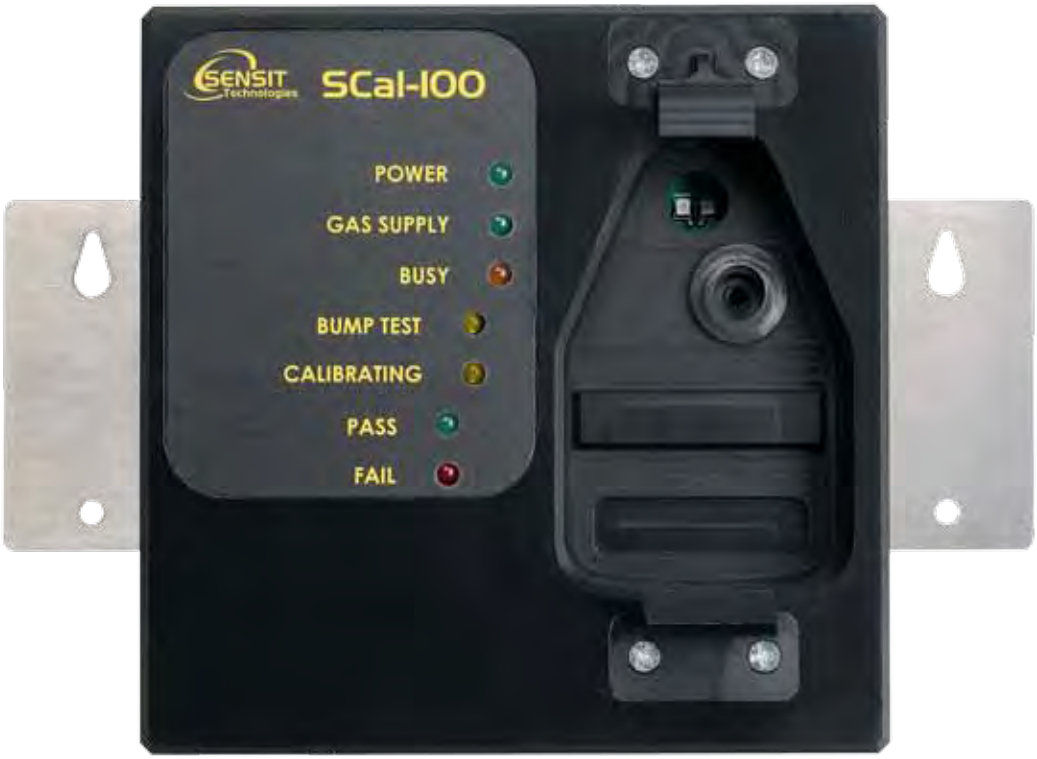
SCAL-100

SENSIT® P100 MONITOR CALIBRATION SYSTEM



Instruction Manual

Read and understand instructions before use.

Patented

MADE IN USA

SENSIT Technologies
is in compliance with ISO 9001:2008

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SCal-100 Operating Manual

Description

SCal-100 is the automatic bump/calibration station for all P100 instruments equipped with two way communication. This is identified by the black housing color of the P100. The SCal-100 is also used to upload the alarm data from P100 event log.

SCal-100 can be connected to any of the calibration gases used for P100. Only one gas at a time can be installed. Consult Sensit Technologies for any gas needs.

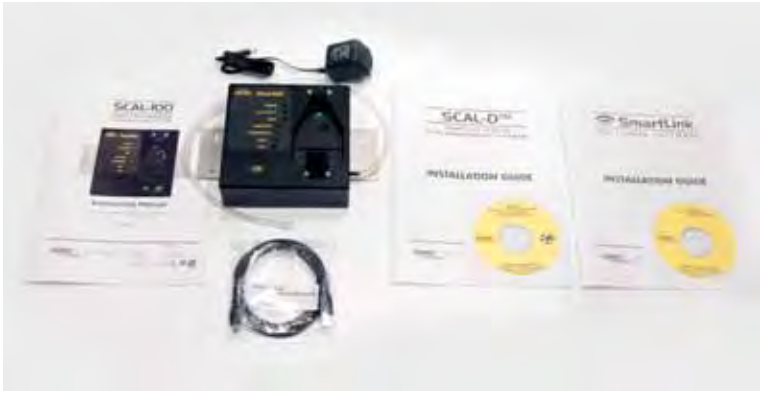
SCal-100 is powered by 9vdc. A power adapter is used when operated on line voltage (International adapter can be requested).

