Pressure Product Line
Measurement made easy in space, on the ocean floor and everywhere in between
Product Line Overview
ABB Measurement & Analytics
Pressure Measurements - Key facts

- > 150,000 Transmitters delivered per year
- Over 4 million Installed Pressure Transmitters
- Providing Pressure Solution for over 80 years
- 48 Hours Quick ship Program

ABB Ability

Plant Enterprise
Automation Systems
Devices and Sensors

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October 5, 2021 | Slide 1
ABB Measurement & Analytics
Pressure Measurement Made Easy – Three main series

Pxx100 – Essential Pressure Transmitter

261 - Compact Pressure Transmitter

266 - Process Pressure Transmitter

ABB offering is tailored to deliver the right product for the right market
ABB Measurement & Analytics – Pressure Portfolio

**Portfolio Selling Points**

- **4 in 1**
  - 3 process variables: Pressure, Static and Temp + Compensated Flow/Level
  - Diaflex & H-Shield nanotechnologies
  - Through The Glass
  - Predictive maintenance through PILD

**Value for customer**

- **261**
  - Up to 0,1% Accuracy
  - Piezo Tech
  - AP, GP, DP
  - 10 mbar – 1050 bar
  - Full Remote Seal portfolio
  - HART, FF, PA, Wireless, 1.5V

- **266xxH**
  - Up to 0,06% Accuracy
  - Resonant Inductive Tech
  - AP, GP, DP
  - 60 mbar – 600 bar
  - Full Remote Seal portfolio
  - HART, FF, PA

- **266xxT Ultra Accuracy**
  - Up to 0,04% Accuracy
  - Piezo Tech
  - AP, GP, DP
  - 400 mbar – 100 bar
  - Full Remote Seal portfolio
  - HART, FF, PA

- **266MV**
  - Up to 0,04% Accuracy
  - Piezo Tech
  - GP, DP
  - Full Remote Seal portfolio
  - HART, Modbus

- **PXS100**
  - 0,25 % ( up to 0,1% ) Accuracy
  - Piezo Tech - AP, GP
  - 400 mbar – 100 bar
  - 4…20mA, opt. HART 7

**Product Performance**

- **NOTES**
  - AP, GP, DP: Absolute, Gauge and Differential Pressure

- **SIL2/SIL 3 for safety loop applications**
  - Wi: Fast connection to any existing net with 10y of std battery

- **Top Accuracy (up to 0,025%) & High Static**
  - All welded remote seal technology

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February 11, 2021 | Slide 5
# ABB Measurement & Analytics

## Pressure Portfolio – Model outlook

<table>
<thead>
<tr>
<th>Regular Installation</th>
<th>PxS100 SERIES</th>
<th>261 SERIES</th>
<th>266 SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ABSOLUTE</td>
<td>GAUGE</td>
<td>ABSOLUTE</td>
</tr>
<tr>
<td>PAS100</td>
<td>PGS100</td>
<td>261AS</td>
<td>261GS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Remote Seal          |              |            |            | 261AC      | 261GR        | 266ART       | 266GRT       | 266MRT       | 266JRT       | 266CRT       |
|                      |              |            |            | 261GG      | 266NRH       | 266HRH       | 266DRH       | 266JRH       | 266CSH       |
|                      |              |            |            |            | 261GC        |             |             |             |             |
|                      |              |            |            |            | 261GN        |             |             |             |             |
266 Series Deep Dive
Design standards

- IEC
- EN
- ISO
- ISA
- ANSI
- NEMA
- NAMUR
- NORSOK
- 3A Sanitary Standard
- Hart
- Fieldbus Foundation
- Profibus PA
- FCC
- IC
ABB Measurement & Analytics
Pressure Measurement Made Easy – Approvals

Approval standards

- SIL2 (1oo1) and SIL3 (1oo2) for ranges up to 15,000 psi (1034 bar). (SFF) : 93%, (DC) : 85%, λDU : 67 FIT, PFDavg : 2.93 x 10^-3 10 y
- Hazardous area (explosion proof and intrinsic safe) approvals for use in every part of the world:
  - ATEX (Europe)
  - cFMus (Canada & US)
  - IECEx (world wide)
  - InMetro (Brazil)
  - NEPSI (China)
  - EAC (Russia, Kazak, Belarus)
  - PESO (India)
Tests and verifications:
• Hydrostatic pressure test
• Helium leakage test
• Dye penetrant test
• PMI
• Huey test (Urea application)
• EN 10204 - 3.1b material traceability
Remote Seals

