Ralston Instruments
Pressure Calibration Specialists

FieldLab Pressure Quick-Start Guide

RALSTON FIELDLAB

For all models of Ralston Pressure FieldLab (FLP1)

Support

Online Support

For step-by-step instructions about how to use FieldLab, install accessories, and troubleshooting, go to:

www.ralstonfieldlab.com/support

Customer Service

Contact Customer service directly

Hours:
Monday-Friday 8:30am-5:00pm EST

Phone:
+1 440-564-1430
+1 800-347-6575 | US & CANADA

Email:
support@ralstoninst.com

Table of Contents

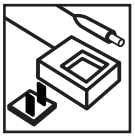
Included Items

Items included with your FieldLab. If any items are missing, please contact Ralston.

FieldLab Pressure Gauge

FieldLab Gauge in specific pressure range and connection type.

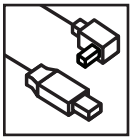
Model: FLP1 - FieldLab Gauge
Model: DGAU-0120 - FieldLab 1/4” Male NPT (2M)
Model: DGAU-0121 - FieldLab 1/4” Male 37 Degree AN Flare (2L)
Model: DGAU-0122 - FieldLab 1/4” Male BSPP (2B)
Model: DGAU-0123 - FieldLab 1/4” Male High Pressure (XH)
Model: DGAU-0124 - FieldLab Male Quick-test (QM)
Model: DGAU-0126 - FieldLab Male Quick-test XT



Power Cable and Adapters

FieldLab AC Power Charger assembly with 5 country adapters

Model: DGAU-0163



USB Cable

Connects the FieldLab to your computer for data transfers and software updates.

Model: DGAU-0191

Need Replacement Parts?

Replacement parts and accessories can be found at **ralstoninst.com/fieldlab**

Activate Your FieldLab

Before using your FieldLab Pressure for the first time, you will need to activate it and link with your PC.

1 Download & Install FieldLab Desktop

Visit **www.RalstonFieldLab.com** to download and install FieldLab Desktop on your Windows PC*

2 Open & Follow onscreen instructions in FieldLab Desktop software

Follow the onscreen directions closely before connecting your FieldLab. Do not connect your FieldLab until instructed to do so.

3 Activate & Update your FieldLab

Register your product with an email using FieldLab Desktop software. Any updates will be made using the FieldLab Desktop software.

4 You're ready to begin!

Review the **Quick Start Overview** to get started putting your FieldLab to work.

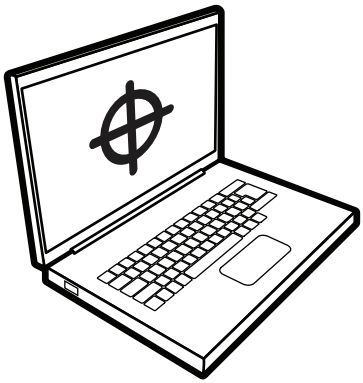
Review the Quick Start Overview ▶

** Windows version 7 or greater only. Administrative rights required to install FieldLab Desktop software.*

FieldLab Quick Start Overview

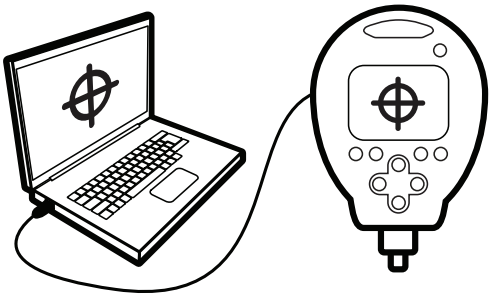
1 Create Test Modes

Create **Test Modes** for common tasks such as **Calibration Tests** or **Data Logging**.



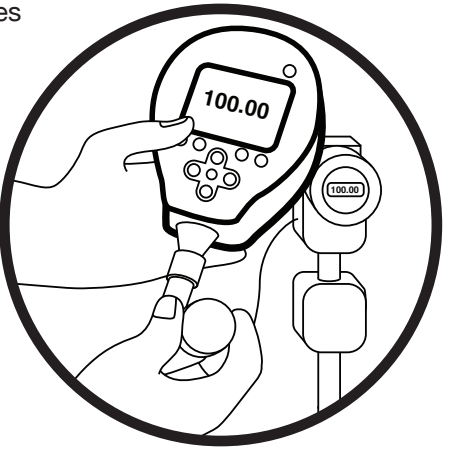
2 Add Test Modes to Your FieldLab

Add the **Test Modes** you need to do your work onto the **FieldLab Pressure** gauge.



