IEPE · CHARGE · MEMS DC

ACCELEROMETER SELECTION GUIDE

How to pick the right LNS accelerometer for your measurement, and how to read an LNS model number. Organized by application, from modal testing to pyroshock and 500 °C engine runs.

03 How to choose

04 Model numbers

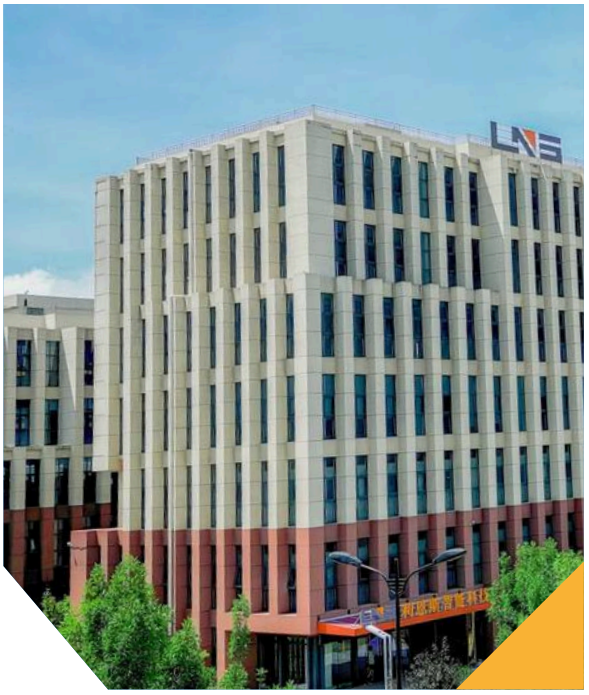
06 – 08 By application

09 Quick reference

PRECISION STARTS AT THE SOURCE.

LNS was founded in 2020 by four industry veterans with deep backgrounds in sensor manufacturing, piezoelectric material research and automation. Their idea was simple: own every step, from the piezo element to the final calibration, and both quality and speed stay under our control.

Today more than 250 people design, build and support LNS sensors from our 10,000 m² facility in Shandong, China, with regional offices around the globe.



30+
Innovative patents

250+
Employees

10,000 m²
Manufacturing floor

4
Global offices

OUR MISSION

To innovate in high-performance sensor technology for advanced monitoring and testing, pioneering next-generation solutions through vertical integration and rigorous quality control.

ABOUT THIS GUIDE

LNS builds hundreds of accelerometer models. This guide groups the most-requested series by application, so you can shortlist the right sensor without paging through the full catalog.

FROM MATERIAL TO MEASUREMENT

01
PIEZO MATERIALS
In-house piezoelectric material research and element production.

02
SENSOR DESIGN
Mechanical and electrical design for each application range.

03
AUTOMATED BUILD
Automated assembly and laser-welded, sealed housings.

04
CALIBRATION
Every sensor ships with its own calibration certificate.

05
LOCAL SUPPORT
Application engineers and distributors in your region.

NOW BUILDING · 2026

LNS HIGH-PRECISION SENSOR TECHNOLOGY PARK

Ground was broken in April 2026 on a new campus in Shandong that adds dedicated space for sensor R&D, scaled manufacturing and faster delivery to customers worldwide.

ISO 9001:2015 · ISO 14001:2015 · ISO 45001:2018

START WITH THE MEASUREMENT

Six questions narrow hundreds of models down to one or two series. Answer them in order: each one rules out more sensors than the next.

01

MOTION OR VIBRATION?

Tilt, rigid-body motion, long-duration shock, or data you will integrate to velocity and displacement need response down to 0 Hz: choose a **MEMS DC** accelerometer. Everything else is a job for a piezoelectric sensor.

02

HOW BIG IS THE SIGNAL?

Pick the range first: about twice the highest peak you expect. Low-level vibration calls for high sensitivity (100 mV/g and up); shock calls for low sensitivity and a range of thousands of g.

03

WHICH FREQUENCIES?

Keep your highest frequency of interest well below the mounted resonance, roughly a third of it or less. The low end is set by the sensor's discharge time constant and your DAQ's coupling.

