



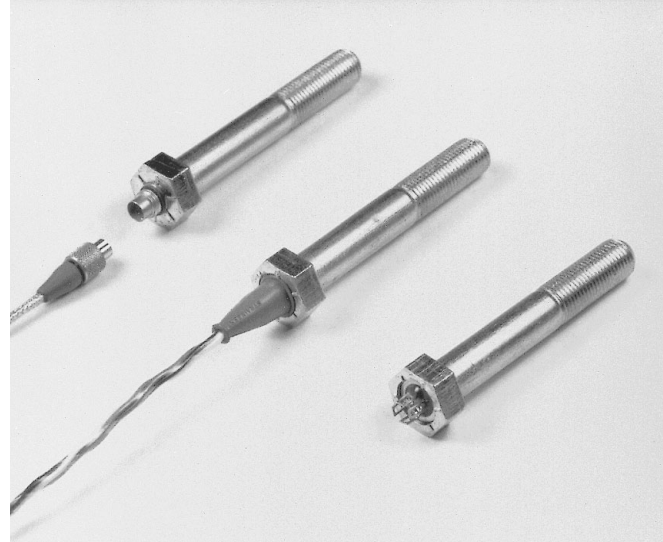
# Standard Internally Gaged Hex Head Cap Screws, SXA Series

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 (nominal, at allowable load)</b>	FB: 3.0 mv/V, approx.
<b>Excitation</b>	350-ohm FB: 12V (Maximum) 120-ohm FB: 3V (Maximum)

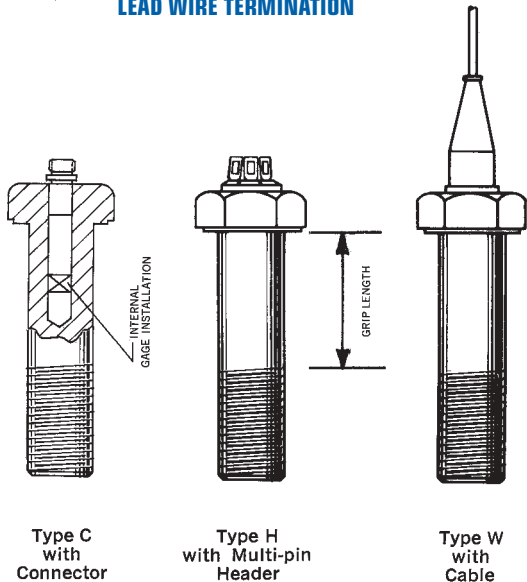
## ALLOWABLE LOADS

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 proof-loaded to above indicated load as part of quality control procedure. Both the value of proof-load and mv/V signal obtained are furnished to customer on a no-charge basis. See calibration section for additional calibration certification.

**LEAD WIRE TERMINATION**

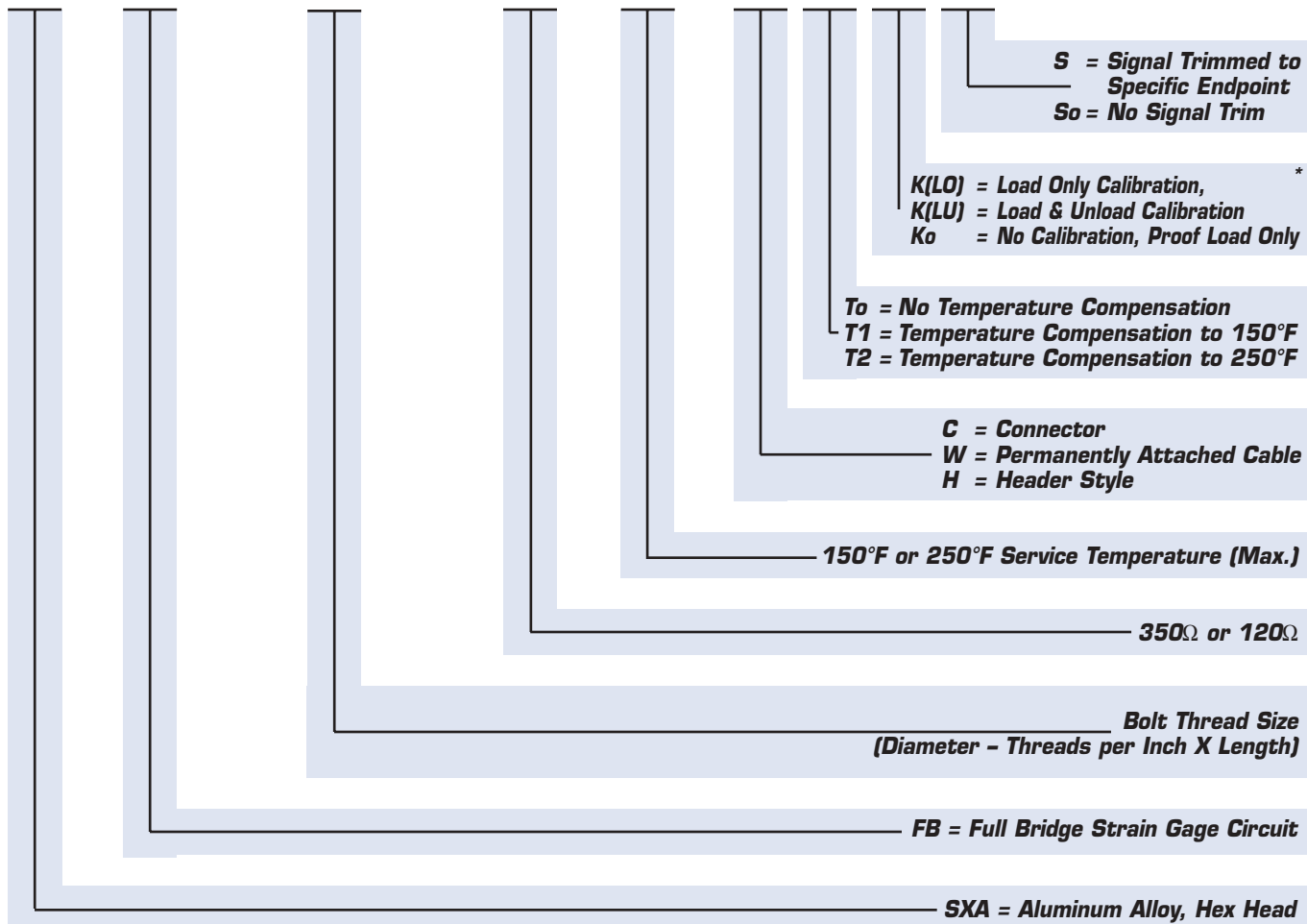


- Type C – screw type miniature connector, requires mating cable assembly.
- Type H – a multi-pin header for soldered lead wire connections
- Type W – factory installed cable

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**ORDERING INFORMATION**

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



**S = Signal Trimmed to Specific Endpoint**  
**So = No Signal Trim**

**K(LO) = Load Only Calibration,**  
**K(LU) = Load & Unload Calibration**  
**Ko = No Calibration, Proof Load Only**

**To = No Temperature Compensation**  
**T1 = Temperature Compensation to 150°F**  
**T2 = Temperature Compensation to 250°F**

**C = Connector**  
**W = Permanently Attached Cable**  
**H = Header Style**

**150°F or 250°F Service Temperature (Max.)**

**350Ω or 120Ω**

**Bolt Thread Size (Diameter - Threads per Inch X Length)**

**FB = Full Bridge Strain Gage Circuit**

**SXA = Aluminum Alloy, Hex Head**

\* See Strainsert Calibration Services (Page 94)