- The entire assembly sensor-capillary-diaphragm seal does not feature gaskets or threaded joints.
- All welded parts and hydraulic circuits are helium leakage tested.
- The "All-welded technology" is worldwide recognized for delivering performance stability over time and delivered by default at no extra-price.
Own Manufactured & Engineered Diaphragm Seals

- Stainless Steel 316L
- Hastelloy C276
- Tantalum
- Hastelloy C2000
- Super Duplex UNS S32750 to ASTM SA479
- Inconel 625
- Inconel 718
- Monel 400
- Stainless Steel Teflon Coated
- Stainless Steel Gold plated
- Diaflex (anti abrasion treatment)
- Tailor-made design items
Cooling System

The Cooling System acts as a barrier to protect the electronics of the transmitter from a high process temperature. Some of the benefits are the following:

- Prevents the transmitter from becoming overheated
- Maintains fill fluid within operating viscosity and temperature limits.
- Sustains pressure transmitter overall high performance capabilities.
- Averts down-time due to extreme temperature related failures.
Diaflex

Innovative solution: extremely high hardness and low friction mechanical characteristics:

- Stable up to 600°C
- Nano-structured coating
- Titanium base composite
- PVD Physical Vapor Deposition - Larc technology
- Thickness: 3-4 μm
- 4000 HV rating on Vicker Hardness scale
**H-Shield**

Innovative solution, extremely high resistance against Hydrogen permeation effect:

- Temperature up to 420°C
- Nano-structured coating
- Titanium composite
- PVD Physical Vapor Deposition - Larc technology
- Thickness: 2-5 µm

<table>
<thead>
<tr>
<th>Material</th>
<th>Ppm @ 230°C</th>
<th>Ppm @ 350°C</th>
<th>Ppm @ 420°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>HC</td>
<td>0.0011</td>
<td>0.0091</td>
<td>0.0199</td>
</tr>
<tr>
<td>AU</td>
<td>0.0009</td>
<td>0.006</td>
<td>0.0133</td>
</tr>
<tr>
<td>HSHI</td>
<td>0.00</td>
<td>0.00</td>
<td>0.0005</td>
</tr>
</tbody>
</table>
PFA

The red PFA coating is suitable for:
• anti-stick and anti-corrosion effect
• superior chemical resistance at high temperatures 482°F/250°C
• Advanced technology of PFA coating allows to apply a thickness up to 160μm

The grey PFA coating is suitable for:
• an anti-stick effect. It is applied on an AISI 316 L ss or Hastelloy C-276
• Outstanding properties of dry lubrication and surface hardness
• Thickness up to 25μm
### Available functions

- **Linear for differential, gauge and absolute pressure or level measurements**
- **Sq. Root (x)** for flow measurements using restriction type primary element, like orifice plate, integral orifice, Venturi or Dall tube and similar
- **Sq. Root (x3/x5)** for open channel flow measurements using rectangular or trapezoidal weir / V-notch (triangular) weir
- **Bidirectional Flow**
- **22 points custom linearization table**
- **Cylindrical lying tank**
- **Spherical tank**
PILD – A predictive function for optimized maintenance

266 line has built-in advanced diagnostic functions to detect blockages in impulse lines called PILD (Plugged Impulse Line Diagnostic) for all communication protocols. The transmitter will register an alarm and send a digital message or analogue alert when a preset blockage level is reached, in accordance to NAMUR standard.

Impulse lines can be blocked by solids in the process, increase in viscosity or the process freezing.

Blocked impulse lines can result in expensive plant shutdowns.
266 Additional Temperature Check

ABB 2600T devices certified by TUV are capable to retain functional safety capabilities after exposure to ambient temperature lower or higher than the functional limits (-40 / +85°C) with improved diagnostic:

Example:
- HART signal to send diagnostic alert message (example -10°C).
- ABB SIL 2/3 devices drives signal into alarm condition threshold are exceeded -40°C (or +85°C).

