FORCE SENSITIVE RESISTOR (FSR)

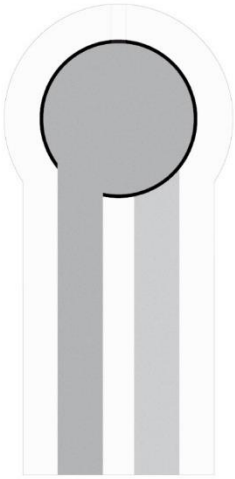
THRU Mode

FRX1TO

Datasheet

Features

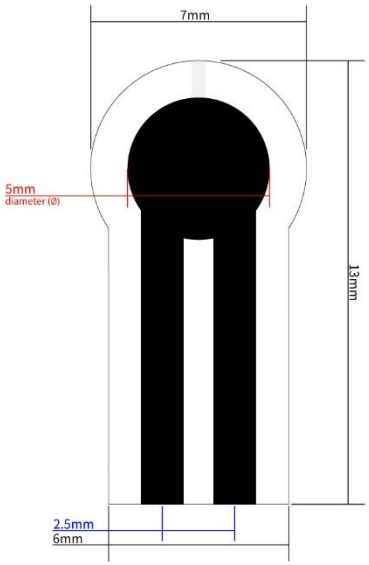
Lightweight precise sensing
Miniature configuration
Flexible and lightweight
Ultra-thin
Instant responding sensitivity
Low actuation force
Low power consumption
Robust
Easy to integrate



FRX1TO
Force sensitive resistor - Thru mode

CERADEX

Technical specifications



Technical dimension

FRX1TO
Force sensitive resistor - Thru mode

CERADEX

Sensor	FRX1TO
Length	13mm
Width	7mm
Active area	5mm diameter (Ø)
Pin spacing	2.5mm
Nominal thickness	0.33mm
Substrate	PET
Sensor style	Open
Connector	2-pin male solder tabs
Thickness	0.73mm
Width	1.6mm

Note: Ceradex offer customize sensor solution for application-specific integration. Including the sensor's dimension, single-zone or multi-zone sensing area, connector options, waterproofs, humidity tolerance, and heat tolerance. Contact us for more information.

Characteristics

Sensor type		Thru mode
Force sensing range		200 g – 10 kg
Actuation force		≤ 200 g
Force resolution		Continuous (analog)
Force repeatability	Single part	± 2%
Non-actuated resistance		> 10M Ω (Ohm)
Response time		< 40 ms
Operation temperature		-20°C - +60°C

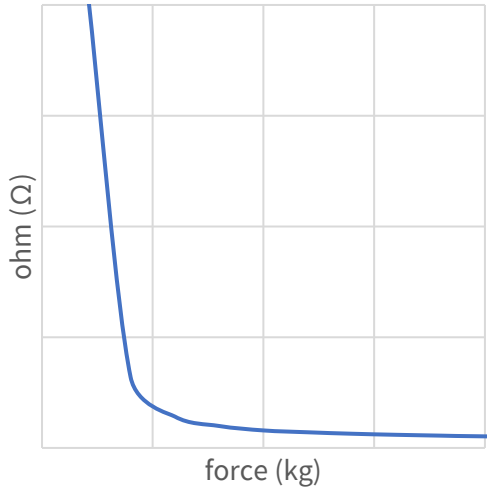
Durability

Tap durability	1kg/1Hz	> 10M actuation
Standing load durability	2.5kg/24hr	< 5%
Operating temperature performance		
Cold	-40°C/1hr	< 5%
Hot	+60°C/1hr	<15%
Storage temperature performance		
Cold	-40°C/1hr	< 10%
Hot	+60°C/1hr	<15%

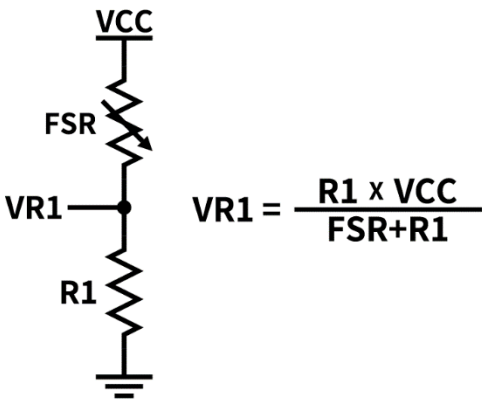
Safety

Maximum driving power	< 240mW
Electromagnetic interference (EMI)	No
Electrostatic discharge (ESD)	No

Response curve



Electrical layout



Note: Force sensing range, response curve, and actuation force can be modified in Ceradex's customized sensor solution.

Applications

Grips applications

Sportwear grips/steering wheel/game controller pressure detection and monitoring.

Occupancy detection

Seat/bed occupancy indicator for safety and monitoring.

User Interface

Can be operated under glove-wearing conditions and detects touch/press control as switches and keypads.

Biomedical pressure analysis

Can be used in wearable devices such as foot sensing and posture analysis.

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