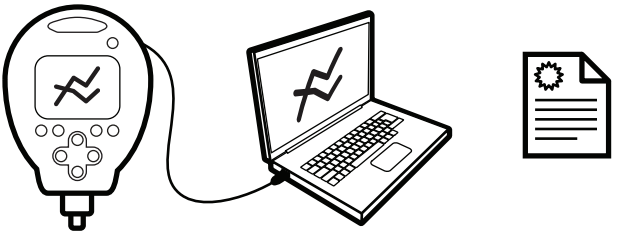
3 Run Tests in the Field

Connect your FieldLab to a pressure source and your **Device Under Test** (DUT) and run your Test Modes as needed. Log results of **Calibration Tests** or perform Pressure Monitoring Logging. All results are stored in **Data Sets** on the FieldLab.



4 Export Data Sets

Transfer **Data Sets** back to your Windows PC into FieldLab Desktop. Export the Data Sets for use in **Calibration Certificates**, As Found/As Left reports, or simple data runs.



? For detailed tutorials on creating and managing **Test Modes** and **Data Sets**, visit:

ralstonfieldlab.com

FieldLab Features Overview

Intrinsically Safe

Intirinsically safe for use in US, Canada, ATEX and IECEx hazardous environments.

For all certifications see page 12

Accuracy to 0.1% of Reading

Precision readings accurate to within 0.1% of reading from 20% and above. Below 20% of scale readings are .002% of full scale.

Power Management

Configure display, unit and power management to maximize battery life in the field.

Graphic Pressure Meter

Graphic Pressure meter with zoom in/out for analog style visual pressure/vacuum reading.

NIST Traceable Pressure Data

All pressure data recorded with FieldLab is traceable back to NIST standards. NIST traceable calibration certificate is included and is also available in the account of the user once registered.

Manage FieldLab(s) with Desktop Software

Manage all your FieldLabs in the same place with the FieldLab Desktop software.

Calibration Test Modes

Configure calibration test points quickly using ASME standard grades and permissible error. Get instant feedback with pass/fail confirmation on each test point. Export calibration test reports for inclusion in calibration certificates.

Data Logging Test Modes

Record data runs continuously at any interval for any duration. Monitor pressure in the field and import Data Sets into FieldLab Desktop.

High/Low Readings

See continuous Maximum and Minimum pressure readings over a span of time.

Easily Change Engineering Units

Change to any of 18 standard engineering units on the fly. Manage frequently used units with FieldLab Desktop.

Updating FieldLab and FieldLab Desktop

Updating FieldLab Desktop

Open FieldLab Desktop on your computer, and select **FieldLab > Check for Updates**.

Updating your FieldLab

1. Open FieldLab Desktop on the computer you use to manage your FieldLab.
2. Connect the FieldLab using the USB cable.
3. Select the FieldLab from the FieldLabs menu. Any available updates will be displayed.

Specifications

Model	FLP1
Pressure Measurement Uncertainty	**Vacuum** +/- 0.25% of Full Scale **Pressure** 0-20% of Full Scale - +/- 0.02% of Full Scale 20-100% of Full Scale - +/- 0.1% of Reading
Temperature	Operating: -10 to 50°C Process Media: -10 to 50°C Storage: -40 to 75 °C
Electrical Connections	USB Connection U_m=5.25V External Power U_m=21V
Ingress Protection	IP67 - IEC 60079-0 Clause 26.4.5
Radiated Emissions	CISPR 11:2009, +A1:2010 Group 1
Electro-Static Discharge Immunity Test	IEC 61000-4-2:2008
Radiated, Radio-Frequency, Electromagnetic Immunity	IEC 61000-4-3:2006 +A12007 +A2:2010
Power Frequency Magnetic Field Immunity Test	IEC 61000-4-8:2009
EMC Immunity	IEC 61326-1:2012 ed 2.0
Drop Test	CSA C22.2 No. 157 Clause 6.5, IEC 60079-0 Clause 26.4.3
Dielectric Strength	UL / IEC 60079-11 Clause 10.3
Manufacturer	Ralston Instruments 15035 Cross Creek Parkway Newbury OH 44065 USA www.ralstoninst.com

Approved Battery

Replace battery only with Ralston Instruments P/N: DGAU-0185 Lithium-Ion Battery Pack

Nominal Voltage:	3.75 Volts
Rated Capacity:	4.8 Ah
Charging Temperature Range:	-20°C to 60°C
Discharging Temperature Range:	-10°C to 50°C

Hazardous Locations

Every Ralston FieldLab Model FLP1 includes the following Intrinsic Safety Approvals:

ATEX and IECEx Hazardous Locations

In ATEX and IEC classified hazardous locations this apparatus is suitable for use in Class I, Zone 0, Group IIC locations as a stand-alone unit without a solar panel attached.

