



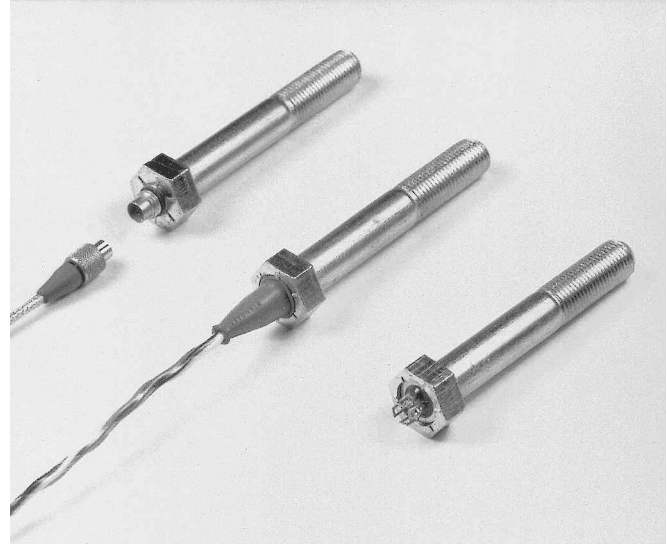
# Standard Internally Gaged Hex Head Cap Screws, SXA Series

Aluminum Alloy

*To measure accurate  
preload, service load  
and overload of bolted  
assemblies*

*For maximum uniformity,  
efficiency and reliability  
in bolted assemblies*

*For effective research,  
testing and manufacturing  
of bolted assemblies*



U.S. Patent No. 2,873,341

## MECHANICAL SPECIFICATIONS

|                                  |  |
|----------------------------------|--|
| <b>Material</b>                  | Aluminum Alloy 2024-T4   |
| <b>Hardness</b>                  | Rockwell B54 Minimum   |
| <b>Ultimate Tensile Strength</b> | 55,000 psi Minimum; 60,000 psi average                                     |
| <b>Threads</b>                   | Class 2A, rolled   |
| <b>Thread Length</b>             | 2-diameters + 1/4 inch full threads + 3/16 inch maximum imperfect threads. |

## ELECTRICAL SPECIFICATIONS

| ITEM  | CHARACTERISTIC  |
|---|---|
| <b>Gages Type</b>                                     | Metal Foil  |
| <b>Gage Factor</b>                                    | 2.00  |
| <b>Service Temperature</b>                            | 150°F or 250°F  |
| <b>Non-Linearity</b>                                  | ±1% of Allowable Load                                 |
| <b>Non-Repetition</b>                                 | ±0.1% F.S.  |
| <b>Bridge Resistance</b>                              | 350 or 120 Ohms (Nominal)                             |
| <b>Configuration</b>                                  | Full Bridge (FB)                                      |
| <b>Output Signal<br/>(nominal, at allowable load)</b> | FB: 3.0 mv/V, approx.                                 |
| <b>Excitation</b>                                     | 350-ohm FB: 12V (Maximum)<br>120-ohm FB: 3V (Maximum) |

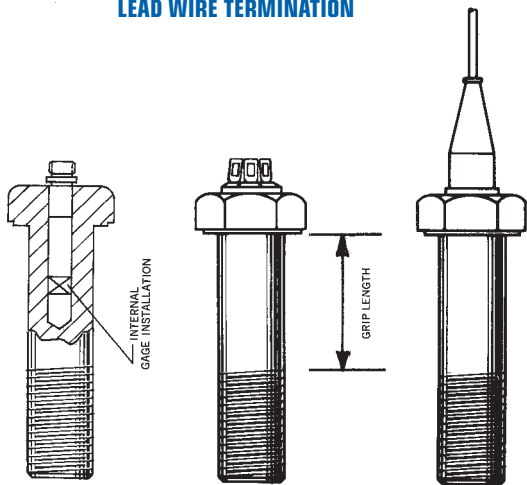
## ALLOWABLE LOADS

Allowable loads for Strainert Hex Head Cap Screws, as tabulated below, are based on approximately 70% Yield Strength of the threads, in pounds.

| SCREW SIZE  | LOAD LBS. |
|-------------|-----------|
| 1/4 – 20NC  | 900       |
| 5/16 – 18NC | 1,500     |
| 3/8 – 16NC  | 2,200     |
| 1/2 – 13NC  | 4,000     |
| 5/8 – 11NC  | 6,500     |
| 3/4 – 10NC  | 10,000    |

Each cap screw is calibrated to above indicated load as part of quality control procedure. See calibration section for additional calibration certification.

