Datasheet

Qosain Scientific PhysBar

Introduction:

PhysBar is a Digital PhysInstrument built on top of a SSCDANN015PD2A5 Pressure Sensor which can accurately and dynamically measures fluid pressure. A luer socket makes it compatible with tubing's of several sizes and an in-built temperature compensation adds to the reliability of readings. An in-built display of PhysBar means that besides being used in integration with PhysLogger, PhysBar can also be used as an independent device.

Features:

- PhysInstrument Class: Digital
- Temperature compensated
- Leur Connector Compatible
- Connects with PhysLogger
- No configuration required
- Hardware tare button
- In-built display

Specifications:

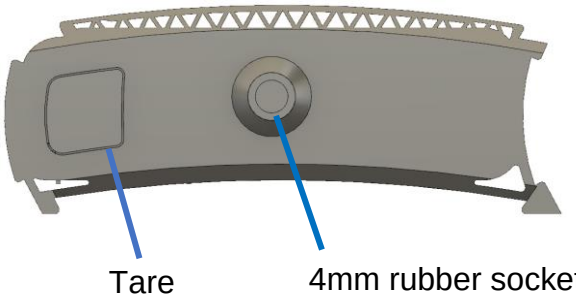
- Range: ± 103.42 kPa (± 15 Psi)
- Accuracy: ± 0.25% full scale range
- Operating temperature: -40 °C to 85 °C
- Based on: Honeywell SSCDANN015PD2A5
- Repeatability: < 1 kPa
- Units: Pa, kPa, bar, atm, psi, torr
- Response time: < 30 ms
- Standalone operation:
  - Input: 5V

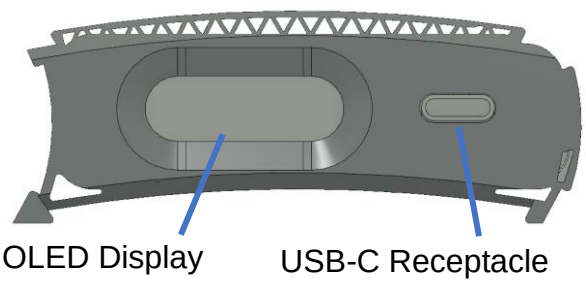
Typical Applications:

- Verify gas laws (Boyle's, Amonton's, Charles's)
- Boiler pressure sensing
- Laws of thermodynamics
- Investigate heat engine cycles
- Predict absolute zero
- Detect gas leakages in a pipe
- Investigate biological reactions–sugar fermentation and H_2O_2 decomposition

Standalone Interface

- Display:
  - Alternating value display in psi and kPa
- Tare:
  - Press "Tare" to adjust offset to force zero output
  - Press and hold "Tare" for more than 3 seconds to reset tare offset





Resources

- Instrument URL: www.physlogger.com/PhysBar.html
- Sensor: https://www.digikey.com/en/products/detail/honeywell-sensing-and-productivity-solutions/SSCDANN015PD2A5/3934917
- Discussion: www.community.physlogger.com/c/physinstruments/physbar/25