

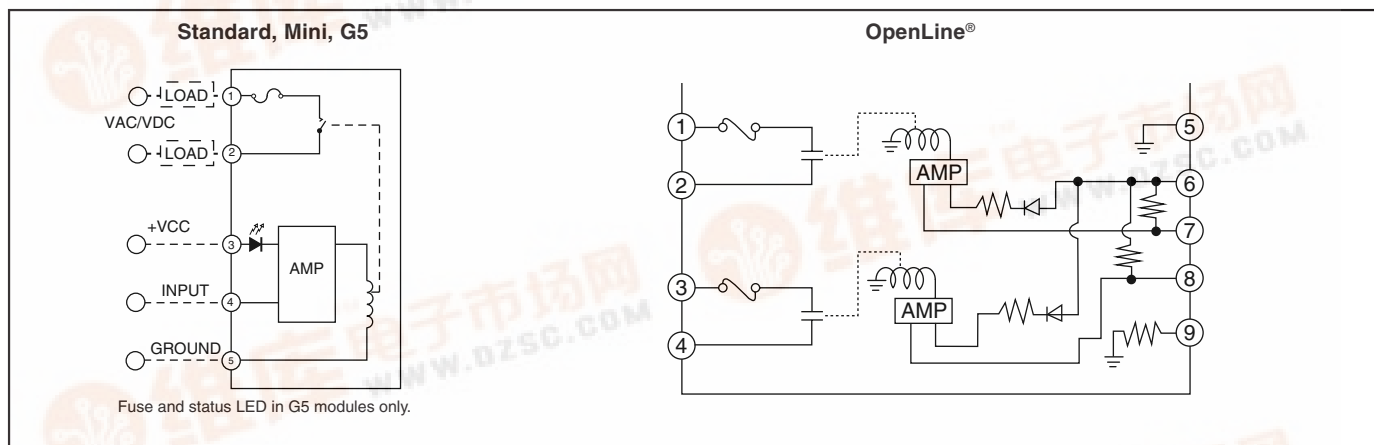
## FEATURES

- SPST, Normally Open
- UL, CSA Certified
- 1500 Vac Optical Isolation
- G5 and OpenLine® Modules Provide Replaceable 5x20mm Glass Fuse
- Built-in Status LED
- Lifetime Warranty
- Switch AC or DC with the Same Module
- Very Low Off-State Leakage Current for AC loads
- No Off-State Leakage Current for DC loads



70L-ODC5R 70G-ODCR/OACRLY 70-ODCR/OACRLY 70M-ODCR

## CIRCUITRY



## SPECIFICATIONS BY PACKAGE STYLE

| Package Style                  |       | Std (70-)   | Mini (70M-) | G5 (70G-)   | OpenLine® (70L-) |
|--------------------------------|-------|-------------|-------------|-------------|------------------|
| Specifications                 | Units |             |             |             |                  |
| Isolation Voltage <sup>1</sup> | Vrms  | 1500        | 1500        | 1500        | 1500             |
| 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 | IEC68-2-7        |
| Storage Temp. Range            | °C    | -40 to 70   | -40 to 70   | -40 to 70   | -40 to 70        |
| Operating Temp. Range          | °C    | -40 to 70   | -40 to 70   | -40 to 70   | -40 to 70        |

