TECHNICAL DATA SHEET

NanoPULS™

General information

NanoPULS	
PURPOSE	• The NanoParticle ULtrasound Sensor (NanoPULS) is an online nanoparticle counter for semiconductor grade Ultrapure water (UPW). • Designed and manufactured for applications such as online UPW monitoring, polishing profiling, semiconductor yield enhancement and UP-grade filter evaluation. • The NanoPULS comprises one Transmitter Unit (TU) and 1 to 4 Sensor Units (SU) connected to the Transmitter Unit. This modular design allows simultaneous measurements at different size channels or sample points.
INSTALLATION	• Requirements: one UPW inlet and one UPW outlet. • No external equipment, consumables or computer required to run the NanoPULS. • See operation manual or contact Ovivo for further information.
OPERATION	• The NanoPULS must be used exclusively indoor, in a dry environment without condensing humidity (typically in a conditioned analyzer cabinet). • It is designed to operate 24/7 without intervention. • In case of flow issues, the measurement stops automatically.
MAINTENANCE & CALIBRATION	• Ovivo recommends an annual maintenance of the Sensor Units. • Ovivo will provide software updates for the Transmitter Unit.

OVIVO®

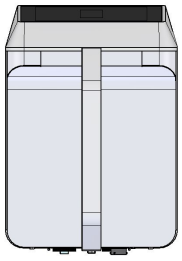
Bringing water to life®

Characteristics

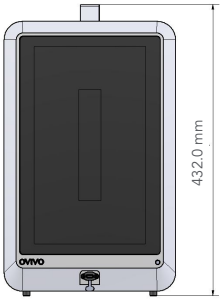
SIZE CHANNELS			≥ 5 nm, ≥ 10 nm, ≥ 20 nm or ≥ 50 nm
COUNTING RANGE		p/mL	0 ... 3'000
ZERO COUNT LEVEL		p/L	< 100
MEASUREMENT FREQUENCY			1 reading per min
SAMPLE FLOWRATE		mL/min	300 (controlled)
MINIMUM LINE PRESSURE		bar psi	2 30
MAXIMUM LINE PRESSURE		bar psi	7 100
SAMPLE TEMPERATURE		°C °F	20 … 25 68 … 77
MAIN WETTED PARTS			PFA (Perfluoroalkoxy) PP (Polypropylene) FKM (Fluoro-rubber)
DIMENSIONS	Transmitter Unit	mm in	250 x 307 x 430 9 x 15 x 17
	Sensor Unit	mm in	160 x 430 x 430 6 x 17 x 17
WEIGHT	Transmitter Unit	kg lbs	13 29
	Sensor Unit	kg lbs	13 29
DATA COMMUNICATION			4 – 20 mA, Ethernet, USB-C key (data export)
USER INTERFACE			13.3" touchscreen
SYSTEM/SOFTWARE			OVIVO®– proprietary software
POWER SUPPLY		VAC Hz	100 – 240 50 – 60
LIQUID CONNECTIONS			¼" PFA flare inlet ½" SS Swagelok® outlet
ENVIRONMENT		°C °F	10 … 40 50 … 104

Technical drawings

TRANSMITTER UNIT (TU)

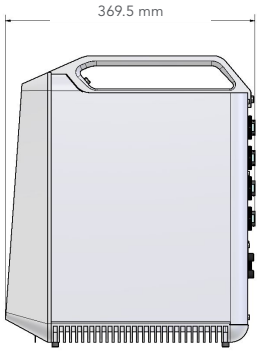


Top



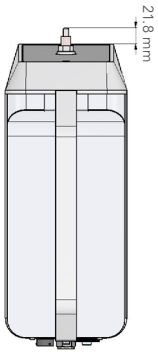
Front

Back



Side

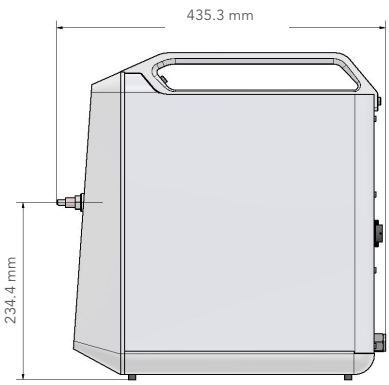
SENSOR UNIT (SU)



Top

Front

Back



Side

Configurations

MODEL	USE CASE EXAMPLE	ILLUSTRATION
NanoPULS-1X	1 size channel on 1 sample point (the user selects manually between size channels)	
NanoPULS-2X	2 size channels/sample points	
NanoPULS-3X	3 size channels/sample points	
NanoPULS-4X	4 size channels/sample points	

Interface and communication

The touchscreen of the Transmitter Unit has a unique design to give the customer an intuitive, practical, and user-friendly experience.

Measurements can be monitored in real-time and from distance thanks to a clear visualization of the data.

There are 3 means of communicating measurements data to an external system from the NanoPULS:

- Export via USB-C key (USB adapter included)
- 4-20 mA analogue output
- Ethernet TCP/IP

Quality

EU DECLARATION OF CONFORMITY

- Designed, developed, and manufactured in accordance with the EU standards for health, safety and environmental protection and is in conformity with the Low Voltage Directive - 2014/35/EU.

EMC DIRECTIVE

- The NanoPULS is designed, developed, and manufactured in accordance with the EMC Directive - 2014/30/EU.

UL CERTIFICATION

- The NanoPULS is Listed to applicable standards and requirements by UL.

ISO 9001:2015

- The manufacturing of the NanoPULS is certified according to ISO 9001:2015.

Other information

DISPOSAL	• Disposal must be in accordance with the appropriate local regulations. • See additional information in the operation manual.
SAFETY ADVICE	• Risk of electrical and pressure hazards. • Improper operation or usage of the NanoPULS for non-intended purpose may endanger the health of the operator, damage equipment and/or prevent efficient operation of the plant. • Unauthorized modification of the NanoPULS will void warranty. We recommend using only original spare parts for maintenance.
MANUFACTURER	Ovivo Switzerland AG Benkenstrasse 262 4108 Witterswil Switzerland nanopuls@ovivowater.com
GLOBAL KNOWLEDGE CENTER	Ovivo Switzerland AG Benkenstrasse 262 4108 Witterswil Switzerland