

SCAL-100

P100 CALIBRATION STATION



INSTRUCTION MANUAL

READ AND UNDERSTAND INSTRUCTIONS BEFORE USE

SENSIT

851 Transport Drive • Valparaiso, IN 46383 (USA)
Phone: 219 465 2700 • Fax: 219 465 2701
Email: info@gasleaksensors.com • www.GasLeakSensors.com

CONTENTS

DESCRIPTION	3
SCAL-100-D (DESKTOP) INCLUDES:	3
SCAL-100-N (NETWORK) INCLUDES:	3
OPERATION-SET UP	4
OPERATION-USE FOR BUMP TEST	4
OPERATION-CALIBRATION ONLY	5
OPERATION-EVENT LOG (REQUIRES SMARTLINK 360)	5
TROUBLESHOOTING TIPS	6
LED STATUS DESCRIPTION	6
NOTES	7
WARRANTY	8

SCAL-100 OPERATING MANUAL

DESCRIPTION

SCAL-100 is the automatic bump/calibration station for all **PIOO** instruments equipped with two way communication. This is identified by the black housing color of the **PIOO**. The **SCAL-100** is also used to upload the alarm data from **PIOO** event log.

SCAL-100 can be connected to any of the calibration gases used for **PIOO**. Only one gas at a time can be installed. Consult **SENSIT Technologies** for any gas needs.

SCAL-100 is powered by 9vdc. A power adapter is used when operated on line voltage (International adapter can be requested).

SCAL-100 is available in two versions. **SCAL-100-D** communicates with a computer via USB when using the **SCAL-D 360** (desktop application) software. **SCAL-100-N** can communicate through the Ethernet connection when using **SCAL-N 360** (network application) software. Either software option can be used for bump/calibration data management.

SCAL-100-D (DESKTOP) INCLUDES:

- **SCAL-100** base
- Gas connection
- USB cable
- Power connection
- Operating manual



SCAL-100-N (NETWORK) INCLUDES:

- **SCAL-100** base
- Gas connection
- Ethernet cable
- Power connection
- Operating manual



OPERATION-SET UP

Find a location to place the **SCAL-100**. This can be table or wall mounted. Use included screws to secure as needed.

CAUTION: Carefully position the **SCAL-100** and its calibrating gas cylinder so that no hazards are created.

First, connect calibration gas cylinder. The regulator setting should not exceed 20psi output pressure. Demand regulators are not acceptable. The flow rate is 300cc/min.

Second, connect the **SCAL-100**'s power supply to a power receptacle. Then insert the 9Vdc input power connection to the receptacle next to the USB/Ethernet connection.

After power is applied the **SCAL-100** will perform a self check. All LED's will illuminate for a second. Then the POWER and BUSY indicator will remain on followed by the GAS LED illuminating. A pressure and valve test is performed during this time. If there is no bottle pressure, the GAS and FAIL LED's will remain on until proper bottle pressure is applied and the **SCAL-100** is disconnected and reconnected to the power source. The LED's will also be cleared by passing the gas check at the start of a new bump/calibration routine.

Upon successful start up, only the POWER LED will remain illuminated.

OPERATION-USE FOR BUMP TEST

To test a **PIOO** be sure the instrument is turned on and properly zeroed. The bump test will test for 80% (default setting as threshold is adjustable) of full range of calibration within a preset time interval (60 Seconds). Most bump tests perform in less than 15 seconds depending on sensor type and age.

Insert the top of the **PIOO** (face down) beneath the forward tab of the **SCAL-100**. Snap the bottom of the **PIOO** into the bottom tab using both thumbs pressing on the bottom corners. Communication will be indicated by the BUSY LED flashing.



The BUMP and GAS LED's will illuminate indicating gas is being applied for the bump test.

Successful bump test is indicated by: 1) BUSY and GAS LED's turn off. 2) PASS and BUMP LED's remain illuminated for 10 minutes or until a new test is started.

Remove the **PIOO** from the **SCAL-100** by pulling back on the bottom retaining tab and lifting the back of the instrument from the **SCAL-100**. Allow the instrument to clear. It is ready for use.

The calibration of the **PIOO** will automatically start upon failure of a bump test. Upon failure of the bump test, the FAIL LED turns on and BUSY LED continues flashing; BUMP LED turns off; CALIBRATING LED illuminates. A gas pressure check is performed followed by the illumination of the GAS LED indicating the start of the calibration process.

Successful calibration is indicated by the CALIBRATING and PASS LED's remaining illuminated for 10 minutes or until a new test is started. The BUSY and GAS LED's turn off.

A failure is indicated by the BUMP/CALIBRATING LED's illuminating alternately with the FAIL LED for 10 minutes or until a new test is started. If this occurs, check for adequate bottle pressure and proper gas type; then retest the **PIOO**. If calibration fails multiple times, maintenance is required.

Remove the **PIOO** from the **SCAL-100** by pulling back on the bottom retaining tab and lifting the back of the instrument from the **SCAL-100**. Allow the instrument to clear. It is ready for use. In the case of a FAIL, the instrument requires service.

OPERATION-CALIBRATION ONLY

To test a **PIOO** be sure the instrument is turned on and properly zeroed. Hold the right button of the **PIOO** until GAS is displayed. Calibrations are performed in less than 120 seconds, depending on sensor type and age.

