ifm Pressure Sensor Webinar

Wednesday 26 August

14H00 PM

Pressure sensor with IO-Link

Precise pressure sensor with temperature monitoring

Sales Engineer - Vaal Triangle

Jannie Claasens

Presenter

Sales Manager - Gauteng

Francois Gey van Pittius

Host

Jannie Claasens

Sales Engineer

ifm electronic ZA
112 Sovereign Drive
R21 Corportate Park
Irene Centurion
Phone 012 450 0400
E-Mail: jannie.claasens@ifm.com
Internet www.ifm.com

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Agenda

1. Introduction
2. Key Features
3. Sensor Connection - Hard wire
4. What is IO-Link
5. Sensor Connection - IO-Link
6. LR-Device Software
7. Applications
8. Summary
9. Q & A

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Introducing the PV8*** series pressure sensor

- On most machines temperature and pressure is monitored by using two separate sensors. This innovative sensor reduces wiring complexity as it can monitor pressure and temperature at the same time.
- This sensor can give two separate outputs (switching signal) for pressure and temperature or the actual process value can be transmitted via IO-Link.
- Imagine having a simple hydraulic power pack and the cost saving of reducing the amount of sensors by half?

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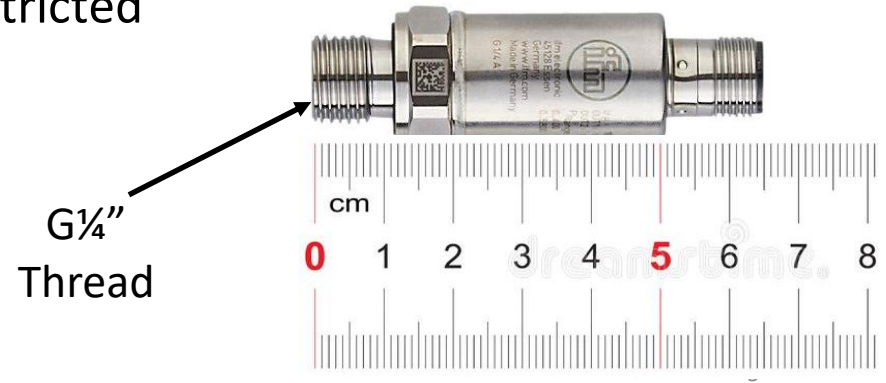
What are the key features of this product?

- Build in temperature measurement (-40 to 90 °C)
- Measuring cell directly welded to process connection
- Can be used in hydraulic applications or with inert gasses
- Compact housing where space is restricted
- IO-Link
- Two switching outputs



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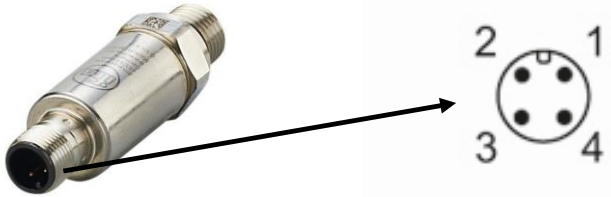
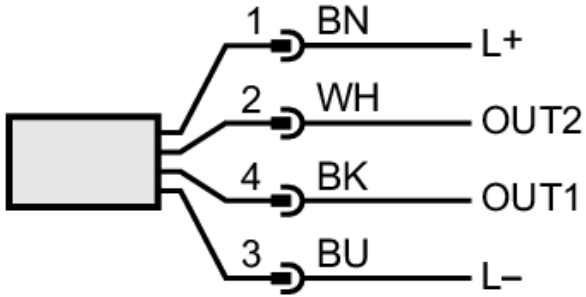
Sensor Connection

Hard Wire:

- OUT1: Switching output for pressure / IO-Link
- OUT2: Switching output for pressure / temperature



M12 Connector



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Benefit of measuring pressure and temperature with a single instrument:

- Cost savings
  - Only one sensor is required
  - Only one process connection fitting required
  - Reduced cabling
  - Reduces stock holding requirements for end user

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Measurement ranges available:

Part Number	Measurement Range Pressure (Bar)	Measurement Range Temperature (°C)
PV8060	0 … 600	-40 … 90
PV8000	0 … 400	-40 … 90
PV8001	0 … 250	-40 … 90
PV8002	0 … 100	-40 … 90
PV8023	0 … 60	-40 … 90
PV8003	-1 … 25	-40 … 90
PV8004	-1 … 10	-40 … 90

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What is IO-Link?

- IO-Link is the worlds first standardized I/O technology for communication with sensors and actuators.
- Over simplified: replaces analogue signals with digital data.
- Can communicate to the sensor (e.g. give it commands) and receive more than just process data from sensor (e.g. diagnostics)

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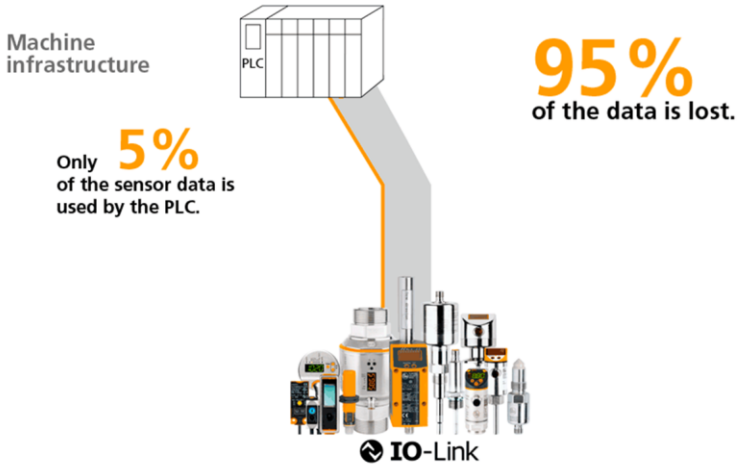
IO Link

IO-Link is a point-to-point open serial communication protocol.



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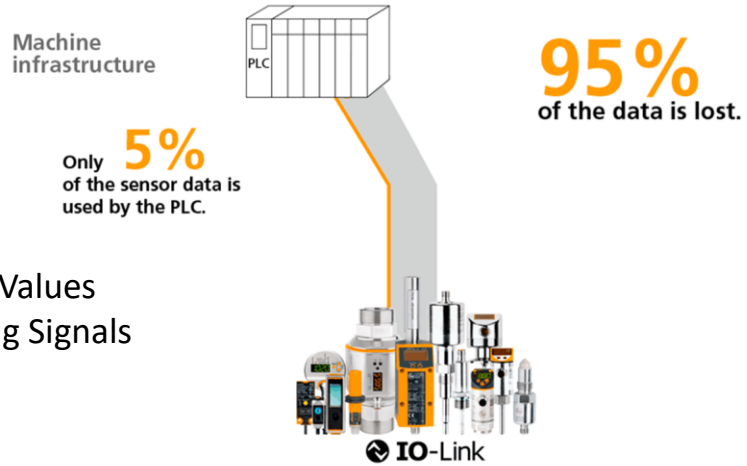

- Process Values
- Switching Signals

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IO Link

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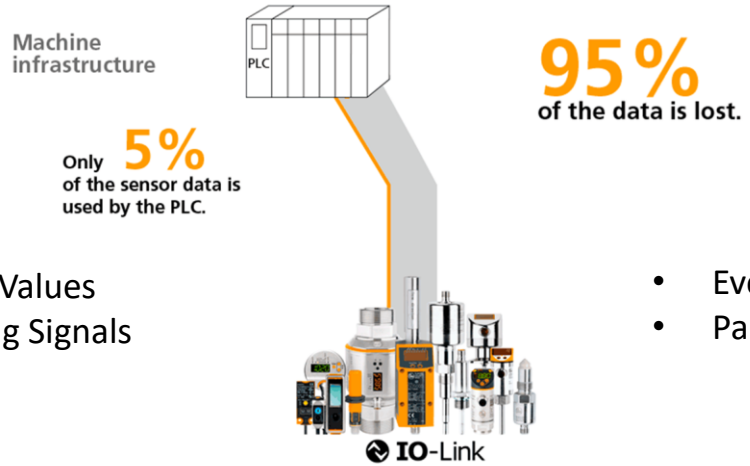

- Process Values
- Switching Signals

- Events and diagnostics
- Parameterization

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IO Link

Identification

Easy sensor replacement

Tamper free

0000100010
0001111001
0010100011

No measured value losses

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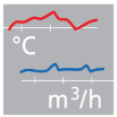
IO Link

Remote Parameterization

Scalable technology



Multiple sensor values

Reduces costs

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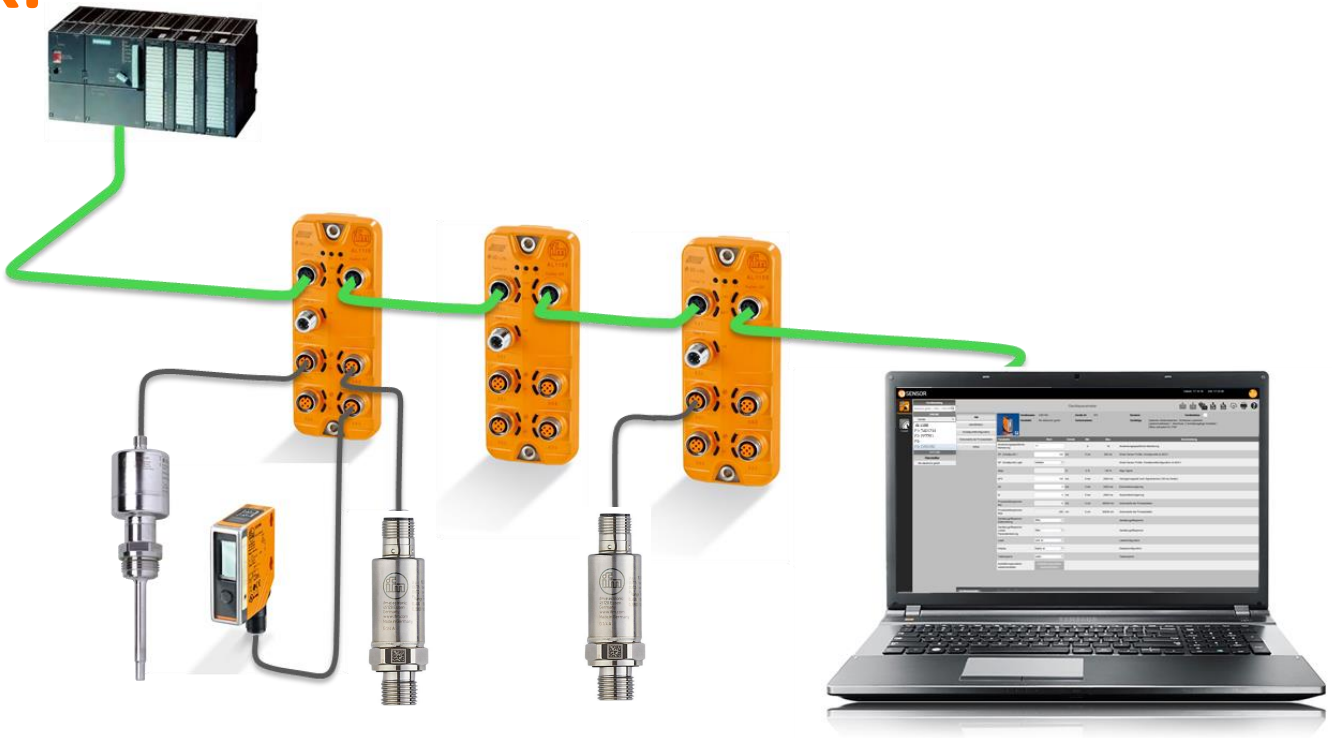
IO-Link:



