

# Technical data

## PT60 and LT Transmitters

Pressure, differential pressure and level transmitters  
in smart and analog versions  
and hygienic design

TYPE	Threaded	Threaded with extended diaphragm	Flange connection		Hygienic clamping connection	Hygienic screw connection	Removable during operation, extended diaphragm	Submersible LT100 or LT10
<b>CONNECTION (examples)</b>	R 1/2" ext. or NPT 1/2" ext. and 1/4" int.	R 1 1/2" external O-ring Viton	50 mm /2"	80 mm /3"	Clamp 38 ISO2852 or clamp 51	Rd 60-6 DIN405 or DN40 DIN11851	Welded flange or compression flange	Separate cable connected pressure probe
<b>DIAPHRAGM MATERIAL</b>								
Hastelloy C	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tantalum	—	—	Yes	Yes	—	—	—	—
Stainless steel, SS 2377	—	Yes	Yes	Yes	—	—	Yes	Yes
<b>PT60H/LT100 (HART) PRESSURE RANGE</b>	min 0-1,17 kPa/max 0-15 MPa. See datasheet							0-3,5/20/200 H <sub>2</sub> O
<b>PT60A/LT10 PRESSURE RANGE</b>	min 0-1,17 kPa/max 0-15 MPa. See datasheet							0-3,5/10/20 mH <sub>2</sub> O
<b>DESIGN</b>								
Atmospheric pressure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Absolute pressure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—
Differential pressure	Yes	—	—	Yes	—	—	—	—
<b>APPROVAL</b>								
EX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes(LT100)
CE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>SPECIFICATIONS</b>								
Accuracy	Less than 0,1% includes nonlinearity, hysteresis and repeatability							
Temperature influence	Less than 0,1% of max span for the whole range -10 to 70 degrees C							

The above process connections are only examples, there are 16 more to choose from.



Pondus Instruments AB, Box 178, S-162 12 Vällingby, Sweden. E-mail: info@pondus-instruments.se

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# Precision *control* requires *accurate* measurement

The PT60 and LT range of electronic transmitters covers most types of medium and most industrial environments. They are installed all over the world in just about every conceivable application.

PT60/LT transmitters are used for measuring pressure, level and flow in gases, vapours and liquids. They are available with different connections - threads, flanges, clamps or extended diaphragms - for different applications. One type of transmitter is removable without interference of production, another type is submersible.

All PT60/LT transmitters are made of stainless steel for use in the most aggressive environments. They are robust, reliable, simple to set. With application adapted connections, pressure seals are avoided.

Two versions are available: the conventional PT60A and the more advanced PT60H. They are identical in all respects with one major exception - the PT60H can be configured with a PC or HART hand terminal. PT60 is also available with Profibus PA.

LT series transmitters are submersible.

## PT60A/PT60H

- Application adapted connections to eliminate temperature drift.
- Withstands media temperatures of up to 210°C/410°F.
- Long-term stability in pressure, temperature and calibration.
- Resistant to electrical and radio frequency interference.
- Withstands overloads up to four times its maximum nominal value, and momentary pressure surges that are even higher.
- Tolerates high levels of vibration.
- Simple to install, calibrate and maintain.
- The products are EX and CE approved, and 3A certified.
- Protection class IP67.
- Tolerates media containing solid particles.
- Integrated indicator as option.

## PT60/LT100

The PT60H is the more advanced version of the PT60A. The smart transmitters are identical in every way to their analog counterparts. They also possess the following features:

**Microprocessor-based electronics.**  
Parameters can be set in three different ways:

- conventionally, via buttons located in the transmitter (not LT100);
- via a PC or laptop using the PI100 program;
- via a HART hand terminal.

**Transmitter accessories include:**

- an indicator displaying the pressure or flow;
- a modem with included series resistance for HART communication;
- the PI100 configuration program on diskette or CD;
- a HART hand terminal;
- valves, flanges, mounting accessories etc.

## EXAMPLES OF APPLICATION

A food processing plant had problems of temperature drift because the transmitters were dependent on pressure transmission. The plant installed PT60 transmitters and eliminated temperature drift entirely.

Incorrect measurement values are not tolerated in the pulp and paper industry. PT60 transmitters with an extended diaphragm have successfully eradicated errors of measurement in pulp mills all over the world. The extended diaphragm prevents pulp from clogging the transmitter.

A waste water treatment plant needed a robust submersible transmitter in its pump pits. The submersible transmitter LT100 in stainless steel was the answer.

Downtime is expensive. Production does not have to be stopped and tanks do not have to be emptied to recalibrate or replace an old or faulty transmitter. The removable PT60 transmitter can be replaced, and configuration/calibration performed electronically, without bringing production to a standstill.



*PT60 and LT transmitters are widely used in many types of applications such as pulp and paper, water and waste water, food and beverages, power and energy, pharmaceuticals and chemicals, and infrastructure applications.*



*Configuration of PT60H and LT100 can be done on-site, from a PC with the PI100 configuration tool.*

## PRECISION SETTINGS – EASILY, RAPIDLY

Each type of transmitter - analogue as well as smart - is equipped with buttons and terminals for setting and field adjustment. The functions are located under a protective cap made of stainless steel. Settings are performed rapidly, easily and precisely.

Measuring range, zero point, time constant and square root extraction can all be set directly on the transmitters. A time constant can be selected to dampen noise and interference in the signal.

Connection is via a two-wire, 4-20 mA lead, or via HART communication for the PT60H and LT100.

## KEY FEATURES

PT60 transmitters withstand temperatures of up to 210°C/410°F in most types of medium. Even at these high levels, the increase in temperature in the transmitter can be as low as 20°C/68°F over ambient temperature.

The connections meet the special requirements for hygiene-sensitive media in the food and pharmaceutical industries. They are designed according to ISO standards with clamp connections to facilitate mounting and removal. Most connections are 3A approved. The filling liquid has an FDA approval for use in food and pharmaceutical industries.

For liquid media, even of a fibre-rich consistency, there is a transmitter that can be removed and replaced while production is in progress. The transmitter does away with costly stoppages and wasteful downtime.

A number of transmitters are especially designed for high-viscous liquids containing fibre, pulp, large particles, sludge and other thick media. They are not susceptible to clogging, silting or congestion.



WITHSTAND TEMPERATURES OF UP TO 150°C/300°F



CONNECTIONS FOR FOOD AND PHARMACEUTICAL APPLICATIONS



TRANSMITTER CHANGEABLE WITHOUT INTERFERING THE PROCESS



SUITABLE FOR HIGH-VISCOUS MEDIA