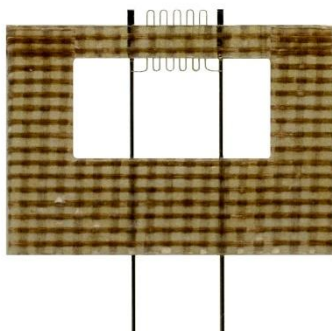


Rev. 1.4
Aug-2024

STN series high temperature strain gages

Product Datasheet

General information:

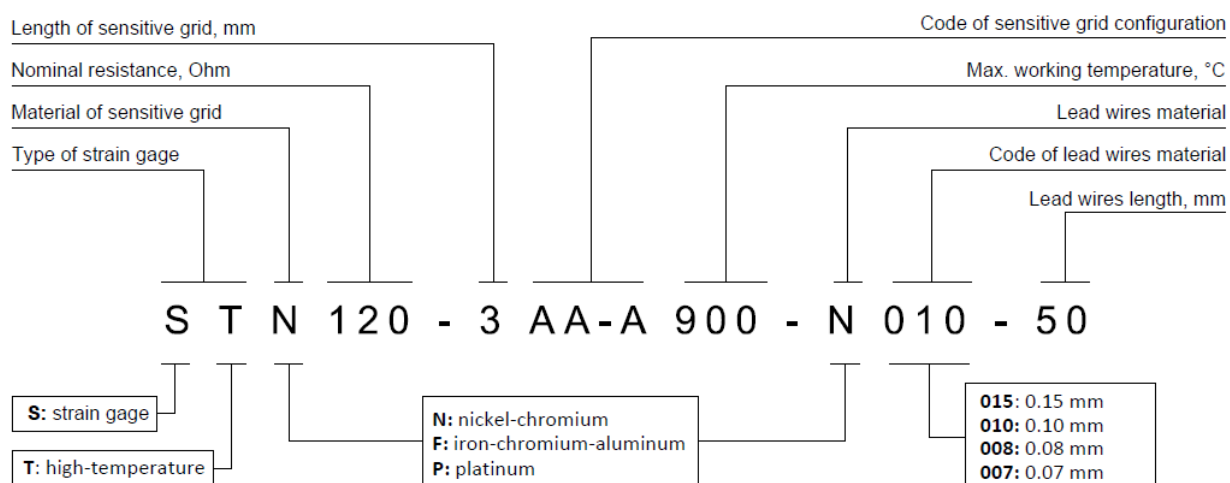


STN series bondable high temperature gages are intended for measurements of deformations in the parts of machinery and equipment, including jet engines, under static and dynamic loads in $-269...+900^{\circ}\text{C}$ temperature range.

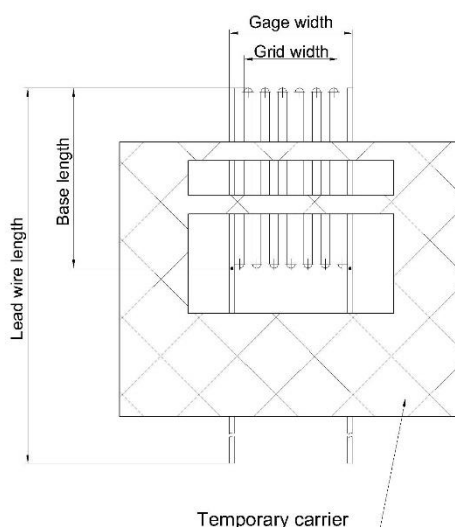
Gages are to be installed on the surface of the test object using ceramic cement adhesive or alumina flame spray method.

Gages are provided on the temporary fiberglass-reinforced PTFE carrier, which is subject to removal during installation of the strain gage.

Designation system:



Schematic drawing:



Standard configurations:

Designation	Nominal resistance, Ohm	Nominal base length, mm	Nominal grid width, mm	Lead wires length, mm
STN120-1.7AA-A900-N010-50	120±3	1.7	2.2	50...300*
STN120-3AA-A900-N010-50	120±3	3.1	1.6	
STN350-3.5AA-A900-N010-50	350±3	3.4	2.6	
STN120-5AA-A900-N010-50	120±3	5	2.0	

*Other lead wire length can be supplied on request

Temporary carrier:

Fiberglass-reinforced PTFE backing, as per drawing above. Default option, provides the best protection of the gage during transportation.

Packaging:

Individual strain gages are supplied on plastic or glass carriers, can be covered with protective plastic foil. Each strain gage is labelled with the actual electric resistance values.

