



73L-IV

73G-IV



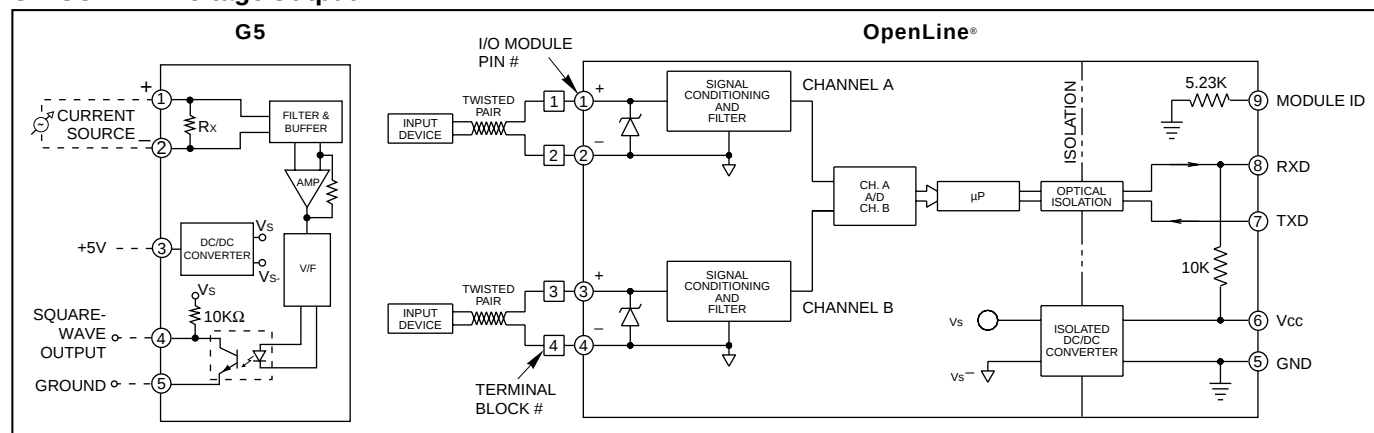
## FEATURES

- Wide Variety of Input Ranges
- Standard Package and Pin-out
- Single 5V Power Supply
- 12-Bit Resolution
- Optical Isolation from Input to Output
- Intermix With Digital Modules on the Same Rack
- Meets the Requirements of IEEE 472
- UL, CSA, CE Certified (OpenLine only)

## DIMENSIONS

For complete dimensional drawings, see page L-23 to L-24.

