Strain Gauges Calibration

SENSOR = Minimum value of resistance = Maximum value of resistance = Resistance without strain = Gauge factor = Thermometer for temperature correction = Temperature units

TS01=100.000000=400.000000=350.231000=2.05000000=TT03=C*

TS02=100.000000=400.000000=350.594000=2.05000000=TT03=C*

TS03=100.000000=400.000000=350.615000=2.05000000=TT03=C*

TS04=100.000000=400.000000=350.407000=2.05000000=TT03=C*

TS05=100.000000=400.000000=350.801000=2.05000000=TT03=C*

TS06=100.000000=400.000000=350.552000=2.05000000=TT03=C*

TS07=100.000000=400.000000=350.338000=2.05000000=TT03=C*

TS08=100.000000=400.000000=350.559000=2.05000000=TT03=C*

TS11=100.000000=400.000000=350.365000=2.05000000=TT03=C*

TS12=100.000000=400.000000=350.872000=2.05000000=TT03=C*

TS13=100.000000=400.000000=350.766000=2.05000000=TT03=C*

TS14=100.000000=400.000000=350.505000=2.05000000=TT03=C*

TS15=100.000000=400.000000=350.881000=2.05000000=TT03=C*

TS16=100.000000=400.000000=350.680000=2.05000000=TT03=C*

TS17=100.000000=400.000000=350.466000=2.05000000=TT03=C*

TS18=100.000000=400.000000=350.770000=2.05000000=TT03=C*

TS20=100.000000=400.000000=350.988000=2.05000000=TT02=C*

TS80=100.000000=400.000000=350.917000=2.05000000=TT02=C*

TS21=100.000000=400.000000=350.646000=2.05000000=TT02=C*

TS81=100.000000=400.000000=350.430000=2.05000000=TT02=C*

TS22=100.000000=400.000000=350.468000=2.05000000=TT02=C*

TS82=100.000000=400.000000=350.912000=2.05000000=TT02=C*

TS30=100.000000=400.000000=350.907000=2.05000000=TT01=C*

TS90=100.000000=400.000000=350.666000=2.05000000=TT01=C*

TS31=100.000000=400.000000=350.663000=2.05000000=TT01=C*

TS91=100.000000=400.000000=350.630000=2.05000000=TT01=C*

TS32=100.000000=400.000000=350.959000=2.05000000=TT01=C*

TS92=100.000000=400.000000=350.777000=2.05000000=TT01=C*

Factors for the high temperature correction:

-56.0, 2.49, -1.49e-2, 1.90e-5

ENGINEERING DATA SHEET

THE INFORMATION APPEARING ON THIS SHEET HAS BEEN COMPILED SPECIFICALLY FOR THE GAGES CONTAINED IN THIS PACKAGE. THIS FORM IS PRODUCED WITH ADVANCED EQUIPMENT & PROCEDURES WHICH PERMIT COMPREHENSIVE QUALITY ASSURANCE VERIFICATION OF ALL DATA SUPPLIED HEREIN SHOULD ANY QUESTIONS ARISE RELATIVE TO THESE GAGES, PLEASE MENTION GAGE TYPE, BATCH AND LOT NUMBER.

H001

Final QA	Check	Batch
JDF	BSR	5133134

Micro-Measurements Division
Made in USA

MEASUREMENTS GROUP, INC.
RALEIGH, NORTH CAROLINA

PRECISION STRAIN GAGES

F007

CODE	TRANSVERSE SENSITIVITY AT 24°C	GAGE FACTOR AT 24°C	RESISTANCE IN OHMS AT 24°C	LOT NUMBER	QUANTITY	OPTION	TYPE
061217-2549	(-4.7 ±0.2)%	2.02 ±1.0%	350.0±0.3%	PU-K47FD08	5		WK-06-250BG-350

WK-06-250BG-350

GENERAL INFORMATION: WK-SERIES STRAIN GAGES

GENERAL DESCRIPTION: WK-Series gages are a family of fully encapsulated K-alloy strain gages used in both experimental stress analysis and transducer applications. These gages have integral high-endurance lead ribbons with a backing and encapsulation matrix consisting of a high-temperature epoxy-phenolic resin system with reinforced glass fiber.

