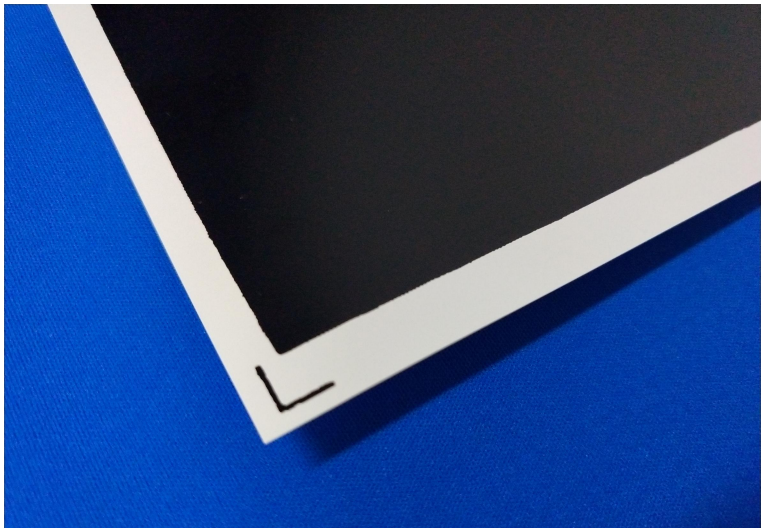
Beegor

BIGGER THAN SENSE

INKSOX 压阻薄膜

产品手册



INKSOX 压阻薄膜是 Beegor 贝骨公司投入数年研发的全新产品系列。

INKSOX 压阻薄膜是一种可测量任何形式的准静态压力的核心敏感材料。为了确保 INKSOX 压阻薄膜性能优良并经久耐用，Beegor 贝骨公司历时数年研发，并经过数十项严苛的检验测试。

四大核心优势

一、高灵敏度、更大量程

——更高的压力灵敏测量响应，以及超过 5MPa 的承压范围。

二、封装强韧、经久耐用

——强韧的封装，使得耐压寿命超过 1000 万次。

三、零漂小

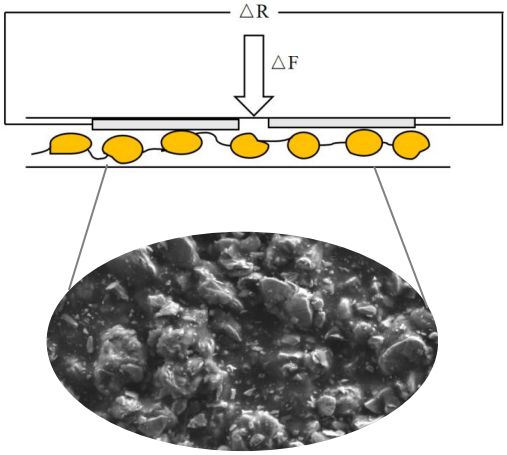
——耐候性和弹性模量更好的材料，确保超低的零漂。

四、尺寸随意定制

——提供 5mm-1000mm 不等的尺寸定制服务。

技术原理

INKSOX 压阻薄膜内部含有纳米压阻层，其表面含有众多的微粒连接为一个导电通路，当薄膜收到压力的时候，微粒之间发生微小的物理性的迁移，从而改变了原有导电通路电阻的大小，形成压力-电阻变化曲线。



