

## Needle RS2N Datasheet

### Description:

RS2NL sensors are ultrasound sensitive contact probes. RS2N consists of a PZT piezoelectric ceramic glued on a mechanical resonant structure. A needle of different lengths guides vibration from the measurement point to the sensitive part. RS2N is mounted in stainless steel housing with further protected in a Nitrile Butadiene Rubber cover.



### Specifications:

General		
Function		Ultrasound resonant contact sensor
Model recognition		FU.SEN.RS2N.00x
Certifications		EMC, ROHS (see DoC)
Center frequency (at 20°C)	kHz	37.0 ±0.5
RMS sensitivity	dB, V/g	9.7mV/g±2dB ref:0dB=1V/g
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)	-10 to +40 (14 to 104)
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
Weight	g (oz)	205 (7.23) model RS2NL100 265 (9.35) model RS2NL300 325 (11.46) model RS1NL500
Electrical connector		7-pole female LEMO
Recommended position		Perpendicular to the surface

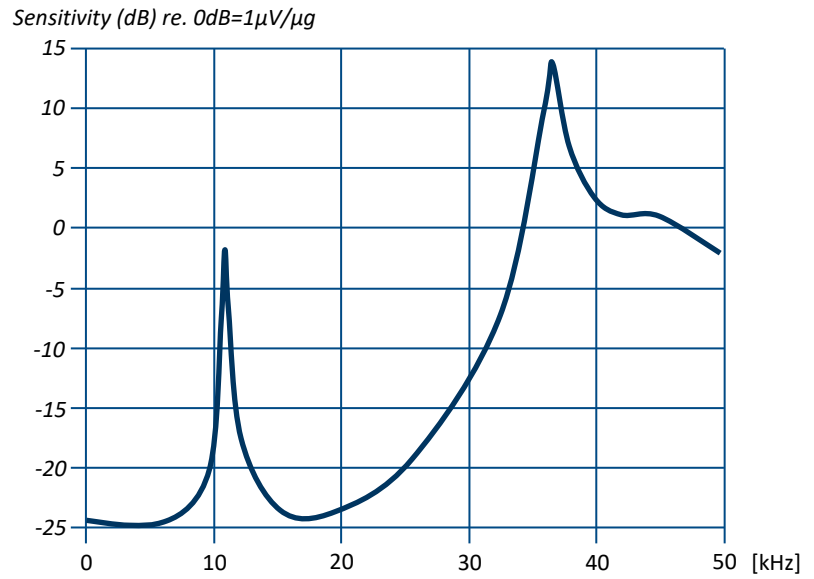
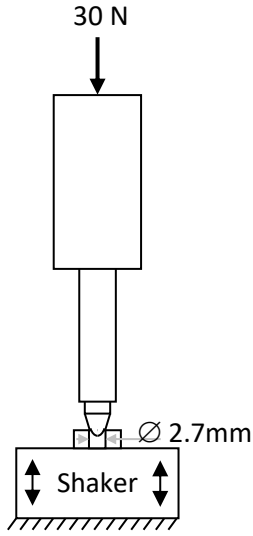
**The needle is a part of the resonant structure, please do not disassemble it!**

*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.*

NB: Additional specifications are available at the download section of SDT web site: [www.sdtultrasound.com](http://www.sdtultrasound.com)

**Test conditions**



RS2NL100  
FU.SEN.RS2N.001

RS2NL300  
FU.SEN.RS2N.002



RS2NL500  
FU.SEN.RS2N.003



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## Safety recommendations:

- Do not expose the sensor to rough handling or heavy impacts.
- Always read and follow the user manual.
- Opening the housing of the sensor may result in hazardous mishandling and voids warranty.
- Do not use the sensor in areas where there is a risk for explosion.
- Do not expose the equipment to high humidity or direct contact with water.
- All repair work should be performed by SDT.
- Using the sensor with non-SDT instruments can cause internal damage.

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2	CMA 27/01/2021	Modified version, gain +30dB + response curve	CGR
1	-	Original version	-
<b>Ver.</b>	<b>Editor</b>	<b>Nature of modification</b>	<b>Verified</b>

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