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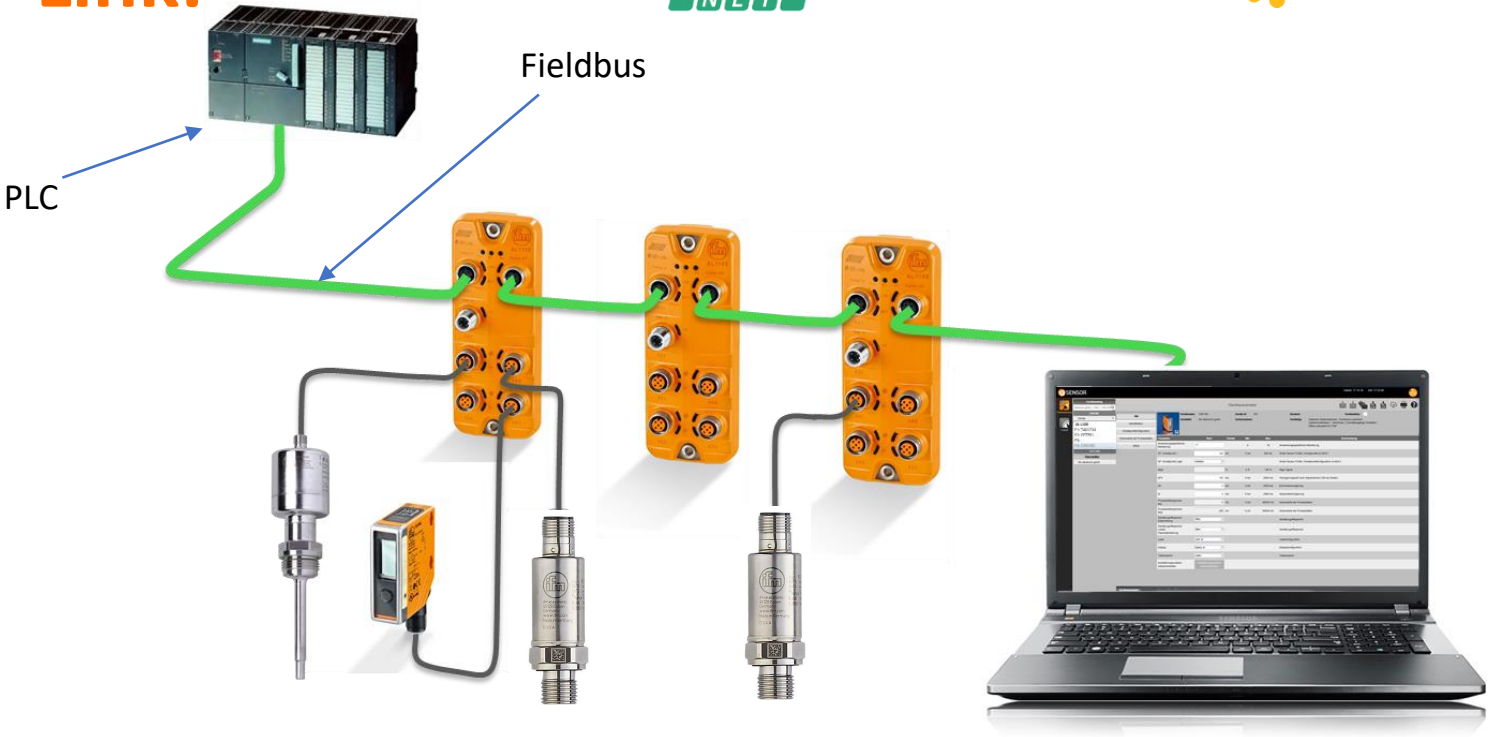

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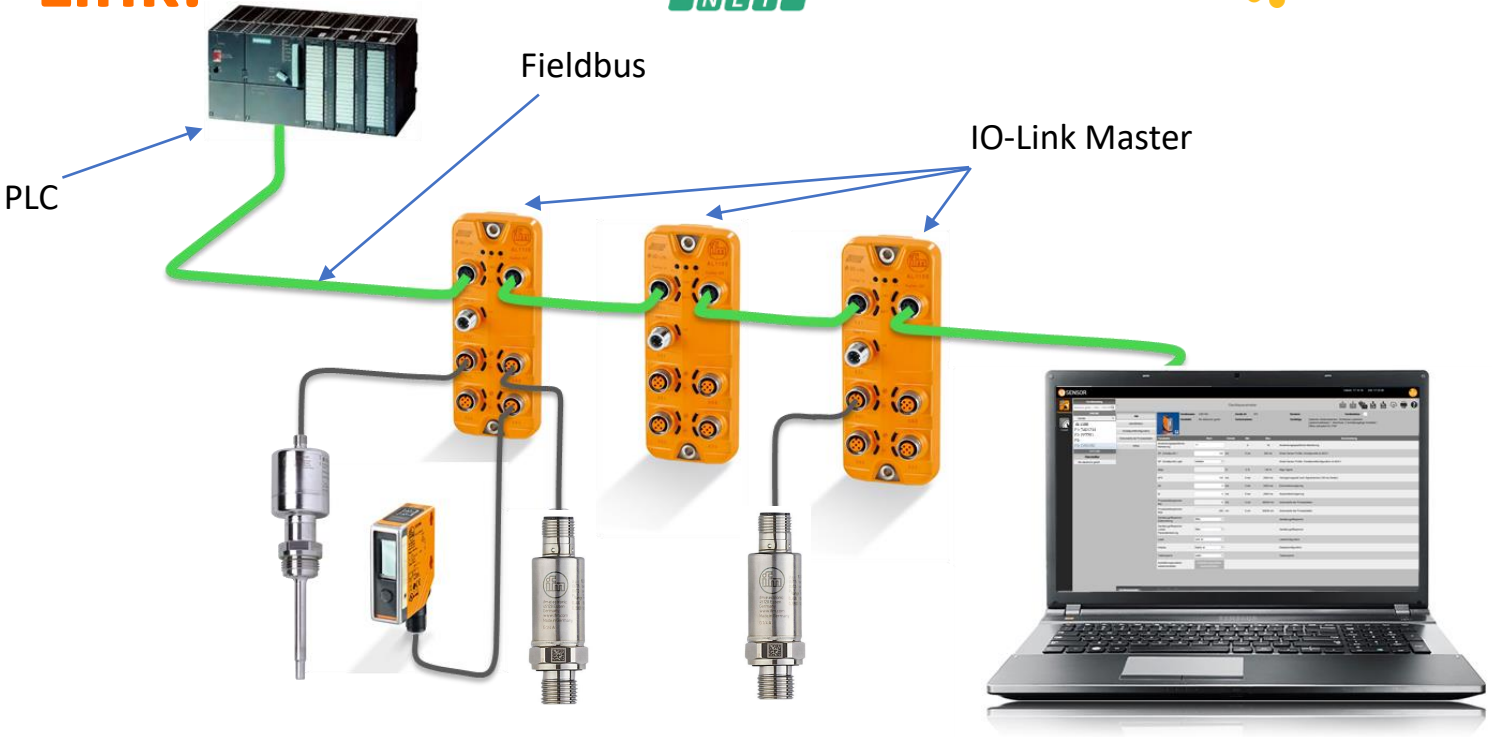

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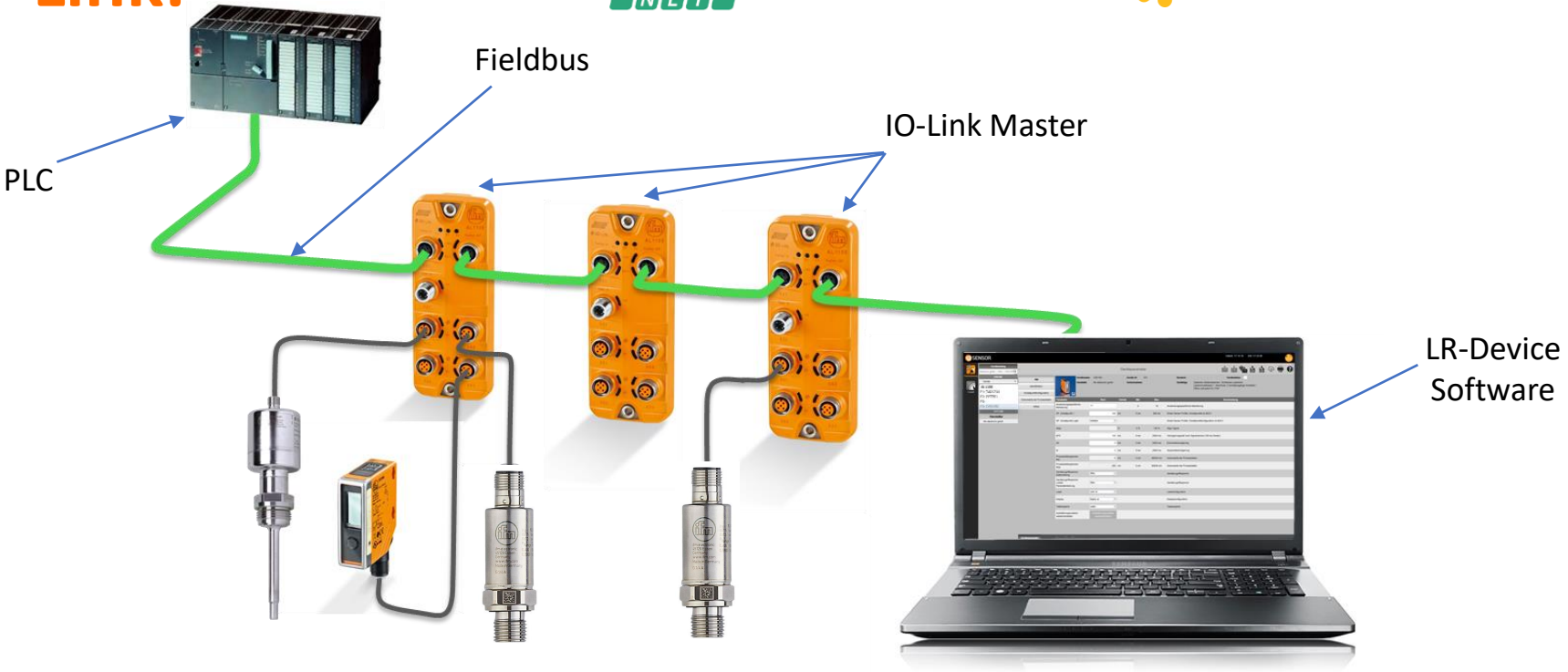

