



Standard Internally Gaged 12-Point Cap Screws, SDH Series

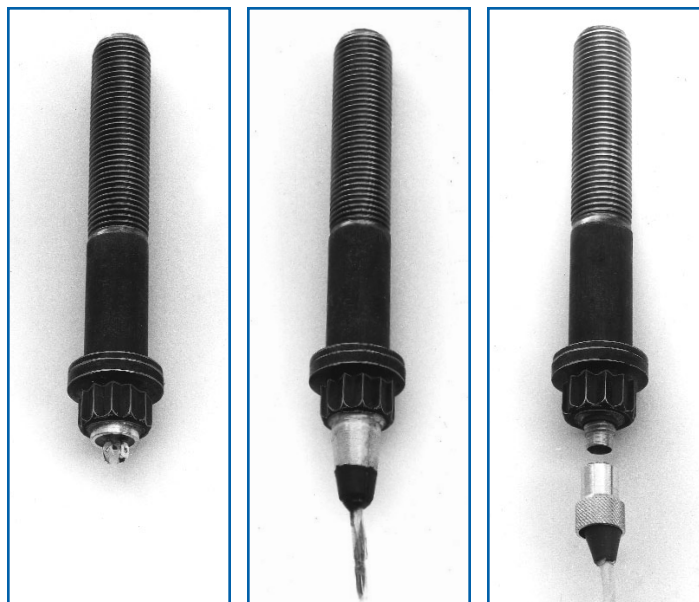
Steel Alloy

*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*

*(Ferry Cap Counter-Bored Screws
interchangeable with most Socket
Head Cap Screws)*



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

MECHANICAL SPECIFICATIONS

| | |
|----------------------------------|---|
| Material | SAE 4140 |
| Hardness | Rockwell C37 to C43 |
| Ultimate Tensile Strength | 170,000 psi Minimum |
| Threads | Class 3A, rolled to 1" dia.; Class 2A, rolled 1-1/8" dia. & larger. |
| Finish | Black Satin Finish |

ELECTRICAL SPECIFICATIONS

| ITEM | CHARACTERISTIC |
|---|---|
| Gages Type | Metal Foil |
| Gage Factor | 2.00 |
| Service Temperature | 150°F or 300°F |
| Non-Linearity | ±1% of Allowable Load |
| Non-Repetition | ±0.1% F.S. |
| Bridge Resistance | 350 or 120 Ohms (Nominal) |
| Configuration | Quarter-Bridge (QB) or Full-Bridge (FB) |
| Output Signal (nominal, at allowable load) | FB: 3.5 mv/V QB: 1.4 mv/V |
| Excitation | 350-ohm FB: 12V (Maximum) 350-ohm QB: 6V (Maximum) 120-ohm FB: 3V (Maximum) |

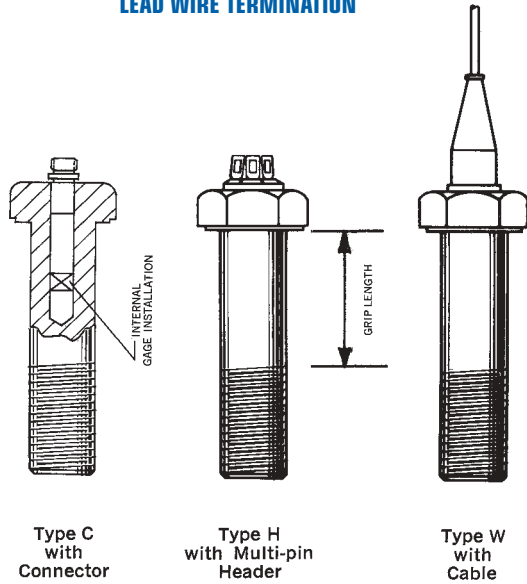
ALLOWABLE LOADS

Allowable loads for Straininsert 12-Point Cap Screws, as tabulated below, are based on approximately 70% Yield Strength of the threads, in pounds.

| SCREW DIA. | LOAD CAPACITY LBS. | |
|------------|--------------------|----------------|
| | FINE THREADS | COARSE THREADS |
| 1/4 | 2,700 | 2,700 |
| 5/16 | 5,400 | 4,800 |
| 3/8 | 8,200 | 7,200 |
| 7/16 | 11,000 | 10,000 |
| 1/2 | 15,000 | 14,000 |
| 5/8 | 25,000 | 22,000 |
| 3/4 | 36,000 | 32,000 |
| 7/8 | 50,000 | 44,000 |
| 1 | 67,000 | 59,000 |
| 1-1/8 | – | 74,000 |
| 1-1/4 | – | 92,000 |
| 1-1/2 | – | 136,000 |