04

HOW HARSH IS THE ENVIRONMENT?

Standard IEPE runs to +120 °C, high-temperature IEPE to +160 °C. Above that, use **charge mode** (up to +500 °C). Wet locations need sealed, integral-cable sensors; ground loops need an isolated base.

05

HOW LIGHT IS THE TEST ARTICLE?

Keep sensor mass under one-tenth of the local mass of the structure, or it changes what you measure. Small parts point to teardrop and miniature models with adhesive mounting.

06

WHAT WILL YOU PLUG INTO?

IEPE inputs supply 2 to 20 mA constant current. Charge sensors need a charge amplifier; MEMS needs DC excitation. For high channel counts, pick triaxial and TEDS models to save setup time.

THREE TECHNOLOGIES AT A GLANCE

	B · IEPE	C · CHARGE	A · MEMS DC
Output	Low-impedance voltage, mV/g	High-impedance charge, pC/g	DC voltage, single-ended or differential
Low-frequency end	About 0.1 to 3 Hz, by series	Set by the charge amplifier	0 Hz (true DC)
Temperature	−50 to +120 °C, high-temp to +160 °C	Up to +500 °C on high-temperature series	−55 to +125 °C
Conditioning	Built in; any IEPE input	External charge amplifier	DC supply
Cabling	Standard coax, long runs	Low-noise coax, keep short	Multi-conductor (4-pin or 9-pin)
Best for	General vibration, modal, NVH, shock	High temperature, environmental test, vibration control, pyroshock	Motion, tilt, low frequency, long shocks

MOUNTING MATTERS

A stud on a flat, clean surface with a thin film of grease gives the widest frequency range. Adhesive and magnetic mounts are quicker but lower the usable upper frequency.

READ THE MODEL, KNOW THE SENSOR

Every LNS model number is built the same way. Four fields tell you the technology, the sensitivity, where the cable exits and which housing it is.

B	06	Y	31
FAMILY	SENSITIVITY	OUTPUT	SERIES

1 FAMILY LETTER

A	MEMS DC-response accelerometers
B	IEPE accelerometers
C	Charge-mode accelerometers
D	Dynamic force sensors
F	Dynamic pressure sensors
G	Signal conditioners
K	Cables, connectors and mounting accessories
N	Impact hammers

2 SENSITIVITY CODE

CODE	IEPE · mV/g	CHARGE · pC/g
00	0.1 to 2 (shock)	0.05 to 1 (shock)
01	5	2.5 to 5
02	10	10
03	20	20
04	–	30
05	50	50
06	100	–
07 · 08	200 to 250 · 300	–
09 · 10	500 · 1,000	–
11 · 12	2,000 to 5,000 · 10,000	–

On MEMS (A) models the code steps by range: A01 is ±500 g, A05 ±100 g, A09 ±10 g, A11 ±2 g.

TEDS VERSIONS

Own number: 2 + sensitivity digits + series digits + output letter.

B02A01 → 20201A · B06B14 → 20614B

3 OUTPUT LETTER

A	Top (axial) connector
B	Side (radial) connector
C	Integral cable or top integral connector
Y	Triaxial, three axes on one connector or cable
D · E	MEMS only: single-ended (D) or differential (E) output

4 SERIES CODE: THE HOUSING AND ITS APPLICATION

00 · 01	General-purpose and universal test housings
M_	Miniature and teardrop (BM1, AM6, BM9)
3_	Cube triaxials (Y31, Y32, Y35, Y39)
5_	Industrial and condition monitoring
9_	High-temperature or high-frequency IEPE
G_	Base-isolated (BG2) or shock-rated (AG, CG)
T_	High-temperature charge, 260 to 500 °C
4_	Thru-hole and shock triaxials (Y40 to Y48)
7_	Waterproof, sealed integral cable
60	Environmental test, charge (−70 to +250 °C)

Same series code, different output letter = same design with the cable on top or on the side: B02**A**94 and B02**B**94 are one high-temperature sensor in two versions.

