

## FEATURES

- Transient Protection: Meets the requirements of IEEE 472, "Surge Withstanding Capability Test"\*
- Non-Polarized Types Provide Inputs For AC or DC
- UL, CSA, CE, TÜV Certified (TÜV not available on OpenLine)
- Optical Isolation
- OpenLine® and G5 Modules have Built-in Status LED



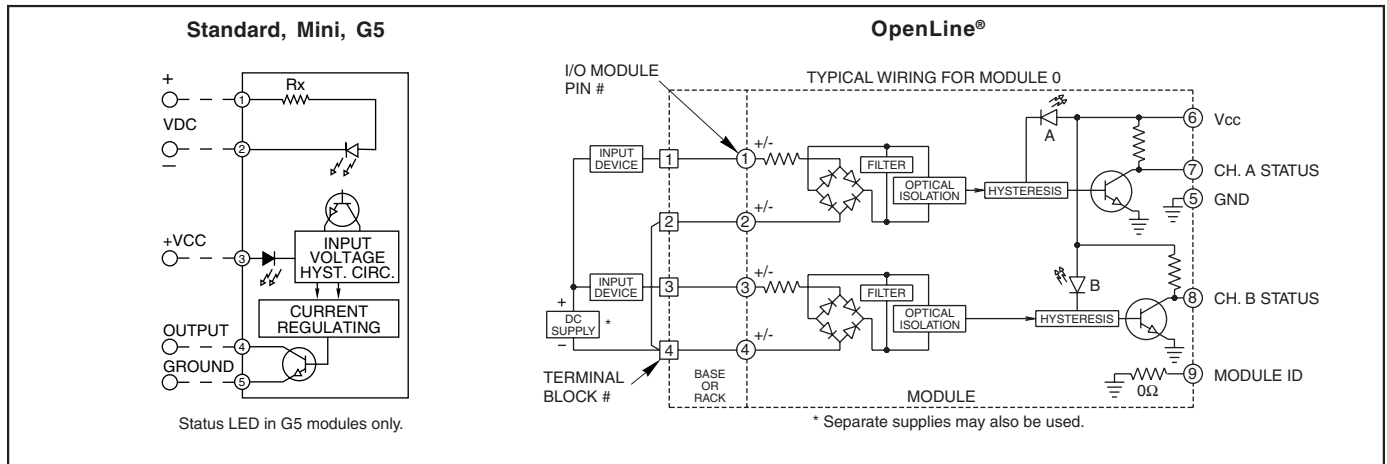
70L-IDC

70G-IDC

70-IDC

70M-IDC

## CIRCUITRY



## SPECIFICATIONS: By Package Style

| Package Style                  |       | Std (70-)   | Mini (70M-) | G5 (70G-)   | OL (70L-)   |
|--------------------------------|-------|-------------|-------------|-------------|-------------|
| Specifications                 | Units |             |             |             |             |
| Output Current Range           | mA    | 1-50        | 1-50        | 1-50        | 1-50        |
| Min. Output Breakdown Voltage  | Vdc   | 50          | 50          | 50          | 50          |
| Isolation Voltage <sup>1</sup> | Vrms  | 4000        | 4000        | 4000        | 2500        |
| Vibration <sup>2</sup>         |       | MIL-STD-202 | MIL-STD-202 | MIL-STD-202 | IEC68-2-6   |
| Mechanical Shock <sup>3</sup>  |       | MIL-STD-202 | MIL-STD-202 | MIL-STD-202 | IEC68-2-27  |
| Storage Temp. Range            | °C    | -40 to +125 | -40 to +125 | -40 to +125 | -40 to +100 |
| Operating Temp. Range          | °C    | -40 to +100 | -40 to +100 | -40 to +100 | -40 to +85  |
| Warranty                       |       | Lifetime    | Lifetime    | Lifetime    | Lifetime    |

<sup>1</sup> Field to logic and channel-to-channel if Grayhill racks are used.

<sup>2</sup> MIL-STD-202, Method 204, 20 G, 10-2000 Hz or IEC68-2-6, 0.15 mm/sec<sup>2</sup>, 10-150 Hz.

<sup>3</sup> MIL-STD-202, Method 213, Condition F, 1500 G or IEC68-2-27, 11 mS, 15g.