Performance always recovers stated accuracy when device return within standard operating conditions.
ABB Measurement & Analytics
266 Series - All-Rounder Pressure Transmitter

**Software features**
- Additional temperature check
- Embedded transfer functions
- Predictive maintenance through PILD

**Functional advantages**
- True DP dual sensor (Static)
- Up to 600bar static pressure resistance
- Ultra / Top Accuracy (0.025% / 0.04%)
- Low Voltage structure

**Configuration features**
- Through The Glass
- Easy set up, even via external pushbuttons
- Multiple communication protocols & modular electronics

**Customer benefits**
- Low maintenance cost due to modular electronic and easy access terminal boards. Less operator time spent in the field
- Higher productivity from capability to configure in field via TTG or external pushbuttons (R1) even in hazardous areas
- Lower cost of ownership thanks to process resistance (Diaflex/H-Shield, all welded remote seals, SR designs)
- Improved productivity as failures can be anticipated/avoided (PILD, additional Temp check)

**Wide environmental & measurement conditions:**
- Multiple HazLoc Certifications
- Diaflex and H-Shield* seal nano-coating
- SIL2/SIL 3 for safety loop applications
- All-welded remote seal tech & tailor made designs (SR)

*S26

* AVAILABLE IN THE REMOTE SEAL CONFIGURATION VIA SR
### ABB Measurement & Analytics
266 Series - Wireless Pressure Transmitter

#### Multiple power options
- 10 years of standard battery
- Harvester compatible*

#### Wide environmental & measurement conditions:
- Ex Intrinsically safe
- Diaflex and H-Shield*** seal nano-coating
- Multiple Pressure measurement (Abs, Gauge and Differential)

#### Installation – fast & easy
- Fast connection to any existing net
- Retrofitting & no electrical background needed

#### Configuration features
- Through The Glass
- FIM, DD & DTM

#### Customer benefits
- Longest battery life in the market resulting in lower cost of ownership
- Standard battery D-Cell type resulting in lower cost of ownership
- No need for cables % related activities, resulting in lower cost of ownership (30% lower**)
- Plug & Play behavior in installation allow operators to increase their productivity. Even in HazLoc!

---

* AVAILABLE VIA SPECIAL REQUEST
** FOR A 30 A/I INSTALLATION AND DATA COLLECTION IN GP AREA
*** AVAILABLE IN THE REMOTE SEAL CONFIGURATION VIA SR
266 Multivariable Deep Dive
The 4-in-1 solution

Measurement of 3 process values
- Differential pressure
- Absolute pressure
- Temperature

Integrated calculation functionality of a flow computer
- Calculation of flow with compensation
- Compensated level measurement for gases, steam and liquids

DP accuracy up to 0,04%
Pabs accuracy of 0,1%
Volumetric Flow

\[ Q_V = K \sqrt{DP} \]

Mass Flow

\[ Q_m \sim C \cdot E \cdot \varepsilon \cdot d^2 \sqrt{dp \cdot \rho} \]

Volumetric flow does not take into account density, which is the main contributor to inaccurate measurement.
ABB Measurement & Analytics
266 Series – Multivariable Transmitter – Installation

Standard approach to flow measurement

Multivariable approach to flow measurement
ABB Models offering

266Jxx (3 in 1 solution without calculation)
- Multiple measurement of process values
- Differential pressure
- Absolute (line) pressure
- Process temperature

266Cxx Calculation functionality (flow computer) included
- Mass flow for gases, steam, and liquids by means of dynamic compensation
- Heat flow for water and steam
- Level measurement with density compensation
- Boiler drum level

Measuring ranges

<table>
<thead>
<tr>
<th>Process variable</th>
<th>Measured value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DP</td>
<td>0.05 kPa to 10 MPa</td>
</tr>
<tr>
<td>P</td>
<td>0.2 inch H2O to 1450 psi</td>
</tr>
<tr>
<td>P_{Process}</td>
<td>up to 41MPa / 5945 psi</td>
</tr>
<tr>
<td>T_{Process}</td>
<td>-200 °C to 850 °C</td>
</tr>
<tr>
<td></td>
<td>-328 °F to 1562 °F</td>
</tr>
</tbody>
</table>
ABB Measurement & Analytics
266 Series - Multivariable Transmitter