ATEX – Stand-alone Use

Ex II 1 G Ex ia IIC T4 Ga
-10 °C ≤ T_a ≤ 50 °C IP67

IECEx – Stand-alone Use

Ex ia IIC T4 Ga
-10 °C ≤ T_a ≤ 50 °C IP67

This product conforms to the following standards:

EN 60079-0:2009/08/01
EN 60079-11:2007
EN 60079-26:2007
IEC 60079-0, 2011/06/22 Ed: 6
IEC 60079-11, 2010/01/28 Ed: 4
IEC 60079-26:2009

North America Stand-alone Use:

Class I, Division 1, Groups A-D, T4
Class I, Zone 0, AEx ia IIC T4
-10 °C ≤ T_a ≤ 50 °C

North America (With Solar Panel installed):

Class I, Division 2, Groups A-D, T4
-10 °C ≤ T_a ≤ 50 °C

This product conforms to the following standards:

ISA 12.12.01
UL 61010-1
UL 913

This product is certified to the following standards:

CSA C22.2 No 157
CSA C22.2 No 213
CSA 61010-1

⚠ WARNINGS

- DO NOT CHARGE BATTERY IN CLASS I, DIV 1/ZONE 0 HAZARDOUS LOCATIONS.
- DO NOT CONNECT TO USB PORT IN HAZARDOUS LOCATIONS.
- DO NOT CONNECT TO POWER PORT IN CLASS I, DIV 1/ZONE 0 HAZARDOUS LOCATIONS
- EXPLOSION HAZARD. IN DIVISION 2 LOCATIONS DO NOT DISCONNECT POWER PORT WHILE THE CIRCUIT IS LIVE UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.
- DO NOT REMOVE OR REPLACE BATTERY OR RF MODULE IN HAZARDOUS LOCATIONS.
- SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY
- TO PREVENT IGNITION OF FLAMMABLE OR COMBUSTIBLE ATMOSPHERES, DISCONNECT POWER BEFORE SERVICING

⚠ AVERTISSEMENT

NE PAS CHARGER LA BATTERIE EN ZONES DANGEREUSES (CL I, DIV 1/Zone 0)

NE PAS CONNECTER USB PORT EN ZONES DANGEREUSES

NE PAS CONNECTER PRISE DE COURANT EN CLASSE I, DIV 1/ZONE 0 ZONES DANGEREUSES

RISQUE D'EXPLOSION. DANS LA CLASSE 1 DIVISION 2 NE PAS COUPER LE COURANT PORT TANDIS QUE LE CIRCUIT EST SOUS TENSION SAUF SI LA ZONE EST CONNUE POUR ETRE DEPOURVUE DE CONCENTRATIONS

NE PAS RETIRER OU REMPLACER LA BATTERIE OU LE MODULE RF EN ZONES DANGEREUSES

SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE INTRINSEQUE

POUR EVITER L'INFLAMMATION D'ATMOSPHERES INFLAMMABLES OU COMBUSTIBLES, DEBRANCHEZ L'ALIMENTATION AVANT

Safety Instructions for Hazardous Locations

- Do not use FieldLab until you have read and fully understand the instructions and hazards of the product
- Any modifications to this product with custom parts can result in hazardous operation of the product.
- Use eye protection while using this product.
- Do not overpressure the FieldLab or damage may result.
- Do not operate FieldLab while it is being charged via the AC or Auto charger as some additional pressure measurement uncertainty may result
- The installation of FLP1 must be in accordance with Ralston Instruments installation instructions.
- The installation must be in accordance with applicable national or International standards.

If RF Module P/N DGAU-0046 is installed the following approvals apply:

RF Module Agency Certifications

United States (FCC)

Contains FCC ID : VW4A091732.

This equipment complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation (FCC 15.19).

Modifications not expressly approved by this company could void the user's authority to operate this equipment (FCC section 15.21).

IMPORTANT:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense (FCC section 15.105).

Industry Canada (IC)

Contains IC: 11019A-091732

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with radio frequency exposure limits set forth by Industry Canada for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the device and the user or bystanders.

Cet équipement est conforme aux limites d'exposition aux radiofréquences définies par Industrie Canada pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre le dispositif et l'utilisateur ou des tiers

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European Union (ETSI)

The RF Module Radio has been certified for use in the European Union countries and conforms to the low voltage directives and safety directives.

A declaration of conformity is maintained on file as described in Annex II of the R&TTE Directive. Conformity is indicated on the back nameplate with the "CE" marking.

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