SCal-100 is available in two versions. SCal-100-D communicates with a computer via USB when using the SCal-D (desktop application) software. SCal100-N can communicate through the Ethernet connection when using SCal-N (network application) software. Either software option can be used for bump/calibration data management.

Only the SCal-100-D version can be used with SmartLink software to review the event log and update the P100 and SCal-100 settings. For more information, refer to the SmartLink manual.

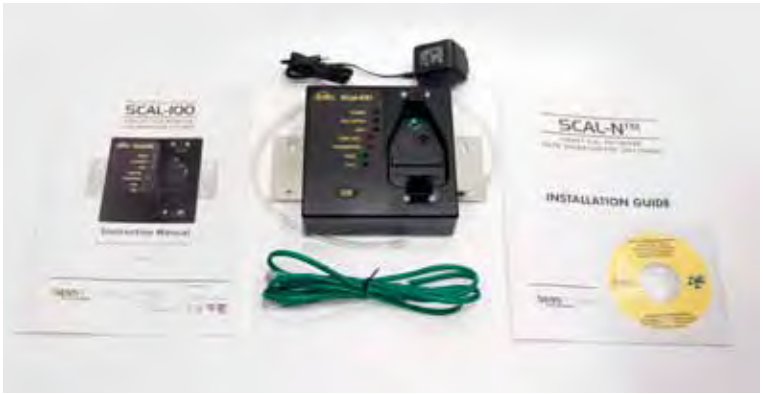
SCal-100-D (Desktop) includes:

- SCal-100 base
- Gas connection
- USB cable
- SCal-D (Desktop) Data Management Software
- SmartLink Log Viewer Software
- Power connection
- Operating manual



SCal-100-N (Network) includes:

- SCal-100 base
- Gas connection
- Ethernet cable
- SCal-N (Network) Data Management Software
- 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 SCal100'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 P100 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 P100 (face down) beneath the forward tab of the SCal100. Snap the bottom of the P100 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 seconds.

Remove the P100 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 P100 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 seconds. 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 seconds. If this occurs, check for adequate bottle pressure and proper gas type; then retest the P100. If calibration fails multiple times, maintenance is required.

Remove the P100 from the SCal-100 by pulling back on the bottom retaining tab and lifting the back of the instrument from the SCal100. 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 P100 be sure the instrument is turned on and properly zeroed. Hold the right button of the P100 until GAS is displayed. Calibrations are performed in less than 120 seconds, depending on sensor type and age.

Insert the top of the P100 (face down) beneath the forward tab of the SCal100. Snap the bottom of the P100 into the bottom retaining tab.

Communication between the P100 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 seconds.

Remove the P100 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 seconds. If this occurs, check for adequate bottle pressure and proper gas type; then retest the P100. If calibration fails multiple times, maintenance is required.

Remove the P100 from the SCal-100 by pulling back on the bottom retention tab and lifting the back of the P100 instrument from the SCal100. Allow the instrument to clear. It is ready for use.

Operation-Event Log (for SCal-100-D version only)

Access the P100 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. P100 should now show "SL".

Place the P100 into the SCal-100-D (which must be connected with USB to a PC with SmartLink 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 P100 from the SCal-100 by pulling back on the bottom retention tab and lifting the back of the P100 instrument from the SCal-100.

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 P100 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 P100 is operating and reinsert the P100 into the base. If no communication is indicated the P100 may need service.

NOTE: Only P100'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, SCal-D, SCal-N)

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.

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