STRAIN GAUGE CODING SYSTEM

RAB GOBLET

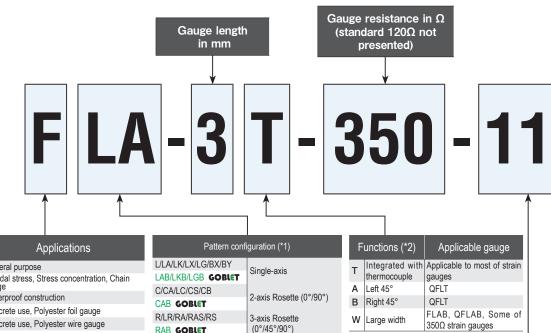
CV

CT

IT

XV/YV/BXV/BYV

(*1) Not always coded 0°/90° 2-axis 0°/45°/90° 3-axis



(0°/45°/90°)

(0°/90°)

Torque 45° Single-axis

5-element Single 5-element Rosette

F	General purpose			
	Residal stress, Stress concentration, Chain gauge			
WF	Waterproof construction			
PF	Concrete use, Polyester foil gauge			
Р	Concrete use, Polyester wire gauge			
FLM/WFLM	Contrete use, Metal backing strain gauge			
MF/QMF	Magnetic field use			
PMF	Concrete use, Embedment type strain gauge			
YEF/YF/YHF	Post-yield strain (Large strain) measurement			
PMFLS	Asphalt use, Embedment type strain gauge			
LF	Low elastic material use, Wood, Gypsum			
PFLW/PLW	Low elastic material use, Wood, Gypsum			
GF	Low elastic material use, Plastics			
BF/UBF	Composite material use			
DSF	High endurance use, Fatigue test			
CTE	Linear Expansion Coefficient Measurement strain gauge			
CF	Cryogenic temperature use			
CEF	Wide range temperature use			
QF/ZF/EF/HZF	High temperature use			
SFA	Stress measurement			
AW	Weldable strain gauge			
BTM	Bolt axial strain measurement			
DD	One-side gauge			
FAC	Crack detection gauge			
TF	Strain gauge type temperature measurement			
KM	Concrete/Asphalt embedment use, strain transducer			
FGMH	Frictional Strain Checker			
FGAH	Frictional Axial strain transducer			
FGDH	Frictional Torque Sensor System			

The following strain gauges are CE marked.

For strain gauge without integral lead wire

- Strain gauge with "-F" appended to the type number

- Strain gauge indicated with "CE" mark in this catalog

(*2) Not inc	dicated for
general stra	in gauges

Compensation material ppm/°C (*3)

3	Composite material		17	7 Stainless steel/Copper alloy	
	Ceramic (Si ₃ N ₄)	2.6~3.3		SUS 304	16.2
	CFRP	3 ~ 5		SUS 310	15.8
5	Composite material		1	SUS 316	16
	Ceramic (SiC)	4.6		SUS 321	16.7
	CFRP	3 ~ 5		Copper	16.7
8	Composite material]	Beryllium copper	16.6
	Glass	7.9		Brass	16.7
	Titanium	8.9		Bronze	17
	Titanium alloy (Ti-6Al-4V)	8.8		Constantan	14.9
11	Mild steel		23	Aluminium	
	Mild steel (0.1~0.2C)	11.8		Aluminium	23.4
	Hard steel (0.4~0.5C)	11.2		Aluminium 2024-T4	23
	Cast iron	10.5		Lead and its alloy	29
	Hastelloy-276	11.2		Gypsum	25
	Inconel 600	13.3		Polyimide	20~30
	Inconel 750	12.1	28	Magnesium	
	Monel	13.5		Magnesium alloy	27
	SUS 630 (17-4PH)	10.8	50	Plastics	
	SUS 631 (17-7PH)	10.6		Epoxy (Cast)	45~65
	Concrete	7~13	70	Plastics	
				Acrylics	70
				ABS	74
				Polyacetal (POM)	80
				Polycarbonate (PC)	66~70
				Polystyrene (PS)	60~80

(*3) Indicated only for self-temperature-compensated strain gauges. For other materials, contact TML or your local representative.

