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## GENERAL PURPOSE STACK SWITCHES

### GENERAL PURPOSE STACK SWITCHES (SPECIAL ORDER ONLY)

Complete general purpose stack switch assemblies are made from a pile-up of various actuator springs, contact springs and lifters. These stack switch assemblies can be used on manually operated control devices where switching is operated by cams, push-buttons and other similar mechanical devices. The stack switch assembly is made up of an actuator spring and various contact springs. These current carrying members are insulated from each other by phenolic spacers with plastic tubing press fitted through the stack; thereby insuring correct alignment of contacts and providing high insulation resistance when mounted.

The types of General Purpose Stack Switch Components available are:

- .375" (9.52 mm) mounting centers
- .250" (6.35 mm) mounting centers
- "Tini-Stack" Switches .188" (4.78 mm) mounting centers
- Telephone Relay Type Switches .250" (6.25 mm) mounting centers

### STACK SWITCH COMPONENTS

Switchcraft offers various stack switch components, such as contact springs, spacers, lifters, etc., in many lengths, thicknesses, mounting centers and other details.

Switchcraft can assemble components into innumerable different stack switch assemblies. It is impossible to catalog every type of stack that has been manufactured. Stack switch assemblies can be designed to meet UL requirements, but only as part of equipment.

### .375" STACK SWITCHES



Thousands of switching combinations are possible. Switch mounting centers are .375" (9.52 mm) (minimum) with .25" (6.35 mm) wide switch parts. Practical spring length is 2.625" (66.68 mm) (maximum). Contact Switchcraft for selection of contacts and ratings.

### .250" (6.35 MM) STACK SWITCHES



Thousands of switching combinations are possible with slightly smaller parts. Mounting centers are .250" (6.35 mm) (minimum) with .188" (4.78 mm) wide parts. Practical spring length is 2.125" (53.98 mm) (maximum). Contact Switchcraft for selection of contacts and ratings.

### MINIATURE .188" (4.78MM) STACK SWITCHES



Many Tini-Stack® switching combinations are possible. Switch mounting centers are .188" (4.78 mm) (minimum). Practical spring length is 1.750" (44.45 mm) (maximum).

### TELEPHONE RELAY TYPE SWITCHES



Compact stack switches are particularly suitable for low activating force, such as in relay and magnetic operated devices. Contact Switchcraft for selection of contacts and ratings.

### SPECIFICATIONS

**Springs:** Copper alloy, in most standard gauge thicknesses ranging from .006" (0.15 mm) to .016" (0.41 mm).

**Spacers:** Rigid plastic, available in thickness of .015" (0.38 mm), .032" (0.81 mm) and .046" (1.17 mm).

**Contacts:** Welded cross bar palladium rated at 2A, 200W AC non-inductive load. Gold alloy generally recommended for "dry" circuit applications.

**Tubing:** Thermoplastic.

**Lifters:** Thermoplastic.

**Mounting Hardware:** Pressure plate, twin nut and screws: Steel, plated.

### SPECIFICATIONS

**Springs:** Copper alloy, in thicknesses ranging from .006" (0.15 mm) to .012" (0.30 mm).

**Spacers:** Rigid plastic is standard in thickness of .031" (.79 mm), .047" (1.19 mm) and .063" (1.60 mm).

**Contacts:** Fine silver or welded cross bar palladium are standard. Palladium or gold alloy are generally recommended for "dry" circuit applications. Other contacts available for varied customer requirements on special order.

**Tubing:** Thermoplastic.

**Lifters:** Thermoplastic.

**Bracket:** Steel, plated.

**Mounting Hardware:** Pressure plate, twin nut and screws: Steel, plated.

DIMENSIONS ARE FOR REFERENCE ONLY  $\frac{\text{Inch}}{(\text{mm})}$

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## GENERAL PURPOSE STACK SWITCHES (continued)

### STACK SWITCH COMPONENT SPECIFICATIONS

**1. SPRINGS** - Copper alloy in most standard gauge thicknesses of .006" (0.15 mm), .008" (0.20 mm), .010" (0.25 mm), .012" (0.30 mm), .016" (0.40 mm) and .020" (0.50 mm), a few designs can be made up to .031" (.079 mm) thick. All or any contact point hole can be provided; spring can be cut at any point.

**2. BRACKETS** - Standard brackets are detailed on drawing. Tools are flexible so that various lengths from same width stock can be provided.

**3. LIFTERS OR PUSHERS** - .125" (3.18 mm) and .188" (4.78 mm) diameter thermoplastic in various lengths staked into one of the contact point holds provides tandem action between blades or to serve as an actuator.

**4. MOUNTING HARDWARE** - Pressure plates (S1293 and S2300) twin nuts (S1008 and S1431) and screws available for mounting.

