

MCS01 压力传感器技术参数(V1.1)

1. 简介：Overview

MCS01(Micheal-ChinaStar)压力传感器是西安中星测控有限公司独创的、具有完全自主知识产权的、多金属融合技术的新型压力传感器。具有高稳性、高可靠性、高过载、低温漂、低时漂、重复性好、迟滞小、绝缘强度高、全金属结构等优点。MCS01 pressure sensor is a new



type of pressure sensor, which has full independent intellectual property rights and is integrated with a variety of metal technologies. It has the advantages of high stability, high reliability, high overload pressure, low temperature drift, low time drift, good repeatability, small hysteresis, high insulation strength and all-metal structure.

2. 应用：Applications

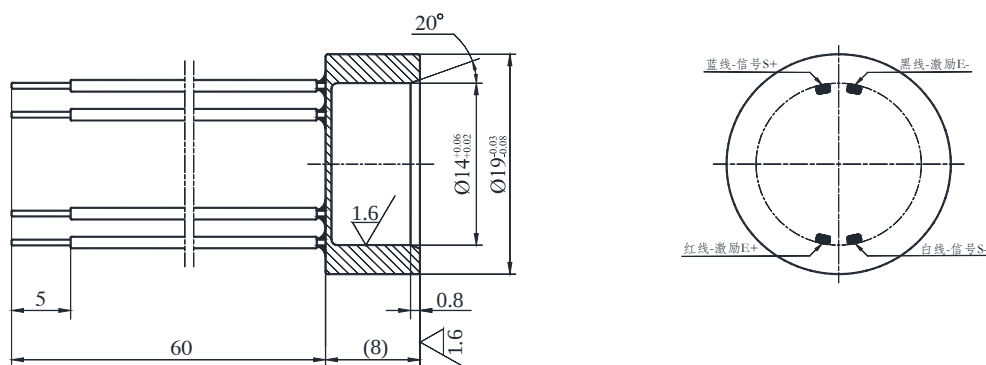
可广泛应用于石油、化工、航天、航空、航海、兵器、能源、水利、电力、热力、供水、汽车、工程机械、工业自动化等行业的压力测量和监视。It can be widely used in petrochemical, aerospace, aviation, navigation, weapons, energy, water conservancy, electricity, heat, water supply, automotive, construction machinery, industrial automation and other industries.

3. 技术参数如下：Technical Parameters

序号	类别 项目	A 级	B 级	C 级	D 级
1	量程范围 Measuring range(MPa)	1.0, 2.0, 5.0, 10, 20, 40, 80			
2	过载压力 Overload pressure	2X			
3	爆破压力 Burst pressure	≥20X (最大 Max: 450MPa)			
	准确度 Acceracy	±0.5%FS			
4	非线性 No-linearity	<0.5%F.S			
5	迟滞 Hysteresis	≤0.025%FS			
6	重复性 Repeatability	≤0.020%FS			
7	长期稳定性 Long term stability	±0.05%FS/Year	±0.1%FS/Year	±0.15%FS/Year	±0.2%FS/Year
8	满量程稳定性 Span time drift	±0.02%FS	±0.03%FS	±0.05%FS	±0.05%FS
9	零点热漂移 TC zero offset	±0.0015%FS/°C	±0.0025%FS/°C	±0.0050%FS/°C	±0.0050%FS/°C
10	满程热漂移 TC Span offset	±0.0030%FS/°C	±0.0050%FS/°C	±0.0100%FS/°C	±0.0100%FS/°C

11	工作电压 Operating voltage	5VDC (V _{max.} =10VDC, V _{min.} =2VDC)
12	零点输出 Zero offset	0±0.2mV/V
13	输出灵敏度 Span	1.5mV/V~2.5mV/V
14	输入电阻 Input resistance	350Ω~1.6kΩ
15	输出电阻 Output resistance	350Ω~1.6kΩ
16	工作温度 Operating temperature	-40℃~125℃ (可选择 Optional: -56℃~125℃)
17	存储温度 Storage Temperature	-56℃~125℃
18	绝缘电阻 Insulation Resistance	≥100MΩ@100V
19	绝缘强度 Insulation	≥250VAC
20	产品寿命 Min. lifetime	≥10 ⁸ 次
21	弹性体材料 Material	17-4PH Stainless steel
22	适用介质 Medium	与 17-4PH 兼容的气体、蒸汽、液体和黏稠流体 Gases, vapors, liquids and viscous fluids compatible with 17-4PH
***在测试 MCS01 芯体的技术参数时建议通电 10 分钟后进行测试; It is recommended to test after power on for 10 minutes. 按国家标准 GB/T 15478-2015 《压力传感器性能试验方法》进行测试! Testing procedures comply to GB/T 15478-2015.		

4. 结构、引线示意图：Structure & Wiring Diagram



5. 推荐的安装结构：Recommended assembly structure

a. “O”型圈密封推荐结构示意图 1：Structure with sealing O-ring

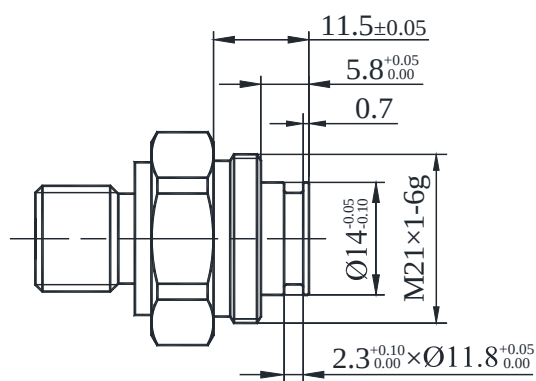


图 1

b. 全焊接密封推荐结构示意图 2: All-welded structure

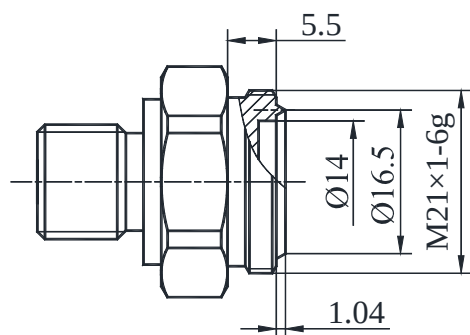


图 2

注意：当 MCS01 技术参数发生更新时恕不另行通知，均以当期传感器附带的技术文件为准！

Note: the technical parameters are subject to update without prior notice. All the technical documents attached to the product shall prevail.