<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, Normally Open               |         | 70M-ODC5R             |                       | 70M-ODC24R            |
| Standard, Normally Open                |         | 70-ODC5R              | 70-OAC5RLY            | 70-ODC24R             |
| Specifications                         | Units   |                       |                       |                       |
| Maximum Line Voltage                   | Vdc/Vac | 100/120               | 110/250               | 100/120               |
| Load Voltage Range                     | Vdc/Vac | 0-100/0-120           | 0-110/0-250           | 0-100/0-120           |
| Maximum Contact Rating                 | W       | 10                    | 90                    | 10                    |
| Maximum Switching Current <sup>1</sup> | A       | 0.5                   | 3.0                   | 0.5                   |
| Maximum Carry Current <sup>1</sup>     | A       | 1.0                   | 5.0                   | 1.0                   |
| Minimum Life Expectancy                |         |                       |                       |                       |
| @ 10 Vdc/10 mA                         | Cycles  | 200 x 10 <sup>6</sup> | —                     | 200 x 10 <sup>6</sup> |
| @ 48 Vdc/100 mA                        | Cycles  | 500 x 10 <sup>3</sup> | —                     | 500 x 10 <sup>3</sup> |
| @ 120 Vac/80 mA                        | Cycles  | 500 x 10 <sup>3</sup> | —                     | 500 x 10 <sup>3</sup> |
| @ 30 Vdc or 230 Vac/3A                 | Cycles  | —                     | 100 x 10 <sup>6</sup> | —                     |
| Maximum Contact Resistance             | mΩ      | 250                   | 250                   | 250                   |
| Maximum Off-State Leakage              | mA      | .002                  | .002                  | .002                  |
| Maximum Turn-On Time <sup>2</sup>      | mSec    | 1                     | 11                    | 1                     |
| Maximum Turn-Off Time <sup>2</sup>     | mSec    | 1                     | 11                    | 1                     |
| Nominal Logic Voltage (Vcc)            | Vdc     | 5                     | 5                     | 24                    |
| Logic Voltage Range                    | Vdc     | 4.8-6.0               | 4.8-6.0               | 20-30                 |
| Maximum Logic Supply Current           |         |                       |                       |                       |
| @ Nominal Vcc                          | mA      | 10                    | 26                    | 16                    |
| Nominal Input Resistance (Rx)          | Ω       | 500                   | 200                   | 1700                  |
| Minimum Drop-Out Voltage               | Vdc     | 2.5                   | 4.8                   | 23                    |
| Maximum Reverse Logic Voltage          | Vdc     | -5                    | -5                    | -5                    |

### G5 and OpenLine® Modules

| Type/Function                          |         | Grayhill Part Number   |                       |                       |                       |
|----------------------------------------|---------|------------------------|-----------------------|-----------------------|-----------------------|
| G5 Fusible, Normally Open              |         | 70L-ODC5R              | 70G-ODC5R             | 70G-OAC5RLY           | 70G-ODC24R            |
| Specifications                         | Units   |                        |                       |                       |                       |
| Maximum Line Voltage                   | Vdc/Vac | 200/200                | 100/120               | 110/250               | 100/120               |
| Load Voltage Range                     | Vdc/Vac | 0-200/0-200            | 0-100/0-120           | 0-110/0-250           | 0-100/0-120           |
| Maximum Contact Rating                 | W       | 10                     | 10                    | 90                    | 10                    |
| Maximum Switching Current <sup>1</sup> | A       | 0.5                    | 0.5                   | 3.0                   | 0.5                   |
| Maximum Carry Current <sup>1</sup>     | A       | 1.5                    | 1.0                   | 5.0                   | 1.0                   |
| Minimum Life Expectancy                |         |                        |                       |                       |                       |
| @ 1Vdc/10 mA                           | Cycles  | 1000 x 10 <sup>6</sup> | —                     | —                     | —                     |
| @ 10 Vdc/10 mA                         | Cycles  | —                      | 200 x 10 <sup>6</sup> | —                     | 200 x 10 <sup>6</sup> |
| @ 48 Vdc/100 mA                        | Cycles  | —                      | 500 x 10 <sup>3</sup> | —                     | 500 x 10 <sup>3</sup> |
| @ 120 Vac/80 mA                        | Cycles  | 500 x 10 <sup>3</sup>  | 500 x 10 <sup>3</sup> | —                     | 500 x 10 <sup>3</sup> |
| @ 30 Vdc or 230 Vac/3A                 | Cycles  | —                      | —                     | 100 x 10 <sup>6</sup> | —                     |
| Maximum Contact Resistance             | mΩ      | 300                    | 250                   | 250                   | 250                   |
| Maximum Turn-On Time <sup>2</sup>      | mSec    | 1                      | 1                     | 11                    | 1                     |
| Maximum Turn-Off Time <sup>2</sup>     | mSec    | 1                      | 1                     | 11                    | 1                     |
| Max. Off-State Leakage @ Max. Line     | mA      | .002                   | .002                  | .002                  | .002                  |
| Nominal Logic Voltage (Vcc)            | Vdc     | 5                      | 5                     | 5                     | 24                    |
| Logic Voltage Range                    | Vdc     | 4.5-6.0                | 4.8-6.0               | 4.8-6.0               | 18-32                 |
| Max. Logic Supply Current              |         |                        |                       |                       |                       |
| @ Nominal Vcc                          | mA      | 30 max./channel        | 10                    | 26                    | 23                    |
| Nominal Input Resistance (Rx)          | Ω       | 167                    | 500                   | 200                   | 1200                  |
| Minimum Drop-Out Voltage               | Vdc     | 4.5                    | 1                     | 1                     | 23                    |

<sup>1</sup> Inductive loads require diode suppression or RC network.

<sup>2</sup> Times include debounce.

**Available from your local Grayhill Distributor.**

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