



Premium Series: Pressure, Differential Pressure and Level Transmitters

PASCAL Ci4

Chemical industry

Mechanical engineering

Process industry

PREMIUM SERIES

HART
COMMUNICATION PROTOCOL

SIL2





THE INTUITIVE ONE

The ultimate in measuring accuracy, process robustness combined with intuitive and convenient operation - that's the PASCAL Ci4 range. The HART7 standard guarantees flexible integration into control systems and compatibility with similar equipment landscapes.

The structural design of the devices with a high-resolution graphics display, intuitive user interface and numerous process connections allows them to be used in a wide range of fields. The uniform concept for pressure, differential pressure and filling levels facilitates the monitoring of systems, simplifies spare parts storage and minimises training requirements.

Particularly suitable for the chemical industry, mechanical engineering and the process industry

Ideal for pressure and differential pressure measurements in aggressive measurement substances or at high process temperatures through the use of high-quality materials for wetted components, such as tantalum, Hastelloy, PTFE and the like.

PASCAL Ci4 HIGHLIGHTS

- Large, high-resolution graphic display
- Intuitive operation
- Quick set-up function
- High-quality, pure stainless steel design
- Many applications due to the large number of device designs
- For robust applications with highest precision
- Freely rotatable display and process connection
- NAMUR-compliant (tested to NE95)
- Output signal 4 ... 20 mA with HART® protocol
- Media temperature up to 400 °C

PASCAL CI41

For relative and absolute pressure



Pressure transmitters for general applications and for installation with diaphragm seals

The digital pressure transmitters for relative and absolute measurements of gases, vapours and fluids can be used in a wide range of applications in the process industry, chemical industry, in mechanical and plant engineering and in energy technology due to their structural design and variety of process connections.

CI41 HIGHLIGHTS

- High measuring rate up to 100 Hz
- Measurement range from 25 mbar to 400 bar
- Accuracy of 0.1%/0.075%
- Process connections in accordance with the standard or manufacturer-specific
- Hygienic and robust designs
- Maximum measurement accuracy even with diaphragm seal systems thanks to ATC technology
- Turn-down of 100:1
- NAMUR-tested to NE95

PASCAL Ci4 – Pressure transmitters



CI4100 for general applications



CI4120 for diaphragm seal operation



CI4110 for food/pharmaceutical/biotechnology industry

PASCAL CI43

For differential pressure, level and flow



Differential pressure transmitters for level measurements, filter monitoring and flow measurements

Differential pressure transmitters are used for measuring fluids and gases. Diaphragm seal systems facilitate the measurement of aggressive, highly viscose or solidifying process media. The parametrisation of level applications can be done quickly and easily with the LAB4Level operating software.

CI43 HIGHLIGHTS

- Measurement ranges from 1 mbar to 40 bar
- Accuracy of 0.1%/0.075%
- High overload protection
- Simultaneous display of differential pressure and static pressure
- LAB4Level operating software for filling level applications
- Long-term stability of 0.1% within 5 years

PASCAL Ci4 – Differential pressure transmitters



CI4340 Differential pressure transmitter, high overload protection



CI4330 Differential pressure and level transmitter



CI4350 Differential pressure and level transmitter, high overload protection

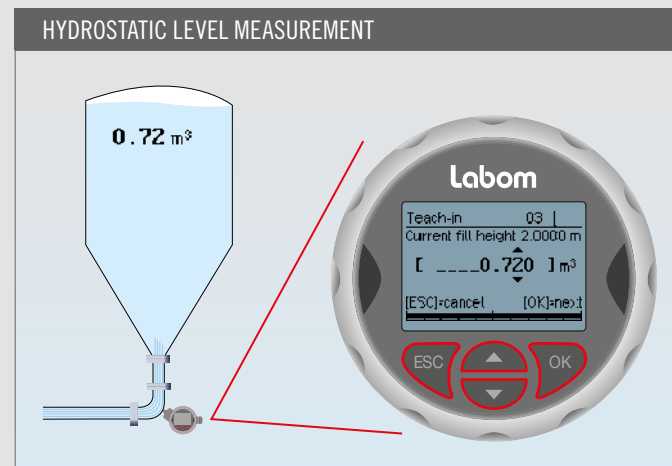
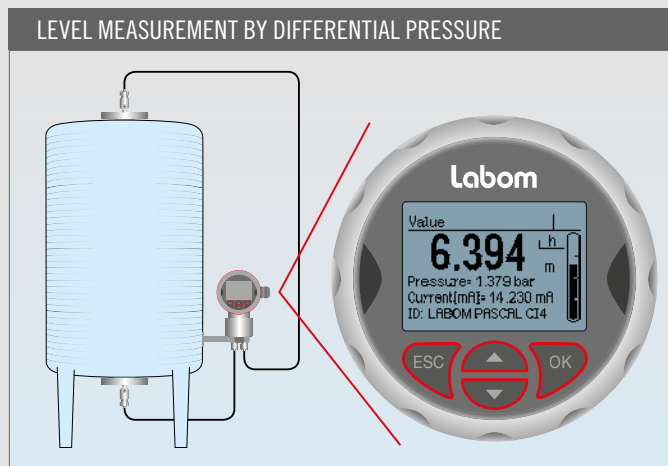
TECHNOLOGIES AND OPTIONS

