

Needle RS2N Datasheet

Description:

RS2NL sensors are advanced ultrasound-sensitive contact probes designed for handheld use with compatible SDT instruments. The core component of the RS2NL sensor is a piezoelectric ceramic transducer, which is adhered to a mechanical resonant structure. Thanks to its embedded conditioning electronics, this configuration allows the sensor to effectively detect and convert ultrasound vibrations into measurable electrical signals. A distinct feature of the RS2NL sensor is its needle, available in various lengths, which guides ultrasound measurements, ensuring detection, especially in difficult-to-access areas. The entire assembly is housed in robust stainless steel and further protected by a cover providing durability and resistance to harsh environmental conditions.

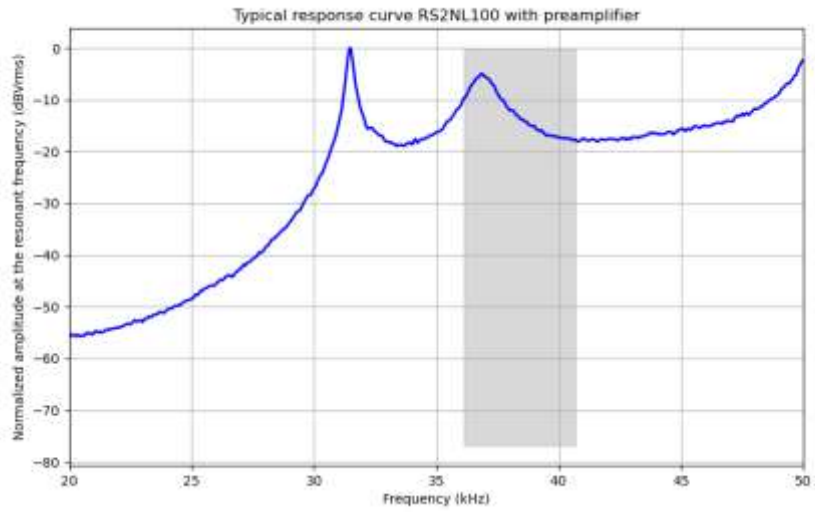
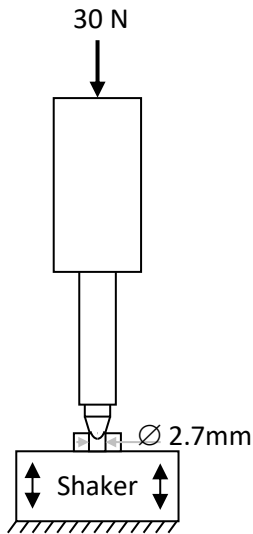


Specifications:

General		
Function		Ultrasound resonant contact sensor
Type		Needle
Model recognition		FU.SEN.RS2N.00X
Serial number		SN 535 YY XXXX
Certifications		EMC, ROHS (see DoC)
Center frequency (at 20°C)	kHz	37.0 ±0.5
Thermal deviation of the center frequency	Hz/°C	-12
Measurement bandwidth	kHz	[36.1-40.7]
Built-in gain	dB	+30
Environmental		
Operating temperature range	°C (°F)	-15 to +60 (5 to 140), non-condensing
IP rating		50
Mechanical		
Housing material		303 Stainless steel and Aluminum
Protection tube		Aluminum
Holster material		Nitrile Butadiene Rubber
Dimensions	mm (in)	∅36 mm (1.42"): x 82 (3.23) model RS2NL100 x 276 (10.87) model RS2NL300 x 571 (18.50) model RS2NL500
Mass	g (oz)	205 (7.23) model RS2NL100 265 (9.35) model RS2NL300 325 (11.46) model RS1NL500
Electrical connector		LEMO 7 female
Recommended position		Perpendicular to the surface

NB: Additional specifications are available in the download section of SDT web site: www.sdtultrasound.com

Test conditions



RS2NL100
FU.SEN.RS2N.001



Needle length (mm)

RS2NL300
FU.SEN.RS2N.002



RS2NL500
FU.SEN.RS2N.003



The needle is a part of the resonant structure, please do not disassemble it!

Safety recommendations:

- Risk of injury when working in electrical environment.
- Adhere to all safety rules and regulations in your facility.
- Always wear proper protective clothing and use insulated tools when around electrical hazards.
- Do not expose the equipment to rough handling or heavy impacts.
- Always read and follow the user manual.
- Opening the sensor housing may lead to incorrect measurements and void the warranty.
- The equipment should not be used in areas where there is a risk of explosion.
- Do not expose the equipment to high humidity or direct contact with water.
- All repairs must be performed by either SDT or an authorized service provider.

3	CMA 03/07/2024	Operating T° range + sensitivity curve	CGR
2	CMA 27/01/2021	Modified version, gain +30dB + response curve	CGR
1	-	Original version	-
Ver.	Editor	Nature of modification	Verified

*The information herein is believed to be accurate to the best of our knowledge.
Due to continuous research and development, specifications are subject to change without prior notice.*