



Measurement & Analytics - Measurement Made Easy

# 2600T Pressure Transmitters Pressure Measurement Made Easy

# Expertise in technology

## More than a century of experience

To operate any process efficiently, it is essential to measure, actuate, record and control. With ABB's measurement products and solutions, you are receiving the best technology combined with the most reliable products available on the market.

ABB offers a broad range of life cycle services for optimum product performance. A global network of measurement products specialists delivers local service and support.

Research and development is a vital source of ABB's technology leadership. It builds on the foundation of existing technologies for new applications, and continues to develop the breakthrough technologies needed to meet the challenges of the future.

ABB and its heritage companies have been leaders in innovation and technology for more than 100 years.

Aztec

**Bailey**

**BOMEM**

Bush Beach Engineering  
Limited

FISCHER  
& PORTER **F**

Hartmann & Braun

**K-TEK**

Kent

Pressductor®

**SENSYCON**

Schoppe & Faeser

*Taylor*

**TBI-Bailey**

**TORBAR**  
FLOWMETERS LTD

**TOTALFLOW**  
MEASUREMENT & CONTROL SYSTEMS

# Comprehensive measurement solutions

## Serving your industry

### ABB's measurement products portfolio:

- Analytical measurement
- Flow measurement
- Natural gas measurement
- Actuators and positioners
- Pressure measurement
- Temperature measurement
- Recorders and controllers
- Level measurement
- Device management
- Force measurement
- Service

ABB measurement products provide world-class measurement solutions for any industry, utility or municipality. Innovations deliver technological solutions to make it easier for you to run your plants. ABB's measurement products are based on common technology, providing a common look and feel and method of operation. This results in products, that are easy to configure, easy to integrate, and easy to maintain.

For more information please visit:  
[www.abb.com/measurement](http://www.abb.com/measurement)

1 Water and waste water | 2 Power and industrial steam | 3 Chemical and petrochemical | 4 Oil and gas | 5 Pulp and paper | 6 Minerals | 7 Metals | 8 Food and beverage | 9 Pharmaceuticals



# Services for measurement products

## Performance optimization solutions



Dedicated to optimizing your plant productivity and performance, ABB's services enable improved utilization and performance of your automation equipment, processes, and personnel. ABB provides support from the planning phase right through to commissioning and servicing.

**ABB's service specialists are strategically located to support all products and systems globally. ABB's broad scope of services lays the foundation for end-to-end support for your enterprise.**

#### **ABB's performance optimization services:**

- Consulting
- Installation and commissioning
- Maintenance and field services
- Asset management systems
- Fieldbus and wireless solutions
- Project execution
- Migration and upgrades
- Repairs and calibration
- Spare parts and consumables
- Support, remote service, and training
- Maintenance support agreements
- In the field meter verification
- Meter recalibration

ABB service – value added services for bottom-line results.

# 2600T produced by evolution

## Discover all the innovative features

### A top quality transmitter family

Unrivalled in its expertise and longstanding tradition in transmitter manufacturing, ABB offers the world's most comprehensive range of pressure measurement products. The 2600T family provides products specifically designed to meet the widest range of applications ranging from arduous conditions in offshore oil and gas to the laboratory environment of the pharmaceutical industry.

- New intuitive HMI for quick commissioning
- Reliable sensor technologies
- Easy to install and configure
- Multivariable version
- Taylor Instrument's all-welded technology for diaphragm seals
- Best-in-class stability

### Information whenever you need it

ABB's measurement products feature the latest in onboard diagnostics and intelligence to help you run your business more effectively. ABB gives you the choice to decide which communication protocols you would like to use to access this information. You can select from a family of tools and from different ways to manage the lifecycle of the devices in order to get the most out of your investment.

### ABB's device management product range includes

- Fieldbus and wireless solutions
- Mobility handhelds
- Asset Vision software
- Scalable service management



# ABB, common features across the range

## Unique ease of operation – innovative plug & play graphic display

The user friendly HMI allows simple and intuitive transmitter operation. The “Easy Setup” procedure allows the user to easily commission the instrument without the need for an expensive hand-held terminal.

## The Communication You Need

ABB Instrumentation products are available with HART / 4-20 mA, PROFIBUS PA, FOUNDATION Fieldbus, MODBUS and WirelessHART communication protocols. The 266 series allows you to preserve your investment allowing an upgrade from HART to any other available communication protocol in minutes with no need to remove the device from its installation or to reconfigure it. The modular construction of the 266 series allows repairs to be carried out in-field so that the instrument is back in operation few minutes after failure detection.

## Reliability in severe service with S26 diaphragm seals

ABB remote seals have a high-integrity, All-Welded construction as standard. This construction is based on decades of experience in remote seal manufacturing inherited by Taylor Instruments. All-Welded manufacturing technique definitely ensures optimum solution even in high vacuum, high temperature applications.

