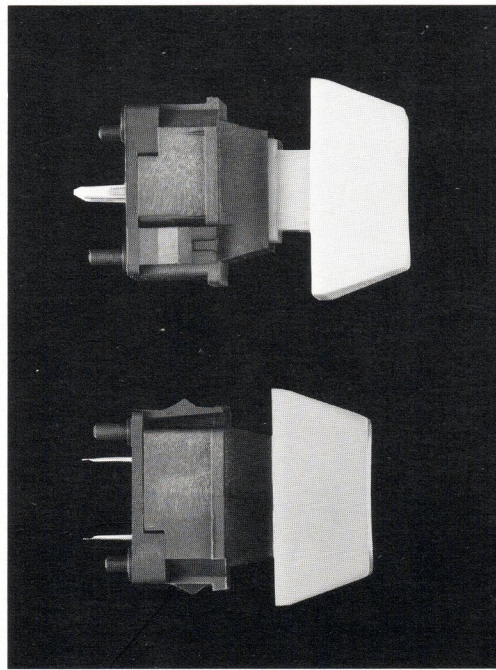


# DC-60



## DC-60 Series Low Profile Key Switches

### NEW LOW COST

Value engineered for high performance at substantially lower cost than conventional mechanical switches.

### HIGH RELIABILITY

Proven trifurcated gold contact design, guaranteed for 10,000,000 cycles minimum.

### FAST ASSEMBLY

Snap in panel mount, or direct mount to printed circuit board by either contact terminal solder connection or heat staked guide posts. No external spring required.

### HUMAN ENGINEERED

Teaseproof operation with tactile feedback at operating point.

### LOW PROFILE

0.770 inches overall, including keycap

# Datanetics

## GENERAL DESCRIPTION

The Series DC-60 Low Profile Key-switch is basically simple in design to reduce cost, yet cleverly engineered to provide the expensive features of teaseproof action, tactile feel and long life.

Its low price and advanced performance make it the ideal keyswitch for the entire spectrum of keyboard applications, from a low cost, "hunt-and-peck" calculator to a most sophisticated, high throughput communication terminal.

The low profile (0.770 inches with key caps) is consistent with modern industrial design and improved human engineering.

The versatile mounting features, which include snap-in clips, high strength solder terminal mounting and heat stackable bottom locating pins will reduce design, manufacturing and maintenance cost.

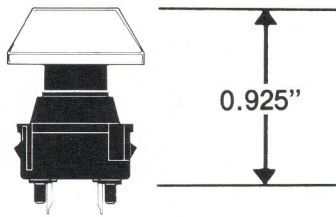
The stainless steel, gold inlayed, trifurcated switch contacts have low bounce and low contact resistance over the 10,000,000 plus operations life of the switch.

The mineral filled nylon housing insures high stability over extreme environmental conditions throughout the life of the switch.

The keystem is made of Delrin for long wear and low friction, and has a large bearing surface to minimize side-loading and keystem wobble.

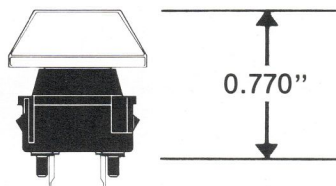
The DC-60 keyswitch is the answer when performance demands are high and price is important.

ACTUAL SIZE

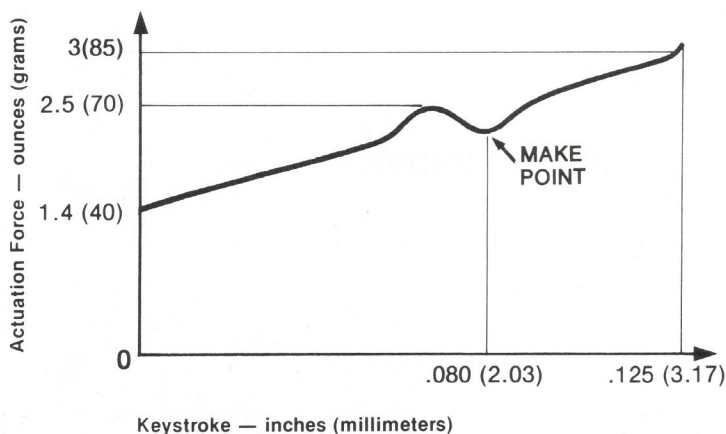


### DC-60 SERIES KEYSWITCH STANDARD PROFILE

ACTUAL SIZE



### DC-60 SERIES KEYSWITCH LOW PROFILE



### FORCE/STROKE DIAGRAM

# GENERAL SPECIFICATIONS

## ELECTRICAL

Contact Ratings (resistive load)  
 Volt Amp Range . . . . .5 to 200 millivolt amp  
 Current Range . . . . .0.05 to 100 ma  
 Voltage Range . . . . .0.5 to 300 volts DC  
 Contact Resistance 1 ohm max. (.1 ohm typ.)  
 Contact Bounce . . . . .2 milliseconds max.  
 (0.5 milliseconds typical)  
 Contact Configuration . . . . . Single Pole  
 single throw - normally open  
 Insulation Resistance . . . . .100 meg ohms  
 min. at 100V (1000 meg ohms typ.)