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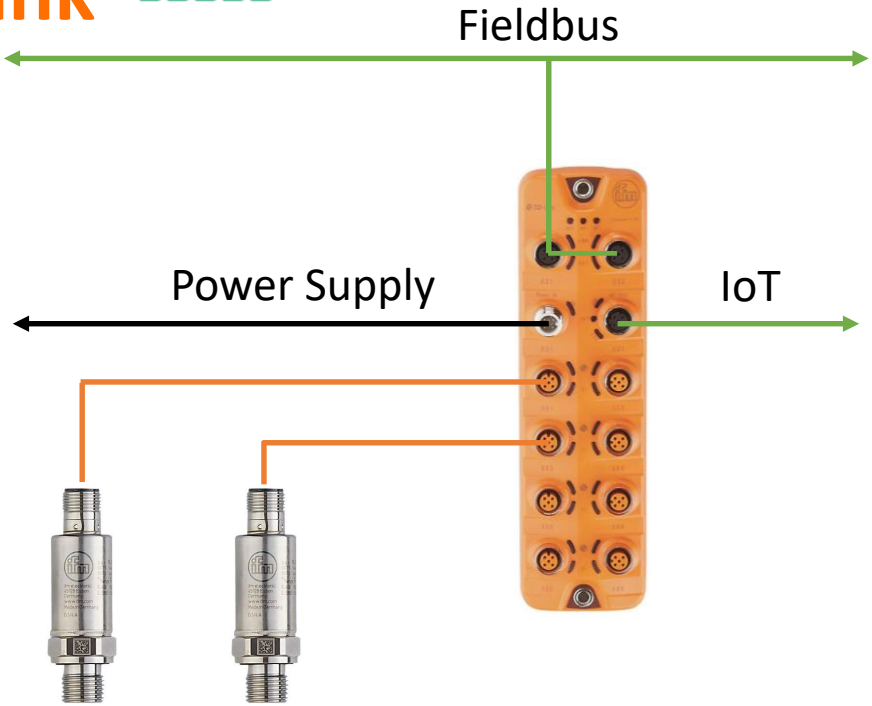
Sensor Connection on IO-Link

IO-Link:

- Digital transmission of process data
  - Pressure and temperature
- User can control and configure switch points
- Receive diagnostic information directly from the sensor
- Easy plug & play replacement of sensors in case of failure



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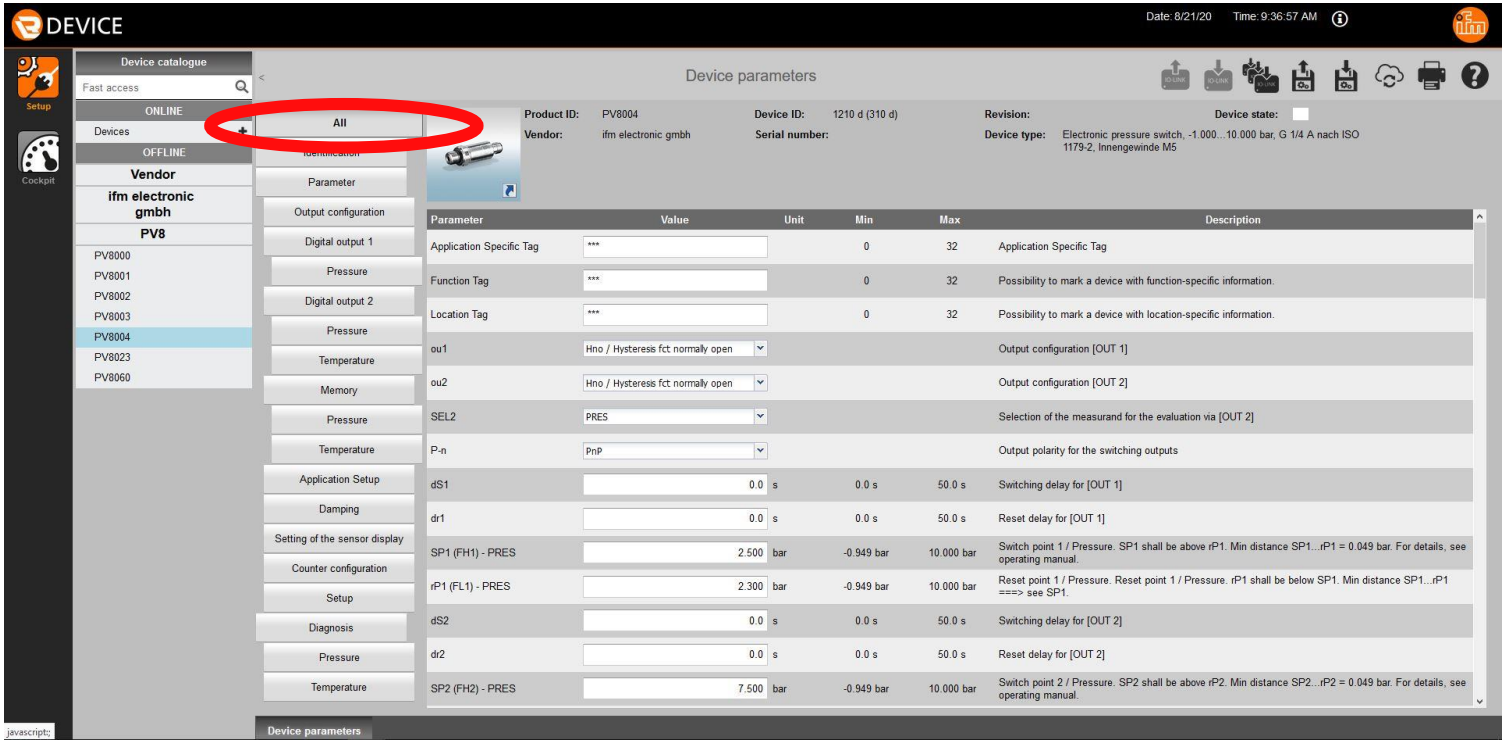
LR Device Software



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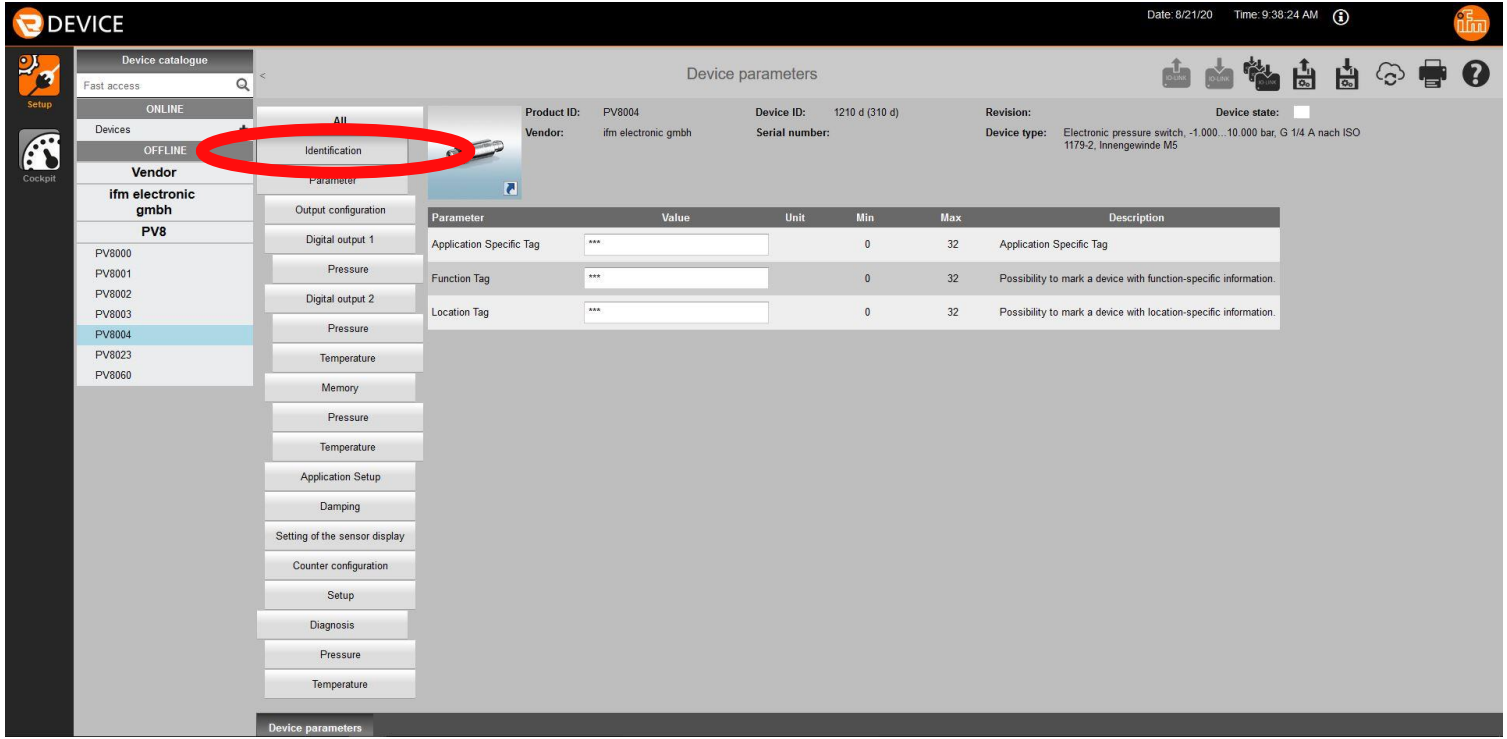