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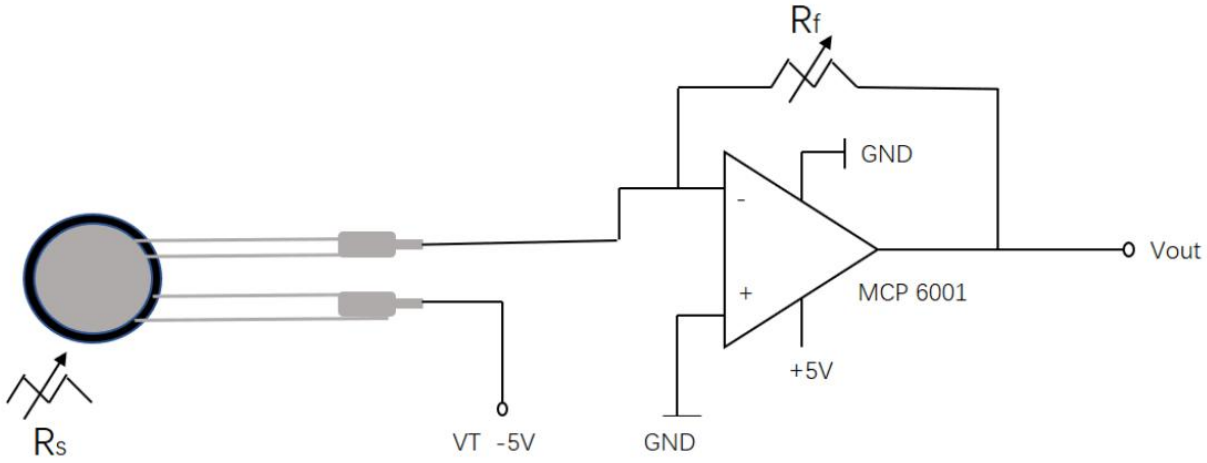
技术参数

	单位 (Units)	数值 (Value)	误差(Error)
最小触发力(Trigger Force)	N	0.2	±5%
压力频率范围 (Force Frequency Range)	Hz	0 to 1	
压力范围(Pressure Range)	N	0.2 to 500	定制
响应时间 (Response Time)	mS	<10	
飘移 (Drift，2.5kg，24h)		-5%	
电极引出线 (Electrode Outlet)	2.54mm端子		定制
工作温度(Operating Temperature)	℃	-40 to 80	
湿度 (Humidity)		0 to 80%	
耐久性 (Durability，1kg，4Hz)		>1000 ,000	
传感器规格			
长度L(Length)	mm	定制	±1%
宽度W(Width)	mm	定制	±1%
厚度D (Thickness)	mm	0.25	±1%

应用电路

要得压力变化，需要对*Inksox*压阻薄膜传感器进行电路处理：匹配电路即可获得电压－压力变化曲线，如下图所示。



计算公式：Vout = －Vt*(Rf/Rs)；

说明： Inksox压阻薄膜传感器的电阻为Rs；

参考电阻Rf建议在1k～100k欧之间；

电源电压可根据运放供电进行选择。

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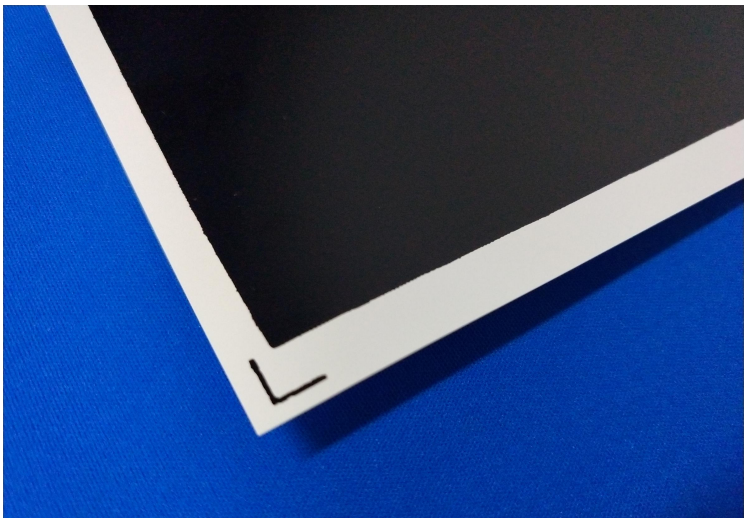
INKSOX Pressure-Resistance Film

Product Manual



INKSOX Pressure-Resistance film is a new product series developed by Beegor Company for several years.
INKSOX Pressure-Resistance film is a core sensitive material for measuring quasi-static pressure in any form. To ensure the excellent performance and durability of INKSOX Pressure-Resistance films, Beegor has been developing for several years and has undergone dozens of rigorous tests.

