

## Precision SC Specs

|                                   |  |   |  |  |  |                        |                              |  |                                     |
|-----------------------------------|--|---|--|--|--|------------------------|------------------------------|--|-------------------------------------|
| <b>HARDWARE SPECIFICATIONS</b>    | Maximum Internal Voltage Test<br>±10.0 V<br>±100 V &<br>±200 V | High Voltage Limit<br>N/A                 | External Sensor Channels<br>1              | Independent Voltage Sources<br>1                   |  |                        |                              |  |                                     |
| Optional                          |  |   |  |  |  |                        |                              |  |                                     |
| <b>MEASUREMENT SPECIFICATIONS</b> | DRIVE DAC<br>12 bits   | Output Voltage Resolution<br>4.88 $\mu$ V | Min Pulse Width<br>50 $\mu$ s              | Min Rise Time @<br>5V<br>40 $\mu$ s                | Maximum Internal Fatigue Frequency<br>5 kHz  | External Fatigue<br>No | Peak Output Current<br>50 mA | High Speed Hysteresis Frequency<br>2 kHz | Low Speed Hysteresis Period<br>10 s |
| <b>System Ranges:</b>             |  |   |  |  |  |                        |                              |  |                                     |
| <b>SYSTEM HARDWARE</b>            | RETURN ADC<br>16 bits  | Integrator Voltage Range<br>±10 V         | Sense Capacitors<br>1.11 nF, 110 pF, 10 pF | Maximum Amplification<br>1                         | Minimum Amplification<br>1                   | Min Amp w/ HVI<br>N/A  |                              |  |                                     |
| <b>MINIMUM MEASUREABLE CHARGE</b> | Integrator Voltage Divisions<br>65536                          | Minimum Sense Capacitance<br>1 nf         | Minimum Voltage Resolution<br>305 $\mu$ V  | Minimum Sense Cap Charge<br>3.1 fC /100 (100x Amp) | Min. Charge Amplification @ x 100<br>0.031fC |                        |                              |  |                                     |
| <b>MAXIMUM MEASURABLE CHARGE</b>  | Maximum Sense Voltage<br>±10.0 V                               | Maximum Sense Capacitance<br>5.7 nf       | Maximum Sense Cap Charge<br>11.1 nC        | Correction for Amplification<br>11.1 nC            | Range with Precision HVI<br>N/A              |                        |                              |  |                                     |