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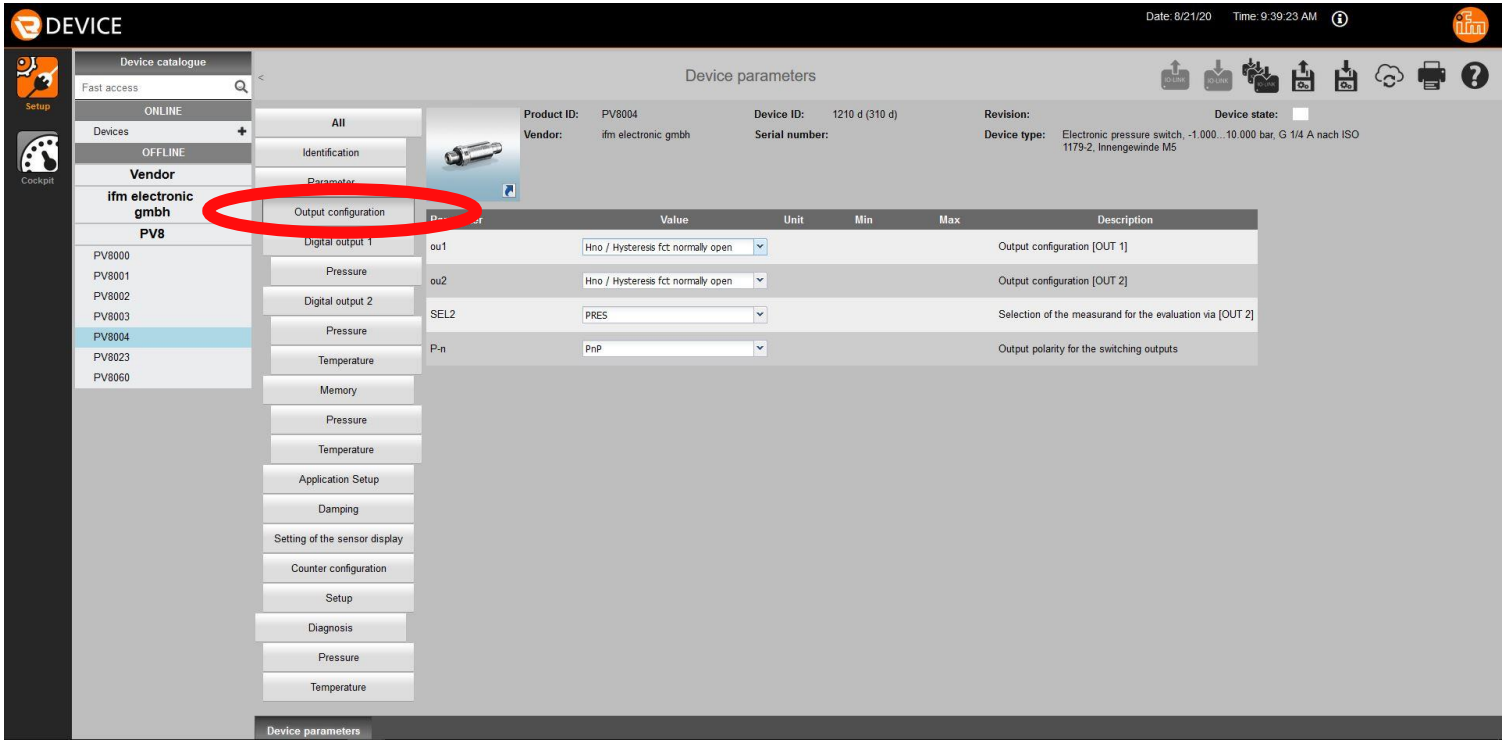

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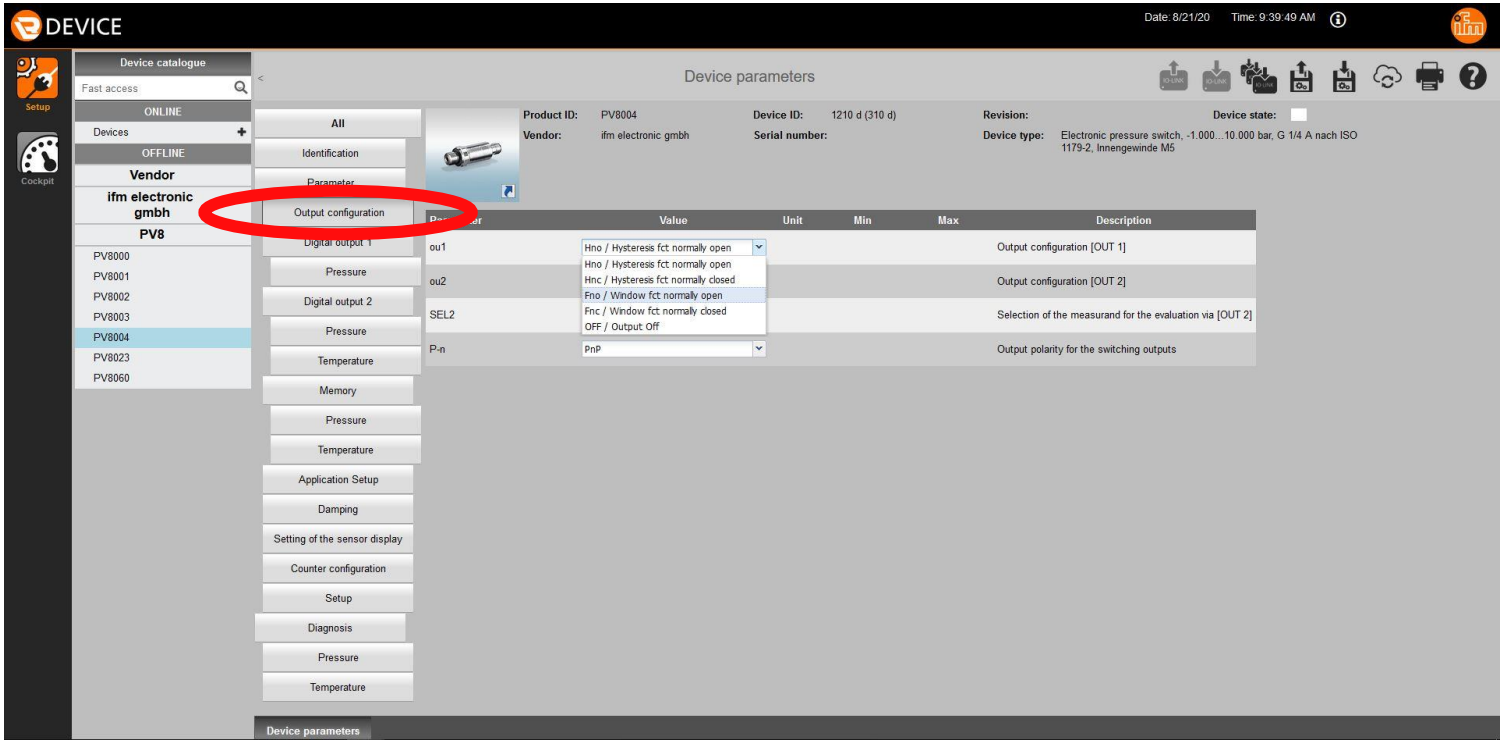

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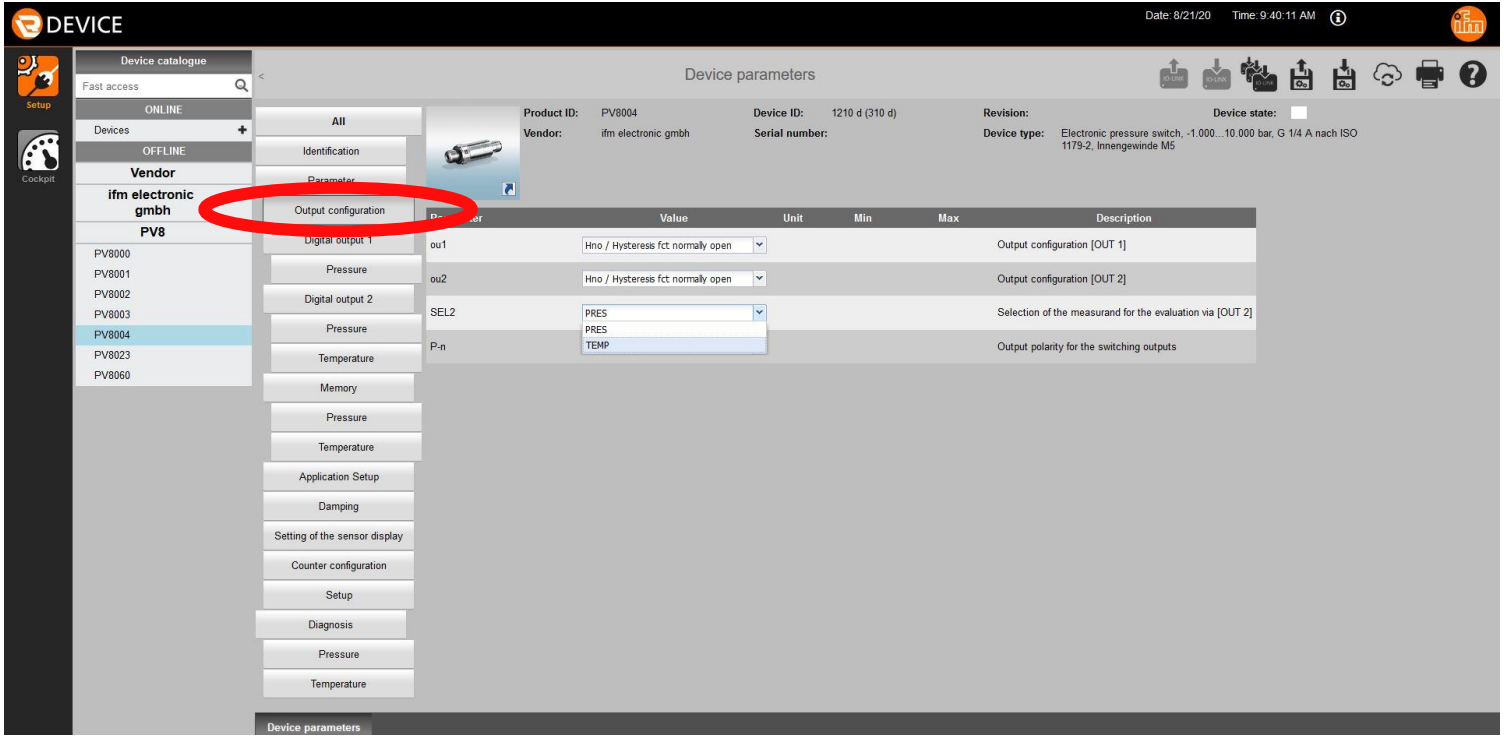

