Bolt axial force sensors

GA

- Manufacture axial force sensing into bolts from size M3
- Operating temperature range:Max.150℃
- Minimize output variations caused by creep

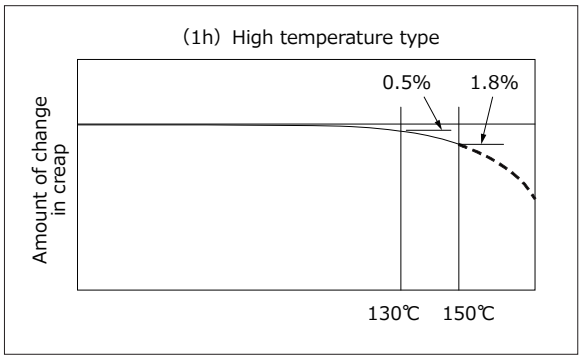
About Bolt axial force sensors

A bolt applies tensile force due to the pull on its shaft when torque is applied to tighten it. This tensile force is referred to as axial force. At the same time, a force is also generated inside the bolt trying to return it to its original position. These two forces work to secure the bolt by applying both axial force and an equal amount of compressive force in the fastened parts. That is why sensing the amount of axial force can identify the amount of force securing the fastened parts. [JISB1083]

Applications

・Evaluation test
・Testing for vehicle performances
・Bolting testing for structures under high temperatures

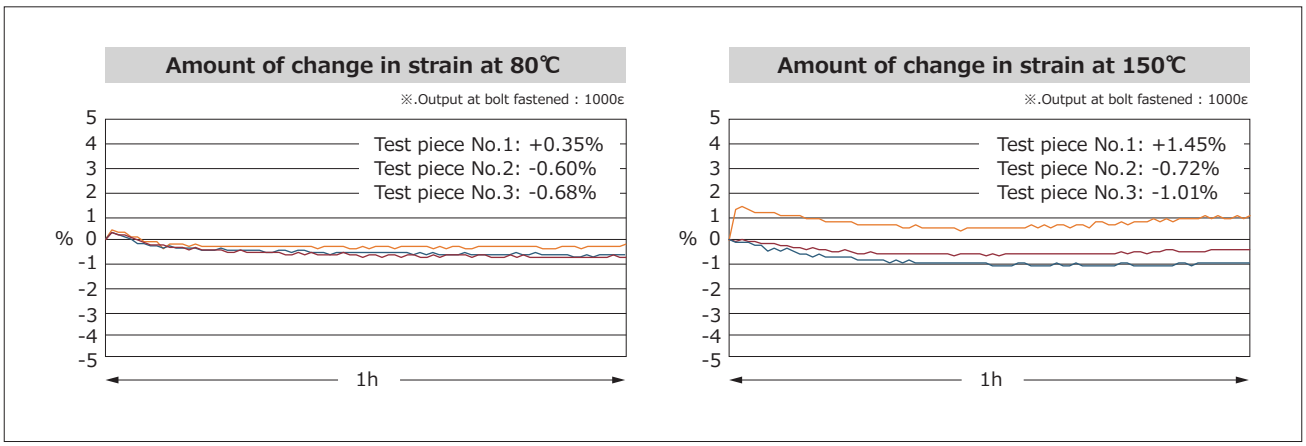
Creap characteristic



Specifications

Bolts size	From size M3
Hole size	φ1.0mm (M3, M4, M5) , φ1.6mm (M4, M5, M6) , φ2.0mm (M8～)
Hole depth	<30mm／φ2.0, <22mm／φ1.6, <18mm／φ1.0
Gage resistance	120Ω～350Ω
Gage length	1mm～2mm
Gage type	One acitve gauge method (Two wire system, Three wire system)
Cable for high temperature	～150℃／3-wire cable 0.24Ω／mm
Cable for ordinary temperature	～80℃／Vinyl-coated flat 3 or 2-wire cable 0.24Ω／mm

Temperature characteristic



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