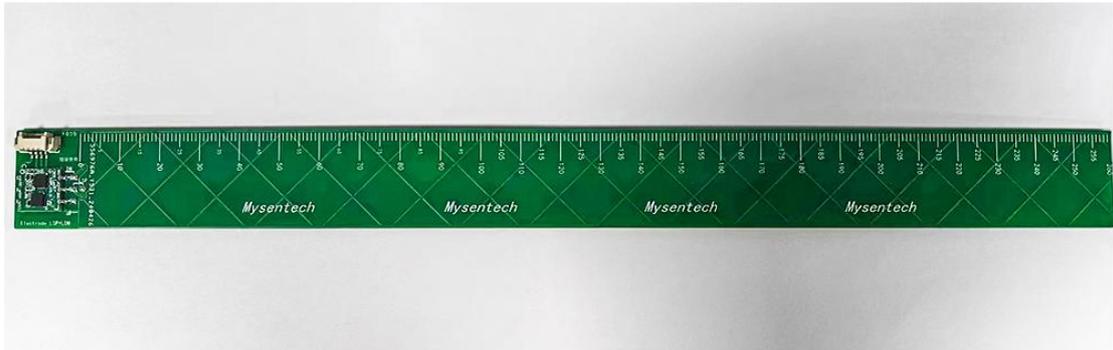


电子水尺液位传感器产品简介

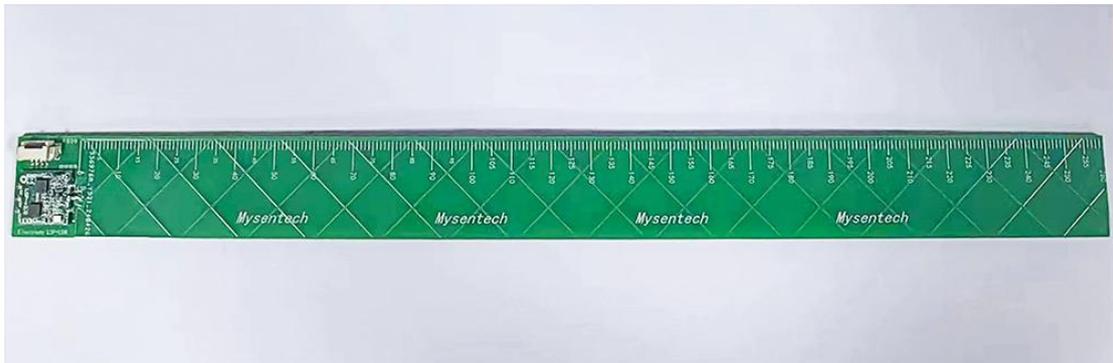
Minyuan E- Ruler

电子水尺液位传感器 MER (Minyuan E- Ruler) 是敏源传感推出的电容型、非接触式感知的智能水位检测模组，模组通过 MC11S/MC12G 高频电容传感芯片检测介电常数的变化，不同电容值反映出液位的不同高度，可测量连续液位或分段液位。

模组分为单端对地版本和差分版本。单端对地版本用的是敏源的高集成度 MC12G 芯片，利用单端对地式的电容检测原理，针对空气间隔较大或者液体介质粘稠度较高的场景更有利。差分版本用的是敏源高集成度 MC11S 芯片，利用差分电容检测原理，针对周围干扰较强的场景更有利。



