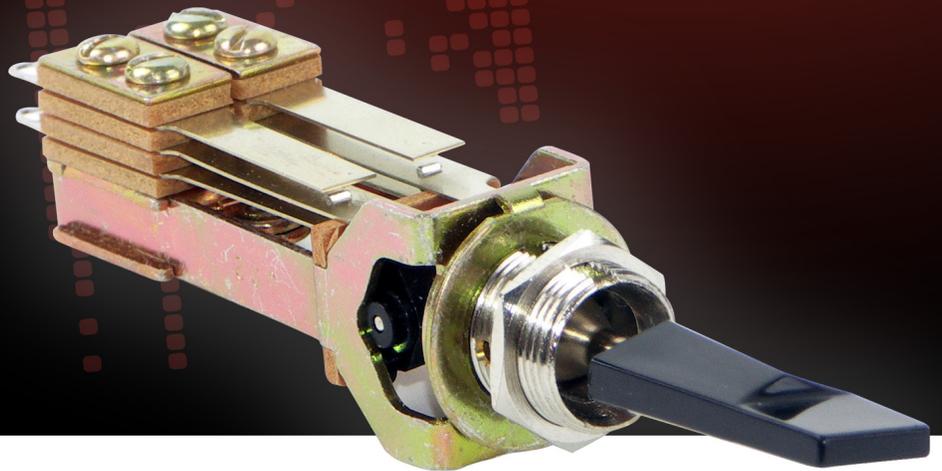




NEW PRODUCT BULLETIN 683

# LEVER SWITCHES



**Switchcraft**<sup>®</sup>  
**CONXALL**<sup>®</sup>

HARSH ENVIRONMENT CONNECTIVITY SOLUTIONS

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## DESIGN FEATURES

High quality, field-proven Switchcraft® lever switches are available in a wide selection of illuminated and non-illuminated versions, 2- and 3-position, locking and non-locking functions can be provided. Switchcraft illuminated lever switches feature choice of colors, wide selection of switching circuits, single lamp illumination and ease of mounting and lamp replacement.

All switches utilize nickel silver springs without “form” at point of flexing to insure long spring life. The springs are assembled into a conventional stack assembly, insulated from each other by phenolic spacers with plastic tubing press-fit through each stack, insuring correct alignment of contacts and providing high insulation resistance.

## APPLICATIONS

Various front panel switching applications on computers, telecommunications systems, industrial control equipment, intercoms, ground support systems, medical electronics, scientific instruments, broadcast consoles and test instrumentation.

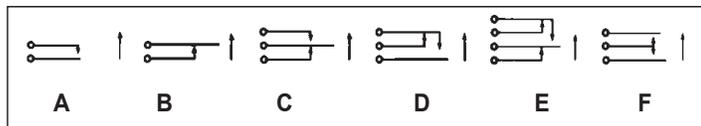
## CONTACTS

Below are listed the basic contacts available on switches in this catalog:

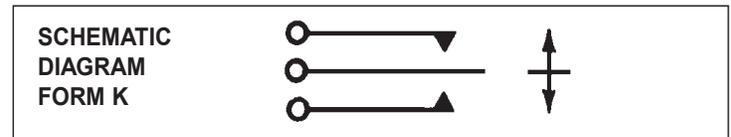
1. Fine silver contacts rated at 2A, 200W (maximum) AC non-inductive load.
2. Welded cross bar silver contacts rated at 3A, 300W (maximum) AC non-inductive load.
3. Welded cross bar palladium contacts rated at 2A, 200W (maximum) AC non-inductive load.
4. Welded cross bar gold alloy contacts rated at up to 1A, 100W (maximum) AC non-inductive load. (Dry circuit applications.)

## BASIC CONTACT FORMS

Below are the basic contact forms available standard on all Switchcraft Lever Switches. Specify circuits needed by referring to the letter identification and respective location on frame. See dimensional drawings for stack switch location.