OGP & Chemical
Pulp & Paper
Food & Beverage
Power
### ABB Measurement & Analytics

#### 266 Series - Multivariable Transmitter advantages

<table>
<thead>
<tr>
<th>Accurate, reliable and convenient</th>
<th>Simplicity with reduced costs</th>
<th>&quot;Right first time&quot; installations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined with manifold, connection hardware and/or primary elements into a single package, it reduces capital expenditures by 55%</td>
<td>Simplifies the piping and greatly reduces the number of leak paths, by as much as 70%</td>
<td>Factory assembled, tested, configured and provided with a factory calibration certificate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Simple to use with easy features</th>
<th>Reliable measurements</th>
<th>Safety by design</th>
</tr>
</thead>
<tbody>
<tr>
<td>User friendly HMI, allowing &quot;Through-the-glass' control</td>
<td>Process diagnostics continuously monitor for impulse line plugging or freezing</td>
<td>Process diagnostics continuously monitor for impulse line plugging or freezing</td>
</tr>
</tbody>
</table>
ABB Measurement & Analytics
266 Series - Multivariable Transmitter

**Communication protocols**

- 4...20 mA
- HART
- Modbus

**Wide environmental & measurement conditions:**

- Multiple HazLoc Certifications
- Diaflex and H-Shield* seal nano-coating
- SIL2/SIL 3 for safety loop applications

**Functional advantages**

- 3 process variables: Pressure, Static and Temperature
- Compensated calculation of Flow and Level
- Top Accuracy (0,04%) & High Static (up to 41 Mpa)
- Predictive maintenance through PILD

**Configuration features**

- Through The Glass
- FIM, DD & DTM

**Customer benefits**

- Reduced cost of ownership and installation due to multiple transmitter avoidance. As well all accessory costs (i.e. valves, wet legs, electrical connections) for standard flow/level calculation are zeroed.

- Lower commissioning cost due to full local configurability and hence potential HHT avoidance.

- Increased productivity of plant delivering high performances in demanding applications like high static line pressure pipes, high temperature processes or hazardous locations.

- Increase productivity thanks to advanced issue detection by PILD and longer seal life with Diaflex on abrasive, sticky or hard processes.

* AVAILABLE IN THE REMOTE SEAL CONFIGURATION VIA SR
261 Series Deep Dive
Key Arguments

- Gauge and absolute pressure measurement
- Measuring spans from 3 mbar to 600 bar
- Standard accuracy of 0.10%
- Turn down of 1:20
- Distinctive display / HMI
- Output signal 4…20 mA / HART
- Small housing, made from stainless steel 316L
- Compliant to the FDA, 3A requirements
- Base: ‘piezo’ silicon pressure sensors
- Cover out of stainless steel or stainless steel and plastic (Window out of Macrolon®)
- Ingress protection IP67 (on request IP68, IP69K)
- Sealed electronic unit: the most protected electronic housing in the market
- Great variety of process connections
ABB Measurement & Analytics
261 Series - Compact class pressure transmitters

- NSF Certified
- FM Approved
- CE Marked
- NEMA
- A3
- PED
- Materials in accordance to NACE
- Intrinsic Safety Ex ia
- CIP / SIP-capability
- FDA-approved filling liquids
- Housing IP67
- Front bonded diaphragm
- Stainless steel housing
- Chemical
- Food & beverage
- Water & Waste W
- Pulp & Paper
- Pharmacy

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### MODEL VARIANTS

<table>
<thead>
<tr>
<th>Standard Versions</th>
<th>Remote Mount Diaphragm Seal</th>
<th>Direct Mount Diaphragm Seal</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS/AS</td>
<td>GR</td>
<td>GC/AC</td>
</tr>
<tr>
<td>Suitable for Water &amp; Wastewater, Pulp and Paper market</td>
<td>Suitable for Water &amp; Wastewater, Chemical, Pulp and Paper market</td>
<td>Suitable for Chemical market</td>
</tr>
</tbody>
</table>
Application Specific Connections

