

# FSP Series

Force Sensing Potentiometer



## SERIES SPECIFICATIONS

Series	Active area	Sensor overall width	Sensor overall length	Tail length	Tail width
FSP01CE	13.00 x 100.00mm	20.00 x 109.00mm	184.00mm	75.00mm	10.00mm
FSP02CE	13.00 x 50.00mm	20.00 x 59.00mm	134.00mm	75.00mm	10.00mm
FSP03CE	ø16.00mm in / ø36.00mm out	ø46.00mm	95.80mm	49.80mm	11.00mm

## CHARACTERISTICS

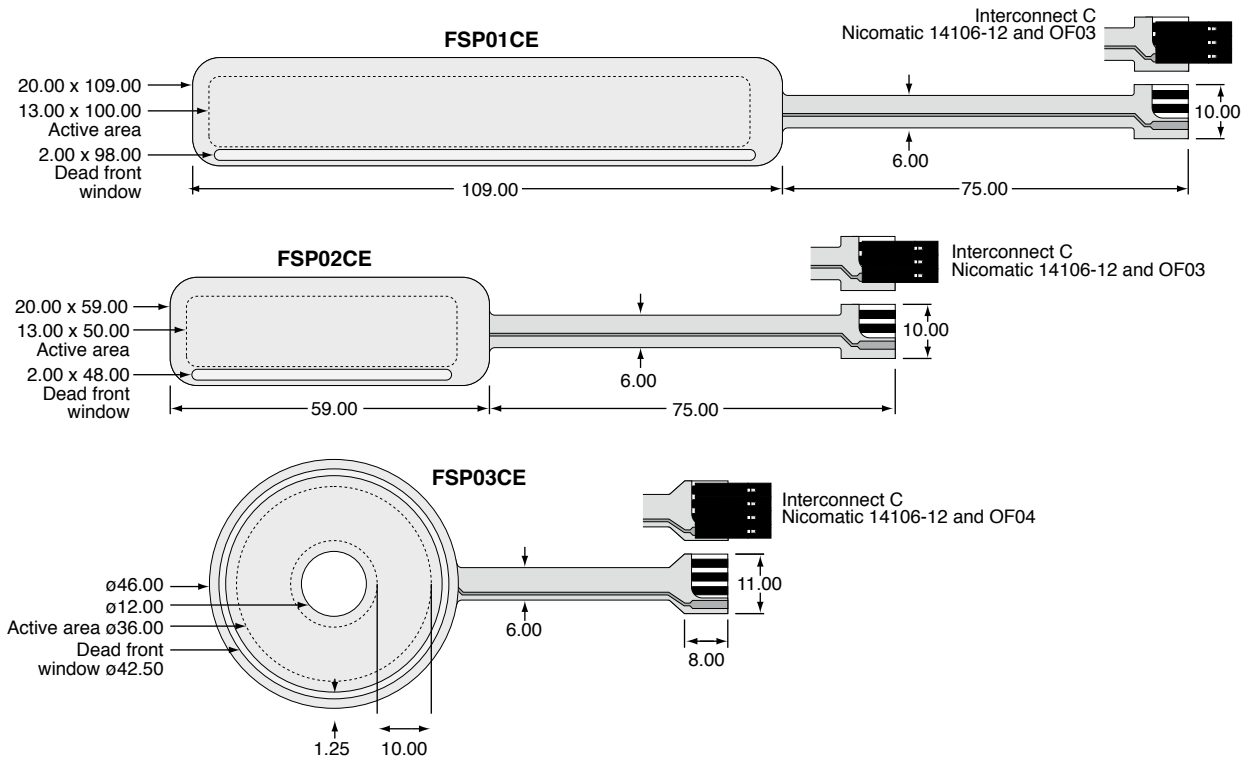
Characteristic	Description	Value
<b>Thickness</b>	0.375mm (inc. 0.05mm adhesive)	
<b>Mode</b>	Thru	
<b>Trace width</b>	0.25mm	
<b>Trace pitch</b>	0.50mm	
<b>Spacer height</b>	0.125mm	
<b>Actuation force</b>	Force to reach 10MΩ, Average of 100 samples	< 20g
<b>Force range</b>	linear region of log/log, Higher forces can be achieved with custom sensor and actuation methods	Up to 1kg
<b>Long term drift</b>	1kg for 48hrs, Per log time	< 2%
<b>Single part repeatability</b>	100 actuations of 1kg, 1 standard deviation/mean	5%
<b>Part to part repeatability</b>	100 sensors same batch, 1 std. deviation/mean	±10%
<b>Low temp. storage</b>	-20°C for 250hrs, Avg. change in resistance of 5 sensors	2%
<b>High temp. storage</b>	+85°C for 250hrs, Avg. change in resistance of 5 sensors	9%
<b>High humidity storage</b>	+85°C/85%RH for 250hrs, Avg. change in resistance of 5 sensors	10%
<b>Lifecycle durability</b>	(10M) 1kg force at 3Hz, Avg. change in resistance of 4 sensors	4%
<b>Hysteresis</b>	100 actuations of 1kg, Avg. change in resistance of 100 samples	5%
<b>Operational temp. range</b>	100 cycles at 0.5kg,	-20 to +60°C
<b>Linear resistance</b>	Resistance between pins 1 & 2, Average of 100 parts same batch	FSP01CE: 1.25k, ±15% FSP02CE: 0.76k, ±15% FSP03CE: ±15%

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependant on actuation interface, mechanics, touch location, and measurement electronics.

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### DIMENSIONS



### ORDERING INFORMATION

#### Terminal type

- A = Bare tail
- B = Solder tab
- C = Connector housing (female)
- D, E... = Assigned sequentially for custom designs

**FSP03CE** - RoHS Compliant

<b>Series FSP</b>	<b>Format</b>	<b>Modifier</b>
Force sensing potentiometer	01 = Short strip 02 = Long strip 03 = Round wheel 04, 05... = Assigned sequentially for custom designs	for custom designs (optional)