Non-inductive Strain Gauges QMF series CE

These are non-inductive strain gauges suited to the measurement in magnetic field. The sensing element of this gauge consists of two identical grids with one grid folded back on another. This construction makes to cancel the electromagnetically induced noise each other. The twisted leadwire is also effective to cancel the induced noise in the same way. Accordingly, this strain gauge is less sensitive to the influence of noise induced in changing magnetic field.

Operating temperature range
−30～+200℃
Temperature compensation range
0～+150℃

Applicable adhesives

CN	−30～+120℃
NP-50B	−30～+200℃
EB-2	−30～+200℃

Please specify the type number as shown in the example below.

QMFLA -2 (-350) -11 -005LET-6FD1LTSS-F

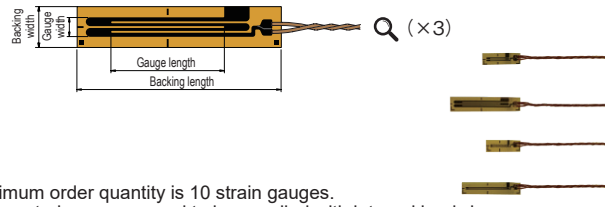
- QMFLA: Gauge series name
- -2: Gauge length
- (-350): Gauge resistance (blank for 120Ω)
- -11: Objective material for temperature compensation
- -005LET: 3-wire from the root of gauge leads (blank for 2-wire)
- 6FD1LTSS-F: Length in meter and type of integral leadwire CE compliant leadwire

Objective material for temperature compensation
(coefficient of linear thermal expansion ×10^{-6}/°C)
-11: Mild steel -17:Stainless steel -23:Aluminium

Note: The backing color of QMF series gauges are the same for every material for temperature compensation.

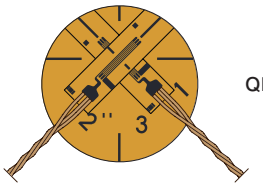
Single axis/Multi-axis (for steel)

●Single axis



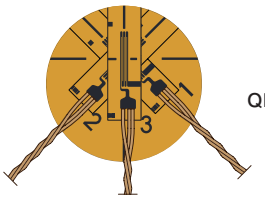
・Minimum order quantity is 10 strain gauges.
・These strain gauges need to be supplied with integral leadwires (made-to-order).

●2-axis 0° /90° Stacked type



QMFCA-2-11 (×3)

●3-axis 0° /45° /90° Stacked type



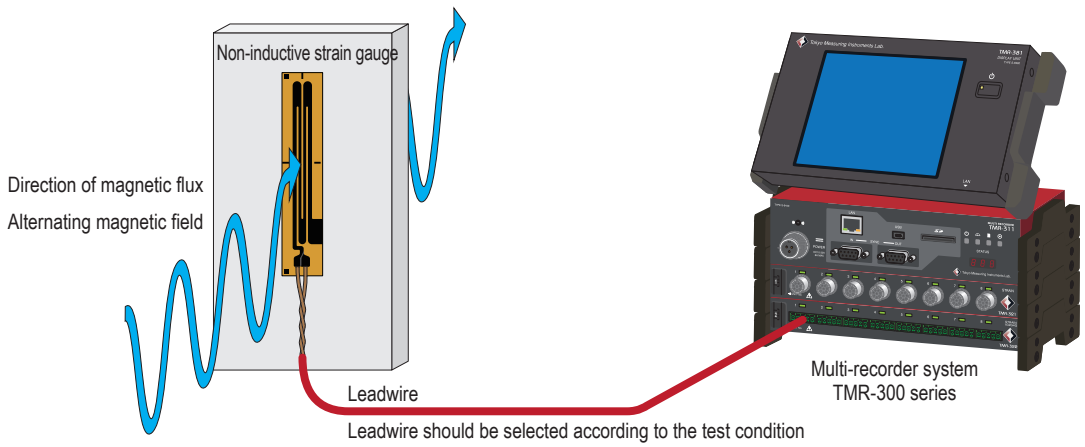
QMFRA-2-11 (×3)

・Minimum order quantity is 10 strain gauges.
・The length of integral leadwire for multi-axis strain gauges of this series is available up to 1 meter (made to order)

Gauge pattern	Type	Gauge size (mm) Length	Gauge size (mm) Width	Backing size (mm) Length	Backing size (mm) Width	Resistance (Ω)
	QMFLA-2	2	0.5	5	1.5	120
	QMFLA-5	5	0.8	9	1.8	120
	QMFLA-2-350	2	0.3	4.5	1.5	350
	QMFLA-5-350	5	0.3	7.8	1.5	350
	QMFCA-2-11	2	0.5	φ7		120
	QMFCA-5-11	5	0.8	φ11		120
	QMFCA-2-350-11	2	0.3	φ7		350
	QMFCA-5-350-11	5	0.3	φ11		350
	QMFRA-2-11	2	0.5	φ7		120
	QMFRA-5-11	5	0.8	φ11		120
	QMFRA-2-350-11	2	0.3	φ7		350
	QMFRA-5-350-11	5	0.3	φ11		350