Insert the top of the **PIOO** (face down) beneath the forward tab of the **SCAL-100**. Snap the bottom of the **PIOO** into the bottom retaining tab.

Communication between the **PIOO** and the **SCAL-100** will be indicated by the BUSY LED flashing.

The CALIBRATING and GAS LED's will illuminate indicating gas is being applied for the calibration. Successful calibration is indicated by: 1) BUSY and GAS LED's turn off. 2) PASS and CALIBRATING LED's remain illuminated for 10 minutes or until a new test is started.

Remove the **PIOO** from the **SCAL-100** by pulling back on the bottom tab and lifting the back of the instrument from the **SCAL-100**. Allow the instrument to clear. It is ready for use.

A failure is indicated by the CALIBRATING and FAIL LED's illuminating alternately for 10 minutes or until a new test is started. If this occurs, check for adequate bottle pressure and proper gas type; then retest the **PIOO**. If calibration fails multiple times, maintenance is required.

Remove the **PIOO** from the **SCAL-100** by pulling back on the bottom retention tab and lifting the back of the **PIOO** instrument from the **SCAL-100**. Allow the instrument to clear. It is ready for use.

OPERATION-EVENT LOG (SMARTLINK 360 SOLD SEPARATELY)

SCAL-100-D

- Access the **PIOO** menu by pressing and releasing both buttons simultaneously. The display will show "Pin". Press the right button and the display will show 900.
- Use the right button to scroll to 933. If the desired number is passed, hold the right button until number exceeds 999. The pin number will start at 900 again. Press Left button to select. **PIOO** should now show "SL".
- Place the **PIOO** into the **SCAL-100-D** (which must be connected with USB to a PC with **SMARTLINK/ SMARTLINK 360** software installed), by using both thumbs. If P100 beeps the **SMARTLINK** mode was ended. Retry.
- BUSY LED will flash indicating communication.
- Follow **SMARTLINK** instructions to view event data.
- Remove the **PIOO** from the **SCAL-100** by pulling back on the bottom retention tab and lifting the back of the **PIOO** instrument from the **SCAL-100**.

SCAL-100-N

- Access the **PIOO** menu by pressing and releasing both buttons together. 'Pin' will be displayed. Press and release power button and '900' will be displayed.
- Scroll through the numbers using 'Z' button until it displays '933'. Press and release the power button and the unit will display 'SL'.
- Place the unit into the **SCAL-100-N** using both thumbs. Click on add button to add **PIOO** device. Select device type **SCAL-100-N**. Make sure **SCAL-100-N** is on the same network.
- **SCAL-100-N** must be powered on. Enter IP address and port of **SCAL-100-N** device. If found and connected, it will add it to the devices list and take you to the logs downloading screen.

TROUBLESHOOTING TIPS

To prevent poor communication keep dirt and debris out of the **SCAL-100** optical path.

Confirm the gas has not exceeded the expiration date. Some gases lose their concentration after expiration.

NO BUSY INDICATION: If this does not begin to flash remove the **PIOO** from the **SCAL-100** by pulling back on the bottom tab and lifting the back of the instrument from the **SCAL-100**. Make certain the **PIOO** is operating and reinsert the **PIOO** into the base. If no communication is indicated the **PIOO** may need service.

NOTE: Only **PIOO**'s with Black Housing will communicate with **SCAL-100**.

POWER, GAS, and FAIL LEDs stay on: Low pressure detected. Check gas supply

POWER and FAIL LEDs stay on: Disconnect and reconnect power to the **SCAL-100**. If POWER and FAIL LEDs continue to remain on, Contact **SENSIT**.

LED STATUS DESCRIPTION

 ON	 Blinking	 OFF
--	--	---

POWER	GAS SUPPLY	BUSY	BUMP TEST	CALIBRATING	PASS	FAIL	DESCRIPTION
							Ready to use.
							Low gas pressure.
							Bump Pass.
							Bump Failed, Now Calibrating.
							Bump and Calibration failed. (BUMP/CAL alternate blinking) with FAIL
							Calibration passed.
							Calibration failed.
							Performing Bump Test
							Performing Calibration
							System error. Contact Sensit.
							PC communication mode (SmartLink, Smartlink360 SCal-D 360, SCal-N 360)

NOTES

WARRANTY

Your **SENSIT® SCAL-100** is warranted to be free from defects in materials and workmanship for a period of two years after purchase. If within the warranty period the instrument should become inoperative from such defects the instrument will be repaired or replaced at our option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Proof of purchase may be required before warranty is rendered. Units out of warranty will be repaired for a service charge. Internal repair or maintenance must be performed by a **SENSIT Technologies** authorized technician. Violation will void the warranty. Units must be returned postpaid, insured and to the attention of the service department for warranty or repair.

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

SENSIT Technologies

851 Transport Drive
Valparaiso, Indiana
46383
USA

Tel: 219/465-2700
Fax: 219/465-2701

Email: info@gasleaksensors.com
Web: www.gasleaksensors.com

MADE IN THE USA

WITH GLOBALLY SOURCED COMPONENTS

SCAL-100 INSTRUCTION MANUAL
Part # 750-00058

Revision 8-11-2021