过程连接 | 螺纹、法兰、卡盘、或 定制 | 工作温湿度 | -20 ~ +60°C、5-95%RH |
| 电气连接 | M12航插、赫斯曼、金属航插 | 温度漂移 | 0.05%FS/°C |
| 壳体材质 | 304不锈钢 | 零点漂移 | 0.05%FS/°C |
| 探杆材质 | 304、316L、客户定制 | 防护等级 | IP 65 |

四、外形尺寸



五、选型表

| WZP- | | | | | | | | | | | 温度变送器(小巧型) | | | | | | | | | | | | | | | | | | | | | | | |
|------|--|---|--|----|----|----------|--|--------------|--|---------|------------|-----|---|-----------------------------|---|--|-----|--|----|--|----|--|----|--|----|--|----|--|----|--|------|--|--|--|
| 代码 | | 电气接口 | | | | 代码 | | 电气接口 | | | | 代码 | | 电气接口 | | | | | | | | | | | | | | | | | | | | |
| M | | M12 防水插头 | | | | L | | 赫斯曼插头 | | | | MZ | | M12 防水插头 配 2m 一体化塑封线缆 | | | | | | | | | | | | | | | | | | | | |
| H | | 金属航插 | | | | Z | | 直接引线 2m | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 分度号及支数 | | | | 代码 | | 分度号及支数 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | | 单支 PT100 A 级 | | | | P2 | | 双支 PT100 A 级 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 测量范围 | | | | 代码 | | 测量范围 | | | | 代码 | | 测量范围 | | | | | | | | | | | | | | | | | | | | |
| 1 | | -50~+100℃ | | | | 3 | | 0~+150℃ | | | | 5 | | 0~+300℃ | | | | | | | | | | | | | | | | | | | | |
| 2 | | 0~+100℃ | | | | 4 | | 0~+200℃ | | | | X | | 客户定制 | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 安装方式 | | | | 代码 | | 安装方式 | | | | 代码 | | 安装方式 | | | | | | | | | | | | | | | | | | | | |
| L10 | | M20×1.5 外螺纹 | | | | L16 | | M27×2 外螺纹 | | | | L31 | | Tri-Clamp1-1/2" (φ 50.5) 卡接 | | | | | | | | | | | | | | | | | | | | |
| L11 | | G1/2 外螺纹 | | | | L21 | | DN25 PN16 | | | | L32 | | Tri-Clamp 2" (φ 64) 卡接 | | | | | | | | | | | | | | | | | | | | |
| L12 | | G1/4 外螺纹 | | | | L22 | | DN50 PN16 | | | | L33 | | Tri-Clamp 1/2" (φ 25.2) 卡接 | | | | | | | | | | | | | | | | | | | | |
| L15 | | G1 外螺纹 | | | | LKL | | 卡套螺纹 () | | | | L34 | | Tri-Clamp3" (φ 91) 卡接 | | | | | | | | | | | | | | | | | | | | |
| L14 | | 1/2NPT 外螺纹 | | | | LKF | | 卡套法兰 () | | | | LX | | 客户定制 | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 变送器类型 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | | 无显示, 无源, PT100 三线制电阻信号输出 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D1 | | 无显示, 24VDC, 4-20mA 模拟量信号输出 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D2 | | 现场显示, 24VDC, 4-20mA 模拟量信号输出 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D4 | | 无显示, 24VDC, 4-20mA Modbus RS485 通讯协议 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D7 | | 现场显示, 24VDC, 2 路开关信号, 输出直流电流最大 300mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 参考精度 (依据标准和测试基准条件, 包括线性(BFSL)、迟滞、重复性。校准温度: 20℃ ± 5℃) 注: 由于隔膜充油和量程不同, 精度各异, 订货时需与销售经理协商选型。(PT100 信号无需选此项) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J1 | | ≤ ± 0.1%F.S | | | J2 | | | ≤ ± 0.25%F.S | | | J3 | | | ≤ ± 0.5%F.S | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 探杆材质 | | | | 接口材质 | | | | 壳体材质 | | | | | | | | | | | | | | | | | | | | | | | | |
| C0 | | 304 不锈钢 | | | | 304 不锈钢 | | | | 304 不锈钢 | | | | | | | | | | | | | | | | | | | | | | | | |
| C1 | | 316L 不锈钢 | | | | 304 不锈钢 | | | | 304 不锈钢 | | | | | | | | | | | | | | | | | | | | | | | | |
| C2 | | 316L 不锈钢 | | | | 316L 不锈钢 | | | | 304 不锈钢 | | | | | | | | | | | | | | | | | | | | | | | | |
| C7 | | 钢衬四氟 | | | | 304 不锈钢 | | | | 304 不锈钢 | | | | | | | | | | | | | | | | | | | | | | | | |
| CX | | 客户定制 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 探杆长度 | | 代码 | | 探杆长度 | | 代码 | | 探杆长度 | | | | | | | | | | | | | | | | | | | | | | | | |
| H1 | | 50mm | | H5 | | 300mm | | H9 | | 1000mm | | | | | | | | | | | | | | | | | | | | | | | | |
| H2 | | 100mm | | H6 | | 500mm | | H10 | | 1200mm | | | | | | | | | | | | | | | | | | | | | | | | |
| H3 | | 150mm | | H7 | | 700mm | | H11 | | 1500mm | | | | | | | | | | | | | | | | | | | | | | | | |
| H4 | | 200mm | | H8 | | 800mm | | HX | | 客户定制 | | | | | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 探杆直径 | | | | 代码 | | 探杆直径 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R0 | | 4mm | | | | R2 | | 8mm | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R1 | | 6mm | | | | R3 | | 12mm | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 代码 | | 配件 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P0 | | 不锈钢焊接底座 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P6 | | 第三方送检报告 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P7 | | 变送器出线长度 (单位 m) 标配无线 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P8 | | 盲套管 (套管总长、安装方式、材质) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WZP- | | | | | | | | | | | M | | P | | 3 | | L10 | | D1 | | J3 | | C1 | | H2 | | R2 | | P0 | | 选型举例 | | | |