

SensorsX SX-LFNB Series

Continuous Float Level Transmitter

Magnetically actuated continuous level measurement with configurable wetted materials



CONTINUOUS OUTPUT

Two-wire 4-20 mA or three-wire resistance

MATERIAL OPTIONS

SUS304/316L, PP or PVDF floats

CONFIGURABLE RANGE

Measurement range up to 6000 mm; custom ranges available on request.

Note: Product specifications and options are configuration-dependent. Confirm the complete model configuration, float compatibility, and dimensional drawing before ordering.

■ PRODUCT OVERVIEW

The SensorsX SX-LFNB Series is a continuous float level transmitter designed for reliable liquid level measurement in tanks and vessels. A magnetic float follows the liquid level and actuates an internal reed-switch and resistance network to provide a continuous output. The series supports two-wire 4–20 mA or three-wire resistance output, with multiple float materials, process connections, and measuring ranges up to 6000 mm.

■ KEY FEATURES

- Simple magnetic-float and reed-switch measuring principle.
- Two-wire 4-20 mA or three-wire resistance output.
- 5-30 V DC supply.
- Resolution options of 5, 8 or 10 mm.
- Metal and plastic float options for different temperature, pressure, density and chemical-compatibility requirements.
- Threaded or flanged process connections; multiple junction-box constructions.
- IP65 ingress protection at the lead outlet or junction box.

■ TYPICAL APPLICATIONS

Storage & Bulk Liquid Tanks

- Fuel and chemical storage tank level
- Water / wastewater tank level
- Tank inventory management

Process Vessels

- Reactor and process vessel level control
- Feed tank level monitoring
- Batch process level tracking

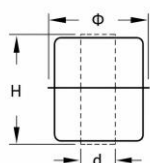
Utility & Auxiliary Systems

- Utility tank level monitoring
- Condensate / sump tank level
- Cooling-system reservoir level

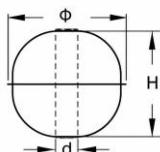
■ GENERAL AND ELECTRICAL SPECIFICATIONS

Parameter	Specification
Measuring principle	Magnetic float actuating an internal reed-switch / resistor-divider network
Supply	5-30 V DC
Output	Two-wire 4-20 mA or three-wire resistance output
Resolution	5 mm, 8 mm or 10 mm
Total accuracy	±8 mm or ±10 mm
Level range	300-6000 mm; custom ranges available on request.
Insertion depth	500-6200 mm; custom ranges available on request.
Ingress protection	IP65 at lead outlet or junction box
Secondary indication	Compatible remote secondary instrument may be used

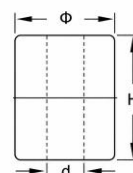
■ FLOAT SELECTION AND RATINGS



S5, S6, S7 Series



S9, S10, S11, S12 Series



P2, P3, F1, F2 Series



Code	Dimensions (mm)	Material	Min. SG	Max. temp.	Max. pressure
S5	Cylinder Ø40 × H36 × d15.5	304 / 316L STAINLESS STEEL	0.70	150 °C	10 kgf/cm ²
S6	Cylinder Ø40 × H50 × d15.5	304 / 316L STAINLESS STEEL	0.70	150 °C	10 kgf/cm ²
S7	Cylinder Ø45 × H56 × d15.5	304 / 316L STAINLESS STEEL	0.70	150 °C	10 kgf/cm ²
S9	Sphere Ø52 × H52 × d15.5	304 / 316L STAINLESS STEEL	0.65	150 °C	25 kgf/cm ²
S10	Sphere Ø52 × H62 × d15.5	304 / 316L STAINLESS STEEL	0.65	150 °C	25 kgf/cm ²
S11	Sphere Ø75 × H75 × d15.5	304 / 316L STAINLESS STEEL	0.55	150 °C	25 kgf/cm ²
S12	Sphere Ø125 × H125 × d15.5	304 / 316L STAINLESS STEEL	0.45	150 °C	25 kgf/cm ²
P2	Cylinder Ø40 × H52 × d20	PP	0.65	75 °C	5 kgf/cm ²
P3	Cylinder Ø48 × H52 × d20	PP	0.65	75 °C	5 kgf/cm ²
F1	Cylinder Ø55 × H70 × d23	PVDF	0.85	150 °C	5 kgf/cm ²
F2	Cylinder Ø40 × H52 × d20	PVDF	1.00	150 °C	5 kgf/cm ²

Note: The liquid specific gravity must exceed the selected float minimum specific gravity. Custom float configurations are available on request. Use the listed float-specific limits as the selection basis.

Plastic float materials include PP, PVC, NBR, and PVDF. Standard float options are available in PP and PVDF, while PVC and NBR constructions are available on request.