**LEAD WIRE TERMINATION**



Type C with Connector

Type H with Multi-pin Header

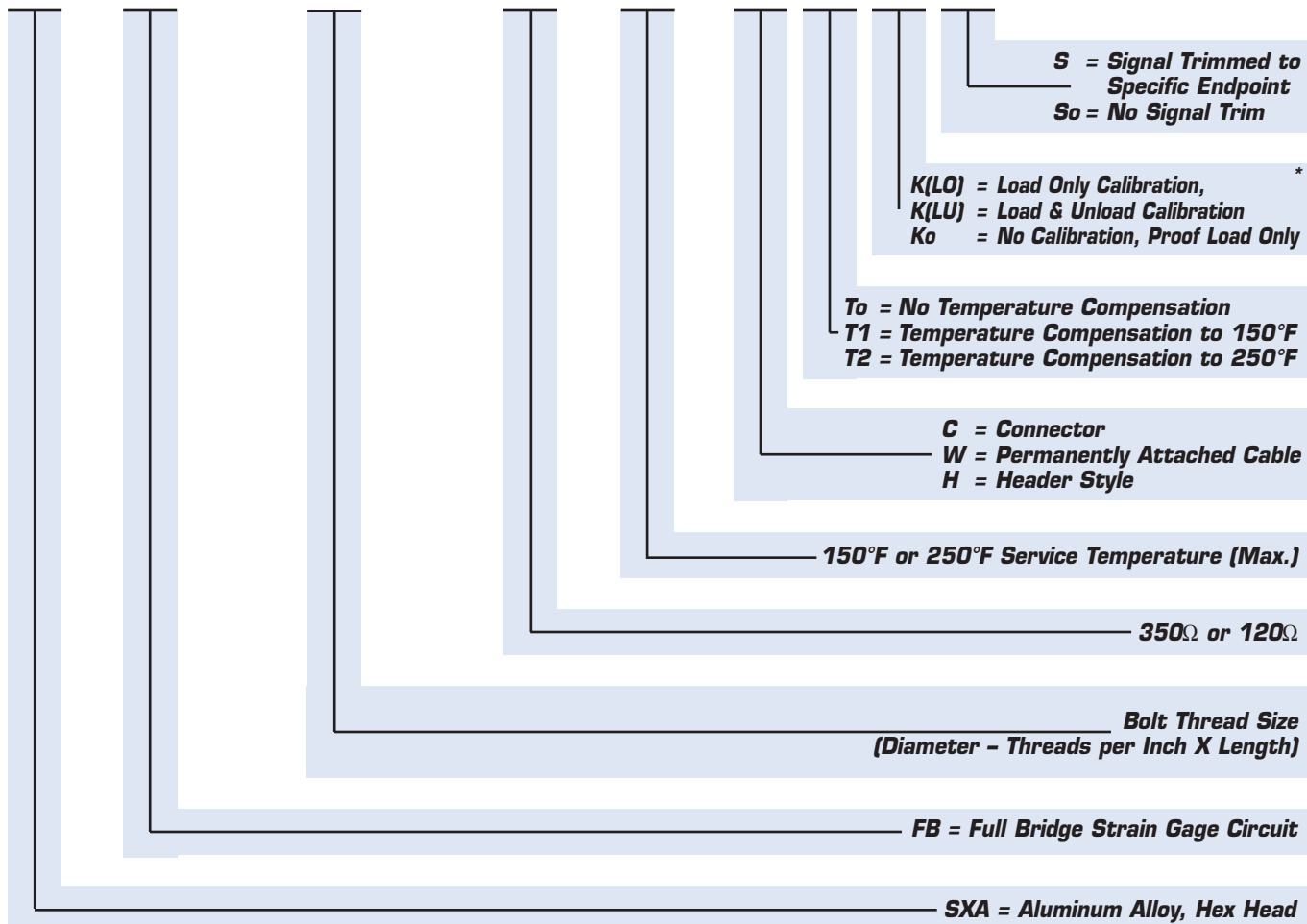
Type W with Cable

- Type C – screw type miniature connector, requires mating cable assembly.
- Type H – a multi-pin header for soldered lead wire connections
- Type W – factory installed cable

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**ORDERING INFORMATION**

**SXA - FB 1/2-13NCx4 (350Ω / 250°F) C T2 K(LO) So**



\* See Strainsert Calibration Services (Page 94)