

Microminiature Slide Switches



Design Features:

- Volume and circuit board area less than 20% of most conventional sized slide switches of similar circuitry
- Plug-in (PC board) or ear (panel) mounting
- One and two pole
- Two and three position
- Detented or spring return
- · Reliable, yet moderately priced
- Low contact resistance

CW microminiature switches are designed to meet industry demand for tiny, yet reliable components at a moderate price. The extended linear motion of the moving contact over the relative closely spaced stationary contacts causes a full wiping and cleaning action of the contacts at each switch actuation. This helps maintain the reliability of the switch even in hostile environments. Where area and volume is limited... computers, thermostats, electronic controls and instruments, games and communication equipment... and reliability is essential... these switches are ideal.

The switches are made in CW's modern facilities... stamping, molding, machining, plating, and assembly. They are tested and retested in CW's laboratories to mechanical and electrical performance standards consistent with those described herein. CW maintains full control of all processes of conversion of raw material to finished product.

ISO 9001:2000 REGISTERED

Catalog S2120-IV/06

TERMINAL OPTIONS

Five terminal styles are available as shown. Choose terminal that best suits your application from charts.



FLAT



TERMINAL BOARD

·BI (5)

| DIMENSION/ STYLE | G-20-55 | G-20-57 | G-20-58 | G-20-74 | G-20-29 | G-20-104 | G-20-139 | G-20-140 | G-20-32 |
|---------------------|--------------|--------------|--------------|--------------|-------------|--------------|---------------|--------------|----------------------------|
| Α | .133 ± .010 | .093 ± .010 | .200 ± .010 | .178±.010 | .359 ± .010 | .284 ± .010 | .520 ± .010 | .349 ± .010 | $.143 \pm .010$ |
| | (3.38 ± .25) | (2.36 ± .25) | (5.08 ± .25) | (4.52 ± .25) | (9.12±.25) | (7.21 ± .25) | (13.21 ± .25) | (8.86 ± .25) | $(3.63 \pm .25)$ |
| В | .050 | .050 | .050 | .050 | .050 | .050 | .050 | .050 | $.043 \pm .003$ |
| | (1.27) | (1.27) | (1.27) | (1.27) | 1.27 | (1.27) | (1.27) | (1.27) | $(1.09 \pm .08)$ |
| C | - | - | - | - | - | - | - | - | .021 ± .005 (.53 ± .13) |
| D | - | - | - | - | | - | - | - | - |
| Style No. | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |





GS-115-PC 0.5 A at 125 Vac/Vdc

D#



GS-111-PC 0.5 A at 125 Vac/Vdc



*Button height and style shown are standard. Other heights available are .342" (8.69 mm) and .500" (12.7 mm).

| DIMENSION/ STYLE | G-20-47 | G-20-49 | G-20-52 | G-20-61 | G-20.62 | G-20-128 |
|---------------------|--------------|-----------------|--------------|-------------------|------------------|--------------|
| A | .046 ± .010 | .052 ± .010 | .100 ± .010 | .052 ± .010 | .087 ± .010 | .162 ± .010 |
| | (1.17 ± .75) | (1.32 ± .25) | (2.54 ± .25) | (1.32 ± .25) | (2.21 ± .25) | (4.11 ± .25) |
| В | .043 ± .003 | .043 ± .003 | .043 ± .003 | .044 ± .003 | $.043 \pm .003$ | .032 ± .003 |
| | (1.09 ± .08) | (1.09 ± .08) | (1.09 ± .08) | (1.12 ± .08) | $(1.09 \pm .08)$ | (.81 ± .08) |
| С | .025 ± .005 | .022 ± .005 | .021 ± .005 | $.030 \pm .005$ | .022 ± .005 | .020 ± .005 |
| | (.64 ± .13) | (.56 ± .13) | (.53 ± .13) | (.76 ± .13) | (.56 ± .13) | (.51 ± .13) |
| D | - | $.054 \pm .005$ | | .054 ± .010 | .100 ± .010 | - |
| | | (1.37 ± .13) | | (1.37 ± 0.25) | $(2.54 \pm .25)$ | |
| Style No. | 4 | 5 | 3 | 5 | 5 | 4 |