**5. LEAF INSULATORS** - Punched in same shape as springs in .015" (0.38 mm) thickness of fish paper or mylar.

**6. SPACERS** - Rigid plastic is standard in thicknesses of .015" (0.38 mm), .032" (0.81 mm), .051" (1.30 mm) and .062" (1.57 mm). Thickness of .093" (2.36 mm) is available for .375" (9.52 mm) mounting centers only. For longer surface creepage paths, use both large and standard sized spacers. High temperature insulation also available.

**7. THERMOPLASTIC TUBING** - .375" (9.52 mm) mounting centers pass #5 screw. .250" (6.35 mm) mounting centers pass #3 screw. .188" (4.78 mm) mounting centers pass #2 screw.

**8. CAM FOLLOWERS** - Two roller bracket designs (G1734 and G2298) available for springs .250" (6.35 mm) wide. Copper alloy standard. Can be furnished in various diameters and materials. Thermoplastic rollers also available.

**9. CONTACTS** - Welded cross bar contacts are commonly used for cost savings. However, riveted contacts are available. Size and material depend on circuit requirements (supply complete details). For low level audio circuits, we suggest gold alloy or palladium cross bar contacts. Springs can be bifurcated (two contacts per spring).

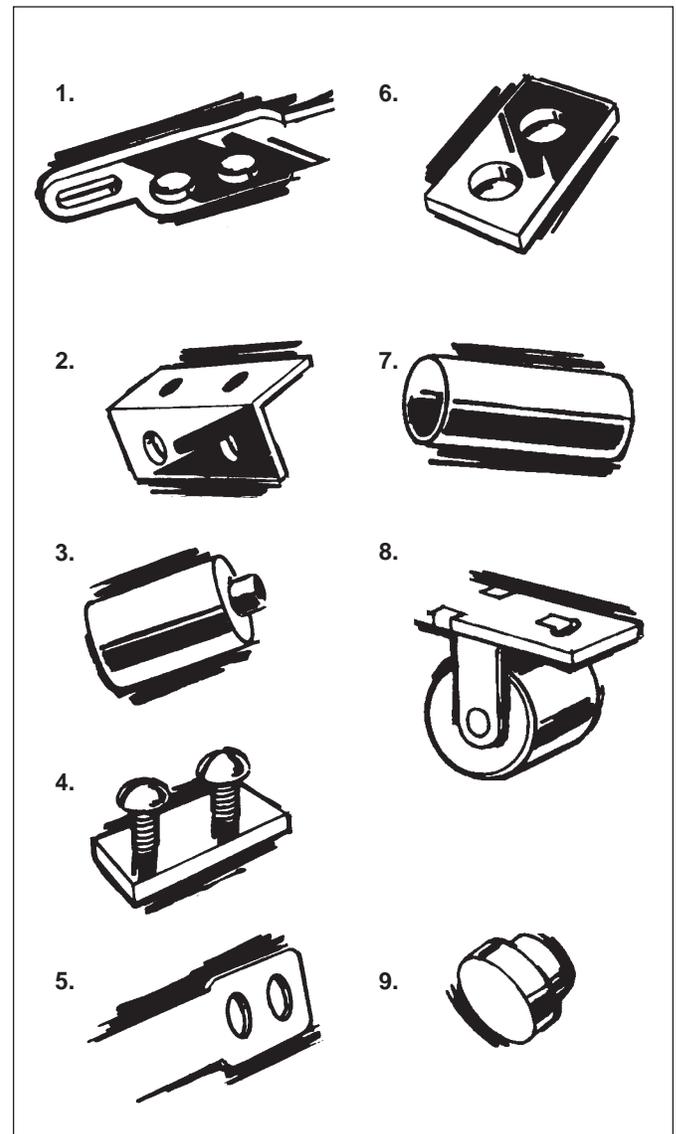
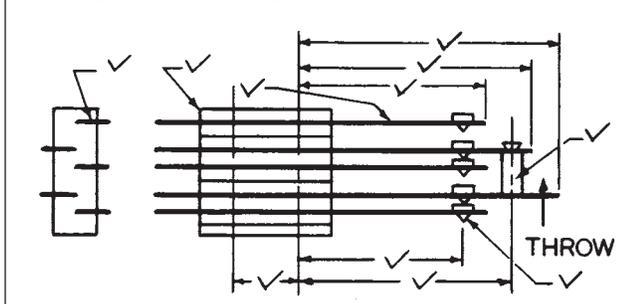
### HOW TO ORDER STACK SWITCHES

Careful consideration of the following suggestions will help specify the most economical and expeditious approach to your switching needs. On initial inquiry or order, supply the following information:

1. Simple sketch or drawing. See "Typical Stack Assembly" drawing. Give details checked that are available.
2. Current, voltage and type of switching load (resistive or inductive).
3. Frequency of operation; life requirements.
4. Details of actuator.
5. Maximum and minimum movement of actuator blade.
6. Any other important specifying details.

It is recommended that data indicated above be forwarded to Switchcraft for comments and recommendations before finalizing your design.

TYPICAL STACK ASSEMBLY



DIMENSIONS ARE FOR REFERENCE ONLY Inch  
(mm)