

Comm 1 and Comm 2 Pinouts/Terminations

PIN	RS-232	RS-485	RS-422
	COMM 1 (J8)	COMM 1 (J8)	COMM 1 (J8)
1	Power Out	Power Out	Power Out
2	Ground	Ground	Ground
3	Switched Power Out	Switched Power Out	Switched Power Out
4	Operate	Operate	Operate
5	Not Used	RRTS	RTS
6	Request To Send	Bus +	Transmit Bus +
7	Transmit Data	Bus -	Transmit Bus -
8	Receive Data	No Connection	Receive Bus +
9	Clear To Send (CTS)	No Connection	Receive Bus -
	COMM 2 (J10)	COMM 2 (J10)	COMM 2 (J10)
1	Power Out	Power Out	Power Out
2	Ground	Ground	Ground
3	Switched Power Out	Switched Power Out	Switched Power Out
4	Operate	Operate	Operate
5	Not Used	RRTS	RTS
6	Request To Send	Bus +	Transmit Bus +
7	Transmit Data	Bus -	Transmit Bus -
8	Receive Data	No Connection	Receive Bus +
9	Clear To Send (CTS)	No Connection	Receive Bus -
TERMINATIONS	Comm 1 (J9)	Comm 2 (J11)	
First or intermediate unit (RS-485)	Pins 2-3	Pins 2-3	
Last or only unit (RS-485)	Pins 1-2	Pins 1-2	
RS-232	Pins 2-3	Pins 2-3	

Figure 2: NGC and PGC1000 Terminal Board

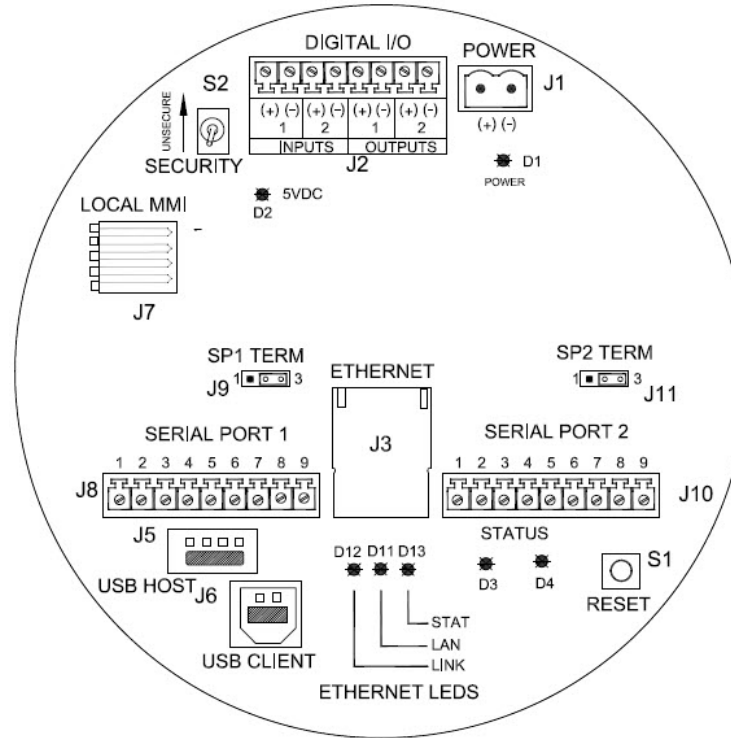
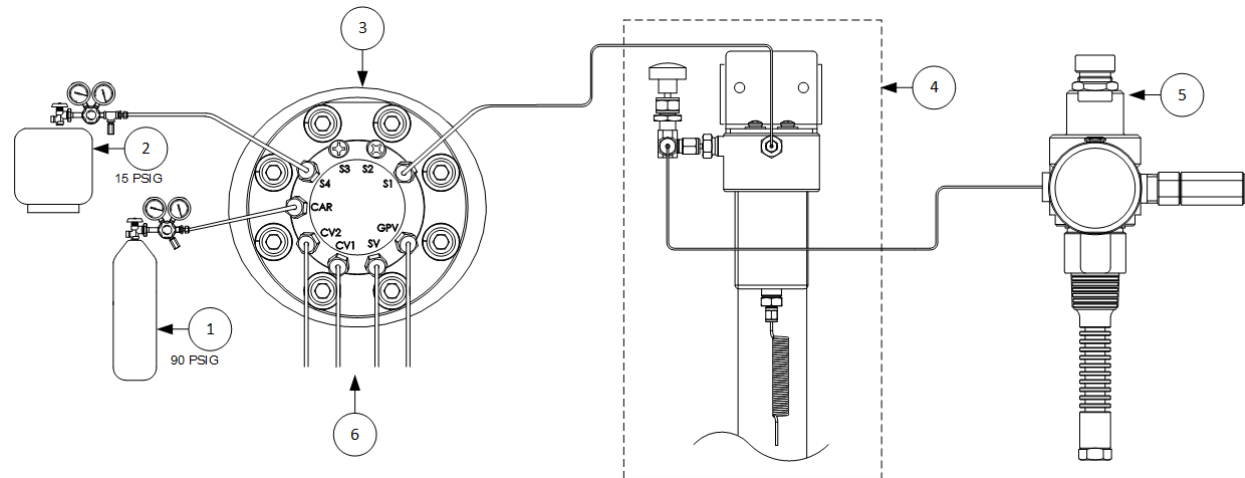


ABB MEASUREMENT & ANALYTICS NGC Series and PGC1000 Quick Start Guide



Figure 1: Tubing layout

#	Name
1	Carrier gas
2	Cal gas
3	Feed through assembly
4	Sample conditioning module
5	Sample probe
6	Vent lines



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Save this guide. Use the code on the back to access user manuals and other product information.