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

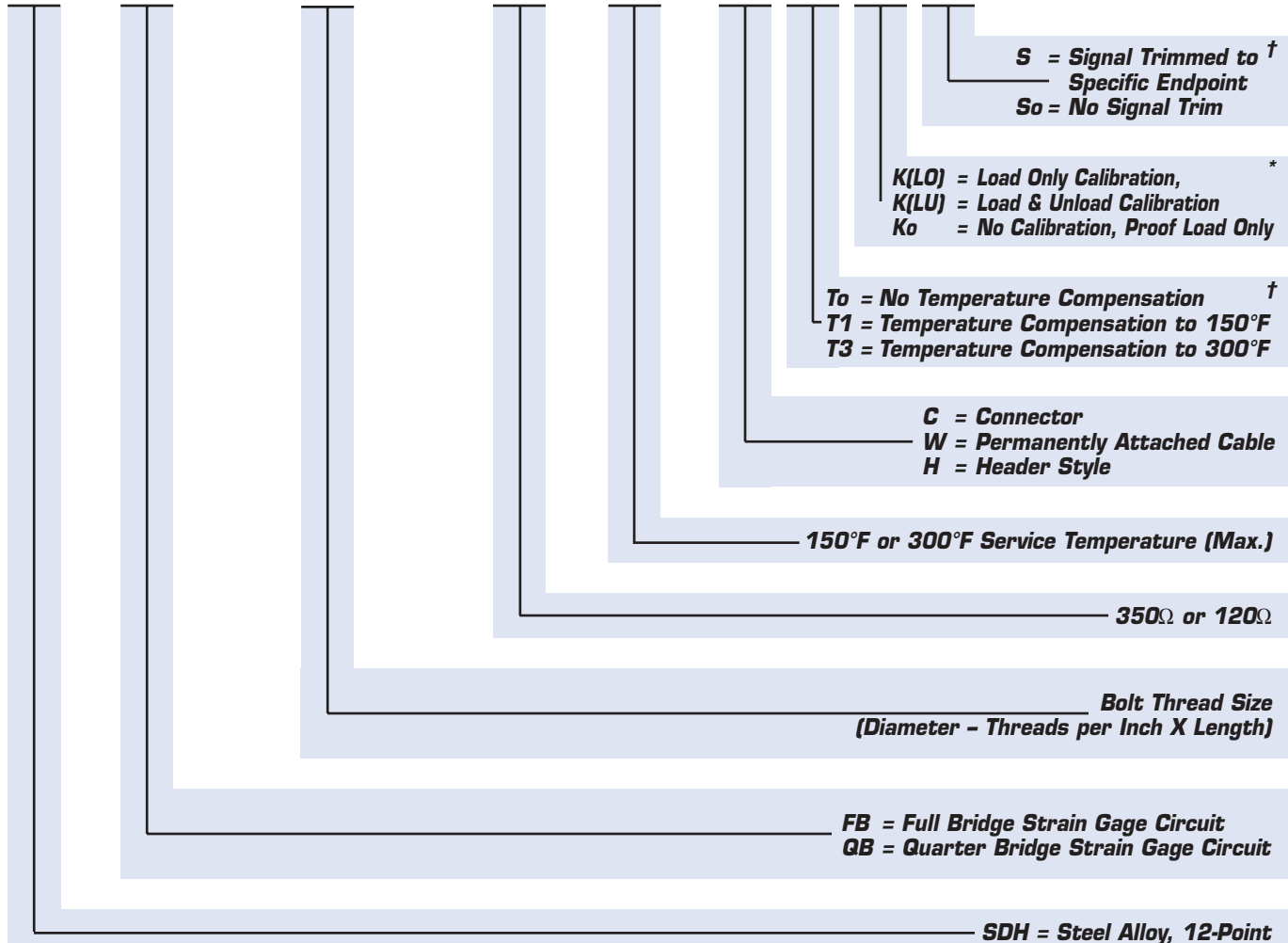
Type W – factory installed cable

Over 130 different STRAINsert 12-Point Cap Screws are stocked, ready for gaging.

U.S. Patent #2,873,341

ORDERING INFORMATION

SDH - FB 1/2-13NCx4 (350Ω / 300°F) C T3 K(LO) So



* See Strainsert Calibration Services (Page 94)

† Not Available for Quarter-Bridge Bolts.