TRY IT

B02B94	IEPE · 10 mV/g · side · +160 °C	C02BT3	Charge · 10 pC/g · side · +500 °C
A09E01	MEMS · ±10 g · differential · hex base	B00AG3	IEPE shock · ±20,000 g · top

POSTFIX OPTIONS

When a sensor differs from its standard version, the change is shown as letters after a hyphen. Each letter is one option, and several letters can be combined.

B06A00-AE

STANDARD MODEL
IEPE, 100 mV/g, top connector

A
10-32 connector

E
10-32 mounting

CONNECTOR

A	10-32 connector
G	M5 connector
X	4-pin connector, coarse pin converted to fine pin

MOUNTING THREAD

B	M6 × 0.75 mounting
C	1/4-28 mounting
D	M5 mounting
E	10-32 mounting
F	M6 mounting

CONSTRUCTION

M	Different housing material
T	Special processing model Integrated temperature and vibration

ELECTRICAL

K	3-wire circuit
I	4–20 mA output, 3-wire circuit
S	Adjusted discharge time constant

READING COMBINATIONS

B06A00-F	M6 mounting
B06A00-AE	10-32 connector, 10-32 mounting
B06A00-EM	10-32 mounting, alternate housing material

Illustrative only; availability varies by series.

ORDERING CHECKLIST

1 · Model: family, sensitivity, output and series

2 · Postfix: any option letters needed

3 · TEDS: order the 2-series number if required

4 · Cable: connector, length and DAQ end

CHECK AVAILABILITY

Not every postfix is offered on every sensor. Check the datasheet or ask LNS that the option is available for your model before ordering.

APPLICATION 01

TEST LAB, MODAL & NVH

Shaker tables, modal surveys, durability rigs and road-load runs. These IEPE series plug into any IEPE-ready DAQ and cover most day-to-day test work.

GENERAL VIBRATION TESTING

UNIVERSAL TEST

B02A00 – B06A00 · B-version side exit

- 10, 20, 50 and 100 mV/g; ±500 to ±50 g
- Up to 10k Hz (±5%)
- M5 connector and stud (10-32 opt.)
- Laser-welded stainless, IP68; TEDS optional

BASE ISOLATED

B01BG2 – B06BG2

- 5 to 100 mV/g; ±1,000 to ±50 g
- 1 – 9k Hz (±5%)
- Isolated base breaks ground loops on shakers and rigs
- Side connector, 10-32/M5 mount, −50 to +120 °C

MODAL & STRUCTURAL ANALYSIS

TRIAXIAL CUBE

B01Y31 – B06Y31 · miniature Y32

- 5 to 100 mV/g, three axes on one 4-pin cable
- 1 – 9k Hz (±5%); Y32 to 10k Hz
- 1/4-28 4-pin; M2.5 thread or adhesive mount
- TEDS available; −40 to +120 °C

TRIAXIAL THRU-HOLE

B01Y41 – B06Y41

- 5 to 100 mV/g; ±1,000 to ±50 g
- 2 – 9k Hz (±5%)
- Single-bolt thru-hole mount, quick to move between points
- 1/4-28 4-pin; TEDS available

SMALL & LIGHTWEIGHT STRUCTURES

TEARDROP, STUD MOUNT

B00BM1 – B06BM1

- 1 to 100 mV/g; ±5,000 to ±50 g
- Low profile for tight locations
- M3 side connector, M3 male stud
- −50 to +120 °C

TEARDROP, INTEGRAL CABLE

B01CM1 – B06CM1

- 5 to 100 mV/g; ±1,000 to ±50 g
- 3 – 10k Hz (±5%)
- Adhesive mount; 1 m integral cable (K00AL113)
- −50 to +120 °C

NVH, RIDE COMFORT & LOW-LEVEL SIGNALS

TRIAXIAL SEAT PAD

B06H46

- 100 mV/g, ±50 g, three axes
- 1 – 4k Hz (±5%)
- Seat cushion pad for ride comfort and whole-body vibration
- Integral cable to 1/4-28 4-pin jack

HIGHER SENSITIVITY

B07A01 – B10A01 · B-version side exit

- 200, 300, 500 and 1,000 mV/g
- ±25 to ±5 g
- For low-level structural and interior NVH signals
- TEDS on side-exit versions

USE WITH

LNS modal impact hammers (NxxB00) and modal kits for impact testing.