**GG**
- DRD connection
- Dairy (DIN 11851) or SMS
- Varivent

**GN**
- Ball-Valve
- SR designs PMC 1 inch, PMC 1.5 inch
- Suitable for Water & Wastewater, Pulp and Paper market

**Suitable for Food and Beverages market, Chemical, Dairy (DIN 11851) or SMS (Swedish standard unit for dairy)**
ABB Measurement & Analytics
261 Series – Highlights for F&B and Pharma

- Fully welded process connections / Hygienic connections: Tri-Clamp, Varivent, Dairy DIN 11851, Neumo-Biocontrol, DRD, APV-RTJ, Neumo, SMS, in-line diaphragm seal, etc.
- Rugged, compact stainless steel housing with Ingress protection IP67 (or IP68, IP69K - on request)
- CIP/ SIP-capable (up to 180 °C)
- FDA-approved materials and filling fluids (standard or vacuum-proof)
- SIL2-classified acc. to IEC 61508 / 61511
- Cover out of stainless steel or stainless steel and plastic (Window out of Macrolon®)
ABB Measurement & Analytics
261 Series – Highlights for Pulp & Paper

- Front bonded process connections for Pulp / Paper
- Ball-Valve connection for specific valve requirements (Valmet, Satron)
- High temperature resistance
- Available SR design with Diaflex and Super Duplex.
• Stainless steel design
• Completely welded without inner sealings
• Compact and robust
• Broad range of measuring cells
• Due to different diaphragm materials compatible to a lot of chemicals being used in Water and Wastewater applications
• Local HMI for configuring the device on site in the application
## ABB Measurement & Analytics

### 261 Series – Configuration options

<table>
<thead>
<tr>
<th>Local / HMI</th>
<th>Handheld configurator</th>
<th>Software / PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Menu control via 4 keys incl.</td>
<td>Hand Held Terminals (HART Transmitter) like DHH805</td>
<td>• FIM</td>
</tr>
<tr>
<td>• Zero / Span Button</td>
<td></td>
<td>• Asset Vision Basic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Any third party Frame applications with implemented 2600T DD from ABB</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Corrosion Resistance</th>
<th>Hygienic / Compact</th>
<th>Robustness</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Corrosion Resistance" /></td>
<td><img src="image2.png" alt="Hygienic / Compact" /></td>
<td><img src="image3.png" alt="Robustness" /></td>
</tr>
</tbody>
</table>
Focused features

- Hygienic connections and FDA filling
- Front bonded connection for viscous processes (P&P)

Configuration features

- FIM, DD & DTM
- Local configuration via HMI

Customer benefits

- High productivity thanks to the sector-driven connections and local configurability in case of non-DCS interaction.
- Higher productivity due to proven-in-use longevity. Readiness for cleaning and/or sanitization in place.
- Lower cost of ownership thanks to resistance to ambient conditions and reduced intervention by operators thanks to remote configurability (FIM)

Resistant and reliable

- Compact stainless-steel housing
- Resistance to vibration, condensation and intrusion up to IP69K

Wide environmental & measurement conditions:

- Ex Intrinsically safe
- Availability of remote seals offering S261
PxS100 Series Deep Dive
PxS100 – The Essential Pressure Transmitter

Features and Benefits

- High visibility touch HMI with backlight option
- Flexible process connections
- Compact Stainless Steel housing
- Fast delivery
- Robust front-bonded connection
- Wide choice of pressure ranges
- ABB unique technologies against abrasion and permeation
- Easy operation

Configuration and interoperability
PxS100 – The Essential Pressure Transmitter

New high visibility HMI with backlit display

The new HMI has:

- high visibility thanks to
  - Wide display dimensions (2 inches)
  - Backlight option
- improved touch response for best interaction

Display menu is constructed with intuitive and easy interaction logic similar to the existing ABB navigation standards.