GI-116 0.5 A at 125 Vac/Vdc



GS-100 0.5 A at 125 Vac/Vdc







GS-113-PC 0.5 A at 125 Vac/Vdc



| DIMENSION/ STYLE | G-20-63 | G-20-64 | G-20-73 | G-20-78 | G-20-85 | G-20-90 | G-20-95 | G-20-102 |
|---------------------|------------------|-----------------|------------------|------------------|--------------|--------------|-----------------|------------------|
| А | .052 ± .010 | .077 ± .010 | .052 ± .010 | .031 ± .010 | .243 ± .010 | .200 ± .010 | .286 ± .010 | .145 ± .010 |
| | (1.32 ± .25) | (1.96 ± .25) | (1.32 ± .25) | (.79 ± .25) | (6.17 ± .25) | (5.08 ± .25) | (7.26 ± .25) | (3.68 ± .25) |
| В | .044 ± .033 | .043 ± .003 | .044 ± .003 | $.043 \pm .003$ | .043 ± .003 | .044 ± .003 | $.043 \pm .003$ | $.043 \pm .003$ |
| | (1.12 ± .08) | (1.09 ± .08) | (1.12 ± .08) | $(1.09 \pm .08)$ | (1.09 ± .08) | (1.12 ± .08) | (1.09 ± .08) | $(1.09 \pm .08)$ |
| С | $.030 \pm .005$ | $.025 \pm .005$ | $.030 \pm .005$ | $.022 \pm .005$ | .021 ± .005 | .030 ± .005 | $.022 \pm .005$ | $.025 \pm .005$ |
| | (.76 ± .13) | (.64 ± .13) | (.76 ± .13) | (.56 ± .13) | (.53 ± .13) | (.76 ± .13) | (.56 ± .13) | (.64 ± .13) |
| D | .08 ± .010 | - | .125 ± .005 | $.066 \pm .005$ | - | .080 ± .005 | $.054 \pm .005$ | - |
| | $(2.03 \pm .25)$ | | $(3.18 \pm .13)$ | (1.68 ± .13) | | (2.03 ± .13) | (1.37 ± .13) | |
| Style No. | 5 | 4 | 5 | 5 | 3 | 5 | 5 | 4 |

GS-118 0.5 A at 125 Vac/Vdc



GS-118-PC 0.5 A at 125 Vac/Vdc



available are .125" (3.18 mm) and .140" (3.56 mm). For additional styles and heights, see below.

Button options... for switches charted only



| Model No. | Ratings | Circuit | Mounting | Standard Terminals | Actuation |
|----------------------|--|---|-----------------------------------|-----------------------|-----------|
| GS-115 | 0.5 A at 125 Vac/Vdc | spdt with detent | Panel | Pin | TOP |
| GS-115-PC | 0.5 A at 125 Vac/Vdc | spdt with &==ð detent | PC board | Pin | TOP |
| GS-111* GS-111-1* | 0.5 A at 125 Vac/Vdc 1.0 A ac 0.5 A at 125 Vdc | spdt with detent | Panel | Flat | TOP |
| GS-111-PC* | 0.5 A at 125 Vac/Vdc | spdt with detent | PC board | Pin | TOP |
| GI-116 | 0.5 A at 125 Vac/Vdc | spdt with detent | PC board | Flat | SIDE |
| GS-100 | 0.5 A at 125 Vac/Vdc | spdt with detent | PC board etched on one side | Flat | TOP |
| GS-113 | 0.5 A at 125 Vac/Vdc | dpdt with detent | Panel | Pin | TOP |
| GS-113-PC | 0.5 A at 125 Vac/Vdc | dpdt with detent | PC board | Pin | TOP |
| GS-118 | 0.5 A at 125 Vac/Vdc | sp-3-pos 3 grang == 3 with detent | Panel | Flat | TOP |
| GS-118-0008 | 0.5 A at 125 Vac/Vdc | sp-3-pos with detent | PC board | Flat | TOP |

*Recognized under the Component Recognition Program of Underwriter Laboratories, Inc. (UL File No. E9556) and certified by Canadian Standards Association (CSA File No. LR20985)

PERFORMANCE STANDARDS⁺

CW switches are designed and manufactured to perform when subjected to the following conditions: Operating temperature – 104°C ambient maximum.

