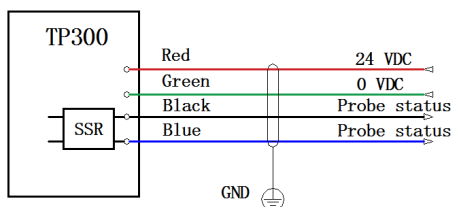
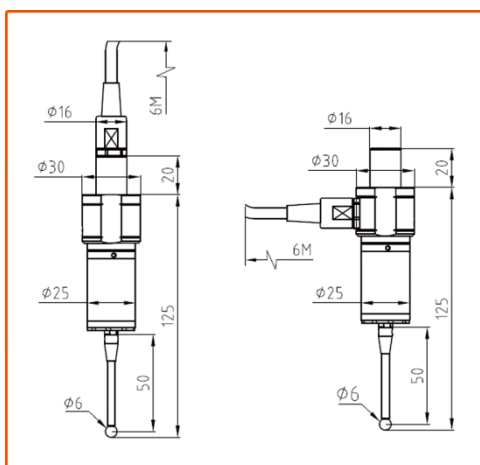
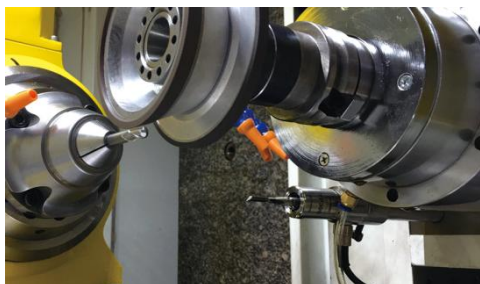


TP300 series of cable probe

Composition of Probe

TP300 series of cable probe consist of three pieces:

- 1) TP300 trigger probe unit;
- 2) HPI-A16 (axial outlet) or HPI-R16 (radial outlet) probe shank containing the probe's interface and cable;
- 3) Stylus (standard model: M4-P50-RB6-S36).



Basic configuration

- ◆ The standard: M4-P50-RB6-S36;
- ◆ The model of crash protecting pole: S-11-016;
- ◆ The cable: 4 cores' shielded, oil - proof moving cable, length: 6m.



Technical Parameters

- 1) The technical parameters of TP300 trigger probe :

- ◆ Stylus sensing direction: $\pm X, \pm Y, +Z$;
- ◆ Stylus sensing over-travel: $X-Y \pm 15^\circ, Z +5 \text{ mm}$;
- ◆ The trigger force in Z direction: 1000 g;
- ◆ Trigger force in X-Y surface (standard stylus) : 65-130g;
- ◆ Unidirectional repeatability (2σ) : $\leq 2 \mu\text{m}$;
- ◆ Seal grade: IP68.

- 2) The technical parameters of probe's interface:

- ◆ Input voltage is $24 \pm 10\% \text{ V DC}$ and output load current is 50 mA.
- ◆ Seal grade: IP68.

Technical Characteristics

- ◆ The signal interface of probe is integrated inside the probe shank, and the trigger signal is transmitted by cable;
- ◆ By changing the power supply's polarity at the probe interface, the logic state of the output signal can be reversed;
- ◆ The stylus connector of the probe is protected by double layers of rubber seal.

Application

- ◆ Setting work-piece coordinate system and machining zero points automatically before processing;
- ◆ Detect and control the key dimensions, position coordinates and their precision automatically between two processes;
- ◆ Detect precision of the key dimensions, shapes, position after processing.
- ◆ Applicable equipments: various specifications of CNC grinding machines, CNC lathes and specially measuring devices.

