

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

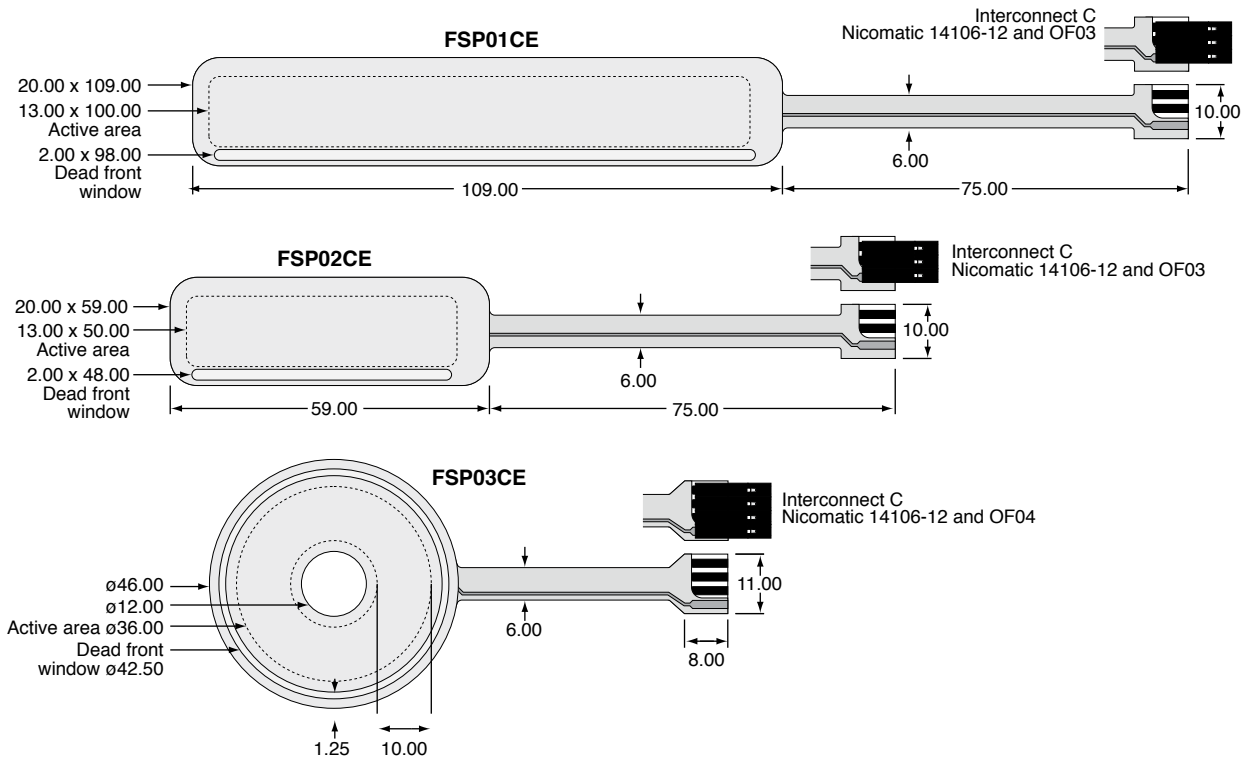
| Characteristic | Description | Value |
|-----------------------------------|--|---|
| Thickness | 0.375mm (inc. 0.05mm adhesive) | |
| Mode | Thru | |
| Trace width | 0.25mm | |
| Trace pitch | 0.50mm | |
| Spacer height | 0.125mm | |
| Actuation force | Force to reach 10MΩ, Average of 100 samples | < 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

FSP03CE - 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) |