Relative humidity – After 100 hours in an atmosphere having 95% relative humidity and a temperature of 50°C, switches will be operative and insulation resistance will be greater than 100 megohms between contacts and housing, if allowed to dry for a period of one hour at 25°C (room temperature). **Life cycling (no load)** – Switches will be operative after 10,000 (minimum) cycles at the rate of 10 cycles per minute at rated load.

High-voltage breakdown – Minimum of 1000 volts rms 60 Hz for one minute between parts of opposite polarity.

Contact resistance – Less than 0.01 ohms at 20 mAdc.

⁺Performance specifications and materials described herein are general specifications that vary depending on the switch construction specified and end application. Consult factory for specifications for specific models. Specifications subject to change without notice.

MATERIALS OF CONSTRUCTION+

Actuator – Type 6/6 black nylon, other colors available

Housing - Cold-rolled steel, plated

Housing plating - Panel: zinc, PC board: Electro-tin

Terminal board – N.E.M.A. Grade XP Phenolic Laminate

Terminals - Copper, silver-plated

Moving contact - Copper alloys, silver-plated

Contact spring – Beryllium copper or phosphor bronze

⁺Materials described herein are general specifications that vary depending on the switch construction specified and end application. Consult factory for specifications for specific models. Specifications subject to change without notice.

ACCESSORIES

Toppers – Shown below is the "Topper" that can change your panel appearance and product styling. Fits onto button.

Hot Stamping – Functional or decorative marking of your choice can be imprinted on "Topper" surface with CW's "inhouse" facilities.

Colors – CW stores molding powders in many colors. "Toppers" and buttons are available in a variety of colors if your quantity is sufficient.



CW PATENTS

CW Engineers are constantly trying to upgrade the quality and cost effectiveness of our switches. Often this results in new inventions. Switch products shown in this catalog may be covered by one or more of the following U.S. Patents:

| 3,270,149 | 3,993,881 | 3,271,535 | 4,404,437 |
|-----------|-----------|-----------|-----------|
| 3,311,719 | 4,128,745 | 3,461,252 | 4,410,232 |
| 0.1 | | 10 | |

Other patent applications are pending.



CARE IN USE OF SWITCHES

CW switches will perform properly if they are installed and used properly. Causes for failure often encountered in the field that are the responsibility of the user are:

- 1. Removal of factory applied lubricants from switch contacts and moving parts.
- Introduction of foreign material into switching mechanism... flux, solder, cleaning materials, and potting compounds.
- 3. Restriction of movement of switch button.
- Excessive heat often introduced while soldering.
- 5. Switching loads in excess of rating.

Users are cautioned to avoid misusing switches and to test and approve switches for acceptability in end application. CW has no knowledge of and makes no representation with respect to the usefulness and/or merchantability of any product that is made to buyer's special engineering specifications.

HOW TO ORDER

Specify CW part number by referencing drawing that shows switch of your choice. If switch you require differs from drawing, specify differences from options available. **Contact CW for information on the following CW products:**

Switches

Standard Slide Switches: · One through four poles Two through four positions 3A through 13A @ 125V AC · One through four poles Miniature Slide Switches: Two through four positions 3A through 13A @ 125V AC MicroMiniature Slide Switches: • One and two poles · Two and three positions .5A @12V AC Fully Enclosed · One pole · One or two position Microminiature Slide Switches: .5A @12V AC · One and two poles Rocker and Power Slide Switches: One & two positions & center-off · Miniature and standard sized • 8A through 16A @125V AC Connectors IDC: CW Industries also manufacturers a comprehensive product line of insulation displacement connectors, including Socket, Header, D-Subminiature, Card Edge, DIP, and PCB

connectors. Available in commercial and military grades. Custom designed switches and connectors to meet

special requirements are also available; consult factory.

130 James Way, Southampton, PA 18966-3838 • Tel. 215-355-7080 • Fax 215-355-1088 • www.cwind.com



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный) **Факс:** 8 (812) 320-02-42 **Электронная почта:** <u>org@eplast1.ru</u> **Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.