On top, the multiple-teeth HMI board grants full flexibility in setting any position for display readability, with a +180°/-180° rotation available.
PxS100 – The Essential Pressure Transmitter
Flexible process connections: Threaded Adapters Modularity

Double threaded connection  Threaded adapters  Equivalent models
PxS100 – The Essential Pressure Transmitter
Flexible process connections: Threaded Flanges Modularity

Front bonded connection  Threaded flanges  Direct mount seal equivalent models

©ABB
PxS100 – The Essential Pressure Transmitter
Compact Stainless-Steel housing

PxS100 housing has been designed in stainless steel to be:
• Compact
• Sturdy
• Corrosion resistant
• Easy to clean (IP69K – Cleaning in Place)

On top, PxS100 has been tested and successfully delivers:

IP66 / IP67 / IP68 / IP69K
PxS100 – The Essential Pressure Transmitter
Robust front-bonded connection

Front bonded process connection is perfectly fitting in:
- Pulp & Paper
- Viscous processes

PxS100 front bonded connection will have:
- Stainless steel design
- Compact and robust geometry
- Broad range of measuring cells applicability
- AISI and HC diaphragm materials
- Availability of H-shield coating on AISI
- Availability of Diaflex coating on AISI and HC
PxS100 – The Essential Pressure Transmitter
Wide choice of pressure ranges

Gauge and Absolute Pressure Measurement

- 5 main ranges:
  - 400 mbar
  - 2.5 bar
  - 10 bar
  - 40 bar
  - 100 bar

- 4 main process connections:
  - ½ NPT M + ¼ NPT F
  - ½ NPT F
  - G ½ B
  - Front Bonded

Analog (Z/S only) and HART 7 Protocols

- Intrinsically Safe Certified under ATEX, IECEx, CSA (CA & US)
- 0.25% Base accuracy
- 0.1% Optional accuracy
- Turndown 10:1

All the specifications of PxS100 enable a perfect fit on essential measurement points
PxS100 – The Essential Pressure Transmitter

Easy operation

**Easy Set up menu**

A simple, smartphone-like approach, for the configuration menu*. Essential and of easy interpretation.

---

**QR code functionalities**

3 QR codes available for advanced operation on the device:

- Documentation QR Code
- DAD – Digital Advanced Diagnostic QR Code
- Channel Partner QR Code

*Easy Set up menu available on the HART version
PxS100 – The Essential Pressure Transmitter

Easy operation

**Documentation QR Code**

The QR code on the product nameplate grants a direct access to PxS100 webpage.

No more paper manuals or time losses to look for a detail on ABB documents: direct access to correct content!

**Digital Advance Diagnostics**

In case of failure / warning, a QR code will pop up. Upon scan, it will lead to an on-line doc with:
- **Resolution tips**
- **Condition details and potential causes**

The specific set of info is constructed to provide more insights to on-field operators, reducing resolution time.

**Channel Partner Support QR Code**

When purchased through ABB Channel Partners*, customers can find CP’s contact details by accessing this QR code* inside the Easy Set Up menu.

Availability of such details (i.e name, address, phone, mail, etc.) make the difference when in need for immediate support.

*Please ask your ABB Channel Partner contact if the option is available from their end.
PxS100 – The Essential Pressure Transmitter
ABB unique technologies

Diaflex
Extremely high hardness and low friction mechanical characteristics:
• Stable up to 600°C.
• Nano-structured coating
• Titanium base composite
• PVD Physical Vapor Deposition - LARC technology
• Thickness: 3-4 μm
• 4000 HV rating on Vicker Hardness scale

Diaflex is available on front bonded connection, either with AISI or HC diaphragm substrate.

H-Shield
Extremely high resistance against Hydrogen permeation effect:
• Temperature up to 420°C.
• Nano-structured coating
• Titanium composite
• PVD Physical Vapor Deposition - LARC technology
• Thickness: 2-5 μm

H-shield is available on the front bonded connection, the double threaded one and the ½ NPT Female

Elevate performances of ABB technologies grant device’s longer operational life
# PxS100 – The Essential Pressure Transmitter
Configuration and interoperability

<table>
<thead>
<tr>
<th>HMI</th>
<th>Handheld</th>
<th>Software / PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Setting via 2 button touch display</td>
<td>Hand Held Terminals (HART Transmitter) like DHH805</td>
<td>• FIM</td>
</tr>
<tr>
<td>• Setting via internal push buttons (Zero/Span) + SW write protect</td>
<td></td>
<td>• DTM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Any third party Frame featuring ABB DD</td>
</tr>
</tbody>
</table>
# Pxx100 Series – Essential Pressure Transmitter