Gauge series

Option -F

The leadwire pre-attachment is available using lead-free solder. For the leadwire

pre-attached strain gauges using lead-free solder, the option code "-F" is appended to the type number to discriminate them from conventional leadwire pre-attached strain

gauges using leaded solder.

Suffix codes of pre-attached leadwires Option -F for CE marking 0.08mm² paralleled vinyl leadwire

Strain Gauge

Option -F

Strain gauges using leaded solder as standard specifications are optionally available with lead-free solder used. The option code "-F" is appended to the type number of lead-free solder used gauges to discriminate them from conventional strain gauges using leaded solder. The option code "-F" is omitted for strain gauges with CE marking such as GOBLET series.

Color coding for test specimen

Length of leadwire pre-attached (*4)

Standard length 1, 3, 5 m

Standard length 3, 5 m

with 2-wire

with 3-wire

(*4) These strain gauges

are available with integral

leadwires attached. (made to

LJB / LJB-F

order)

Most of our strain gauges are self-temperature-compensated. The backings of F, WF and CF series strain gauges are classified into three colors according to the objective material for measurement.

Objective material for measurement	Coefficient of linear thermal expansion	Backing color	Type number (example)
Mild steel	11×10 ⁻⁶ /°C	Red	FLAB-3-11
Stainless steel Copper alloy	17×10 ⁻⁶ /°C	Brown	FLAB-3-17
Aluminium	23×10 ⁻⁶ /°C	Green	FLAB-3-23

LJBT / LJBT-F 0.08mm² 3-wire parallel vinyl leadwire LJC / LJC-F 0.11mm² paralleled vinyl leadwire IJCT / IJCT-F 0.11mm² 3-wire paralleled vinvl leadwire LJD 0.3mm² paralleled vinyl leadwire LJDT 0.3mm² 3-wire paralleled vinvl leadwire LH / LH-F 0.02mm² twisted vinyl leadwire LHT / LHT-F 0.02mm² 3-wire twisted vinyl leadwire 3.2mm-dia. shielded vinyl leadwire LS / LS-F LTSA / LTSA-F 3mm-dia. shielded 3-wire vinyl leadwire LTSB / LTSB-F 5mm-dia. shielded 3-wire vinyl leadwire 0.08mm² polypropylene 4-wire paralleled leadwire with LQM / LQM-F modular plug LXT / LXT-F 3-wire parallel special vinyl leadwire LJRA / LJRA-F 2-wire twisted cross-linked vinvl leadwire LJRTA / LJRTA-F 3-wire twisted cross-linked vinyl leadwire LJQTA / LJQTA-F 3-wire twisted cross-linked polyethylene leadwire TLJBT / TLJBT-F Temperature-integrated 3-wire paralleled vinyl leadwire Temperature-integrated 3-wire twisted fluorinated resin 6FB 🗆 TLT / 6FB 🗆 TLT-F (FEP) single-core leadwire 0.14mm/0.18mm polyurethane leadwire LP / LP-F LU / LU-F 0.14mm/0.18mm polyester leadwire LE / LE-F 0.14mm/0.18mm polyeimide leadwire 6FA LT / 6FA LT-F 3-wire twisted fluorinated resin (FEP) leadwire 3-wire twisted fluorinated resin (FEP) leadwire (Surface 6FAS DLT / 6FAS DLT-F treatment (tetra-etching) is not required) 6FB I T / 6FB I T-F 3-wire twisted fluorinated resin (FEP) single-core leadwire 6FC ILT / 6FC ILT-F 3-wire twisted fluorinated resin (FEP) leadwire 3-wire twisted fluorinated resin (FEP) leadwire (Surface 6FCS I T / 6FCS I T-F treatment (tetra-etching) is not required) 1.5mm-dia. 3-wire twisted fluorinated resin (FEP) 6FD DI TS leadwire with shield 4FA DLT / 4FA DLT-F 3-wire twisted fluorinated resin (PTFE) leadwire 3-wire twisted fluorinated resin (PTFE) single-core

4FB DLT / 4FB DLT-F leadwire For further information on combination use with strain gauges, refer to pages 37~38.

Name of each part of strain gauge

