General Specifications

LN01
Piezoelectric Accelerometer
(for FN series)

GS 01W03H01-01EN

■ GENERAL

This General Specification (GS) describes the specifications for Piezoelectric Accelerometer. This product is used in combination with "Field Wireless Multi-Function Module FN510".

Refer to General Specifications of "Field Wireless Multi-Function Module FN510" for an overview and detailed information.



■ STANDARD SPECIFICATIONS

□ MEASUREMENT RANGE

Frequency Range(Refer to 100 Hz):
10 Hz to 3000 Hz (± 1 dB)
5 Hz to 10000 Hz (± 3 dB)

Operation Acceleration Range:
±300 m/s^2 (Peak)

□ PERFORMANCE SPECIFICATIONS

Sensitivity:
2.0 mV/m/s^2 ± 10% (at 100 Hz)

Temperature Characteristics:

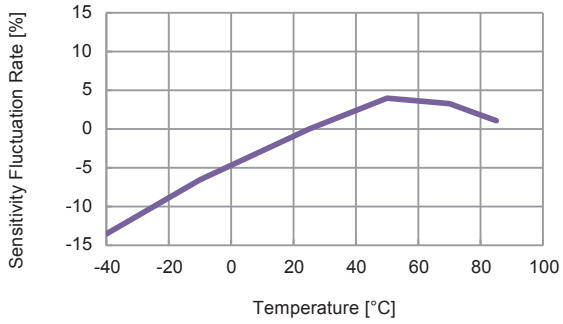


Figure 1 Sensitivity Fluctuation Rate (typical) v.s. Temperature

Transverse Sensitivity:
≤ 5%

Mounted Resonance Frequency:
≥ 30000 Hz

Power supply Voltage:
3.4 V

Current Consumption:
1.2 mA

□ NORMAL OPERATING CONDITION

Ambient Temperature Range:
- 40 to 85°C (altitude up to 3000 m)

Ambient Humidity Range:
0 to 100%RH (non-condensation, excluding the end of cable)

Shock Resistance: > 10000 m/s^2

□ REGULATORY COMPLIANCE STATEMENTS

CE Conformity:
EMC: EN61326-1 Class A Table 2
* The instrument continues to operate at a measurement accuracy of within ±20% of the range during testing.
Safety: EN61010-1 (Indoor/Outdoor use)
Environment: EN IEC 63000

Canadian Safety Standards:
CAN/CSA-C22.2 No. 61010-1,
CAN/CSA-C22.2 No. 94.2, IEC60529

Degrees of Protection:
IP66, IP67 and Type 4X apply when the end of cable properly protected from ingress of water and dust

□ PHYSICAL SPECIFICATIONS

Housing Material:
SCS14 stainless steel

Weight:
73 g
(without the integral cable and the mounting stud)

Integral Cable:
Length: 10 m, Outer diameter: 4.3 ± 0.2 mm

Mounting:
M20 female screw for the mounting stud

YOKOGAWA

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■ MODEL AND SUFFIX CODES

Model	Suffix Code		Descriptions
LN01	.....		Piezoelectric Accelerometer (for FN series)
General Specification	Mounting stud	**-A**.....	M6 male
		-B.....	1/4-28 UNF male
	-	**0**	Always 0
Optional Codes			/☐ Optional specification

■ OPTIONAL SPECIFICATIONS (For Explosion Protected Types)

Please select appropriate equipment in accordance with the laws and regulations of the relevant country/region, when it is used in a location where explosive atmospheres may be present.