## CIRCUITRY: Voltage Output



## SPECIFICATIONS: By Part Number

| Type/Function                          |                            | Grayhill Part Number |               |               |                         |                         |                         |
|----------------------------------------|----------------------------|----------------------|---------------|---------------|-------------------------|-------------------------|-------------------------|
| G5, OpenLine®                          |                            | 73G-IV1              | 73G-IV5       | 73G-IV10      | 73L-IV1                 | 73L-IV5                 | 73L-IV10                |
| Specifications                         | Units                      |                      |               |               |                         |                         |                         |
| Number of Inputs                       |                            | 1 Ch., Diff.         | 1 Ch., Diff.  | 1 Ch., Diff.  | 2 Ch., S.E.             | 2 Ch., S.E.             | 2 Ch., S.E.             |
| Resolution                             | bits                       | 12                   | 12            | 12            | 12                      | 12                      | 12                      |
| Absolute Accuracy@25°C <sup>1, 2</sup> | $\mu\text{V}/\text{count}$ | 244.1                | 1221          | 2441          | 244.1                   | 1221                    | 2441                    |
| Accuracy Drift w/Temp. <sup>2</sup>    | % of full scale            | +/- 0.1              | +/- 0.1       | +/- 0.1       | 0.075                   | 0.075                   | 0.075                   |
| Maximum Offset                         | PPM/°C                     | +/- 50               | +/- 50        | +/- 50        | +/- 35                  | +/- 25                  | +/- 25                  |
| Maximum Gain (0-60°C)                  | PPM/°C                     | +/- 55               | +/- 55        | +/- 55        | +/- 75                  | +/- 75                  | +/- 75                  |
| Serial Data Format                     |                            | 12-bit packet        | 12-bit packet | 12-bit packet | Right Justified, 16-bit | Right Justified, 16-bit | Right Justified, 16-bit |
| Serial Data Packet                     |                            | N/A                  | N/A           | N/A           | 115.2Kb,N,8,2           | 115.2Kb,N,8,2           | 115.2Kb,N,8,2           |
| Step Response Time <sup>4</sup>        | mS                         | 2.5                  | 2.5           | 2.5           | 1.5                     | 1.5                     | 1.5                     |
| Input Resistance (Rx)                  | Mohm                       | 1                    | 1             | 1             | 2.2                     | 2.2                     | 2.2                     |
| Input Voltage Range                    | Vdc                        | 0-1                  | 0-5           | 0-10          | 0-1                     | 0-5                     | 0-10                    |
| Maximum Overload                       | V                          | —                    | —             | —             | +/- 30                  | +/- 30                  | +/- 30                  |
| Logic Voltage Range                    | Vdc                        | 4.5-5.5              | 4.5-5.5       | 4.5-5.5       | 4.75-5.25               | 4.75-5.25               | 4.75-5.25               |
| Maximum Logic Supply Current @ 5Vdc    | mA/Ch.                     | 150                  | 150           | 150           | 38                      | 38                      | 38                      |
| Module ID (Pin 9)                      | K $\Omega$                 | N/A                  | N/A           | N/A           | 5.23                    | 5.23                    | 5.23                    |
| Isolation Voltage                      |                            |                      |               |               |                         |                         |                         |
| Field to Logic                         | Vrms                       | 2500                 | 2500          | 2500          | 2500                    | 2500                    | 2500                    |
| Field to Power                         | Vrms                       | 2500                 | 2500          | 2500          | 2500                    | 2500                    | 2500                    |
| Module to Module                       | Vrms                       | 2500                 | 2500          | 2500          | 2500                    | 2500                    | 2500                    |
| Channel A to Channel B                 |                            | —                    | —             | —             | None                    | None                    | None                    |
| Environmental Conditions               |                            |                      |               |               |                         |                         |                         |
| Operating Temperature <sup>3</sup>     | °C                         | 0 to 60              | 0 to 60       | 0 to 60       | -40 to 85               | -40 to 85               | -40 to 85               |
| Storage Temperature                    | °C                         | -25 to 85            | -25 to 85     | -25 to 85     | -55 to 100              | -55 to 100              | -55 to 100              |

<sup>1</sup> Includes offset, gain, non-linearity and repeatability error terms.

<sup>2</sup> Accuracy and drift graphs are available in Bulletin #753.

<sup>3</sup> Start up temperature greater than -25°C.