APPLICATION 02

SHOCK, HIGH-G & ENVIRONMENTAL TEST

Drop and crash testing, pyroshock, high-frequency work and qualification testing in thermal chambers, where range, survivability and temperature decide the sensor.

MECHANICAL SHOCK & DROP · IEPE

SHOCK, TOP CONNECTOR

B00AG1 – B00AG5

- 0.17 to 2 mV/g; ±2,500 to ±30,000 g
- Resonance ≥70 kHz (B00AG3)
- 10-32, M5 or M6 stud
- −50 to +120 °C

TRIAXIAL SHOCK

B00Y40 – B00Y48

- 0.25 to 2 mV/g; ±2,500 to ±20,000 g
- Three axes, thru-hole mount
- M5 ×3 or 1/4-28 4-pin connector
- −50 to +120 °C

PYROSHOCK & VERY HIGH G · CHARGE

SHOCK, CHARGE OUTPUT

C00AG1 · C00CG1 – C00CG7

- 0.05 to 1 pC/g; ±25,000 to ±100,000 g
- No built-in electronics to overload
- M5/M6 stud; top or integral connector
- −50 to +230 °C (CG7 to +150 °C)

TRIAXIAL SHOCK, CHARGE

C00Y40 – C00Y42 · C02Y41 · C04Y42

- 0.3 to 1 pC/g, up to ±20,000 g
- 10 and 30 pC/g versions for lower levels
- Thru-hole mount, M5 ×3 connectors
- −50 to +230 °C

HIGH FREQUENCY & MINIATURE SHOCK

HIGH FREQUENCY

B02A92 · B02A92D

- 10 mV/g, ±500 g
- 1 – 20k Hz (±5%)
- −55 to +125 °C; A92D to +160 °C
- Top connector, 10-32/M5; TEDS on B02A92

MINIATURE SHOCK

B00A00 · B00A01 · B00A07

- 0.5, 1 and 2 mV/g; ±10,000 to ±2,500 g
- Top connector; B-version side exit
- 10-32/M5 female thread
- −50 to +120 °C

ENVIRONMENTAL TEST & VIBRATION CONTROL · CHARGE

ENVIRONMENTAL TEST

C01A60 – C04A60 · B60 side exit

- 5, 10 and 30 pC/g; ±6,000 to ±1,500 g
- 0.5 – 15k Hz (±5%)
- −70 to +250 °C for thermal chambers
- 10-32/M5 mount

VIBRATION CONTROL

C02A01 · C04A01 · B01 side exit

- 10 and 30 pC/g; ±1,500 and ±1,000 g
- Control reference for shaker systems
- −40 to +160 °C
- 10-32/M5 mount

SHOCK SELECTION TIPS

Choose a range well above the expected peak: levels climb fast near the source. Stud-mount the sensor and tie down the cable. Watch for zero shift, a baseline offset after the pulse; moving to a lower-sensitivity, higher-range model usually reduces it. For charge sensors, keep the low-noise cable short.

APPLICATION 03

HIGH-TEMP, LOW FREQ & DC RESPONSE

Engines and exhaust systems up to +500 °C, slow-moving structures down to 0.1 Hz, and motion or tilt that needs a true DC response.

HIGH TEMPERATURE · UP TO +288 °C

HIGH-TEMPERATURE IEPE

B02A94 – B06A94 · B94 · Y94 triaxial

- 10 to 100 mV/g (Y94 from 5 mV/g)
- 1 – 10k Hz (±5%); Y94 1 – 8k Hz
- −50 to +160 °C, no external amplifier
- 10-32/M5 mount (Y94: M2.5)

CHARGE, 260 TO 288 °C

C02BT4 · C03BT4 · C05AG4

- 10, 20 and 50 pC/g
- BT4 1 – 10k Hz; AG4 1 – 6k Hz (±5%)
- BT4 to +260 °C; AG4 to +288 °C
- BT4: 7/16-27 2-pin, 3× M4 thru-hole

