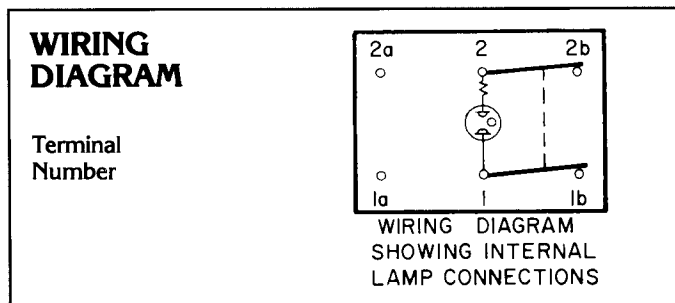
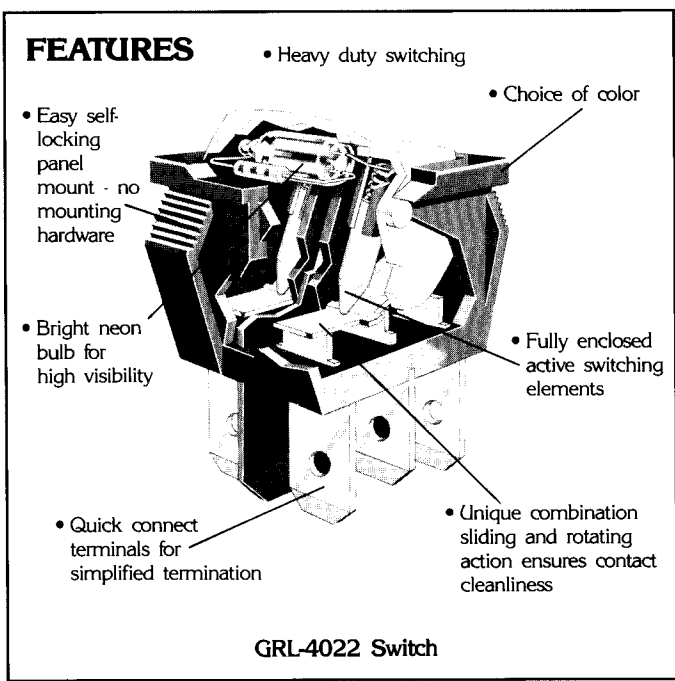
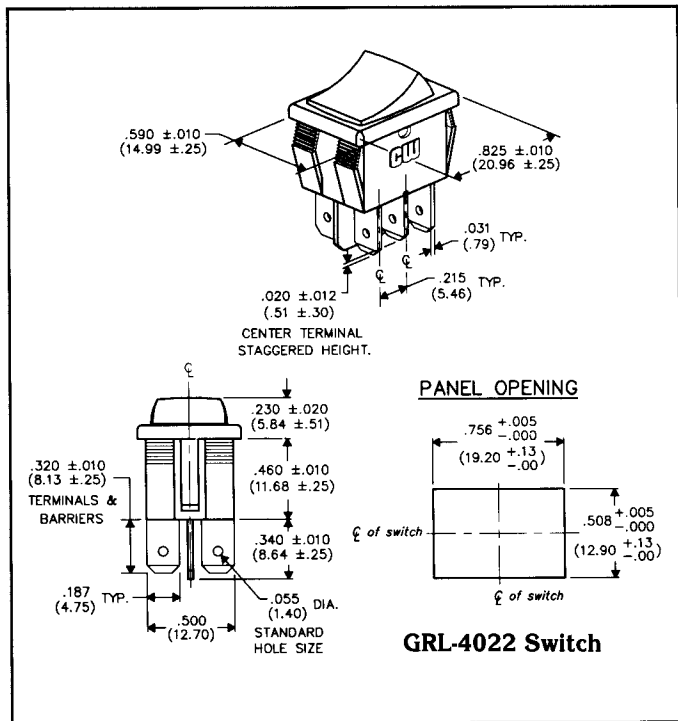


# 4000 Series: Illuminated Mini-Rocker Switches

CW's Illuminated Mini-Rocker Switches offer a variety of circuit and lighting options . . . with the current capacity normally associated with much larger switches. Select the circuitry that best satisfies your requirement either SPST, SPDT, DPST, or DPDT.