### SPECIFICATIONS: By Part Number

#### Standard and Miniature Modules

| Type/Function                           |         | Grayhill Part Number |             |             |             |
|-----------------------------------------|---------|----------------------|-------------|-------------|-------------|
| Miniature, Non-Polarized                |         | 70M-IDC5G            | 70M-IDC5NP  | 70M-IDC15NP |             |
| Standard, Non-Polarized                 |         | 70-IDC5G             | 70-IDC5NP   | 70-IDC15NP  | 70-IDC24NP  |
| Specifications                          | Units   |                      |             |             |             |
| Maximum Input Voltage                   | Vac/Vdc | 60                   | 32          | 32          | 32          |
| Input Voltage Range <sup>1</sup>        | Vac/Vdc | 35-60                | 15-32/10-32 | 15-32/10-32 | 15-32/10-32 |
| Input Current @ Max. Input Voltage      | mA      | 6                    | 18          | 18          | 18          |
| Maximum Turn-on Time                    | mSec    | 10                   | 5           | 5           | 5           |
| Maximum Turn-off Time                   | mSec    | 10                   | 5           | 5           | 5           |
| Nominal Input Resistance (Rx)           | W       | 10K                  | 1.8K        | 1.8K        | 1.8K        |
| Maximum Pick Up Voltage (Output Low)    | Vac/Vdc | 35                   | 15/10       | 15/10       | 15/10       |
| Minimum Drop Out Voltage (Output High)  | Vac/Vdc | 9                    | 3           | 3           | 3           |
| Nominal Logic Voltage (Vcc)             | Vdc     | 5                    | 5           | 15          | 24          |
| Logic Voltage Range                     | Vdc     | 3-6                  | 3-6         | 8-18        | 15-30       |
| Max. Logic Supply Current @ Nominal Vcc | mA      | 10                   | 10          | 10          | 10          |

#### G5 Modules

| Type/Function                           |         | Grayhill Part Number |             |             |
|-----------------------------------------|---------|----------------------|-------------|-------------|
| G5, Non-Polarized, Status LED           |         | 70G-IDC5G            | 70G-IDC5NP  | 70G-IDC15NP |
| Specifications                          | Units   |                      |             |             |
| Maximum Input Voltage                   | Vac/Vdc | 60                   | 32          | 32          |
| Input Voltage Range <sup>1</sup>        | Vac/Vdc | 35-60                | 15-32/10-32 | 15-32/10-32 |
| Input Current @ Max. Input Voltage      | mA      | 6                    | 18          | 18          |
| Maximum Turn-on Time                    | mSec    | 10                   | 5           | 5           |
| Maximum Turn-off Time                   | mSec    | 10                   | 5           | 5           |
| Nominal Input Resistance (Rx)           | W       | 10K                  | 1.8K        | 1.8K        |
| Maximum Pick Up Voltage (Output Low)    | Vac/Vdc | 35                   | 15/10       | 15/10       |
| Minimum Drop Out Voltage (Output High)  | Vac/Vdc | 9                    | 3           | 3           |
| Nominal Logic Voltage (Vcc)             | Vdc     | 5                    | 5           | 15          |
| Logic Voltage Range: Std & Mini         | Vdc     | 4.5-6                | 4.5-6       | 10-18       |
| Max. Logic Supply Current @ Nominal Vcc | mA      | 10                   | 10          | 10          |

#### OpenLine® Modules

| Type/Function                           |         | Grayhill Part Number |
|-----------------------------------------|---------|----------------------|
| Dual, Non-Polarized, Status LED         |         | 70L-IDCNP            |
| Specifications                          | Units   |                      |
| Maximum Input Voltage                   | Vac/Vdc | 32                   |
| Input Voltage Range <sup>1</sup>        | Vac/Vdc | 15-32/10-32          |
| Input Current @ Max. Input Voltage      | mA      | 17                   |
| Maximum Turn-on Time                    | mSec    | 5                    |
| Maximum Turn-off Time                   | mSec    | 5                    |
| Nominal Input Resistance (Rx)           | W       | 1.9K                 |
| Maximum Pick Up Voltage (Output Low)    | Vac/Vdc | 5/10                 |
| Minimum Drop Out Voltage (Output High)  | Vac/Vdc | 3                    |
| Nominal Logic Voltage (Vcc)             | Vdc     | 5                    |
| Logic Voltage Range                     | Vdc     | 4.5-28               |
| Max. Logic Supply Current @ Nominal Vcc | mA      | 6/CH                 |
| Module ID Resistance to Logic Ground    | W       | 0                    |

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

<sup>1</sup> For input voltages in the range of 90 to 140 Vdc, use AC input modules 70-IAC5, 70M-IAC5, 70G-IAC5 or 70L-IAC. For input voltages in the range of 180 to 280 Vdc, use AC input modules 70-IAC5A, 70M-IAC5A, 70G-IAC5A or 70L-IAC5A.