

## FEATURES

- Transient Protection: Meets the requirements of IEEE 472, "Surge Withstanding Capability Test"
- SPST, Normally Open
- Zero Crossing Turn-On
- UL, CSA, CE, TÜV Certified
- Optical Isolation
- OpenLine® and G5 Modules Provide Replaceable 5x20 mm Glass Fuses
- Built-in Status LED
- Lifetime Warranty



70L-OAC      70G-OAC      70-OAC      70M-OAC

## DIMENSIONS

For complete dimensional drawings, see pages L-4 or L-5.

## FUSES

G5 Fuses are 5 Amp Littelfuse part number 217005 or equivalent. OpenLine® fuses are 3.15 Amp Littelfuse part number 2173.15.



## Maximum Current Versus Ambient Temperature

The chart indicates continuous current to limit the junction temperatures to 100°C. Information is based on steady state heat transfer in a 2 cubic foot sealed enclosure.

## CIRCUITRY



## SPECIFICATIONS: By Package Style

Package Style		Std (70-)	Mini (70M-)	G5 (70G-)	OL (70L-)
<b>Specifications</b>	<b>Units</b>				
Load Current Range <sup>1</sup>	A rms	0.03 to 3.5	0.03 to 3.0	0.03 to 3.5	0.03 to 2.0/CH
Maximum 1 Cycle Surge <sup>2</sup>	A rms	80	80	80	30
Maximum Turn-On-Time (60 Hz) <sup>3</sup>	mSec	8.33	8.33	8.33	8.33
Maximum Turn-Off Time (60 Hz)	mSec	8.33	8.33	8.33	8.33
Static dv/dt <sup>7</sup>	V/μsec	3000	3000	3000	3000
Typ. Power Dissipation	W/A	1.0	1.0	1.0	1.0
Isolation Voltage <sup>4</sup>	V rms	4000	4000	4000	2500
Vibration <sup>5</sup>		MIL-STD-202	MIL-STD-202	MIL-STD-202	IEC68-2-6
Mechanical Shock <sup>6</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> See Figure 1 for derating.  
<sup>2</sup> Maximum 10 cycle surge is 50% of 1 cycle surge. Application of maximum surge may not be repeated until module temperature has returned to its steady state value.  
<sup>3</sup> Except 70-OAC5A5 which is 200 μSec and 70-OAC5A-11, 70M-OAC5A-11, and 70G-OAC5A-11 which are 100 μSec.  
<sup>4</sup> Field to logic and channel-to-channel if Grayhill racks are used.  
<sup>5</sup> MIL-STD-202, Method 204, 20, 10-2000 Hz or IEC68-2-6, 0.15 mm/sec<sup>2</sup>, 10-150 Hz.  
<sup>6</sup> MIL-STD-202, Method 213, Condition F, 1500G or IEC68-2-27, 11 mS, 15g.  
<sup>7</sup> Except part numbers with -L suffix which have a dv/dt rating of 200 V/μSec.

## SPECIFICATIONS: By Part Number

### Standard and Miniature Modules

Type/Function		Grayhill Part Number					
Miniature, Normally Open, Random Turn-on			70M-OAC5A-11				
Miniature, Normally Open, Zero Voltage Turn-on (ZVT)		70M-OAC5	70M-OAC5A	70M-OAC15	70M-OAC15A	70M-OAC24	70M-OAC24A
Miniature, Normally Open, ZVT, Inductive Load		70M-OAC5-L	70M-OAC5A-L				
Standard, Normally Closed, Random Turn-on			70-OAC5A5				
Standard, Normally Open, Random Turn-on			70-OAC5A-11				70-OAC24A-11
Standard, Normally Open, ZVT		70-OAC5	70-OAC5A	70-OAC15	70-OAC15A	70-OAC24	70-OAC24A
Standard, Normally Open, ZVT, Inductive Load		70-OAC5-L	70-OAC5A-L				
Specifications	Units						
Nominal Line Voltage	Vac	120	240	120	240	120	240
Load Voltage Range	Vac	24-140	24-280	24-140	24-280	24-140	24-280
Minimum Peak Blocking Voltage	Volts	400	600	400	600	400	600
Maximum Off-state Leakage @ 60Hz	mA, rms	2	4	2	4	2	4
Nominal Logic Voltage (Vcc)	Vdc	5	5	15	15	24	24
Logic Voltage Range	Vdc	2.5-10	2.5-10	10-18	10-18	15-30	15-30
Max. Logic Supply Current @ Nominal Vcc	mA	16	16	9	9	9	9
Nominal Input Resistance (Rx)	$\Omega$	240	240	1800	1800	2700	2700
Minimum Drop Out Voltage	Vdc	1	1	1	1	1	1
Maximum Reverse Logic Voltage	Vdc	-5	-5	-5	-5	-5	-5

## G5 Modules

Type/Function		Grayhill Part Number					
G5 Fusible, Normally Open, ZVT		70G-OAC5	70G-OAC5A	70G-OAC15	70G-OAC15A	70G-OAC24	70G-OAC24A
G5 Fusible, Normally Open, ZVT, Inductive Load		70G-OAC5-L	70G-OAC5A-L	70G-OAC15-L	70G-OAC15A-L	70G-OAC24-L	70G-OAC24A-L
G5 Fusible, Normally Open, Random Turn-on			70G-OAC5A-11				
Specifications	Units						
Nominal Line Voltage	Vac	120	240	120	240	120	240
Load Voltage Range	Vac	24-140	24-280	24-140	24-280	24-140	24-280
Minimum Peak Blocking Voltage	Volts	400	600	400	600	400	600
Maximum Off-state Leakage @ 60Hz	mA, rms	2	4	2	4	2	4
Nominal Logic Voltage (Vcc)	Vdc	5	5	15	15	24	24
Logic Voltage Range	Vdc	4-6	4-6	8-20	8-20	18-32	18-32
Max. Logic Supply Current @ Nominal Vcc	mA	20	20	12	12	8	8
Nominal Input Resistance (Rx)	W	100	100	1000	1000	2700	2700
Minimum Drop Out Voltage	Vdc	1	1	1	1	1	1
Maximum Reverse Logic Voltage	Vdc	-5	-5	-5	-5	-5	-5

## OpenLine® Modules

Type/Function		Grayhill Part Number	
Dual, Fusible, Normally Open, ZVT		70L-OAC	70L-OACA
Dual, Fusible, Normally Open, ZVT, Inductive Load		70L-OAC-L	70L-OACA-L
Specifications	Units		
Nominal Line Voltage	Vac	120	240
Load Voltage Range	Vac	24-140	24-280
Minimum Peak Blocking Voltage	Volts	600	600
Maximum Off-State Leakage @ 60 Hz	mA, rms	2	4
Nominal Logic Voltage	Vdc	5	5
Logic Voltage Range	Vdc	4.5-28	4.5-28
Max. Logic Supply Current @ Nominal Vcc	mA	7/CH	7/CH
Module ID Resistance to Logic Ground	$\Omega$	2.15K	2.15K
Minimum Drop Out Voltage	Vdc	1	1

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

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