S26 diaphragm seals are completely designed and manufactured by ABB. The wide range of special materials (Tantalum, SuperDuplex, Inconel 625, Monel, Hastelloy C-276 and unique from ABB Hastelloy C-2000) allows Customers to easily find the best fit for their specific processes providing long lasting solutions for highly corrosive media while increasing overall instrument lifecycle. Diaphragm seal portfolio includes also different coatings such as anti-abrasion Diaflex, gold plated to prevent hydrogen penetration, anti-stick and anticorrosion.

ABB also offer special designed remote seals for individual process solutions.

S26 seals repair is supported by the ABB pressure service centers worldwide.



# 261 pressure transmitters

## The quality cost-effective solution

### The 261 series is the result of our focus on essential features for pressure and level measurement

- Base accuracy  $\pm 0.1\%$
- Compact and extremely robust housing out of stainless steel 316L
- Maintenance free due to ABB's reliable well-proven sensor technology
- Easy operation and set up via the graphic display with intuitive menu navigation
- Wide choice of process connections to suit multiple installations in various industry segments e.g.:
  - Threaded connections for the power or pulp/paper industries
  - Flanged connections for the chemical industry
  - Hygienic connections: e.g. for the pharmaceutical or food and beverages industries
- Designed to meet both CIP and SIP applications
- Output signal 4...20 mA with HART digital communication
- Conforms to SIL2 acc. to IEC 61508 / IEC 61511

### Most served industry segments

- Water
- Food, Beverage and Pharmaceutical
- Pulp and Paper



# 266 pressure transmitters

## Performance with intelligence

### 266 delivers previously unattainable operational benefits

From the design to the software functionality, the 266 series represents the latest evolutionary step in the wide ABB product portfolio. Users can easily find the right application solution for their measurement needs and select among different levels of accuracy.

The 266 is available with an accuracy from 0.075% up to the 'Top performance' accuracy of 0.025%. This allows the user to control their processes with an excellent precision for pressure, level and flow measurements. Accuracy is no longer a constraint.

Notable is also the choice of measuring ranges allowing to measure pressures from 0.05 kPa (0.2 inH<sub>2</sub>O) up 105 MPa (15000 psi). 266 is one of the few low range differential pressure transmitters offering an outstanding suitability draft range measurements.

Pressure transmitter models are suitable for measurements up to 1050 bar (15000 psi), using Inconel 718 NACE compliant material for wetted parts.

One further highlight available with the 266 differential pressure transmitter is the version for high static pressure applications. This allows to measure differential pressure with a high accuracy in applications with maximum working pressure (MWP) up to 60 MPa (8700 psi). Naturally this version also includes Ex certifications, if required.

### Go for wireless with 266 Pressure transmitters

ABB WirelessHART 266 pressure transmitter enables the easy addition of pressure measurement points throughout your

operation. You can now monitor hard-to-reach locations and keep your employees out of dangerous and hazardous areas. 266 WirelessHART has a battery life up to 10 years at 32 sec. update time, delivering a very cost-effective and reliable solution to monitor your process assets.

Installation times and overall implementation costs of process measurements are significantly reduced by eliminating complex wired infrastructures.

### Most served industry segments

- Oil and Gas
- Chemical
- Power
- Metal and Mining
- Water

### TTG Technology: no more barriers between users and instruments

ABB is the first instrumentation company able to offer on its HMI (Human Machine Interface) the TTG Technology (Through The Glass). With this exclusive and innovative option, users can interact directly with the instrument, without removing the windowed front cover, saving cost and time, especially in hazardous areas.

Using ABB's proven four button HMI with intuitive menu navigation and Easy Set Up menu, configuration times can be greatly reduced.

Moreover, expensive hand-held configurators are no longer necessary since all the essential parameters can be set via the HMI with just one touch.

### Easy to use... starting from the outside

The external non-intrusive zero and span push buttons allow users to rerange the transmitter safely in a few seconds.

An additional external write protection is also provided.



# Simplicity and compactness

## The key to the platform for pressure

### The 266 series never lets you down: plug-in communication board and terminal block

The new design enables in-field maintenance operations. Both terminal block and communication boards can be replaced in few minutes without the need to reconfigure the transmitter.

Failures due to lightning, wrong earth wiring, etc. are not now an issue: 266 is protecting your plant productivity smartly.



### PILD: Plugged Impulse Line Diagnostic as standard

Process diagnostics will continuously protect your 266 HART / 4-20 mA, PROFIBUS PA and FOUNDATION Fieldbus pressure transmitters from the risk of impulse line clogging or freezing.

Once a process anomaly is detected, the PILD function will generate a warning on the local LCD as well as via the communication protocol.



### SIL2 and SIL3 TUV certified

The 266 series is certified by TUV NORD for use in safety instrumented systems as per the requirements of IEC61508. The transmitters meet the requirements for SIL2 applications in a single transmitter configuration (1oo1) and for SIL3 applications in a redundant configuration (1oo2).