Safety and compliance information is included with the device in the shipping packaging.

NGC and PGC1000 Quick Start Guide

Connect sample streams

IMPORTANT NOTE: Do not use any type of plastic, Teflon™ or Teflon-lined braided steel tubing. Use only good quality, clean, stainless steel chromatographic-grade transport tubing for carrier, calibration gas and sample lines. Use of poor-quality stainless-steel tubing will generate unsatisfactory results. H2S applications require Sulfinert® tubing.

IMPORTANT NOTE: Use only ultra-high purity grade carrier gas. Purge all lines prior to connecting to the device.

IMPORTANT NOTE: The transport tubing run for the sample conditioning modules can be up to 50 feet. Lengths longer than 50 feet must adhere to the rules of calculated lag time.

If a sample conditioning module is not being used, the sample transport tubing should be 1/16-inch tubing and no longer than ten feet.

To calculate lag time:

$$\text{Lag Time} = \frac{\text{Volume[cc] per Foot of Tubing} \times (\text{Feet of Tubing})}{\text{Actual Sample Flow Rate (cc/min.)}}$$

Tube outside diameter	Tube wall thickness	Volume per foot
1/8 inch	0.02 inch	1 cc
1/4 inch	0.035 inch	5 cc
3/8 inch	0.035 inch	15 cc
1/2 inch	0.035 inch	25 cc

Common settings

- Set the carrier regulator to 90 PSIG.
- Set calibration blend/sample stream pressures to between 15 ±2 PSIG.
- Ensure valves are open.



Power supply information

For a 12-volt power supply, 8 amps are required. Set the power supply to 14.5 volts. For a 24-volt power supply, 4 amps are required. Set the power supply to 25-26.5 volts.

Recommended wire size is 12 AWG.

Startup using USB

After the unit has been powered up for a minimum of 2 hours for temperature stabilization, continue with the following steps:

- Verify that carrier, sample, and cal pressures are set correctly.
 - Connect with a USB cable (to connect using Ethernet, see the NGC8200/PGC1000 Gas Chromatograph User Manual).
1. Start PCCU32.
 2. Click the **Setup** icon on top tool bar. 
 3. On the System **Setup** tab, select **Serial port**.
 4. Select the port from the **PCCU Com. Port** drop-down list.
 5. Click **Close** to exit setup.
 6. Click the **Entry** icon , then **View > Expert**.

The Start-up Wizard will initialize to assist with analyzer setup. If you choose not to use the Wizard or if it fails to start, continue with the next step.

7. Select **Show Tree View** (on the left).
8. Select **Totalflow** from the top of the tree.
9. In the Station Setup Tab, under the Value Column, select **Totalflow**.
10. Change the default ID.
11. Click **Send**.
12. Select **Analyzer Operation** in the tree view (on the left) to open the **Main Screen**.
13. Select the **Stream Sequence** tab and enable the streams to be used.
14. Click **Send**.
15. Select **Diagnostics** (on the right) to verify that diagnostic tests were successful.

Unused streams will fail stream tests since no pressure is applied.

16. Select **Calibration** (on the right).
 - a. Enter calibration blend information from certificate.
 - b. Verify that the blend total equals 100%.
17. Click **Send**.
18. Close the window.
19. Select **Peak Find** (on the right). Verify that **Manual** is selected. (Do not use Auto).
20. Select **Run Single Cycle** and review the chromatogram:


- Verify that all peaks are gated and labeled.
 - Verify that the reference peaks have appropriate retention times and there are no alarms.
21. Click **CAL** (on the left side of the main screen).

IMPORTANT NOTE: Calibration will take approximately 30 minutes.

After calibration is accepted:

1. Select **stream 4** to run calibration gas again.
2. After the stream starts, select **HOLD** so it runs only one time. This will update stream data.
3. Verify stream 4 results are acceptable.
4. Select **Run** (on the left) to put the unit in service analyzing process stream(s).

To save the configuration:

1. Click the **Save & Restore** icon  on top toolbar.
2. In the Save and Restore window, click **Restore Station Files**.
3. Verify the default name and path for the files. Click **OK**. This will restore the files to the tfCold drive.

TCP connection

See the NGC8200/PGC1000 Gas Chromatograph User Manual for setup instructions.

Use IP address: **169.254.0.11**.

Gas chromatograph product pages



PGC1000



NGC8200 Series

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