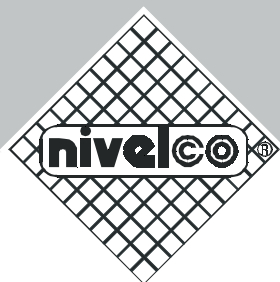


*Thank you for choosing a NIVELCO instrument.
We are sure that you will be satisfied throughout its use*



SenSonar

SIT/SIS-300 series ultrasonic sensors
for liquid level metering

USER'S MANUAL



APPLICATION

The **Ultrasonic Level Meters** made by NIVELCO offer you excellent tools for liquid level and volume measurements in tanks containing various liquid materials and for open channel flow measurement.

The **Two-Part Measurement System** consists of **SenSonar SI/SS-300 Sensor(s)** based on the latest SenSonic™ transducer technology of NIVELCO and a highly sophisticated **SM/SW-300 NIVOSONAR Remote Control Unit**. This powerful system, is capable of measuring the level of practically any liquid, even under most difficult conditions.

TECHNICAL DATA

Model	Teflon faced	Stainless Steel faced		
	SIT-380 SIT-38N	SIS-362 SIS-36A	SIS-344 SIS-34C	SIS-325 SIS-32D
Range	0.3 to 4 m	0.40 to 7 m	0.55 to 12 m	0.65 to 25 m
Frequency	80 kHz	60 kHz	40 kHz	20 kHz
Total beam angle at -3dB	5°	5°	5°	7°
Mounting	380: 2" BSP 384: 2" NPT	362: DN 80 34C: ANSI 3"	344: DN 125 34C: ANSI 5"	325: DN 150 32D: ANSI 6"
Wetted parts	PTFE (Teflon)	Stainless steel (SS314Ti / 1.4571)		
Process temperature	-30°C to 100°C (CIP 120°C for max 2 hours)			
Mechanical protection	IP68			
Pressure (absolute)	0.3 to 3 bar			
Output signal/power supply	To/from NIVOSONAR SM/SW-300 Remote Control Units			
Electrical connections	Direct cable outlet			
Signal cable	4-wire shielded cable; wire cross section: 0.5 to 2.5 mm ² ; max. 50nF, max. 20 Ohm			
Length of signal cable	Advised max. cable length: 300 m; recommended type: LIYCY 4 x 0.75 mm ²			
Electrical protection	Class III. with surge protection			

Manufacturer:
Nivelco Process Control Co.
 H-1043 Budapest, Dugonics u. 11.
 Phone: (36-1) 369-7575 Fax: (36-1) 369-8585
 E-mail: sales@nivelco.com http://www.nivelco.com

DIMENSIONS AND ACCESSORIES

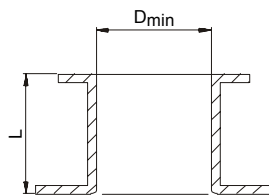
SIT-380 SIT-38N	SIS-362 SIS-36A	SIS-344 SIS-34C	SIS-325 SIS-32D

INSTALLATION

- **FOAM**
In case of foaming liquids, the sensor should be mounted as far away from the place of liquid inflow as possible. Eventually a location should be found, where foaming is the smallest, or a stilling well must be adopted.

- **STANDOFF PIPE**

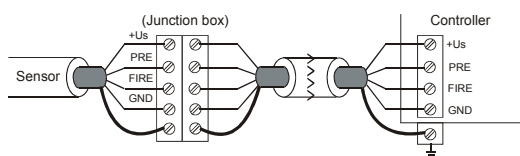
The hereby-presented dimensions are strongly recommended when using stand-off pipes. The structure is recommended to be rigid, the inner rim where the ultrasonic beam leaves the pipe should be rounded.



L[mm]	D _{minimum} [mm]			
	SI-38	SI-36	SI-34	SI-32
500	125	150	200	300
300	100	125	175	200
200	85	100	150	175

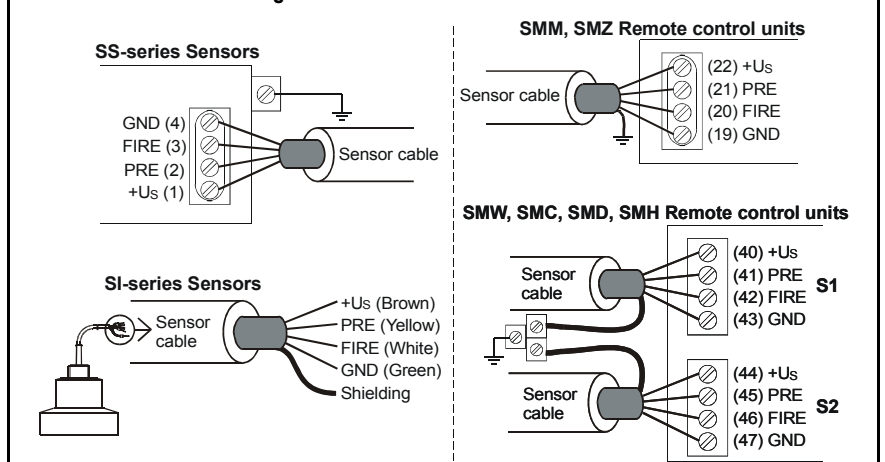
ELECTRICAL CONNECTIONS

- Use ordinary, 4-wire shielded cables for connecting sensors to controllers. Use type of cable described in the "Technical Data Table".
- Extend sensor cable as shown below:



- To safety ground the metal housing of SS-300 sensors, use grounding screw terminal of housing.
- Signal cables must not be led in common duct with high voltage lines.
- If signal cables of more than one sensor are led in common duct, make sure that they are individually shielded.

Wiring between sensor and remote control unit



MAINTENANCE AND REPAIRS

The device does not require routine maintenance. In some instances, however, the sensor may need occasional cleaning to remove surface deposits

STORAGE CONDITIONS

Ambient temperature range: -30 to +80°C
Relative humidity: up to 98%

WARRANTY

All Nivelco products are warranted free of defects in materials or workmanship for a period of two years from the date of purchase.

Repairs under guarantee are carried out at the Manufacturer's premises. The Purchaser is liable for costs of dismantling and re-installation as well as transport costs.

Nivelco shall not be liable for misapplication, labour claims, direct or consequential damage or expense arising from the installation or use of equipment.