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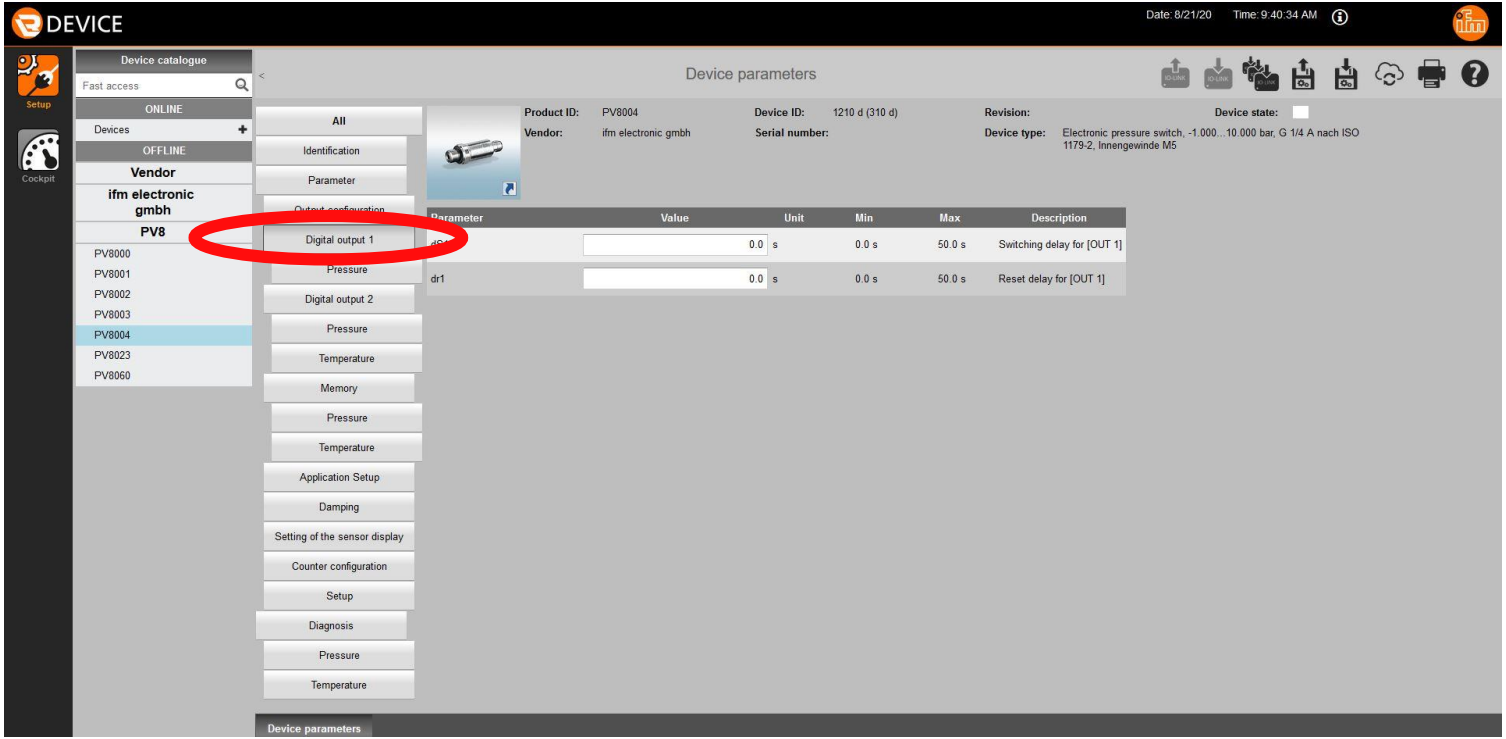

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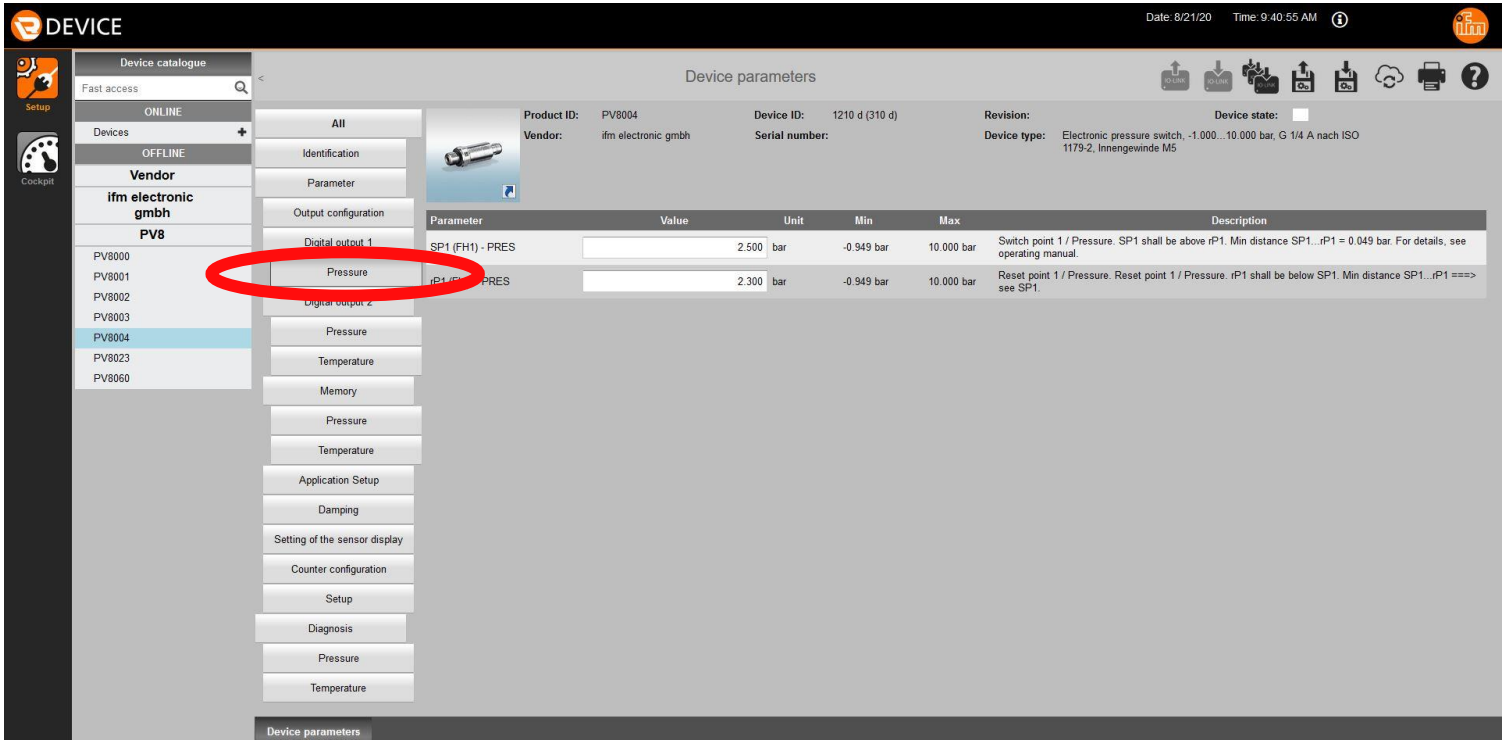

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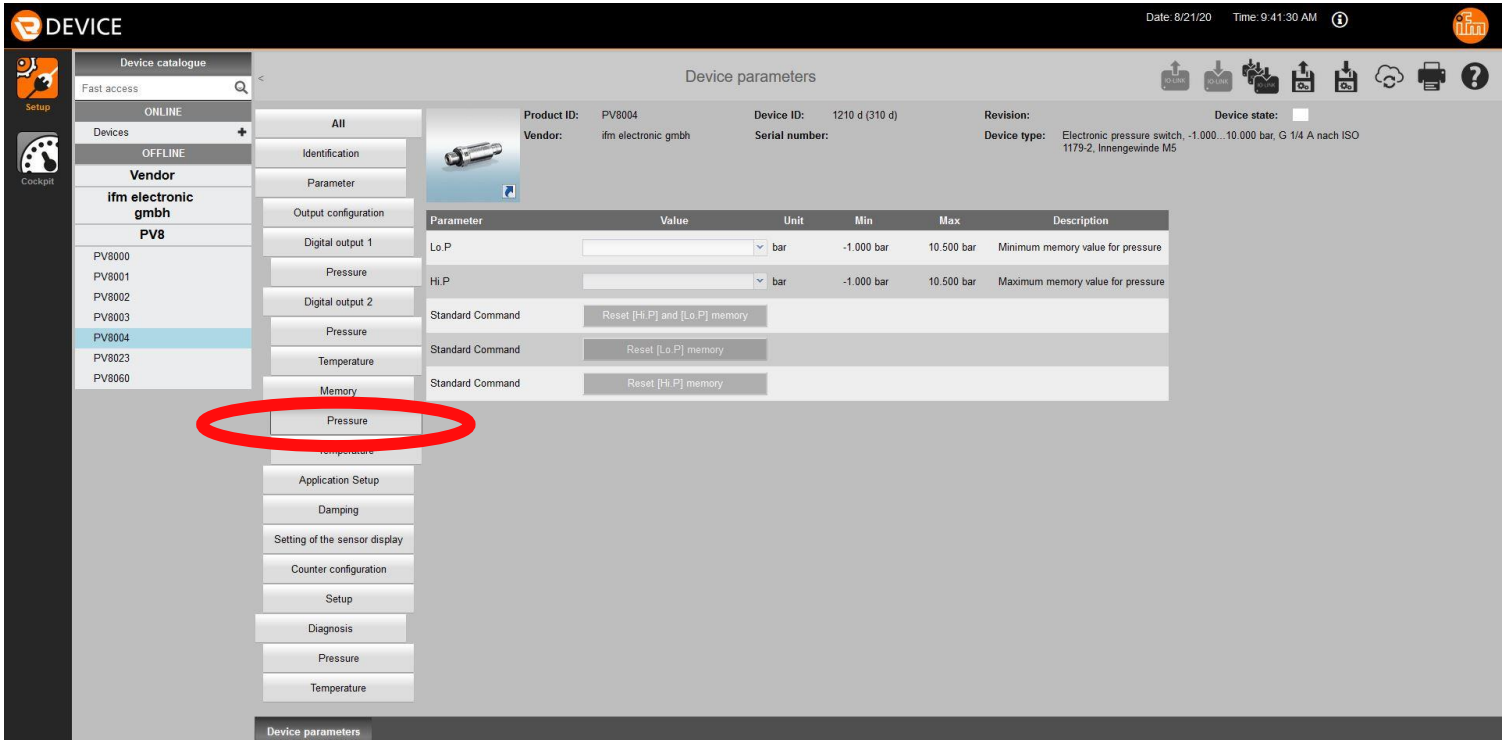