## Functional advantages

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backlit Touch display</td>
<td></td>
</tr>
<tr>
<td>Digital Access Diagnostics (Dynamic QR Code)</td>
<td></td>
</tr>
<tr>
<td>Label QR code for easier documentation access</td>
<td></td>
</tr>
<tr>
<td><strong>Wide environmental &amp; measurement conditions:</strong></td>
<td></td>
</tr>
<tr>
<td>Ex Intrinsically safe</td>
<td></td>
</tr>
<tr>
<td>Diaflex and H-Shield* seal nano-coating</td>
<td></td>
</tr>
<tr>
<td>IP66/67/68/69K, sturdy and compact AISI Housing</td>
<td></td>
</tr>
</tbody>
</table>

## Go-to-Market Advantages

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double-threaded connection</td>
<td></td>
</tr>
<tr>
<td>Threaded NPT adapters</td>
<td></td>
</tr>
<tr>
<td>Threaded G Flanges for direct mount seal-equivalent installation</td>
<td></td>
</tr>
<tr>
<td><strong>Configuration and communication</strong></td>
<td></td>
</tr>
<tr>
<td>FIM, DD &amp; DTM</td>
<td></td>
</tr>
<tr>
<td>4...20 mA / HART</td>
<td></td>
</tr>
<tr>
<td>Full local configuration via display</td>
<td></td>
</tr>
</tbody>
</table>

## Customer benefits

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher competitiveness thanks to the targeted price/feature ratio fitting even aggressive price tiers.</td>
<td></td>
</tr>
<tr>
<td>Lower cost of ownership due to ABB nano coatings increasing resistance to abrasion and diaphragm inflation</td>
<td></td>
</tr>
<tr>
<td>Increased productivity thanks to the flexibility in process connections coupled to standard off-shelf device</td>
<td></td>
</tr>
<tr>
<td>Increased productivity thanks to the fast availability on the market and Digital Access Diagnostics</td>
<td></td>
</tr>
</tbody>
</table>
Remote Indicators Deep Dive
Remote indicator

Indication accuracy

- Digital: ±0,10% of span (16 mA) ± 1 digit
- Bar graph: ±1% Resolution
- 16 bit conversion Ambient temperature effect
- ±0,15% of span (16 mA)

By applying an appropriate input scaling, JDF200 shows:

- Current
- Pressure
- Temperature
- Level
- Mass and Volume Flow
- Heat Transfer Rate
- Custom variable
ABB Measurement & Analytics
JDF300 – Multivariable FOUNDATION™ Fieldbus Field Indicator

Macro specs

• 2600T family look and feel
• L1 display with common HMI operational logics, including Easy Setup
• Hazardous Area Certified
  • ATEX
  • IECEx
  • FM
• IP67 protection
• C4 corrosion protection painting
• Additional external push-button for haz-loc configuration
Remote Visibility

Multivariable display visibility
- Up to 8 variables, including measure goodness
- Single variable (P) displayed multiple times
- Set of variables (P, T, flow) displayed in sequence

Local display configuration
- Tailored for specific visualization

Multipurpose bracket system
- One bracket for wall & pipe installation

Delocalized Control

Library of function block available
- 1 Arithmetic (+, -, average, etc)
- 1 Input selector (returns output based on rules on input received)
- 1 Control selector (as ‘input selector’ but with input from control blocks)
- 2 PID (Proportional, integral, derivative)

Backup LAS capability (Link Active Scheduler)
- JDF300 is able to auto-activate schedule of the planned activities on the network

FF Network Fit

FOUNDATION™ Fieldbus architecture allows JDF300 to process/receive any variable from existing FF network devices including:
- Pressure
- Temperature
- Flow
- Setpoint
- PID output (control variable %)

From both ABB and competitors’ products
### Cost Saving

- Lower operating cost: monitoring system can be designed in a simpler way
- Lower installation cost: store one bracket code for pipe and wall installation
- Lower cost of ownership: combined certification and modular spare parts reduce immobilized capital

### Improved Control

- Faster in field diagnostic improved by multiple simultaneously available data
- System failure recovery and stops avoidance through LAS capability

### Enhanced Productivity

- No operators running around: more data in the same place
- No costs for training: operating the devices is the same as ABB 266 models
- Improved operators’ safety level due to elimination of need to reach difficult measurement points