Item		Description	Code
Factory Mutual (FM)	United States	FM Intrinsically safe Approval (United States) Applicable Standards: FM 3600, FM 3610, FM 3810, ANSI/UL 60079-0, ANSI/ISA-60079-11, ANSI/UL 61010-1, NEMA250, ANSI/IEC 60529 Certificate: FM16US0143X Intrinsically safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F and G, Class I; Zone 0, in Hazardous Locations, AEx ia IIC Enclosure: IP66/IP67 and Type 4X,Temperature Class: T4, Amb.Temp. : –40 to 100°C (–40 to 212°F) *1 Electrical Parameters: Ui = 5.88 V, Ii = 150 mA, Pi = 221 mW (linear source), Ci = 11.2 µF, Li = 38.3 µH Dielectric strength: ≥ 500 V a.c. r.m.s., 1 minute	**FS17**
	Canada	FM Intrinsically safe Approval (Canada) Applicable Standards: C22.2 No. 60079-0 CAN/CSA-C22.2 No. 60079-11 CAN/CSA-C22.2 No. 61010-1 CAN/CSA-C22.2 No. 94 CAN/CSA-C22.2 No. 60529 Certificate: FM16CA0082X Ex ia IIC T4 Ga Intrinsically safe for Class I, II, III, Division 1; Groups A, B, C, D, E, F and G; Enclosure: IP66/IP67 and Type 4X, Temperature Class: T4, Amb.Temp. : –40 to 100°C (–40 to 212°F) *1 Electrical Parameters: Ui = 5.88 V, Ii = 150 mA, Pi = 221 mW (linear source), Ci = 11.2 µF, Li = 38.3 µH Dielectric strength: ≥ 500 V a.c. r.m.s., 1 minute	**CS17**
ATEX		ATEX Intrinsically safe Approval Applicable Standards: EN IEC 60079-0, EN 60079-11 Certificate: FM16ATEX0066X II 1 G Ex ia IIC T4 Ga Degrees of Protection: IP66/IP67 in accordance with only EN 60529 Amb.Temp.(Tamb): –40 to 100°C (–40 to 212°F) *1 Electrical Parameters: Ui = 5.88 V, Ii = 150 mA, Pi = 221 mW (linear source), Ci = 11.2 µF, Li = 38.3 µH Dielectric strength: ≥ 500 V a.c. r.m.s., 1 minute	**KS27**
IECEx		IECEx Intrinsically Safe Approval Applicable Standards: IEC 60079-0, IEC 60079-11 Certificate: IECEx FMG 16.0027X Ex ia IIC T4 Ga Degrees of Protection: IP66/IP67 in accordance with only IEC 60529 Amb.Temp.(Tamb): –40 to 100°C (–40 to 212°F) *1 Electrical Parameters: Ui=5.88 V, Ii=150 mA, Pi=221 mW (linear source), Ci=11.2 µF, Li=38.3 µH Dielectric strength: ≥ 500 V a.c. r.m.s., 1 minute	**SS27**

*1: This ambient temperature range is for intrinsic safety certification. Regarding the actual operational temperature, refer to “NORMAL OPERATING CONDITION” section.

