

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

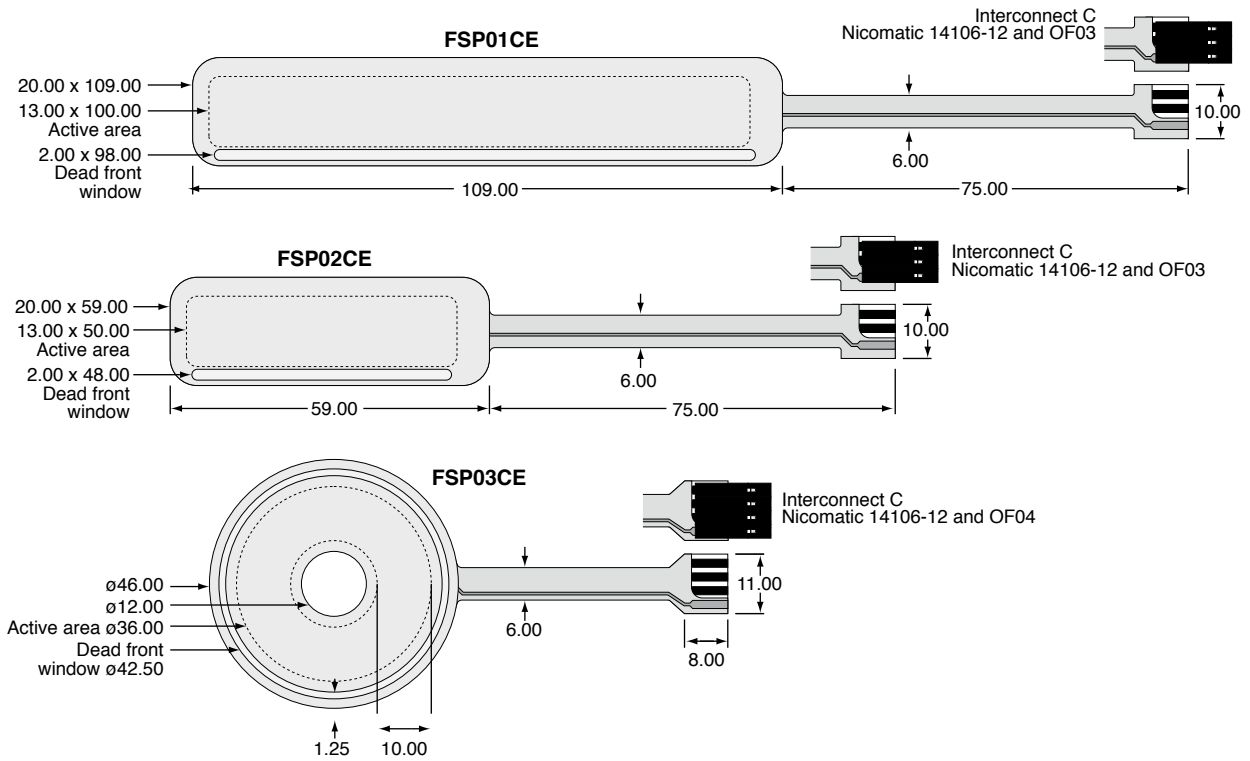
Characteristic	Description	Value
Thickness	0.375mm (inc. 0.05mm adhesive)	
Mode	Thru	
Trace width	0.25mm	
Trace pitch	0.50mm	
Spacer height	0.125mm	
Actuation force	Force to reach 10MΩ, Average of 100 samples	< 20g
Force range	linear region of log/log, Higher forces can be achieved with custom sensor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

F S P 0 3 C X E - RoHS Compliant

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