Non-inductive Strain Gauges QMF series CE

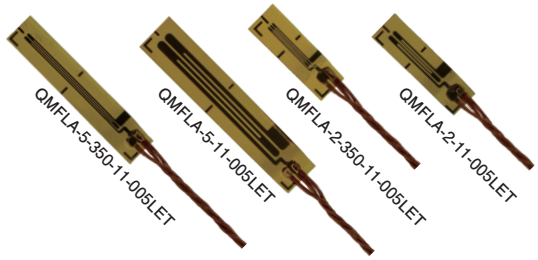
Important point

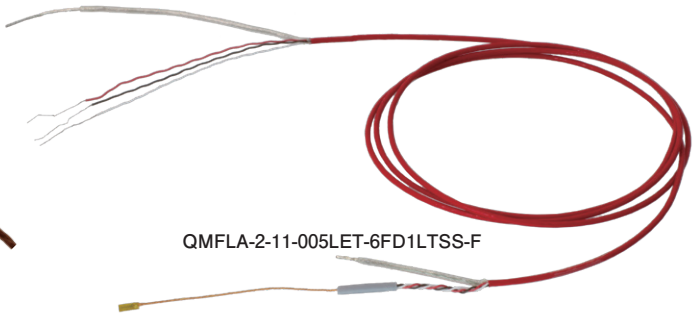


●Features

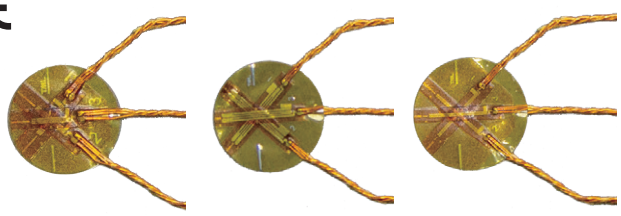
- 2-axial: Measurement of tension and compression, Tri-axial: Rosette analysis is possible
- Gauge lengths of 2mm and 5mm and gauge resistances of 120Ω and 350Ω are selectable
- Selectable Measuring method from 1-Gauge 2-Wire, 1-Gauge 3-Wire, and 1-Gauge 3-Wire (3-Wire root specification) depending on test environment
- Operating temperature range extended to -30 to +200°C (temperature compensation range: 0 to +150°C)
- Gauge lead wire length is approx. 50mm, The length of the gauge lead wire is approximately 50 mm, making it easy to affix (only for the 3-wire root type).
- CE compliant

CE

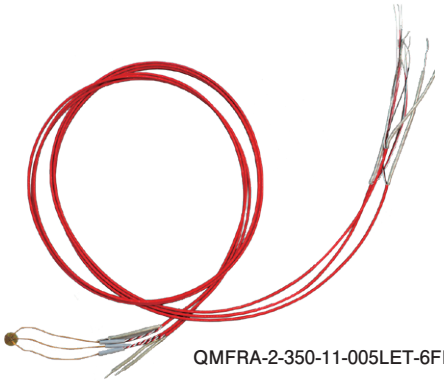




CE



QMFRA-2-350-11-005LET QMFRA-5-11-005LET QMFRA-5-350-11-005LET



Dedicated leadwire recommended for QMF/MF series strain gauges

We supply various leadwires dedicated to strain gauges so as to meet our customers' requirements. Please refer to page 30 to 38 for the details of combination of a strain gauge and a leadwire.

