LEGACT
力 感 科 技

Technical data FS- INS-W99-V1
99-zone foot pressure sensor

Product Description

FS-INS-W99 foot pressure sensor is with 99 independent sensing areas, using 15 rows of 7 columns of sensing area layout, a total of 22 interface leads, interface leads using 1mm pitch, 22Pin, 0.3mm thickness plug-in interface. The output resistance of the sensing area varies with the external pressure of the flexible film pressure sensor.

The foot pressure sensor consists of polyester film with excellent comprehensive mechanical properties, high conductive material and nano-scale pressure-sensitive material. The bottom layer is a conductive layer on a flexible film and a composite, and the top layer is a pressure-sensitive material on a flexible film and a composite. The two are bonded by double-sided glue and isolate the sensing area of the upper and lower layers. When the sensing area is under pressure, the line that separates the underlying layer from each other is on, and the output resistance of the sensing area changes accordingly with the pressure.

Excellent pressure sensing.

Fast response

Long durability life

Reasonable human foot mechanics design

Custom is available for design

Typical applications (smart insoles)

Pedometer

Gait analysis

Foot force analysis

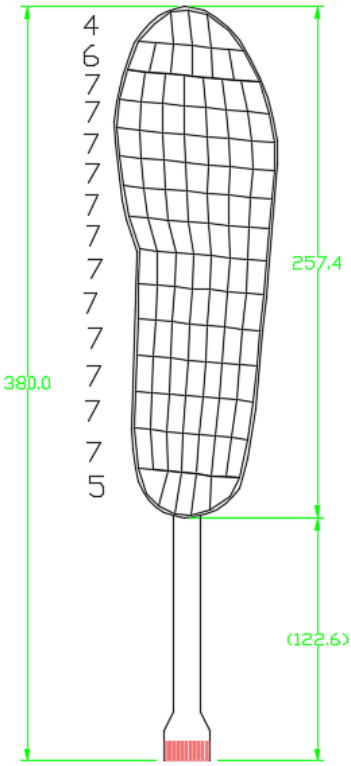
Foot Correction Analysis

Technical data

Thickness	0.4mm
Form	Thin, flexible
Trigger force	100g
Pressure range	0.1Kg~10kg
pressure	Soft contact press
Resistance not triggered	大于 1M Ω
Activation time	小于 1mS
Use temperature	-20℃~+65℃
Durability	More than 10million times (Daily walking, under normal use)
Resistance range	0.5K~50KΩ
Response time	<1ms
Waterproof	NO
Dust	NO
Electromagnetic interference EMI	NO
Electrostatic release EDS	NO
RoHS compliant	RoHS