ULTRA-HIGH TEMPERATURE · CHARGE TO +500 °C

500 °C, STUD MOUNT

C01AT2 · C02AT2 · BT2 side exit

- 5 and 10 pC/g; ±1,000 and ±800 g
- 1 – 4k Hz (±5%)
- −50 to +500 °C
- 10-32/M5 mount

500 °C, THREE-BOLT MOUNT

C02BT3 · C02CT3

- 10 pC/g, ±600 g; 10 – 5k Hz (±5%)
- −50 to +500 °C for engines and exhausts
- 3× M4 thru-hole mount
- 7/16-27 2-pin (BT3) or high-temp Lemo (CT3), metal cable

LOW FREQUENCY & SEISMIC

LOW FREQUENCY

B06A04

- 100 mV/g, ±50 g
- 0.1 – 6k Hz (±5%)
- Top connector, 10-32/M5
- TEDS available; −40 to +120 °C

SEISMIC, HIGH SENSITIVITY

B10A03 – B12A03 · B11A51 · B12A51

- 1,000 to 10,000 mV/g; ±5 to ±0.5 g
- From 0.1 Hz; A03 to 1k Hz, A51 to 400 Hz
- Buildings, bridges, floors, large structures
- A51: MIL-C-5015 connector, 1/4-28 mount

MOTION & DC RESPONSE · MEMS

UNIAXIAL MEMS

A03D01 – A11D01 · E01 · D02/E02 thru-hole

- ±2 to ±200 g (20 to 2,000 mV/g)
- 0 – 2,000 Hz (±5%)
- Single-ended (D) or differential (E) output
- 1/4-28 4-pin; −55 to +125 °C

TRIAXIAL MEMS

A03YD5 – A11YD5 · YE3 differential

- ±2 to ±200 g on three axes
- 0 – 2,000 Hz (±5%)
- 5/16-32 9-pin connector, 10-32/M5 mount
- Need ±500 g? See impact-resistant A01D06

GOOD TO KNOW

Built-in electronics limit standard IEPE sensors to +120 °C. From +120 to +160 °C use the 94-series; above that, a charge sensor with its amplifier placed in a cooler zone. MEMS sensors also measure gravity: a ±2 g model mounted vertically already uses half its range.

APPLICATION FINDER

APPLICATION	START WITH	SENSITIVITY / RANGE	PG
General vibration testing	BxxA00 / B00 · BxxBG2	10 to 100 mV/g	06
Modal & structural	BxxY31 · BxxY32 · BxxY41	5 to 100 mV/g	06
Small, lightweight parts	BxxBM1 · BxxCM1 · BxxAM6	1 to 100 mV/g	06
NVH & ride comfort	B06H46 · B07A01 – B10A01	100 to 1,000 mV/g	06
Mechanical shock & drop	B00AG_ · B00CG_ · B00Y4_	±2,500 to ±50,000 g	07
Pyroshock, very high g	C00CG_ · C00Y4_	up to ±100,000 g	07
High frequency	B02A92 · B02A92D	10 mV/g, to 20 kHz	07
Environmental test, shaker control	CxxA60 / B60 · CxxA01 / B01	5 to 30 pC/g	07
High temperature to +160 °C	BxxA94 / B94 · BxxY94	5 to 100 mV/g	08
High temperature to +500 °C	CxxBT4 · C05AG4 · CxxAT2 · C02BT3	5 to 50 pC/g	08
Low frequency & seismic	B06A04 · BxxA03 · BxxA51	100 to 10,000 mV/g	08
Motion, tilt, DC	AxxD01 / E01 · AxxYD5 / YE3	±2 to ±200 g	08
Wet or submerged	BxxA71 · BxxB72 · BxxY70 · BxxY77	2 to 100 mV/g	–
Machine condition monitoring	BxxA57 · BxxC51 · B06Y51 · BxxA54T	50 to 1,000 mV/g	–
Calibration reference	BxxB04 / B05 · CxxB05	10 to 1,000 mV/g	–

NOT SURE? ASK AN ENGINEER

Send us your frequency range, levels, temperature and DAQ. We will recommend a sensor, cable and mounting.

EMAIL
info@lnsdynamics.com

WEB
lnsdynamics.com