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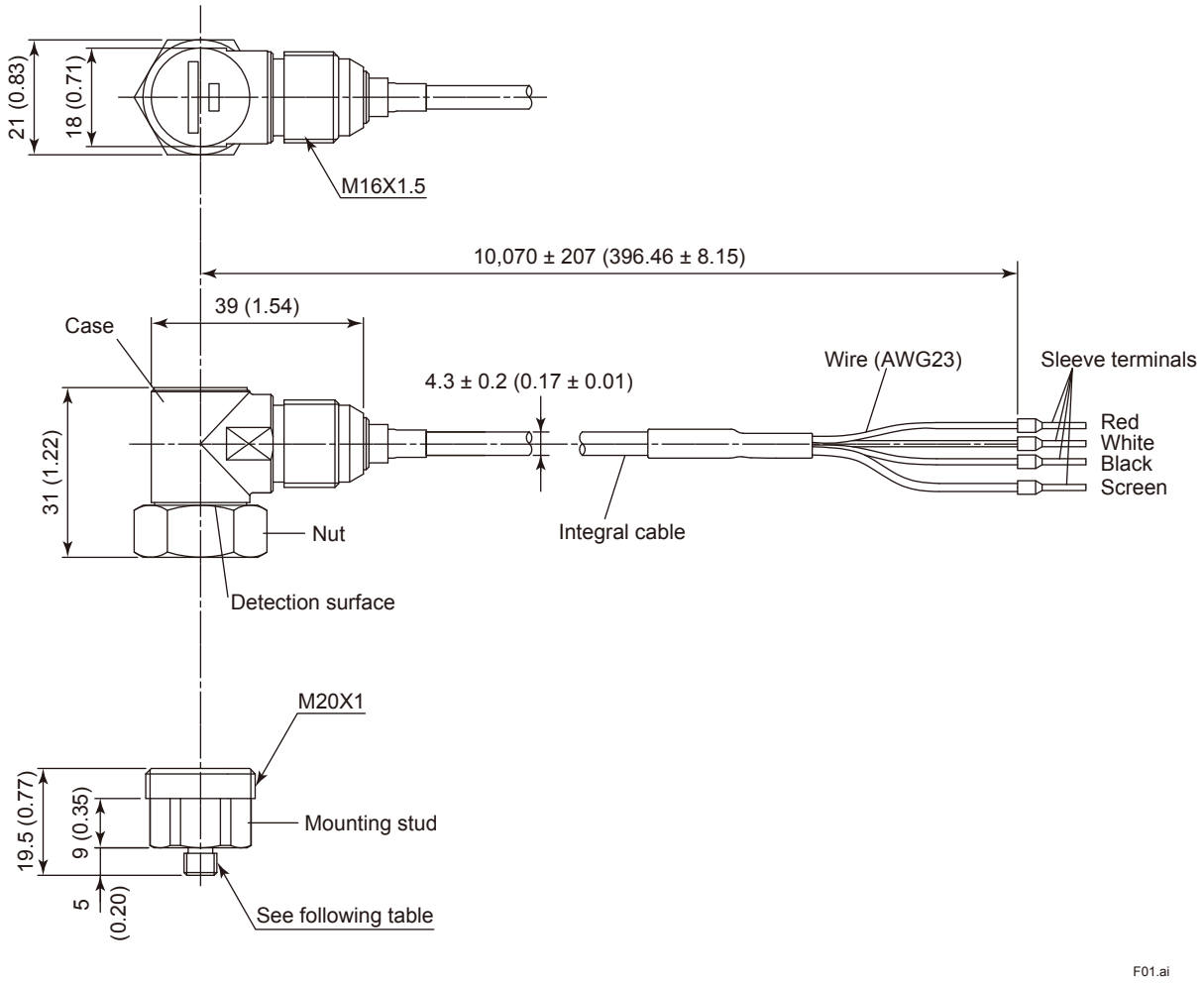
■ OPTIONAL ACCESSORIES

Item	Parts Number	Description
Mounting stud	F9091RB	M6 male
	F9091RC	1/4-28 UNF male

■ DIMENSIONS

□ Accelerometer and Mounting stud

Unit: mm (approx. inch)

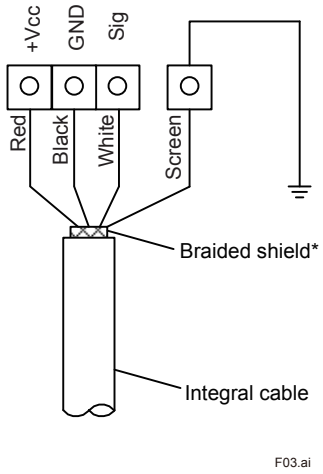


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Mounting stud Code	Thread Type	Parts No.
-A	M6X1	F9091RB
-B	1/4-28 UNF	F9091RC

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□ Wiring



* Screen line is connected to the braided shield.

< Ordering Information >

Specify the following when ordering.

1. Model, suffix codes, and option codes.

< Related Products General Specifications >

Field Wireless Multi-Function Module FN510:
Refer to GS 01W03E01-01EN

< Trademark >

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This instrument is intended to be sold and used only as a part of equipment which is excluded from WEEE Directive, such as large-scale stationary industrial tools, a large-scale fixed installation and so on, and, therefore, subjected to the exclusion from the scope of the WEEE Directive. The instrument should be disposed of in accordance with local and national legislation/regulations.

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