INSTALLATION DIMENSIONS

INCHES

[mm]

2

[51]

2 1/2

[64]

¾ - 28 UNF - 2B ¾ DEEP TYPICAL

TENSION FORCE

ACTIVE END

SM-10, SM-25, SM-50, SM-100, SM-250

SM-500, SM-1000

2

[61]

1 1/4

[32]

¾

[19]

¾ - 20 UNF - 2B ½ DEEP TYPICAL

TENSION FORCE

ACTIVE END

ELECTRICAL INFORMATION

SM Series is provided with a 4-conductor shielded cable (AWG 28) 5 feet (1.5m) long.

Wiring Color Code complies with ISA S37.8 “Specifications and Tests for Strain Gage Force Transducers” and SMA Load Cell Terminology.

APPLICATION NOTES

1. The Super-Mini load cell is for controlled environment applications. In general, it can be used anywhere a readout instrument can be used.

2. At least one diameter thread engagement is desirable, approximately ¾” (6mm) on the SM-10 (45N) through 250 pound (1000N) ranges and ¾” (12mm) on the SM-500 (2000N) and 1000 (5000N) units.

3. Jam nuts may be used, however care should be exercised to not apply excessive torque across the load cell. Torque should be reacted against the load cell structure immediately adjacent to the jam nut.

   SM-10: 5 - inch pounds (0.55N•m)
   SM-25: 10 - inch pounds (1.1N•m)
   SM-50: 20 - inch pounds (2.2N•m)
   SM-100, 250: 40 - inch pounds (4.5N•m)
   SM-500, 1000: 200 - inch pounds (22.5N•m)

4. The force to be measured should be applied to the active end of the cell to eliminate possible errors due to cable interaction. The active end of the cell is separated from the cable/connector side by the slot (cutout) in the flexure (the serial number is always shown on the inactive side).

5. NOTE: Please exercise caution during handling and installation of these load cells. The application of a force equaling more than 150% of rated capacity (15 lbs. on SM-10; 37.5 lbs. on SM-25, etc.) can result in irreparable damage.

6. These units are not intended for submerged operation. A Moisture Resistant coating is applied to protect SM Series for capacities 25 thru 1000 lbs. from high humidity conditions up to and including 95% Relative Humidity and periodic exposure to condensation.

   Bottoming out of the mounting stud can cause irreparable damage to the load cell.

PERFORMANCE DATA

Input Resistance — Ohms ................. 350 + 40/-3.5
Output Resistance — Ohms .................. 350 ± 3.5
Recommended Excitation — VDC ............. 10
Non-Linearity — % Rated Output ........... ± 0.03
Hysteresis — % Rated Output ................ < ± 0.02
Temp. Range Compensated — °F (-15 to 65°C) ............ 0 to 150

Temperature effect on zero —
% Rated Output/100°F (55.6 °C) ........... ± 0.15
Zero Balance — % Rated Output ............. < ± 1

SUPER-MINI LOAD CELL

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WARRANTY & CERTIFICATION STATEMENT ON OTHER SIDE

FORM 15-3
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