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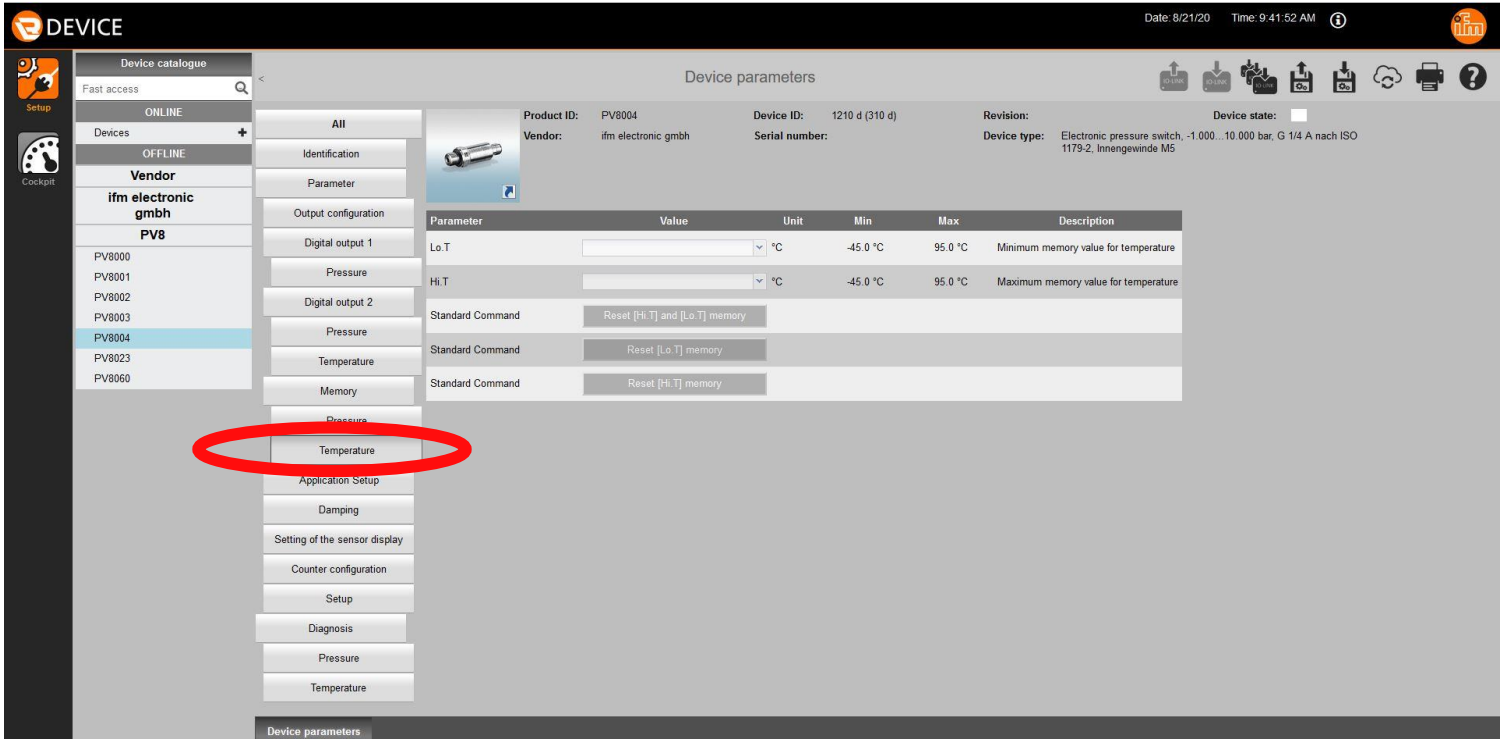

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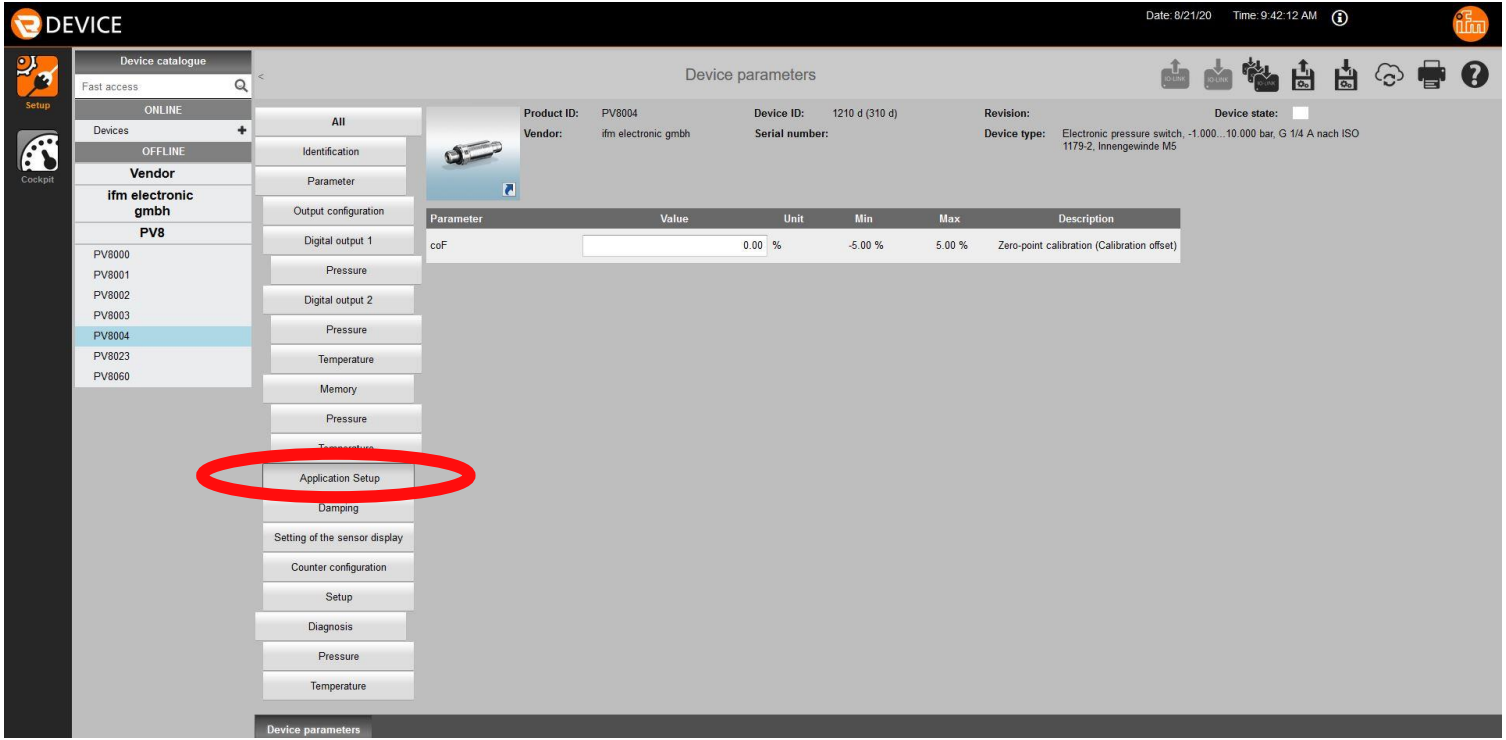

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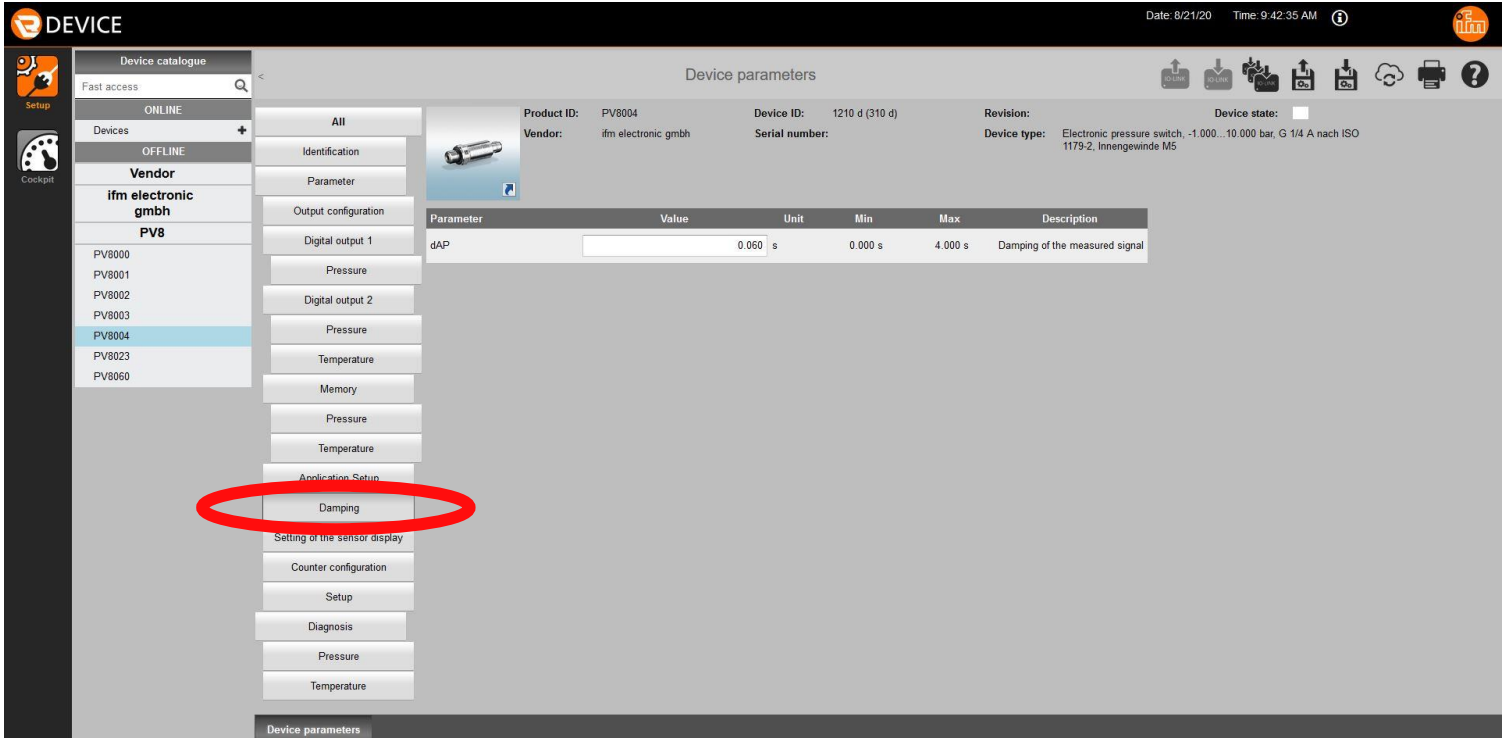