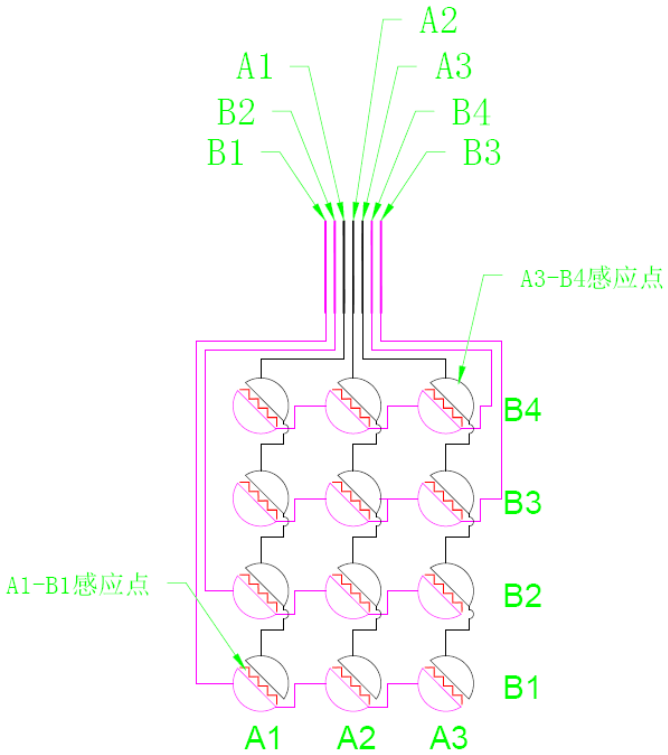
Description

1. The structure size is shown below：

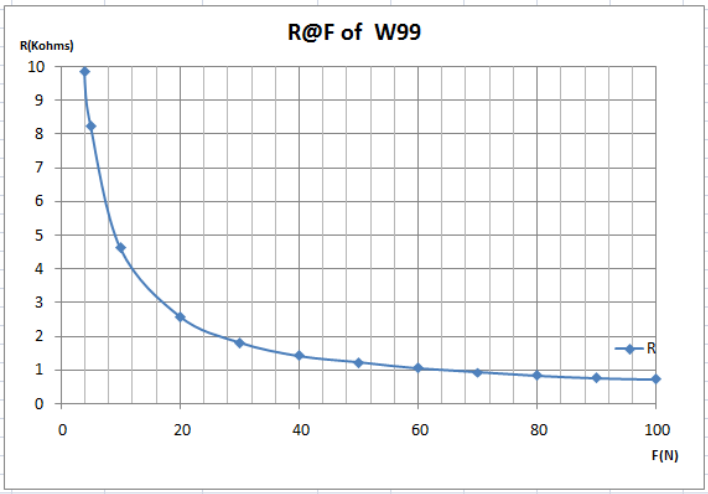


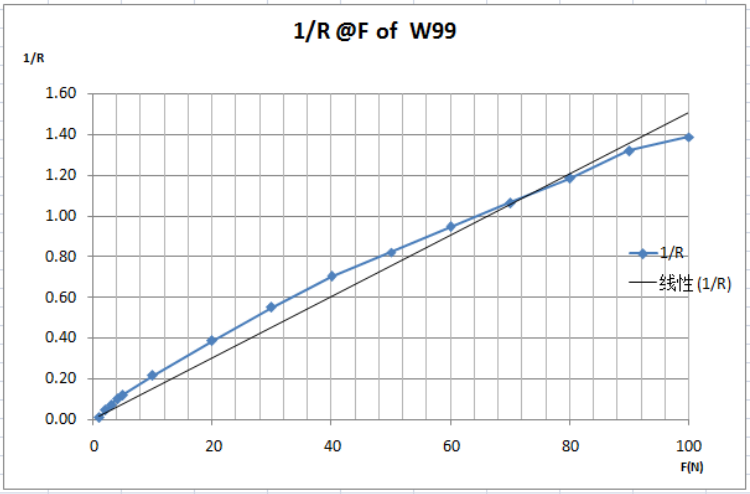
2. Description of the principle of the circuit

With array distribution,Xm-Yn corresponds to the sensing points of column m and n row, respectively, and the resistance values of the Xm-Yn sensing points can be measured when the interfaces Xm and Ym are connected with the universal meter ohm probe. Using A,B for X,Y, sensor circuit schematics are as follows:



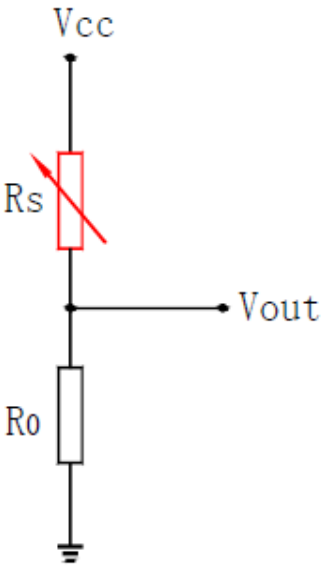
3. Product pressure resistance characteristics (for reference only)

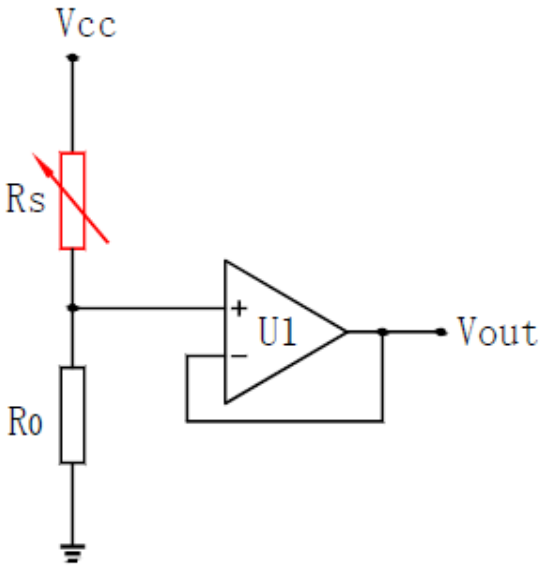




4. Application circuit instructions

It is recommended to obtain sensor output information by connecting the fixed resistance of 1K-5K euros and capturing voltage changes at both ends of the fixed resistance.





Note:

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