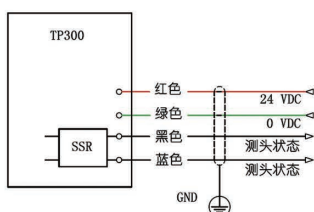
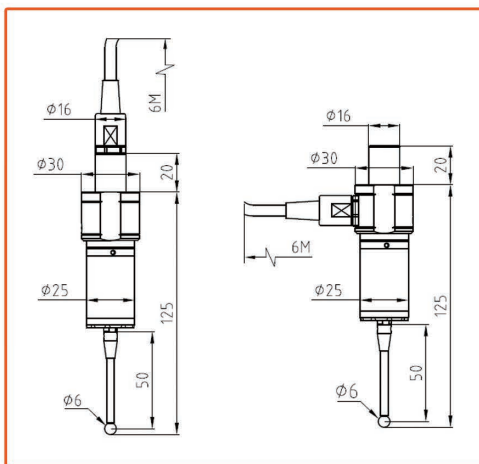
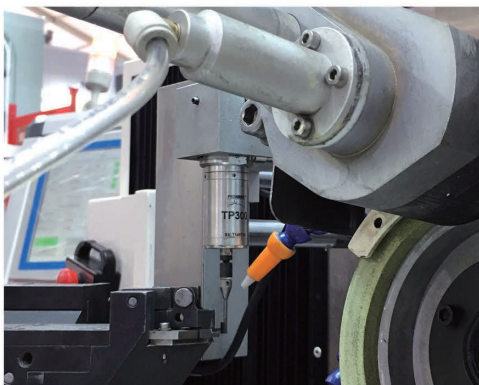
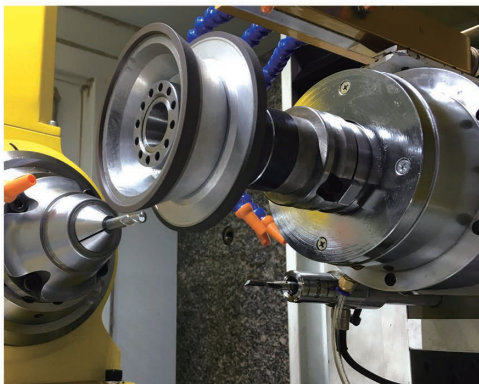
Notes for purchase

- ◆ As for special stylus, check whether the standard stylus equipped with the TP300 probe can meet the requirements and whether it is necessary to order special stylus;
- ◆ About sealing protection of the connectors for stylus and probe: for TP300 probe applied in CNC lathe, it is recommended that the customer give protecting instruction to use metal cover + rubber sealing cover when ordering the probe.

测头的组成

TP300系列电缆通讯测头由三个部分组成

- 1) TP300 型触发式测头单元；
- 2) 包含测头集成接口和电缆的HPI-A16(轴向外线)或HPI-R16(径向出线)型测头柄；
- 3) 测针(标配型号: M4-P50-RB6-S36)。



测头技术参数

1) TP300型触发式测头的技术参数:

- ◆ 测针触发方向: $\pm X, \pm Y, +Z$;
- ◆ 测针各向触发保护行程: $X-Y \pm 15^\circ, Z +5 \text{ mm}$;
- ◆ 测针Z向触发力调整范围: 1000 g;
- ◆ 测针X-Y平面触发力(标准测针): 65-130g;
- ◆ 测针任意单向重复触发精度 (2σ): $\leq 2 \mu\text{m}$;
- ◆ 防护等级: IP68。

2) 测头柄(接口)的技术参数:

- ◆ 输入电压: $24 \pm 10\% \text{ V DC}$;
- ◆ 输出负载电流: 50 mA;
- ◆ 防护等级: IP68。

测头的技术特征

- ◆ 测头信号输出口集成在测头柄内部, 触发信号通过电缆传输;
- ◆ 测头接口输入电源极性反接可实现输出信号逻辑状态的翻转;
- ◆ 测头的测针接口采用双层橡胶密封罩的防护方式。

测头的应用

- ◆ 在数控加工程序之前自动设定工件坐标系和加工基准点;
- ◆ 在数控加工程序之间自动对关键尺寸和位置坐标及其精度的检测和控制;
- ◆ 在数控加工程序之后对工件的关键尺寸、形状和位置精度的检测;
- ◆ 测头适用的设备: 各种规格的数控磨床, 数控车床以及专用测量装置。

测头的基本配置

- ◆ TP300 型测头单元配备的标准测针型号为: M4-P50-RB6-S36;
- ◆ 每只测头配备一只防撞保护杆, 型号: S-11-016;
- ◆ HPI-A16或HPI-R16型测头柄配备4芯屏蔽防油运动电缆, 长度6米。

选购注意事项

- ◆ 关于特殊测针, 核实TP300 型测头配备的标准测针是否能满足需要, 是否需要订购特殊规格的测针;
- ◆ 关于测头测针接口密封防护: 对于在数控车床上应用的TP300测头, 建议客户在订购测头时提出采用金属罩+橡胶密封罩防护的说明。