PTU05

825B071F

Compact ultrasonic level transmitter

TECHNICAL DATA

Enclosure material:	**PP**
Mechanical installation:	**1" BSP**
	on request with PP DN100 PN6 flange screwed
Mechanical protection:	**IP68**
Electrical connection:	**n.1 output cables (L=3m) or**
	IP68 male connector with linking cable
Working temperature:	**-25 ÷ +75°C**
Pressure:	**from 0,5 to 1,5bar (absolute)**
Power supply:	**24Vdc**
Power consumption:	**1W**
Analog output:	**4-20mA max load 750 ohm**
Serial port:	**RS485**
Max measure range:	**0,3÷5m**

[The above distance must be intended from perfect reflecting surfaces, in contrary case decreases the maximum measurable distance]

Temperature compensation:	**PT100 from -30 to +80°C**
Accuracy:	**not better than +/-2mm**
Resolution:	**1mm**
Calibration:	**two push-buttons, for self-acquisition**
	or by SWING unit
Warm-up:	**30 minutes normally**
LEDs display:	**red LED for supply**
	yellow LED flashing for echo receiving

PTU05 Mechanical installation

To reach a good and safe measurement, avoiding spurious echo (not reflected from the surface to measure) need to take care about the sensor sensibility volume in the sound path, no obstacles or objects must be present into the sensibility volume (lobe), see fig.2/D/E.
On fig.2 some suggestion:

1) Install perpendiculary at the surface, see fig.2/A
2) Don't use with foaming products, see fig.2/B
3) Avoid installation where the product distance could be less than 0,3m, see fig.2/C
4) No obstacles or objects must be present into the sensibility volume, see fig.2/D/E

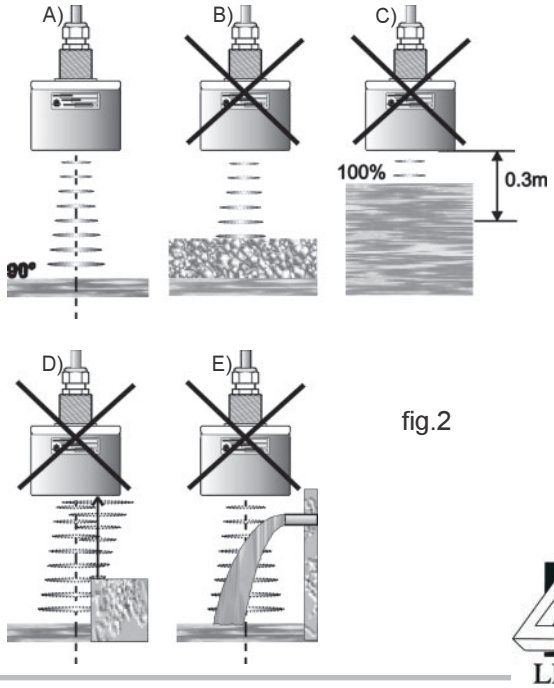


fig.2

PTU05 Overall dimensions

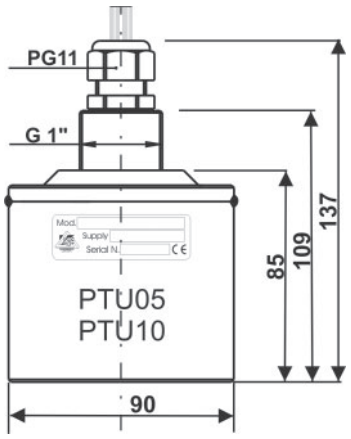


fig.3

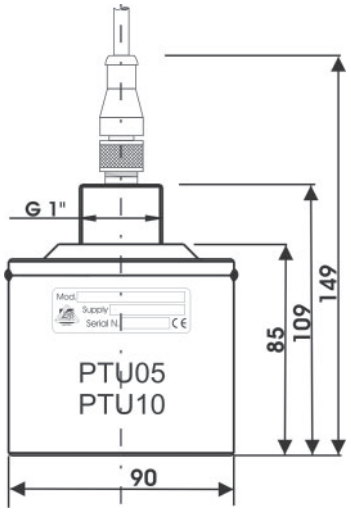


fig.4

LEKTRA

applied solutions for the applications

No special cable or coax-cable are requests, and no practice distance limits.