Service factor	Guidance
Temperature	Maximum operating temperature depends on the float material and construction. PVC and PP are suitable for temperatures up to 80 °C, PVDF up to 150 °C, and SUS304/316L up to 200 °C. The allowable operating temperature shall not exceed the rating specified for the selected float.
Pressure	Maximum operating pressure depends on the float material and construction. Plastic floats are rated up to 5 kgf/cm ² , while standard SUS304/316L float options are rated up to 10 or 25 kgf/cm ² depending on the float type. Higher-pressure metal configurations are available for applications up to 40 kgf/cm ² , with selected constructions suitable for pressures up to 64 kgf/cm ² . Always observe the pressure rating specified for the selected float.
Viscosity	For more viscous liquids, use a float with larger outside diameter than its minimum-density requirement alone would suggest, to overcome surface-tension effects.
Corrosive media	PP is suitable for strong acid and alkali applications, while PVDF is recommended for strong-acid service above 80 °C. Verify chemical compatibility with the process medium before use.
Alcohols and oils	Stainless steel is recommended; food applications should use sanitary-grade SUS316L.

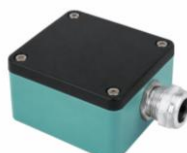
■ JUNCTION BOX OPTIONS



NG type



NF type



SA type



PI type



F2 type



PR type



EA type



F3 type

Note: Junction box options include NG, NF, SA, PI, F2, PR, EA, and F3. Available housing materials include stainless steel, aluminum alloy, PC, and PP. Material, cable entry, display, IP rating, and hazardous-area approval depend on the selected configuration. Images are for reference only.

■ SELECTION AND APPLICATION NOTES

- Select the float first from liquid specific gravity, operating temperature, pressure, chemical compatibility and viscosity.
- Select nominal connection size and the applicable threaded or flanged connection standard.
- Select a junction-box type appropriate for the environment and required local indication.
- Choose resolution, explosion-protection option, display option, level range, insertion depth, total accuracy and output.
- Verify that the requested level range and insertion depth combination is mechanically feasible for the vessel and connection.
- Obtain an approved dimensional drawing and model-specific wiring instructions before fabrication or installation.

■ INSTALLATION AND COMMISSIONING

- Confirm the float moves freely over the full required travel.
- Prevent the stem and float from contacting internal structures or tank walls.
- Confirm material compatibility and all temperature and pressure limits.
- Confirm wiring from the delivered terminal label before energizing.
- Verify 4 mA and 20 mA endpoints, or the resistance endpoints, against known liquid levels using the model-specific procedure.

■ ORDERING INFORMATION— SX-LFNB

Complete model number example: **SX-LFNB-S5DNNGAOO1000100011**

Float Type	
S5	Cylinder Ø40 × H36 × d15.5
S6	Cylinder Ø40 × H50 × d15.5
S7	Cylinder Ø45 × H56 × d15.5
S9	Sphere Ø52 × H52 × d15.5
S10	Sphere Ø52 × H62 × d15.5
S11	Sphere Ø75 × H75 × d15.5
S12	Sphere Ø125 × H125 × d15.5
P2	Cylinder Ø40 × H52 × d20
P3	Cylinder Ø48 × H52 × d20
F1	Cylinder Ø55 × H70 × d23
F2	Cylinder Ø40 × H52 × d20
Thread (Flange) Size	
A	3/8" (DN8)
B	1/2" (DN15)
C	3/4" (DN20)
D	1" (DN25)
E	1-1/2" (DN40)
F	2" (DN50)
G	2-1/2" (DN65)
H	3" (DN80)
I	4" (DN100)
J	5" (DN125)
K	6" (DN150)
1	1/8"
2	1/4"
3	1-1/4" (DN32)
Connection Type	
N	ASME B16.5 Class 150 flange
O	ASME B16.5 Class 300 flange
P	PT thread
Q	PF thread
F	NPT thread
T	GAS thread

U	EN 1092 PN6
V	EN 1092 PN10
W	EN 1092 PN16
X	EN 1092 PN25
Y	EN 1092 PN40
Z	EN 1092 PN63
Housing Type	
NG	NG Type
NF	NF Type
SA	SA Type
PI	PI Type
F2	F2 Type
PR	PR Type
EA	EA Type
F3	F3 Type
Resolution	
A	5 mm
B	8 mm
C	10 mm
Explosion Protection	
O	Without
E	With
Display	
O	Without
S	With
Level Range	
0300	300 mm
0500	500 mm
0800	800 mm
1000	1000 mm
1200	1200 mm
1500	1500 mm
2000	2000 mm
2500	2500 mm
3000	3000 mm
4000	4000 mm
5000	5000 mm
6000	6000 mm
Insertion Depth	
0500	500 mm
0700	700 mm

1000	1000 mm
1200	1200 mm
1400	1400 mm
1700	1700 mm
2200	2200 mm
2700	2700 mm
3200	3200 mm
4200	4200 mm
5200	5200 mm
6200	6200 mm
Total Accuracy	
1	±8 mm
2	±10 mm
Output	
1	4-20 mA
Optional	
D	Customized information; specify in order remarks