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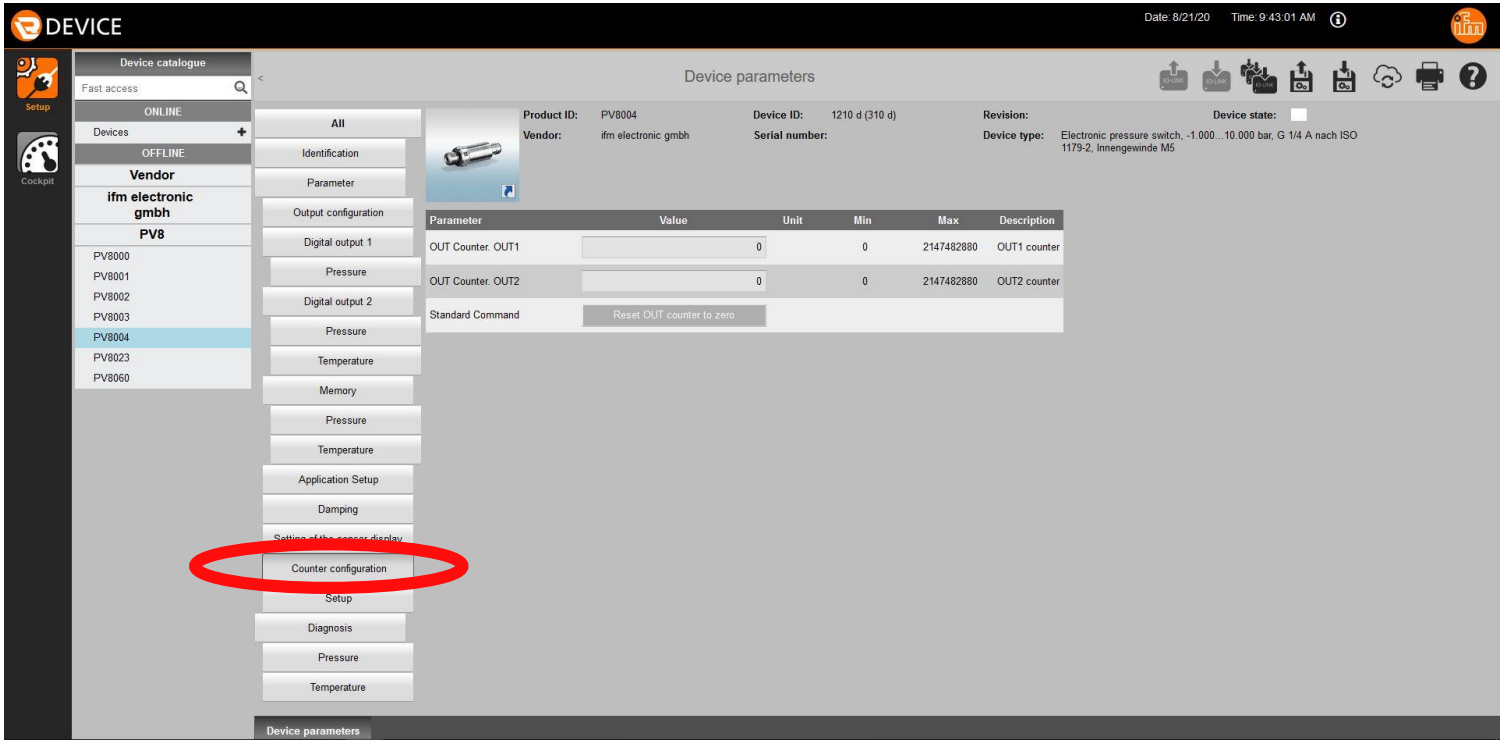

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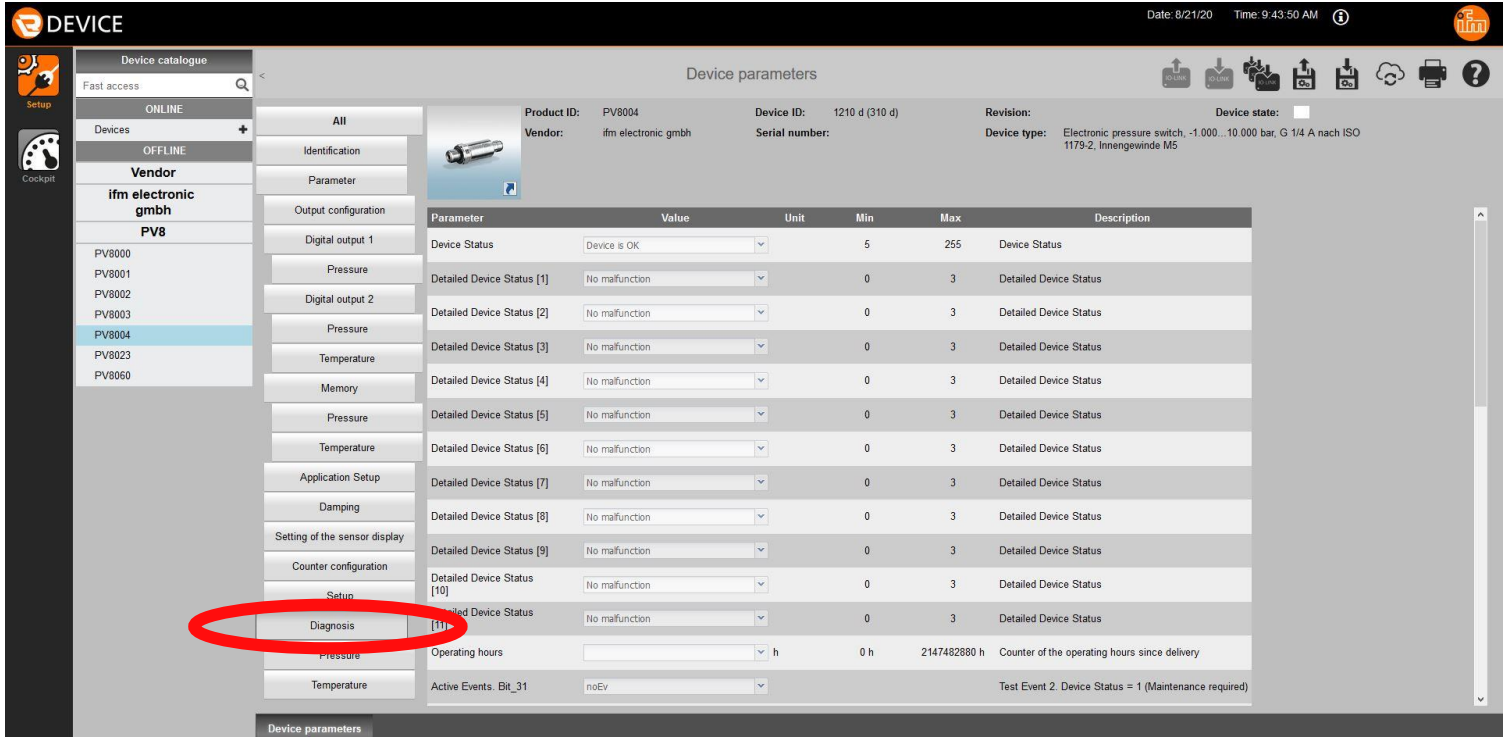

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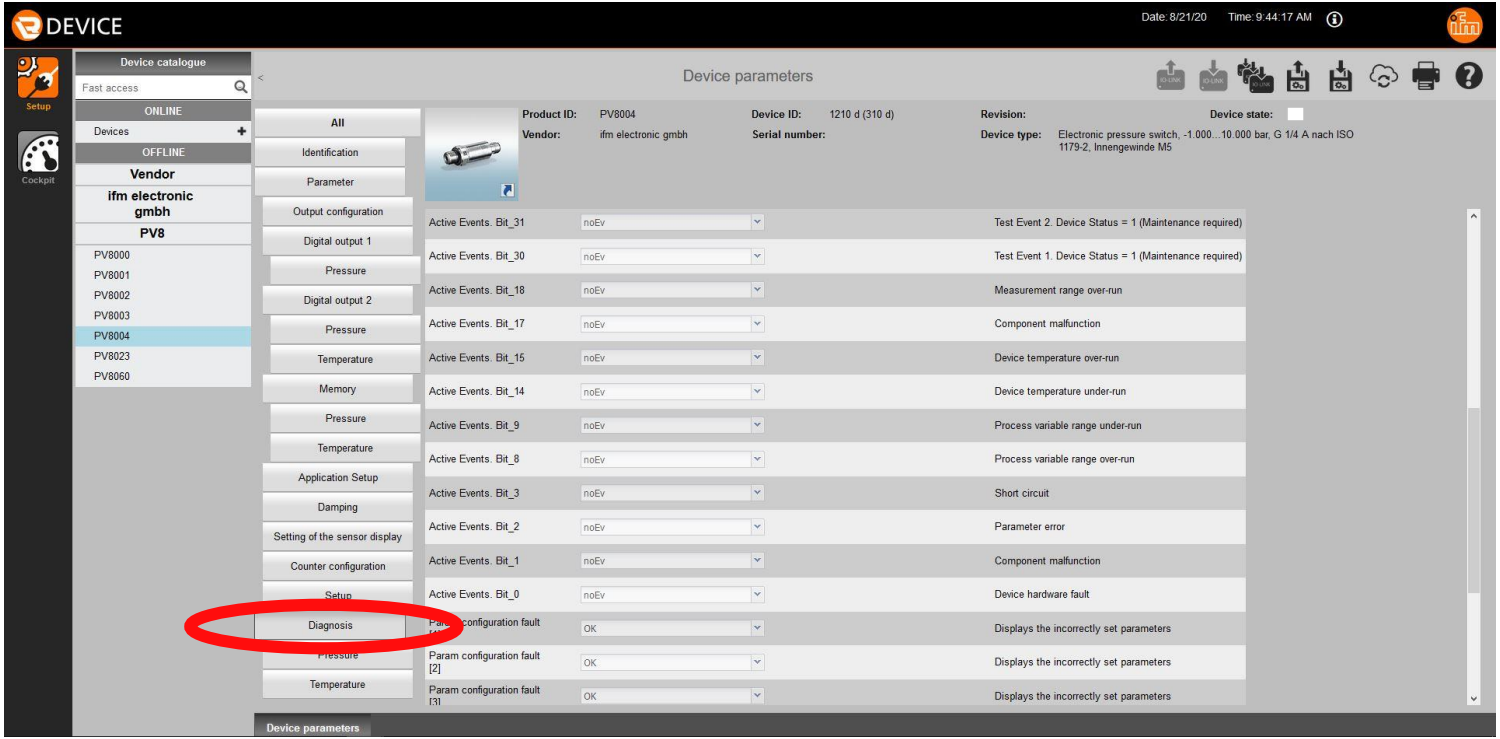