差分版本 MER-LDM



单端对地版本 MER-LSP

1. 主要性能

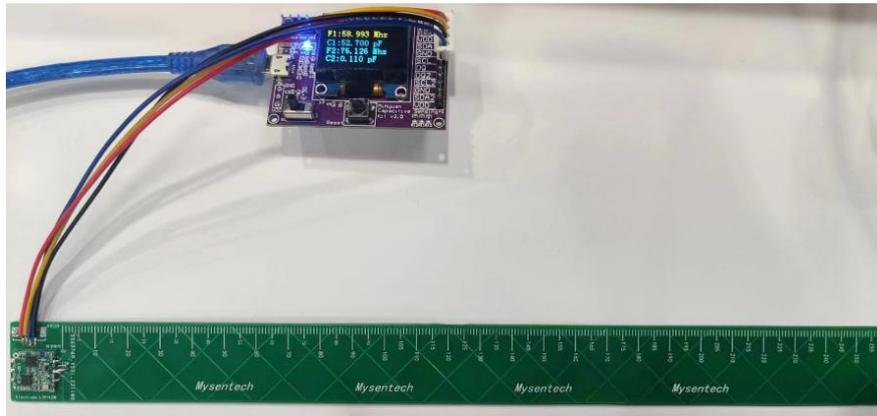
测量方式：非接触可穿透 1~10mm 非金属容器

电源接口	GND	电源地
	VDD	电源正

3. 通信方式

模组为 I2C 接口输出，上位机可查询电容值、频率、温度等信息。

使用敏源电容传感评估板 MCSK 连接模组，可进行快速测试评估。



MER 和 MCSK 连接

```
LSP: F1= 58.789 Mhz C1= 54.272 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.1 mV
LSP: F1= 58.813 Mhz C1= 54.077 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.5 mV
LSP: F1= 58.813 Mhz C1= 54.077 pF F2= 76.126 Mhz C2= 0.110 pF VT= 640.7 mV
LSP: F1= 58.868 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.2 mV
LSP: F1= 58.946 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.0 mV
LSP: F1= 58.946 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.6 mV
LSP: F1= 58.946 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.7 mV
LSP: F1= 58.946 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.4 mV
LSP: F1= 58.946 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.6 mV
LSP: F1= 58.954 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 640.4 mV
LSP: F1= 58.946 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.3 mV
LSP: F1= 58.946 Mhz C1= 52.945 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.5 mV
LSP: F1= 58.954 Mhz C1= 52.945 pF F2= 76.126 Mhz C2= 0.110 pF VT= 642.2 mV
LSP: F1= 58.954 Mhz C1= 52.945 pF F2= 76.126 Mhz C2= 0.110 pF VT= 642.1 mV
LSP: F1= 58.946 Mhz C1= 52.945 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.4 mV
LSP: F1= 58.954 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.0 mV
LSP: F1= 58.954 Mhz C1= 53.008 pF F2= 76.126 Mhz C2= 0.110 pF VT= 642.2 mV
LSP: F1= 58.954 Mhz C1= 52.945 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.2 mV
LSP: F1= 58.954 Mhz C1= 52.945 pF F2= 76.126 Mhz C2= 0.110 pF VT= 641.9 mV
```

单端对地型数据

```
LDM: F1 = 2.475 Mhz F2 = 2.882 Mhz C1= 16.628 pF R = 1.1767 VT 636.9 mV
LDM: F1 = 2.476 Mhz F2 = 2.883 Mhz C1= 16.612 pF R = 1.1766 VT 636.7 mV
LDM: F1 = 2.478 Mhz F2 = 2.883 Mhz C1= 16.643 pF R = 1.1760 VT 637.5 mV
LDM: F1 = 2.475 Mhz F2 = 2.883 Mhz C1= 16.612 pF R = 1.1773 VT 637.1 mV
LDM: F1 = 2.478 Mhz F2 = 2.883 Mhz C1= 16.610 pF R = 1.1760 VT 637.2 mV
LDM: F1 = 2.479 Mhz F2 = 2.884 Mhz C1= 16.657 pF R = 1.1759 VT 637.7 mV
LDM: F1 = 2.475 Mhz F2 = 2.884 Mhz C1= 16.641 pF R = 1.1779 VT 637.1 mV
LDM: F1 = 2.476 Mhz F2 = 2.884 Mhz C1= 16.639 pF R = 1.1772 VT 636.6 mV
LDM: F1 = 2.478 Mhz F2 = 2.886 Mhz C1= 16.670 pF R = 1.1771 VT 636.5 mV
LDM: F1 = 2.475 Mhz F2 = 2.886 Mhz C1= 16.639 pF R = 1.1785 VT 637.0 mV
LDM: F1 = 2.478 Mhz F2 = 2.886 Mhz C1= 16.639 pF R = 1.1771 VT 637.6 mV
LDM: F1 = 2.478 Mhz F2 = 2.886 Mhz C1= 16.841 pF R = 1.1771 VT 636.2 mV
LDM: F1 = 2.476 Mhz F2 = 2.884 Mhz C1= 16.639 pF R = 1.1772 VT 636.5 mV
LDM: F1 = 2.478 Mhz F2 = 2.886 Mhz C1= 16.655 pF R = 1.1771 VT 636.6 mV
LDM: F1 = 2.476 Mhz F2 = 2.886 Mhz C1= 16.655 pF R = 1.1778 VT 635.8 mV
LDM: F1 = 2.476 Mhz F2 = 2.886 Mhz C1= 16.655 pF R = 1.1778 VT 636.5 mV
LDM: F1 = 2.476 Mhz F2 = 2.886 Mhz C1= 16.652 pF R = 1.1778 VT 636.5 mV
```

差分式数据