For the Vdc power supply take in consideration that the negative of the power supply is electrically connected to the negative output current.

A special J-box with P1 and P2 calibration push buttons built-in is available on request.

The picture below shows the connectors and the push-buttons for the 4÷20mA version calibration.

Available a RS485 serial port to communicate to PC or PLC.

On request the “SoniSoft” S/W communication for PC and the RS485/RS232 conversion module are available.

SWING connections

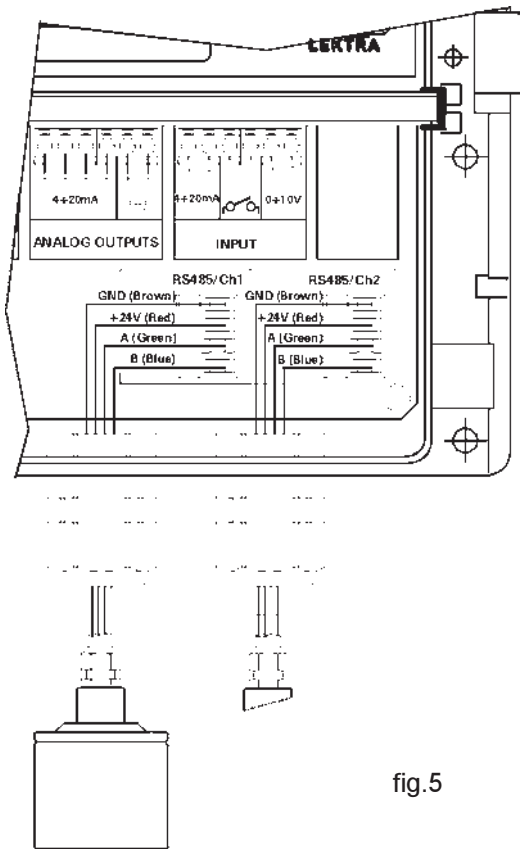
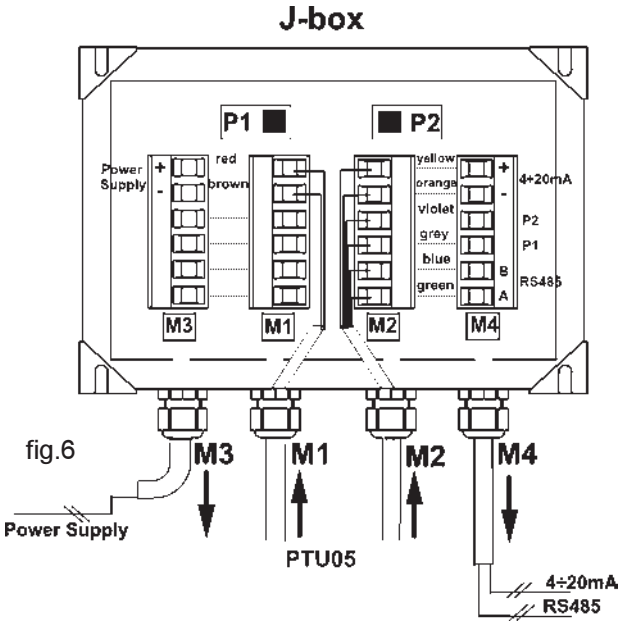