## MECHANICAL

Operating Force . . . . .2.5 oz. . .5 oz. (70 GR)  
 Pretravel . . . . .0.080 inch 0.010 inch  
 (2.03 mm 0.25 mm)  
 Total Travel . . . . .0.125 inch 0.010 inch  
 (3.18 mm .25 mm)  
 Mounting . . . . .Snap-in, solder, or heat stake  
 Minimum Spacing . . . . .5/8 inch (15.87 mm)  
 Operating Life . . . . .Exceeds 10,000,000 cycles

## MATERIALS

Key Stem . . . . .Self-lubricating DELRIN™  
 Housing . . . . .Mineral filled nylon  
 Contacts . . . . .Gold-inlaid, stainless steel  
 Terminals . . . . .Solder Alloy Inlaid  
 Stainless Steel  
 Keycaps(optional) . . Two color molded ABS

## ENVIRONMENTAL

Operating Temperature . . . +32° to +140°F  
 (0° to +60°C)  
 Storage Temperature . . . . .-40° to +160°F  
 (-40°C to +71°C)  
 Rel Humidity . . . . .5% to 95% non-condensing  
 Vibration . . . . .Remains open while subjected to  
 10-55 Hz at 0.06 in. (1.5 mm) displacement  
 Shock . . . . .Remains open and operable under  
 50 G's for 11 milliseconds

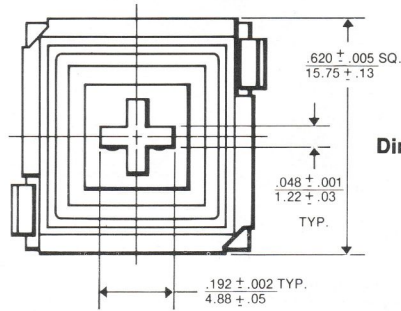
## OPTIONS

Higher Operating Force  
 Omission of heat stakable guide posts  
 Custom key stem configurations  
 Special keytops and colors

## AVAILABLE CONFIGURATIONS

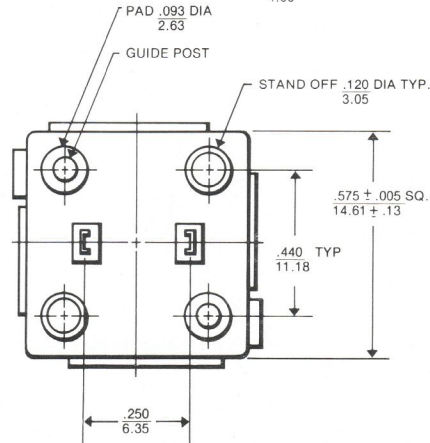
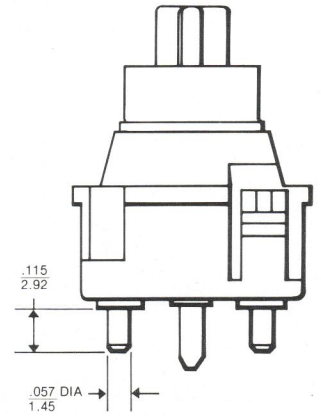
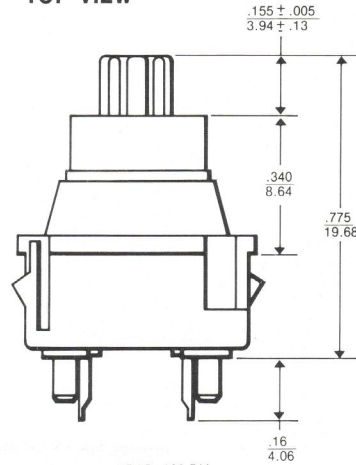
DC-61-01 . . . Single Pole, Momentary Action,  
 Low Profile with Guide Posts  
 DC-61-02 . . . Single Pole, Momentary Action,  
 Low Profile without Guide Posts  
 DC-61-03 . . . Single Pole, Momentary Action,  
 Standard Profile with Guide Posts  
 DC-61-04 . . . Single Pole, Momentary Action,  
 Standard Profile without Guide Posts  
 DC-62 . . . Single Pole Alternate Action Switch  
 available in above configurations