TEMPERATURE RANGE: -452° to +550° F(-269° to +290° C) for continuous use in static measurements. Useful to +700° F (+370° C) for short term exposure.

SELF TEMPERATURE COMPENSATION: See data curve below.

STRAIN LIMITS: ±1.5% at room temperature; ±1.0% at -320° F (-195° C); ±3% at +400° F (+205° C).

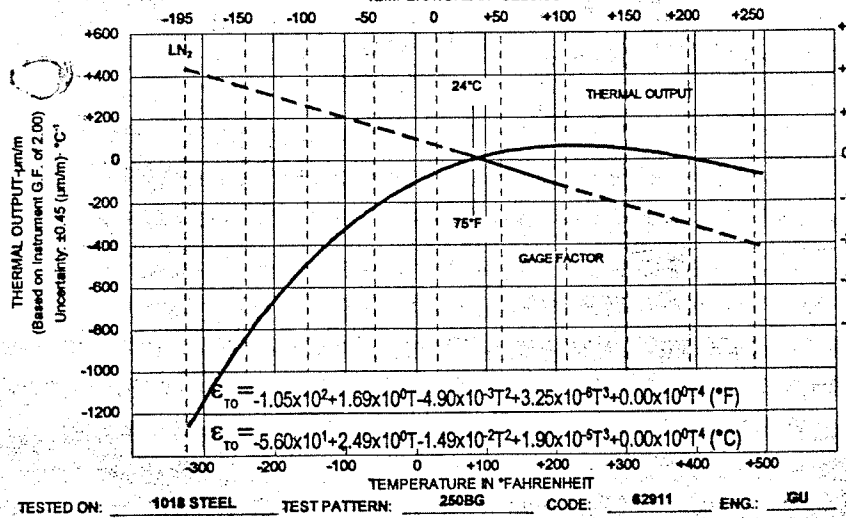
FATIGUE LIFE: 10^6 cycles at ±1500μin/in (μm/m); 10^7 cycles at ±1800μin/in (μm/m). Longer gage lengths and lower resistances show greater endurance and less scatter in fatigue life.

BONDING AGENTS: High-temperature epoxy adhesives are recommended for best performance over the entire temperature range. Micro-Measurements M-Bond 610, 600 and M-Bond GA-60 are particularly compatible with WK-Series gages. Refer to M-m Catalog A-110 for information on bonding agents, and Bulletin B-130 for installation procedures.

LEADWIRE SYSTEM: Two flat, high-endurance leads attached to each tab permit 3-wire or 4-wire systems to be carried directly to the gage, minimizing leadwire errors over the wide useful temperature range of the WA-Series strain gages. Option SP-30 WK-Series gages are supplied with single 0.005 in. (0.13 mm) diameter nickel-clad copper wire leads. Option SP-30 reduces fatigue life of WK-Series gages and should not be selected where best cyclic endurance is required. Internal tab connections on these gages are made with +570° F (+300° C) solder. Leadwires may be soft soldered, spot-welded or silver soldered. Refer to M-M Bulletin B-132 for information on solders.

G038

THERMAL OUTPUT — LOT NO. K47FD08



TESTED ON: 1018 STEEL TEST PATTERN: 250BG CODE: 62911 ENG.: GU

TEST PROCEDURES USED BY MICRO-MEASUREMENTS

OPTICAL DEFECT ANALYSIS	M-M Procedures and Standards
GAGE RESISTANCE AT 24°C AND 50% RH	M-M Procedure, Direct NIST Traceability on Resistance Standards
GAGE FACTOR AT 24°C & 50% RH (UNIAXIAL STEEL FIELD - POISSON RATIO - 0.285)	ASTM E-251 (Constant Stress Cantilever Method)
TEMPERATURE COEFFICIENT OF GAGE FACTOR	ATSM E-251 (Step Deflection Method)
THERMAL OUTPUT	ASTM E-251 (Slow Heating Rate, Continuously Recorded)
TRANSVERSE SENSITIVITY AT 24°C AND 50%H	ASTM E-251
FATIGUE LIFE	NAS-942 (Modified)
STRAIN LIMITS	NAS-942 (Modified)
GAGE THICKNESS	M -M Procedure
	M-M Procedure (Similar to NAS 942 Method