fig.5

Analog output version



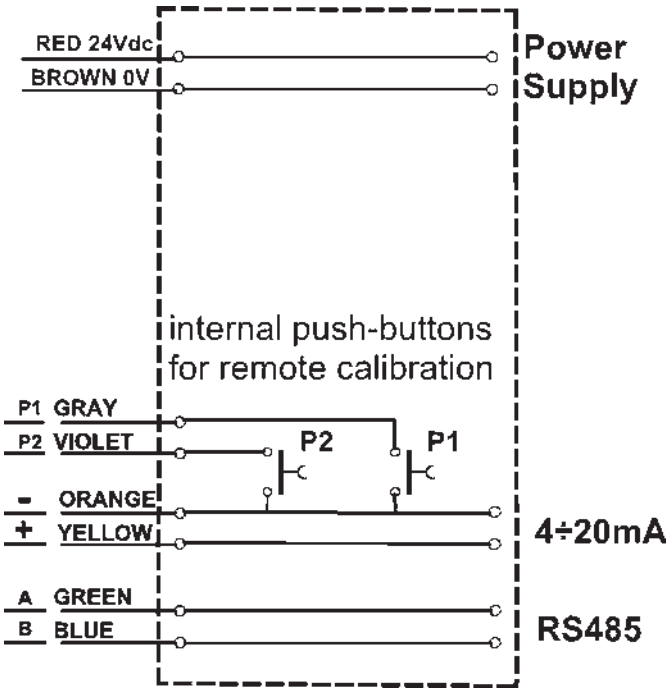


fig.7

The PTU05 calibration can be done in two different ways:

a) By means the P1 and P2 push-buttons.

b) With PC or PLC soft. communication with RS485 port.

a) <u>By means the P1 and P2 push-buttons</u>

To calibrate by-means 2 push-buttons P1 and P2 (see figure), needs to put the "PTU05" respectively at the distance refers to 0% and 100% level, in order to memorise the relevant distance electronically.
In the condition of normal working the PTU05 shows led flashing (when echo is received).

To calibrate 4mA needs to put the PTU05 at the distance at which you want 4mA output current. Wait till the led is flashing than: press simultaneously P1 and P2, release them and verify that led will stay fix lightened.
Press two times P1, release it and wait until led is flashing again before move the sensor. <u>The distance has been memorised and associated to 4mA output.</u>

To calibrate 20mA needs to put the PTU05 at the distance at which you want 20mA output. Wait till the led is flashing than: press simultaneously P1 and P2, release them and verify that led will be fix lightened.
Press two times P2, release it and wait until led is flashing again before move the sensor. <u>The distance has been memorised and associated to 20mA output.</u>