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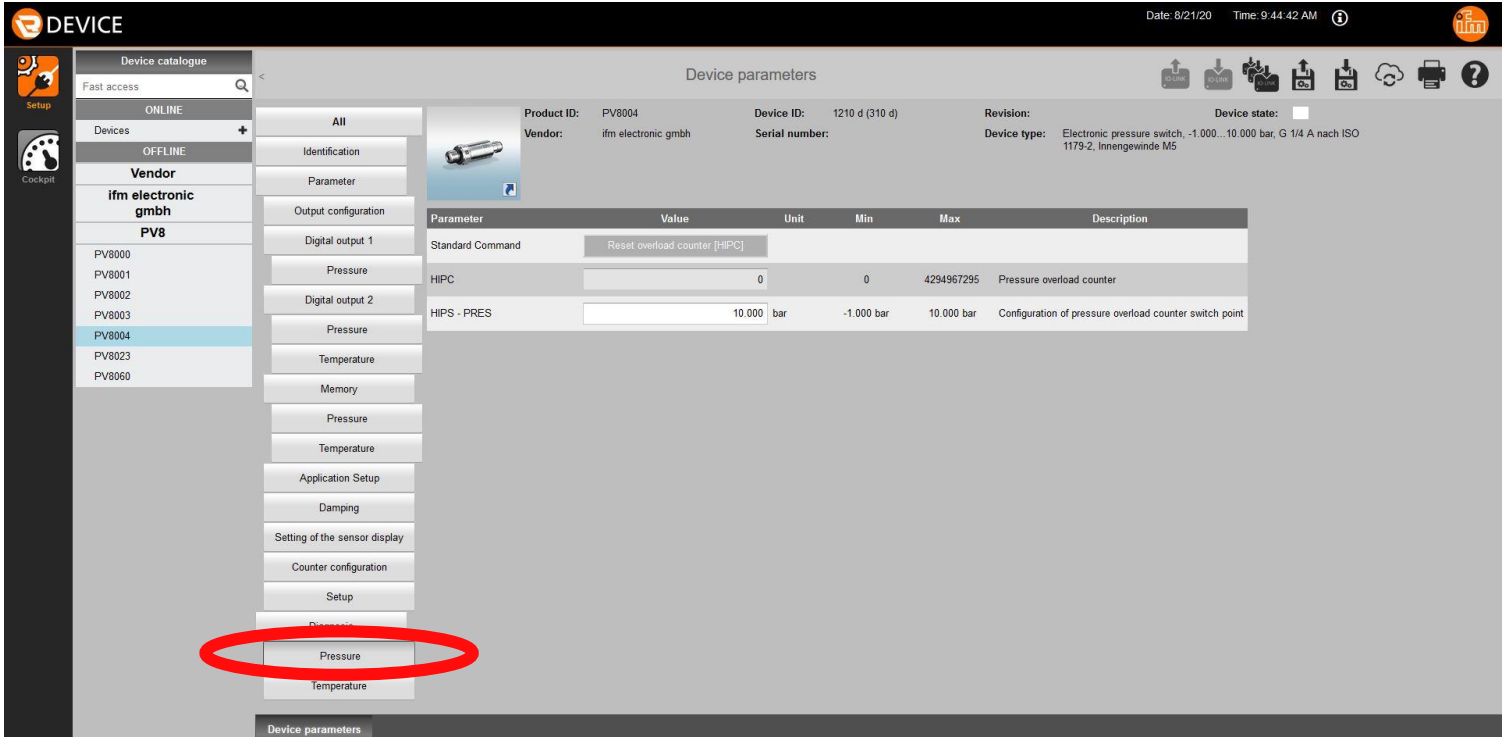

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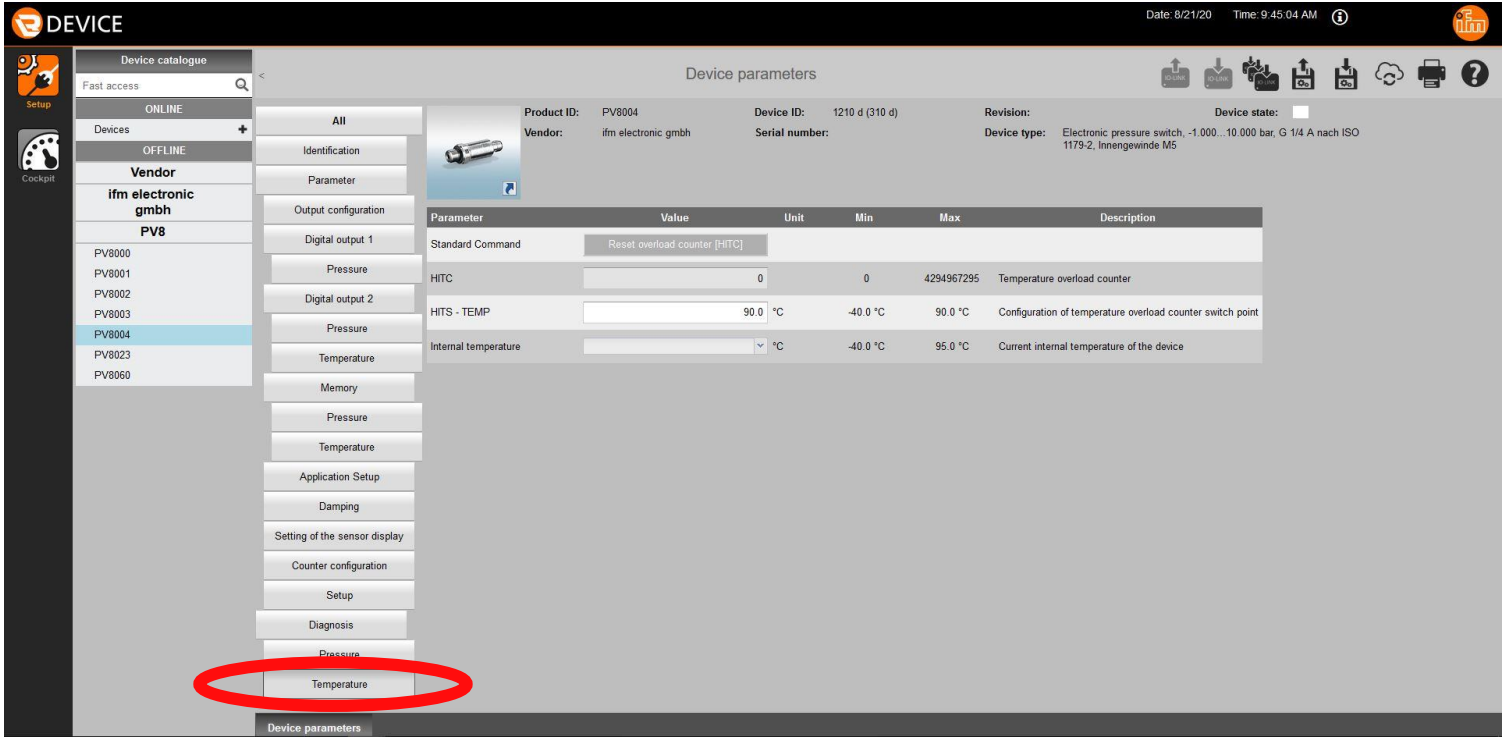

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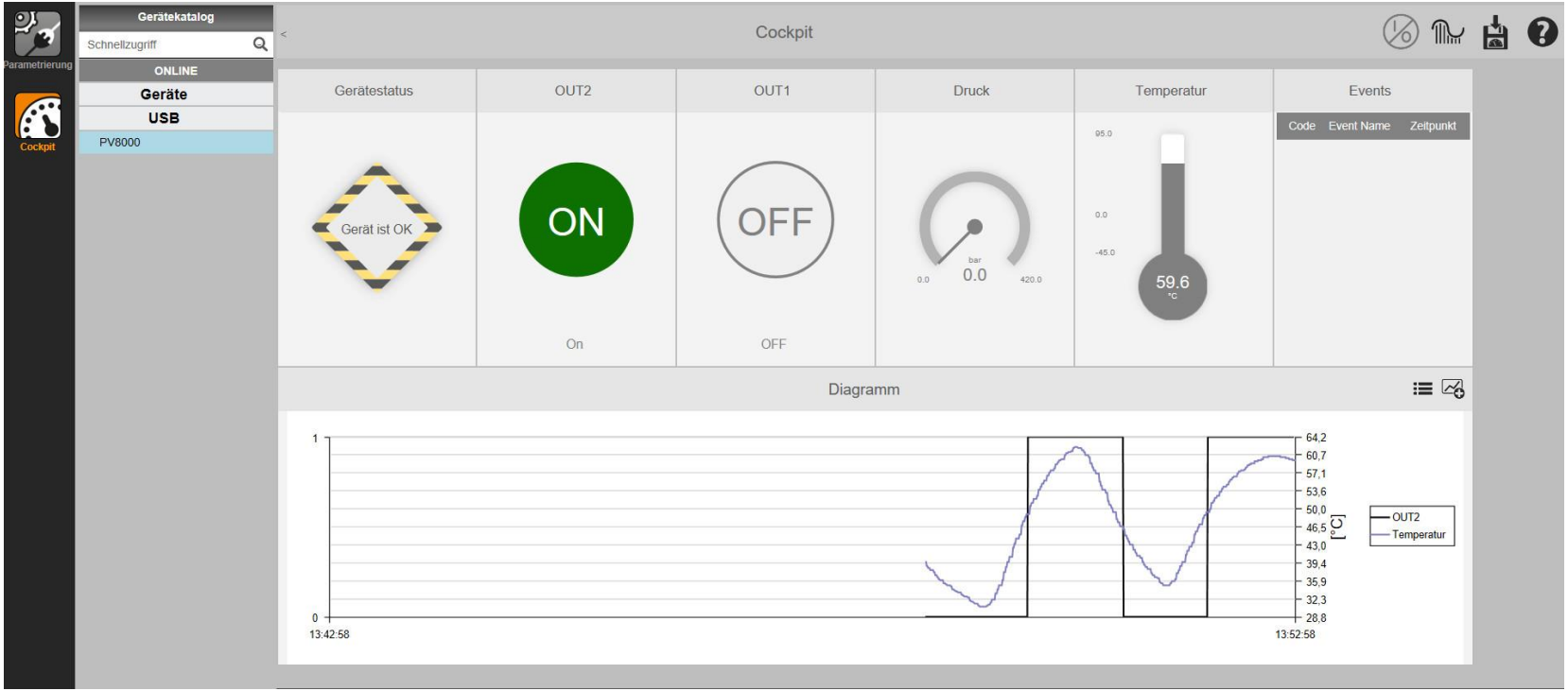

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IO-Link Advantages:

- More than one process value from one sensor
- No conversion losses
- Reduce cable amount
- Easy sensor parameterisation
- Over pressure and temperature counters
- Switch state counters
- + More diagnostics

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Application Example – Gearbox Oil Circulation

- Measure oil pressure
- Measure oil temperature

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Application Example – Compressor & Pumps

- Ensure lubricating oil is operating at ideal temperature
- Trend temperature easily

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Application Example – Cooling Circuits

- Measure inlet and outlet pressure
- Measure inlet and outlet temperature
- Trend temperature easily and calculate efficiency

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Summary:

PV8***:

- Can be used as a standard pressure or temperature switch
- More than one process measurement (Pressure + Temperature)
- Cost saving
- Diagnostics
- Over-run counters

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IO-Link Starter Kits

Various IO-Link started kits are available

Part No: ZZ1100, ZZ1122, ZZ0619 etc

Includes:

- LR Device Software
- IO-Link Master
- IO-Link Sensor
- Cables and accessories

Price Range - R5178 to R8150

Let us help you start your journey to the

4th Industrial Revolution

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Q & A

Do you have questions about the products featured?

Webinar Schedule

7 October 2020	**Industrial Condition Monitoring – New IO-Link Vibration Sensor with Temperature Monitoring (Part 1)**
14 October 2020	**Industrial Condition Monitoring – New IO-Link Vibration Sensor Machine Classification (Part 2)**

See the next webinars at the link below:
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Jannie Claasens

Sales Engineer

Freestate / Lesotho

ifm electronic ZA
112 Sovereign Drive
R21 Corportate Park
Irene Centurion
Phone 012 450 0400
E-Mail:
Jannie.Claasens@ifm.com
Internet www.ifm.com

Francois Gey van Pittius

Sales Manager:

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ifm electronic ZA
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R21 Corportate Park
Irene Centurion
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E-Mail:
Francois.Gey.van.Pittius@ifm.com

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