## DIMENSIONS



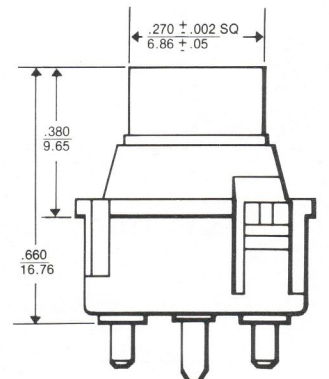
Dimensions shown in inches  
millimeters

TOP VIEW



BOTTOM VIEW

## STANDARD PROFILE

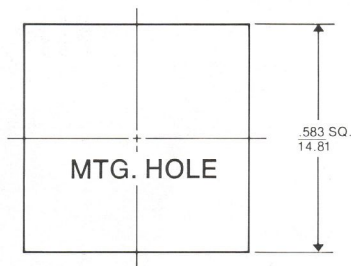
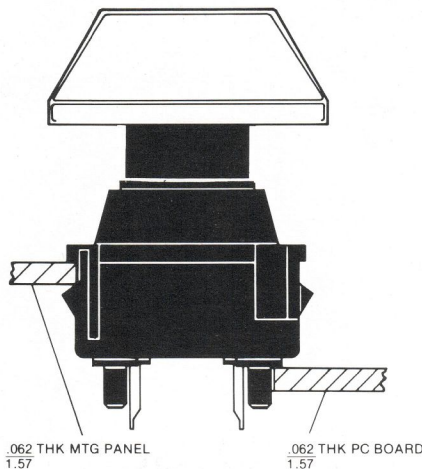


## LOW PROFILE

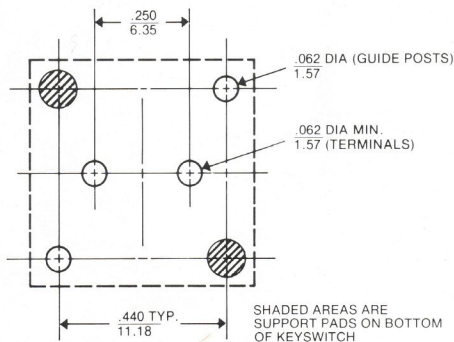
# APPLICATION AND ADDITIONAL INFORMATION

## RECOMMENDED MOUNTING DIMENSIONS

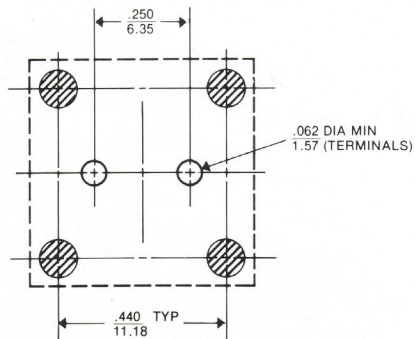
DIMENSIONS NOM.  $\frac{\text{inches}}{\text{millimeters}}$



### SNAP-IN APPLICATION



TOP VIEW OF CIRCUIT BOARD  
PC MOUNTING WITH GUIDE POSTS



TOP VIEW OF CIRCUIT BOARD

## WARRANTY

The DC-60 Series Key Switches are guaranteed by Datanetics to perform in accordance with all applicable specifications for a period of three years from date of delivery or 10,000,000 cycles of operation, whichever occurs first. Datanetics will replace, F.O.B. Fountain Valley, at no cost to the user, any switch that fails to meet these criteria unless physical or electrical abuse is evident.

## SWITCH MOUNTING

There are three options available for securing the DC-60 into the keyboard.

1. It may be secured to the printed circuit board directly by its solder terminals, utilizing the optional guide posts to orient the switch properly.

2. In addition, it may be heat-staked to the printed circuit board by the optional guide posts for increased holding force.

3. It may be snapped into 0.583 square hole of a 0.62 in. (1.57 mm) thick metal bezel and retained by the molded in mounting clips. (With this mounting, the guide posts should be omitted.)

The drawings on this page provide dimensional information for each of these mounting options.

## SOLDERING

High-temperature materials allow flow soldering at a temperature of 530°F (287°C) for 5 seconds

## CLEANING

If a cleaning solvent is required, it is recommended that water, Isopropyl Alcohol, or trichlorotrifluoroethane (Freon) be used. Since many solvents are harmful to plastics, any variation from the recommended cleaning solvents should be used with extreme caution.