

Using the ADROIT-Interface and ADROIT6000 App

Introduction

ADROIT is a range of high performance, robust pressure measurement devices. Combining the best mechanical properties of micromachined silicon in a fully welded 316L stainless steel body with the latest digital processing capability to offer levels of accuracy, previously unavailable in a device of this type.

By using digital signal processing, the highest levels of performance over temperature are achieved. The final stage of processing converts the signal back into a conventional analogue output for easy interfacing to existing infrastructure. Fast ASIC technology ensures response times around 1 ms and fast switch on for pulse power operation. The digital processing also enables the replacement of mechanical adjustment to potentiometers with automatic calibration adjustment using the ADROIT-Interface and ADROIT6000 App.

The ADROIT-Interface is a hardware device which enables communication via USB to the sensor utilising one wire communication along the sensor power wires. The ADROIT6000 App runs on either a Windows based PC or ANDROID mobile devices and provides a number of options to make adjustment to the ADROIT series sensors.



Process

The ADROIT-Interface is available to order from Druck. The ADROIT6000 app is available free of charge as a download from the ADROIT webpage on Druck.com. For Android devices the ADROIT6000 app can be found on play store by searching for ADROIT6000.

The ADROIT6000 app and ADROIT-Interface works with the full ADROIT range as well as with PMP4200 motorsport sensors.

The main function of the ADROIT6000 App is to make adjustments to the zero and span settings of the sensor. Typical examples of when the App would be used include adjustment following calibration, if the sensor needs to be corrected or to reset zero on the sensor prior to starting a test programme.

Connecting the sensor to the interface box is straightforward, the positive and negative terminals on the interface unit connect to the positive and negative power supply lines on the sensor. The signal wire on voltage sensors is not connected. (see wiring diagram)

Druck can supply a set of suitable cables (Part no: 209-359) to connect to the interface and by using the UNIKCABLE option Druck can provide a suitable mating connector and wiring for electrical connector variants.

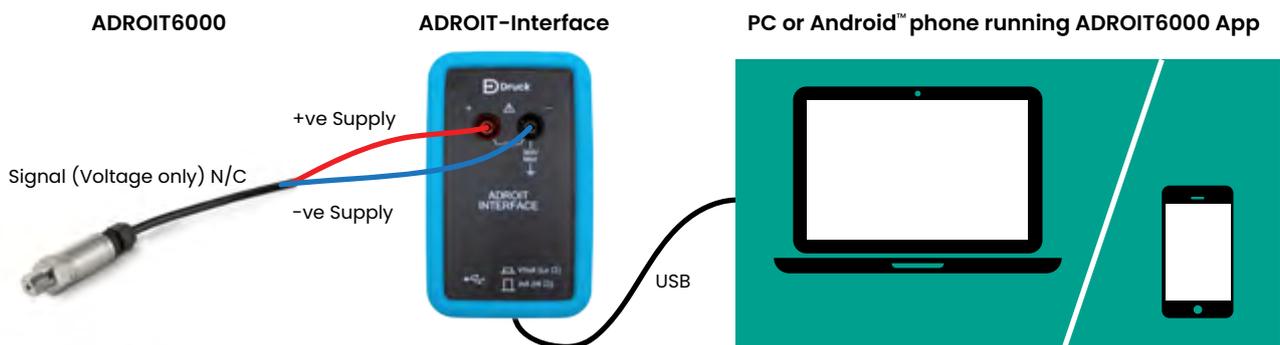
The interface is connected to the device (either Android based mobile or Windows based PC) by the included USB cables, which include the required USB On-The-Go adapter. The ADROIT-interface and ADROIT series sensor is powered by the device. Ensure the output load selector switch is in the appropriate position for the sensor type.

The application provides a simple selection of menus. The first option to connect to the sensor will initiate the connection and provide an updated screen with options to change zero point only, modify zero and span or return the sensor to its factory calibration settings.

The application is intuitive to use and prompts the entry of data at the relevant points. It is essential that the calibration process is conducted on the sensor in advance of using the application to make adjustments.

Typically, during a two-point calibration you would need electrical output and pressure readings at zero and full scale completed on calibrated equipment. Druck manufactures a range of calibration products suitable for these procedures, please see the Druck website or contact your local sales representative for further details.

Wiring diagram



Functions available

Connect – connects the sensor to the application via the one wire interface and sets sensor in communications mode.

Wiring Diagram – Displays a schematic of the wiring as an aide memoir.

User Manual – Displays the ADROIT user manual for reference.

Output Calculator – Allows the user to calculate the electrical output at a set pressure or a pressure reading for a given output. Requires the user to enter details of the sensor being used. This function does not need a sensor to be connected to operate.

Zero Adjustment – Allows adjustment of the zero point of the sensor.

Full Adjustment – Allows adjustment of the zero and full scale values of the sensor.

Factory Reset – Returns the sensor to the calibration settings at the point of manufacture.

Do's and don'ts

- ✓ Always take measurements with calibration equipment prior to using the app.
- ✓ Select the appropriate position for the output resistance switch.
- ✓ Always use as per the wiring diagram.
- ✗ Don't attempt to take readings from sensor at same time as making modifications.
- ✗ Don't attempt to re-range the sensor with ADROIT application, it will only allow small adjustments to be made.

Where to get App:

Visit: <https://www.bakerhughes.com/druck/industrial-pressure-sensors/configurable-modular-pressure-sensors/druck-adroit6000-pressure-sensors>

Google Playstore: <https://play.google.com/store/apps/details?id=com.bakerhughes.adroit6000>

We are here to help. Contact us at any time, find our local phone numbers or fill out the form to be contacted: <https://www.bakerhughes.com/druck/contact>