Groups of strain gages are packed in plastic boxes in amount of 1...25 pieces. Each group packing has a label with the main parameters of the gages, including resistance range of the gages group, gage factor, production date, etc.

Batches of strain gages are packed in plastic containers with or without auxiliary installation tools. Each batch container has a label with all main parameters of the gages, general description, batch number and production date.

Fatigue life:

1·10⁶ at ±650 microstrain at 20°C.

Typical parameters:

Nominal gage factor at 20°C: 2.05



Diagram 1. Gage factor dependence on the temperature**

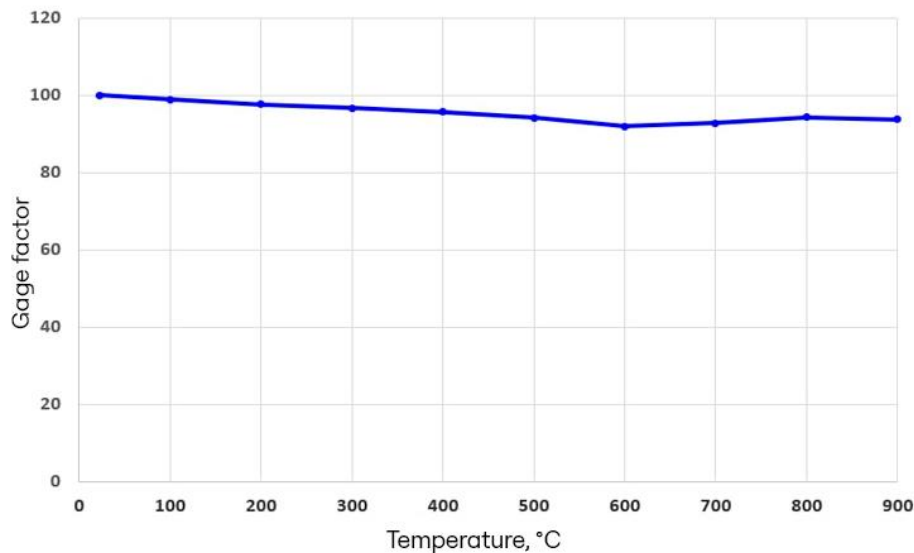
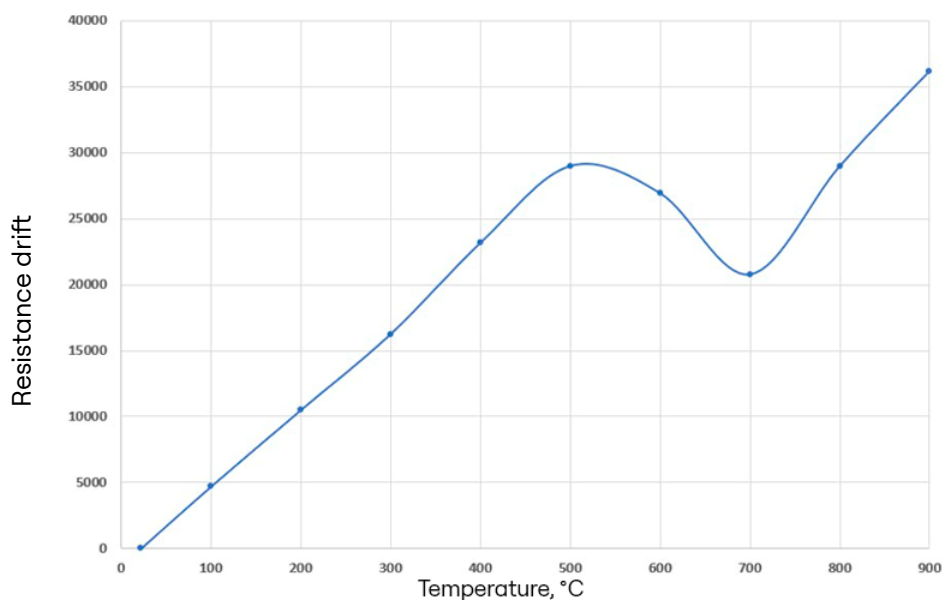


Diagram 2. Resistance drift due to the temperature**



** STN350-3.5AA-A900-N010-50 gages installed on CrNi62MoWCoAl alloy beam with ZEMIC GT-900-H ceramic cement. Test performed with HTDR-1001 tool.

*Illustrative data, real parameters may differ from adhesive type and test beam material. Real test data for the batch of strain gages will have mentioned parameters indicated.