## SPECIFICATIONS: By Part Number

| Type/Function                            |                 | Grayhill Part Number |               |                         |                         |
|------------------------------------------|-----------------|----------------------|---------------|-------------------------|-------------------------|
| G5, OpenLine®                            |                 | 73G-IV5B             | 73G-IV10B     | 73L-IV5B                | 73L-IV10B               |
| Specifications                           | Units           |                      |               |                         |                         |
| Number of Inputs                         |                 | 1 Ch., Diff.         | 1 Ch., Diff.  | 2 Ch., S.E.             | 2 Ch., S.E.             |
| Resolution                               | bits            | 12                   | 12            | 12                      | 12                      |
| Absolute Accuracy @ 25°C <sup>1, 2</sup> | mV/count        | 2.44                 | 4.88          | 2.44                    | 4.88                    |
| Accuracy Drift w/Temp. <sup>2</sup>      | % of full scale | +/- 0.1              | +/- 0.1       | 0.075                   | 0.075                   |
| Maximum Offset                           | PPM/°C          | +/- 50               | +/- 50        | +/- 25                  | +/- 25                  |
| Maximum Gain (0 to 60°C)                 | PPM/°C          | +/- 55               | +/- 55        | +/- 75                  | +/- 75                  |
| Serial Data Format                       |                 | 12-bit packet        | 12-bit packet | Right Justified, 16-bit | Right Justified, 16-bit |
| Serial Data Packet                       |                 | —                    | —             | 115.2Kb, N, 8, 2        | 115.2Kb, N, 8, 2        |
| Step Response Time <sup>3</sup>          | mS              | 2.5                  | 2.5           | 1.5                     | 1.5                     |
| Input Resistance (Rx)                    | Mohm            | 1                    | 1             | 2.2                     | 2.2                     |
| Input Voltage Range                      | Vdc             | -5 to 5              | -10 to 10     | -5 to 5                 | -10 to 10               |
| Maximum Overload                         | V               | —                    | —             | +/- 30                  | +/- 30                  |
| Logic Voltage Range                      | Vdc             | 4.5-5.5              | 4.5-5.5       | 4.75-5.25               | 4.75-5.25               |
| Maximum Logic Supply Current@5Vdc        | mA/Ch.          | 150                  | 150           | 38                      | 38                      |
| Module ID (Pin 9)                        | KΩ              | N/A                  | N/A           | 5.23                    | 5.23                    |
| Isolation Voltage                        |                 |                      |               |                         |                         |
| Field to Logic                           | Vrms            | 2500                 | 2500          | 2500                    | 2500                    |
| Field to Power                           | Vrms            | 2500                 | 2500          | 2500                    | 2500                    |
| Module to Module                         | Vrms            | 2500                 | 2500          | 2500                    | 2500                    |
| Channel A to Channel B                   |                 | —                    | —             | None                    | None                    |
| Environmental Conditions                 |                 |                      |               |                         |                         |
| Operating Temperature                    | °C              | 0 to 60              | 0 to 60       | -40 to 85               | -40 to 85               |
| Storage Temperature                      | °C              | -25 to 55            | -25 to 85     | -55 to 100              | -55 to 100              |

| Type/Function                            |                 | Grayhill Part Number |               |                         |                         |
|------------------------------------------|-----------------|----------------------|---------------|-------------------------|-------------------------|
| G5, OpenLine®                            |                 | 73G-IV50M            | 73G-IV100M    | 73L-IV50M               | 73L-IV100M              |
| Specifications                           | Units           |                      |               |                         |                         |
| Number of Inputs                         |                 | 1 Ch., Diff.         | 1 Ch., Diff.  | 2 Ch., S.E.             | 2 Ch., S.E.             |
| Resolution                               | bits            | 12                   | 12            | 12                      | 12                      |
| Absolute Accuracy @ 25°C <sup>1, 2</sup> | μV/Count        | 12.2                 | 24.4          | 12.2                    | 24.4                    |
| Accuracy Drift w/Temp. <sup>2</sup>      | % of full scale | +/- 0.1              | +/- 0.1       | 0.07                    | 0.07                    |
| Maximum Offset                           | PPM/°C          | +/- 50               | +/- 50        | +/- 35                  | +/- 35                  |
| Maximum Gain (0 to 60°C)                 | PPM/°C          | +/- 55               | +/- 55        | +/- 75                  | +/- 75                  |
| Serial Data Format                       |                 | 12-bit packet        | 12-bit packet | Right Justified, 16-bit | Right Justified, 16-bit |
| Serial Data Packet                       |                 | —                    | —             | 115.2Kb, N, 8, 2        | 115.2Kb, N, 8, 2        |
| Step Response Time <sup>3</sup>          | mS              | 2.5                  | 2.5           | 1.5                     | 1.5                     |
| Input Resistance (Rx)                    | Mohm            | 1                    | 1             | 2.2                     | 2.2                     |
| Input Voltage Range                      | mV              | 0-50                 | 0-100         | 0-50                    | 0-100                   |
| Maximum Overload                         | V               | —                    | —             | +/- 30                  | +/- 30                  |
| Logic Voltage Range                      | Vdc             | 4.5-5.5              | 4.5-5.5       | 4.75-5.25               | 4.75-5.25               |
| Maximum Logic Supply Current@5Vdc        | mA/Ch.          | 150                  | 150           | 30                      | 30                      |
| Module ID (Pin 9)                        | KΩ              | N/A                  | N/A           | 5.23                    | 5.23                    |
| Isolation Voltage                        |                 |                      |               |                         |                         |
| Field to Logic                           | Vrms            | 2500                 | 2500          | 2500                    | 2500                    |
| Field to Power                           | Vrms            | 2500                 | 2500          | 2500                    | 2500                    |
| Module to Module                         | Vrms            | 2500                 | 2500          | 2500                    | 2500                    |
| Channel A to Channel B                   |                 | N/A                  | N/A           | None                    | None                    |
| Environmental Conditions                 |                 |                      |               |                         |                         |
| Operating Temperature                    | °C              | 0 to 60              | 0 to 60       | -40 to 85               | -40 to 85               |
| Storage Temperature                      | °C              | -25 to 85            | -25 to 85     | -55 to 100              | -55 to 100              |