Type and designation of leadwires

Application	Leadwire name	Operating temperature range of leadwire (°C)	Loop resistance per 1 meter (Ω)	Example of type number
Magnetic field Room temperature (without temperature change)	2-wire twisted vinyl leadwire LJAY-F QMFLA-2-[a]-[z]LJAY-F、QMFCA-2-[a]-[z]LJAY-F、QMFRA-2-[a]-[z]LJAY-F	-20 ～+80	0.44	QMFLA-2-11-1LJAY-F QMFCA-2-11-1LJAY-F QMFRA-2-11-1LJAY-F MFLA-60-350-11-1LJAY
	3.2mm-dia. 2-core shielded vinyl leadwire LS-F Shield QMFLA-2-[a]-[z]LS-F、QMFCA-2-[a]-[z]LS-F、QMFRA-2-[a]-[z]LS-F	-20 ～+80	0.44	QMFLA-2-11-1LS-F QMFCA-2-11-1LS-F QMFRA-2-11-1LS-F MFLA-60-350-11-1LS
Magnetic field Room temperature	3mm-dia. 3-core shielded vinyl leadwire LTSA-F Red (independent) Black White Shield QMFLA-2-[a]-[z]LTSA-F、QMFCA-2-[a]-[z]LTSA-F、QMFRA-2-[a]-[z]LTSA-F	-20 ～+80	0.44	QMFLA-2-11-1LTSA-F QMFCA-2-11-1LTSA-F QMFRA-2-11-1LTSA-F
Magnetic field High temperature	1.5mm-dia. 3-core shielded fluorinated resin (FEP) leadwire 6FDOLTS-F Red (independent) Black White Shield QMFLA-2-[a]-6FD[z]LTS-F、QMFCA-2-[a]-6FD[z]LTS-F、QMFRA-2-[a]-6FD[z]LTS-F	-30 ～+200	1.1	QMFLA-2-11-6FD1LTS-F QMFCA-2-11-6FD1LTS-F QMFRA-2-11-6FD1LTS-F
Magnetic field Room temperature (with 3-wire from the root of gauge leads)	3mm-dia. 3-core shielded vinyl leadwire LTSAS-F Red (independent) Black White Shield QMFLA-2-[a]-005LET-[z]LTSAS-F、QMFCA-2-[a]-005LET-[z]LTSAS-F、QMFRA-2-[a]-005LET-[z]LTSAS-F	-20 ～+80	0.44	QMFLA-2-11-005LET-1LTSAS-F QMFCA-2-11-005LET-1LTSAS-F QMFRA-2-11-005LET-1LTSAS-F
Magnetic field High temperature (with 3-wire from the root of gauge leads)	1.5mm-dia. 3-core shielded fluorinated resin (FEP) leadwire 6FDOLTSS-F Red (independent) Black White Shield QMFLA-2-[a]-005LET-6FD[z]LTSS-F、QMFCA-2-[a]-005LET-6FD[z]LTSS-F、QMFRA-2-[a]-005LET-6FD[z]LTSS-F	-30 ～+200	1.1	QMFLA-2-11-005LET-6FD1LTSS-F QMFCA-2-11-005LET-6FD1LTSS-F QMFRA-2-11-005LET-6FD1LTSS-F
Magnetic field High temperature (with no temperature change)	2 stranded wire shielded (FEP) sheathed single core wire 6FBOLS-F Shield QMFLA-2-[a]-6FB[z]LS-F、QMFCA-2-[a]-6FB[z]LS-F、QMFRA-2-[a]-6FB[z]LS-F	-30 ～+200	1.05	QMFLA-2-11-6FB1LS-F QMFCA-2-11-6FB1LS-F QMFRA-2-11-6FB1LS-F

[a] : Objective material for temperature compensation (coefficient of linear thermal expansion × 10^{-6}/℃)
[z] : Leadwire length (m)

Non-inductive Strain Gauges MF series (For Concrete)

These are non-inductive strain gauges suited to the measurement in magnetic field. The sensing element of this gauge consists of two identical grids with one grid folded back on another. This construction makes to cancel the electromagnetically induced noise each other. The twisted leadwire is also effective to cancel the induced noise in the same way. Accordingly, this strain gauge is less sensitive to the influence of noise induced in changing magnetic field.

Operating temperature range
−20～＋80℃

Applicable adhesives

CN	−20～+80℃
CN-E	−20～+80℃
RP-2	−20～+80℃

Please specify the type number as shown in the example below.

MFLA -60 -350 -11 -1LJAY

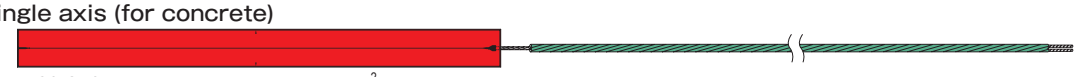
- MFLA: Gauge series name
- -60: Gauge length
- -350: Gauge resistance (blank for 120Ω)
- -11: Objective material for temperature compensation
- -1LJAY: Length in meter and type of integral leadwire

Objective material for temperature compensation
(coefficient of linear thermal expansion ×10^{-6}/°C)
-11: Mild steel

Single axis (for concrete)

Gauge pattern	Type	Gauge size(mm) Length	Gauge size(mm) Width	Backing size(mm) Length	Backing size(mm) Width	Resistance Ω
	MFLA-60-350	60	0.1	64	5	350

●Single axis (for concrete)



MFLA-60-350-11-1LJAY Used leadwire 0.08mm² twisted vinyl leadwire 1 m
Loop resistance per 1 m: 0.44Ω

MFLA-60-350-11-1LS (Shielded leadwire)
Used leadwire 3.2 mm dia. 2-core twisted shielded vinyl leadwire 1 m
Loop resistance per 1 m: 0.44Ω

Minimum order quantity is 10 strain gauges.