# Multivariable transmitters of 266 series

## Ideal for mass flow application

### Reliable solution for high pressure direct mass measurement

The unique combination of several sensor systems in a single device permits simultaneous measurement of differential pressure, absolute pressure and, via an external sensor, process temperature. Used for DP flow measurement it calculates the mass flow of gas, steam, and liquid with dynamic compensation. The measurement accuracy improves by 1 to 2%. Due to the available draft range this transmitter is tailored for use with the cheap and easy to install averaging Pitot tubes. In level applications the Multivariable transmitter calculates fluid density depending on temperature and pressure for dramatically increase of measurement accuracy even when using diaphragm seals.

### Push down cost, increase safety

Less process penetrations means less potential leaking points and higher safety.

### Boost the availability

And in the seldom case of fault the smart self-configuration function of the changeable electronic enables field repairs to be carried out so that the instrument is back in operation within minutes.

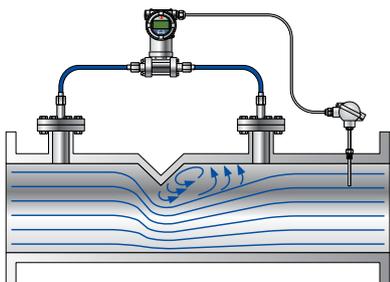
This short Mean Time To Repair (MTTR) combined with the high MTBF is the base for highest availability. The integrated "Plugged Impulse Line Detection" (PILD) function is another nice tool for an enhanced availability indicating a potential problem before it becomes a problem.

### Mass flow measurement

Mass flow of gas, steam, liquid and standard volume flow of gas in accordance with AGA3 or DIN EN ISO 5167.

Highest accuracy is achieved through:

- Dynamic flow correction with continuous calculation of Reynold's number and flow coefficient
- Correction of material-dependent thermal size changes
- Linearization of the primaries



### Shorten maintenance time

In case of changes in the process the "Easy Setup" feature, carried out with local indicator, Hand Held Terminal or Device Type Manager (DTM) allows to adapt the instrument within shortest possible time.

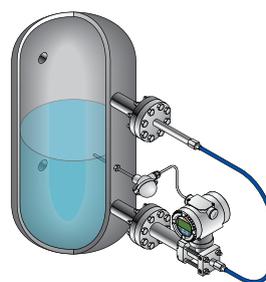
### Most served industry segments

- Oil and Gas
- Chemical
- Power



### Level measurement

- Improves the hydrostatic level measurement due to density correction
  - level in open tanks
  - level in pressurized tanks
  - boiler drum level
- volume of tanks with any shape
- tank content in mass units



# 2600T all-welded diaphragm seals

## Performance and reliability over time

### Flanged models

The ABB diaphragm seal portfolio includes rotating and fixed-flange models specifically designed to connect to flanged pipe fittings according to ASME, EN, ISO and JIS.



### Ring-Joint construction

This type of diaphragm seal, flanged according to ASME standard, has been designed for high pressure /high temperature conditions.



### Wafer / Pancake

Designed to connect to ASME and EN standard flanges the wafer diaphragm seal offers stable performance for a large number of applications. Joints and flushing rings complete the already wide offering. Wafer seals represent a cost-effective and reliable application solution.



### Off-line seal

Available with threaded or ASME/ EN flanged process connection, the Off-line model matches small process connections. Recommended for clean process fluid measurements.



### Sanitary models

Diaphragm seals developed according to the stringent 3-A requirements. Available with different process fittings (Triclamp, Cherry Burrel, Union Nut and Sanitary), this range demonstrates ABB's commitment to satisfy users needs by engineering solutions for the most demanding processes.



### Union connection

A screw thread process connection that provides a flush diaphragm for gauge pressure applications. Originally designed by Taylor Instrument this connection is combined with the "all welded" technology to provide a high integrity solution for arduous applications.



### Chemical Tee

Available only from ABB and designed for the chemical and Oil&Gas industries, the Chemical Tee remote seal is designed to connect to a Wedge Flow Element or to any process fitting with the appropriate dimensions.



### Button

Button seals are designed for accurate high pressure measurement with a small diaphragm size. This type of connection is especially suitable for plastic and resins production processes, at high pressure and high temperature conditions.



### In-line

In line seals are suitable for measuring the pressure of fluids in pipes. The pressure measuring diaphragm forms the pipe wall making this type of seal suitable for measuring the pressure of flowing fluids particularly those that are highly viscous or contain solids.



### Pulp & Paper

Designed especially for preventing process media from plugging the process connection, Pulp & Paper diaphragm seals can be manufactured with anti-stick coatings which remove the need for manual cleaning and therefore reduce costs.



### Urea service

This specialized remote seal is manufactured from materials which match the aggressively corrosive conditions when Urea is present in the process. The urea grade wetted materials ensure stable performances even in high temperature / high vacuum conditions. Huey test available as option.



### Socket & Saddle

These diaphragm seals have been developed to meet the requirements of users who require a directly welded process connection. Suited for highly viscous process fluids measurements.



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