b) <u>With PC or PLC soft. communication with RS485 port</u>

Refers to the "SoniSoft" S/W operating manual

<u>Calibrations via SWING RS485 connection</u>

Refers to the "SWING" operating manual

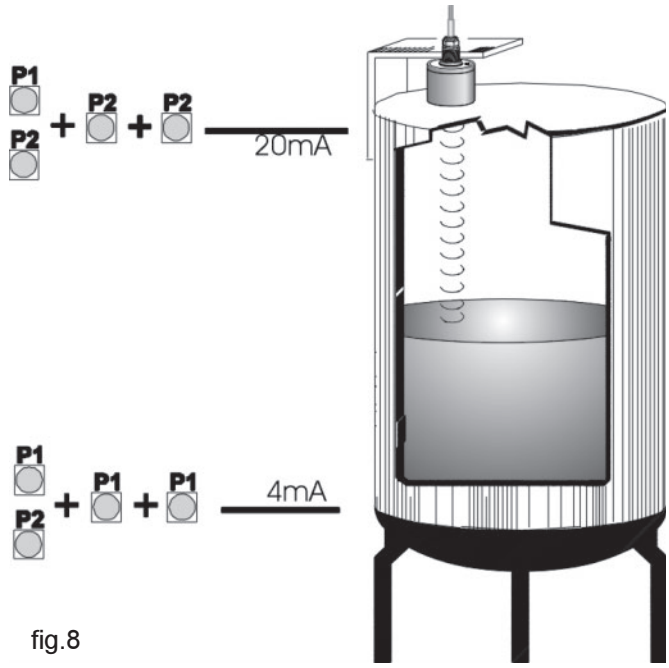


fig.8

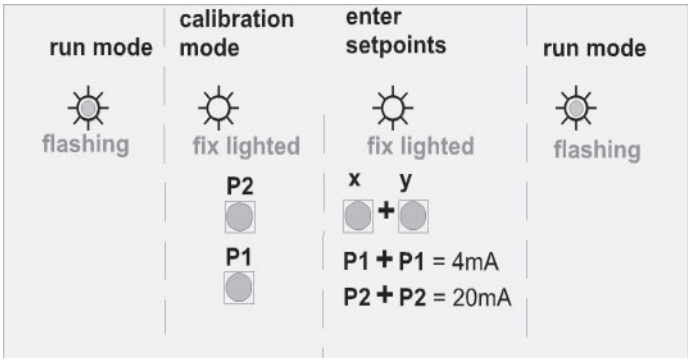


fig.9

fig.11

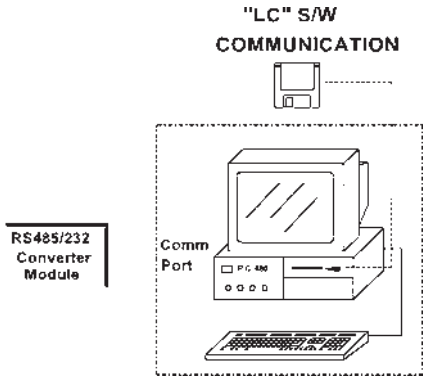


fig.10

PTU05 Order code

PTU05	Code	Version
	A	Designed to be connected to Swing unit (RS485) with linking cable 3m
	B	4÷20mA + RS485 output transmitter with linking cable 3m
	C	Designed to be connected to Swing unit (RS485) + IP68 male connector with linking cable 5m
	D	4÷20mA + RS485 output transmitter + IP68 male connector with linking cable 5m
	Z	Special

Code	Process connection
0	G 1 A / PP
1	DN100 PN6 UNI6091-71/PP flange
9	Special

Code	Accessory
A	None
P	IP68 male connector with linking cable 9m; for C and D version connection
R	IP68 male connector with linking cable 15m; for C and D version connection
Z	Special

PTU05	A	0	A

Order code example

PTU05 Warranty

Products supplied by SGM LEKTRA are guaranteed for a period of 12 (twelve) months from delivery date according to the conditions specified in our sale conditions document.
SGM LEKTRA can choose to repair or replace the Product.
If the Product is repaired it will mantein the original term of guarantee, whereas if the Product is replaced it will have 12 (twelve) months of guarantee.
The warranty will be null if the Client modifies, repair or uses the Products for other purposes than the normal conditions foreseen by instructions or Contract.
In no circumstances shall SGM LEKTRA be liable for direct, indirect or consequiential or other loss or damage whether caused by negligence on the part of the company or its employees or otherwise howsoever arising out of defective goods

PTU05 Factory test certificate

In conformity to the company and ceck procedure I certify that the equipment:

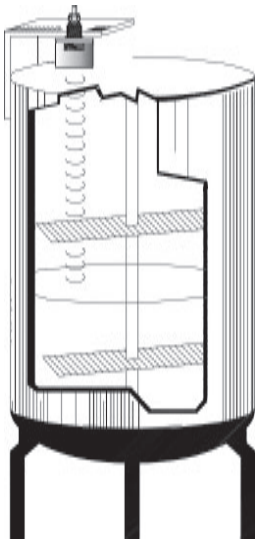
PTU05 ..... Serial n. .....

is conform to the technical requirements on Technical Data and it is made in conformity to the SGM-LEKTRA procedure

Quality Control Manager .....

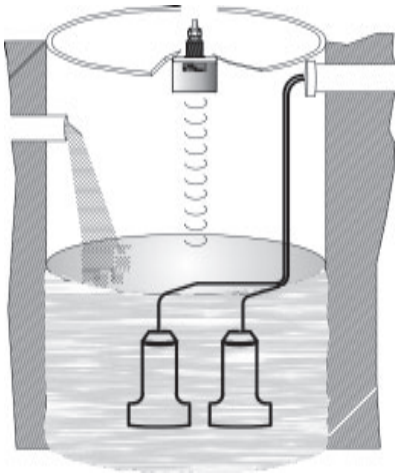
Production and ceck date .....

PTU05 Application



Non contact continuous level measurement into tanks with agitator

fig.12



Pump control compact stand alone unit, only through SWING unit connection

fig.13

fig.14

Measurement in vessels and channels, only through SWING unit connection

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