<sup>1</sup> Includes offset, gain, non-linearity and repeatability error terms.

<sup>2</sup> Accuracy and drift graphs are available in Bulletin #753.

<sup>3</sup> Start up temperature greater than -25°C.

## SPECIFICATIONS: By Part Number

| Type/Function                         |                 | Grayhill Part Number |               |
|---------------------------------------|-----------------|----------------------|---------------|
| G5                                    |                 | 73G-IVAC120          | 73G-IVAC240   |
| Specifications                        | Units           |                      |               |
| Number of Inputs                      |                 | 1 Ch., Diff.         | 1 Ch., Diff.  |
| Resolution                            | bits            | 12                   | 12            |
|                                       | mV/Count        | 27.34                | 65.52         |
| Absolute Accuracy @ 25°C <sup>1</sup> | % of full scale | +/- 0.3%             | +/- 0.3%      |
| Accuracy Drift w/Temp.                |                 |                      |               |
| Maximum Offset                        | PPM/°C          | +/- 150              | +/- 150       |
| Maximum Gain (0 to 60°C)              | PPM/°C          | +/- 150              | +/- 150       |
| Serial Data Format                    |                 | 12-bit packet        | 12-bit packet |
| Step Response Time <sup>2</sup>       | mS              | 2.5                  | 2.5           |
| Input Resistance                      | Mohm            | 1                    | 1             |
| Input Voltage Range                   | Vac             | 28 to 140            | 28 to 280     |
| Logic Voltage Range                   | Vdc             | 4.5-5.5              | 4.5-5.5       |
| Maximum Logic Supply Current @ 5V dc  | mA/Ch.          | 150                  | 150           |
| Isolation Voltage                     |                 |                      |               |
| Field to Logic                        | Vrms            | 2500                 | 2500          |
| Field to Power                        | Vrms            | 2500                 | 2500          |
| Module to Module                      | Vrms            | 2500                 | 2500          |
| Environmental Conditions              |                 |                      |               |
| Operating Temperature <sup>3</sup>    | °C              | 0 to 60              | 0 to 60       |
| Storage Temperature                   | °C              | -25 to 85            | -25 to 85     |

Available from your local Grayhill Distributor.  
For prices and discounts, contact a local Distributor, a local Sales Office or Grayhill.

<sup>1</sup> Includes offset, gain, non-linearity and repeatability error terms.

<sup>2</sup> Time required for output frequency to change to within 1% of final reading.