LEVEL MEASUREMENTS

Hydrostatic or via differential pressure

LABOM offers the optional **LAB4Level** operating software for the Ci4 series. It can simultaneously calculate and display fill height, volume and weight. It can be indicated in the selected unit or as a percentage, as required. Various layouts enable the display to be adapted to the user's need.

Measuring filling levels using differential pressure transmitters with diaphragm seals is ideal, for example, when aggressive media or hygienic conditions require a separation of process and instrument side.

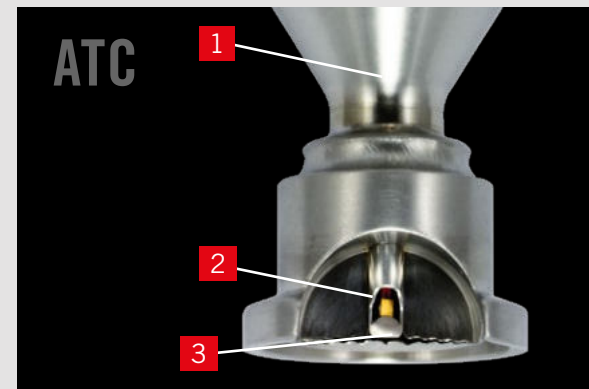


TEMPERATURE ERROR COMPENSATION

Mathematical correction of the measuring error in diaphragm seal systems

LABOM has developed a further compensation process to eliminate the disadvantages of the influence of process temperature on diaphragm seal systems. The temperature of the pressure transmission fluid is recorded with an additional temperature sensor called the **ATC sensor** (ATC = Active Temperature Compensation). The resulting measurement errors from the process heat can therefore be mathematically corrected.

Temperature errors can therefore be reduced by 80 - 90% thanks to this technology. High-precision pressure measurement can thus be carried out directly benefitting from the high accuracy of the pressure measuring device.



1. Device connection
2. ATC sensor
3. Diaphragm seal
(The diaphragm of the diaphragm seal)

COMMUNICATIVE

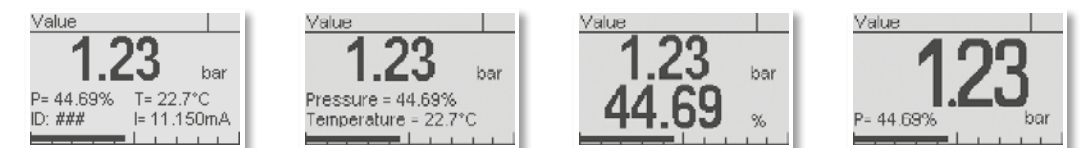
INTUITIVE OPERATION

Optimised menu navigation

The quick set-up summarises all the key setting parameters in a single menu. Various configurable displays enable users to select which and how many subordinate variables are displayed. All parametrisation data can be copied from the device to the configuration memory in the display module. It is stored permanently there. This enables parameters to be transferred simply and quickly to other devices.

Practical display modes

The display structure can be adapted to the requirements of the measuring point. There are five different display modes with configurable content.



REMOVABLE CONTROL UNIT

For concealed or hard-to-reach measuring points

- The display and control unit can optionally be fitted up to 10 metres away from the measuring point.
- Fully-operational control module: with the same functionality as when operating directly on the unit



MADE TO MEASURE SOLUTIONS – DIFFERENT Ci4 DESIGNS



**PRESSURE TRANSMITTER
PASCAL Ci4** for high-temperature applications in the plastics industry



**PRESSURE TRANSMITTER
PASCAL Ci4** with a flange connection for high-temperature applications in coffee roasting plants



**COMBINED DEVICE PASCAL
Ci4** for the monitoring of pressure vessels in the food industry (Kombibar)



**PRESSURE TRANSMITTER
PASCAL Ci4** for the chemical industry with a process connection made of Hastelloy in accordance with DIN 837-1



**PRESSURE TRANSMITTER
PASCAL Ci4** in a lightweight aluminium design for panel installation



**PRESSURE TRANSMITTER
PASCAL Ci4** with a special customer-specific red coating