## PERFORMANCE STANDARDS

### Endurance:

- 100,000 cycles, no load minimum
- 25,000 cycles at rated load minimum up to 16 A @ 125 VAC
- 10,000 cycles at rated load minimum 16 A @ 250 VAC

### Contact Resistance:

Less than .01  $\Omega$  at 10 mA (Initial)

### Operating Temperature:

105°C maximum

### High Voltage Dielectric Withstanding Voltage:

2,500 V, 60 Hz for 1 minute between mounting surface and circuit connections

**Humidity:** Insulation resistance >  $10^3$  M $\Omega$  after 100 hours at 95% R.H. and 50°C followed by 1 hour dry at ambient room conditions

## MATERIALS

- Rocker Knob:** Transparent polycarbonate (standard) or translucent nylon 6/6 (optional)
- Rocker Lamp:** High intensity neon lamp type NE-38 with 1/8 watt 47k ohm resistor, 10,000 hour life for 125 volt applications (standard)
- Housing:** Nylon 94V-2
- Terminal & Moving Contact:** Copper alloy, and/or copper alloy silver plated
- Spring:** Music wire
- Plunger:** Brass

## MOUNTING

Self locks without hardware when popped into a .756" (19.20 mm) x .508" (12.90 mm) panel cutout. Acceptable panel thickness range is from .050" (1.27 mm) to .150" (3.81 mm). CAUTION: Burr direction must be away from the direction of insertion.

## TYPES AVAILABLE

TYPE	CIRCUIT	ELECTRICAL RATING†	LISTING AGENCY††
GRL-4011-8, -13, -16	SPST	-8: 8 A @ 125 VAC / 4 A @ 250 VAC 3 A @ 277 VAC	UL / CSA
GRL-4012-8, -13, -16	SPDT		
GRL-4021-8, -13, -16	DPST	-13: 13 A @ 125 VAC / 10 A @ 250 VAC 1/2 @ HP 125 - 250 VAC 5 A @ 14 V (T)	UL / CSA
GRL-4022-8, -13, -16	DPDT	-16: 16 A @ 125 - 250 VAC 3/4 HP @ 125 - 250 VAC 10 A @ 14 V (T) 3 A @ 125 V (L)	UL / CSA

†All ratings are on a load per pole, opposite polarity basis. Additional ratings may be available, consult factory.

††Due to ongoing advancements, additional agency certifications may be available, consult factory.

## OPTIONAL FEATURES

### LAMP TYPES:

**Standard** is neon lamp type NE-38, for 125 volt applications.

**Optional** are neon lamps for 250 volt applications and incandescent lamps for 14 volt applications.

### INSULATING BARRIERS:

Standard on all double pole switches is a molded insulating barrier between rows of terminals on adjacent poles. **Optional** on single pole and double pole switches are insulating barriers between terminals of the same pole. Insulating barriers can permit the use of less costly uninsulated solderless connectors. See Figure 1. To specify barriers between terminals of same pole on both single and double pole versions request switch "with barriers."

### COLORS:

Our standard switch includes a black housing and a red transparent rocker knob. For design flexibility the switch housing can be molded in many popular colors. Also, translucent or transparent rocker knobs are available in a variety of colors. Contact the factory for details.

### TERMINATION:

Standard is solderless, .187" (4.75 mm) x .032" (.81 mm). Other options include: .110" (2.79 mm) x .032" (.81 mm) solderless; (G-20-173); .187" (4.75 mm) x .020" (.51 mm) solderless; (G-20-180); .110" (2.79 mm) wide with .048" (1.22 mm) x .237" (6.02 mm) slot for easier hand soldering (G-20-179).

## HOW TO ORDER

**Step 1:** Select part number that satisfies your maximum current needs.

**Step 2:** No added identification is required for standard 125V high light output neon lamp. Specify optional lamp if required.

**Step 3:** Insulation barriers between rows of terminals of adjacent poles is standard. Specify "with barriers" for barriers between terminals of the same pole.

**Step 4:** Standard switch has black housing and transparent red rocker knob. For special colors or knob materials, contact factory.

**Step 5:** Standard switch has .187" (4.75 mm) x .032" (.81 mm) solderless terminal. Specify optional terminal if required.

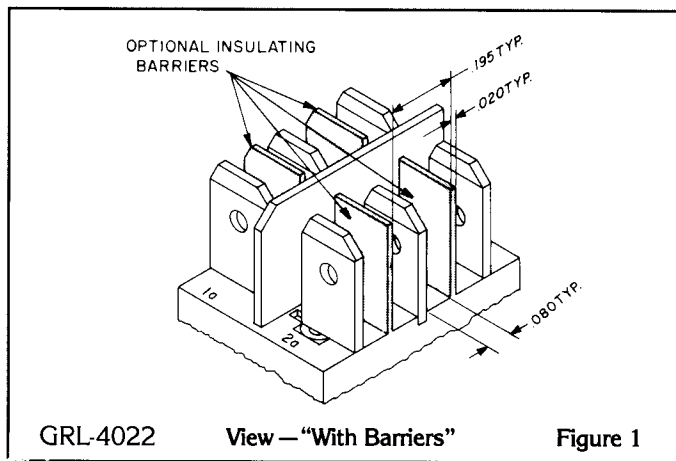


Figure 1