# **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 o	ut ø46.00mm	95.80mm	49.80mm	11.00mm

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Thickness	0.375mm (inc. 0.05mm adhesive)
Mode	Thru
Trace width	0.25mm
Trace pitch	0.50mm
Spacer height	0.125mm

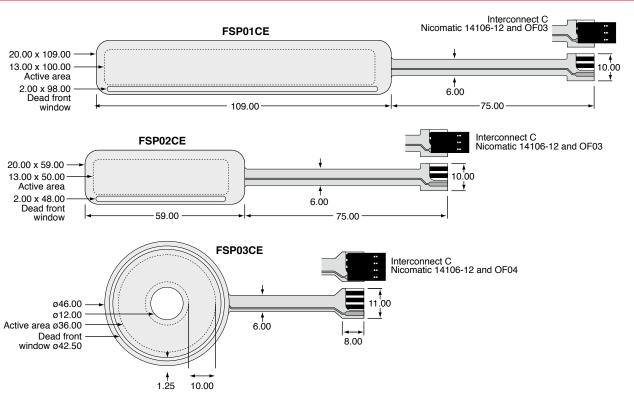
Characteristic	Description	Value	
Actuation force	Force to reach $10M\Omega$ , Average of 100 samples	< 20g	
Force range	linear region of log/log, Higher forces can be achieved with custom sensor and actuation methods	Up to 1kg	
Long term drift	1kg for 48hrs, Per log time	< 2%	
Single part repeatability	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 E - RoHS Compliant **FSP03C** I Modifier Series FSP Format Force sensing 01 = Short strip for custom potentiometer 02 = Long strip designs (optional) 03 = Round wheel 04, 05... = Assigned sequentially for custom designs