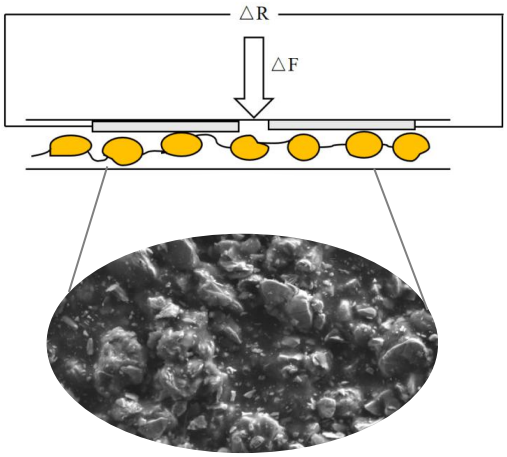
Advantage

More sensitive -Higher Pressure Sensitive Measurement Response
Zero drift- Long-term, repeated use of zero drift small
More stable supply-Faster and more stable supply

More durable-Strong packaging improves durability
Wider Size-Provide millimeter to meter size customization

Technical Principle

The core mechanism of PIEZOR piezo films is the formation of space charges to exhibit piezoelectric effect by utilizing the structural characteristics of organic shell holes. When the piezoelectric film is subjected to forward pressure, its thickness changes slightly, which will induce the change of induced charge on the corresponding surface electrode layer, thus showing short-circuit current or open-circuit voltage in the external circuit.



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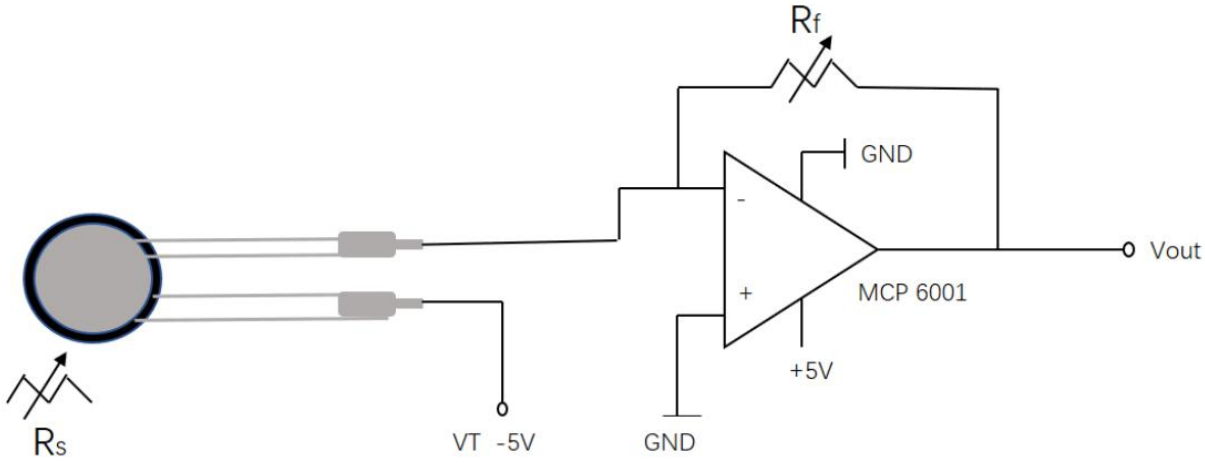
Technical Parameter

	单位 (Units)	数值 (Value)	误差(Error)
最小触发力(Trigger Force)	N	0.2	±5%
压力频率范围 (Force Frequency Range)	Hz	0 to 1	
压力范围(Pressure Range)	N	0.2 to 500	Customized
响应时间 (Response Time)	mS	<10	
飘移 (Drift，2.5kg，24h)		-5%	
电极引出线 (Electrode Outlet)	2.54mm Terminal		Customized
工作温度(Operating Temperature)	℃	-40 to 80	
湿度 (Humidity)		0 to 80%	
耐久性 (Durability，1kg，4Hz)		>1000 ,000	
传感器规格 (Sensor Specifications)			
长度L(Length)	mm	Customized	±1%
宽度W(Width)	mm	Customized	±1%
厚度D (Thickness)	mm	0.25	±1%

Application Circuit



Formula	Vout = − Vt*(Rf/Rs);
	RS-resistance of pressure film sensor
	RF- reference resistor. It is suggested that the resistance should be between 1K~ 100k.
	Vt-power supply voltage.

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