To avoid ordering special switches it is possible to use a larger standard circuit, providing the circuit fulfills your requirements. Circuit Form K is widely used in talk-listen (intercom) function applications. In normal position (neutral), switch does not contact upper or lower contact spring. During typical operation, lever is held in upper (momentary) position while speaking. Releasing lever allows switch to return to neutral. For listening, lever is moved to down (locking) position. Lever is manually returned to neutral when finished.



## ORDERING STANDARD SWITCHES

Order lever switches by part number from pages 295 through 298.

## LAMP DATA

Lever-Lite® switches use T-1 3/4 flange base lamps which are available from commercial sources.

## ORDERING SPECIAL SWITCHES

### Lever Switches

Should you desire a special version of any Switchcraft® lever switch not shown here, we require the following information:

1. Switch series.
2. Number of positions.
3. Mechanical action (locking, non-locking, etc.).
4. Contact configuration for each position.
5. Type of contact material.
6. Color sequence (Lever-Lite III).

## UL RECOGNIZED LEVER SWITCHES

Seven series of Switchcraft lever switches are UL recognized. These switches are available on special order to fulfill your switching requirements which specifically require UL listed switching devices.

1. Series 12000
2. Series 41000

**NOTE:** Refer to switch series in this catalog for full mechanical specifications and additional standard and special features.

## LEVER-LITE® III SERIES 84000 - ILLUMINATED LEVER SWITCHES

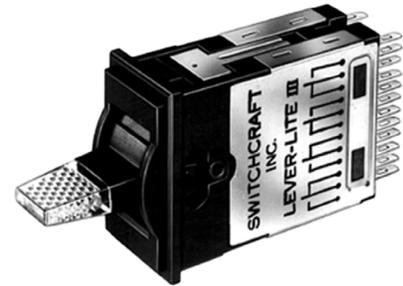
Lever-Lite® III illuminated lever switches are designed for front-of-panel mounting, relamping, terminating, color changes and removal. A minimum of time is required to install singly, in rows, or in matrix arrays to meet a wide variety of switching applications. 2- and 3-position types are available in non-locking functions. Mounts on .875" (22.22 mm) horizontal centers or 1.5" (38.1 mm) vertical centers. Talk-listen (intercom) function is also available. Illumination technique provides a different color for each lever position.

### LAMPS

Standard T 1-3/4" midget flange-base lamps (not supplied) are available in voltages up to 28V.

### SPECIAL ORDER FEATURES

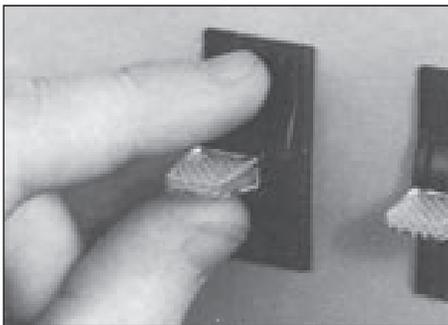
1. Talk-Listen (Intercom) function.
2. Welded cross bar gold alloy for dry circuit and silver contacts are available. See page 294.



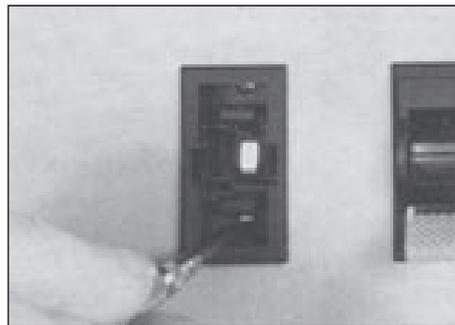
### ILLUMINATION

A single internal lamp provides brilliant lever lighting in any color required. Standard factory installed color filters are provided as follows: Series 84000, Multi-Color Illumination 2-position - Amber (neutral position); green (down position). 3-position - Red (up position); amber (neutral position); green (down position). One-color (all positions) and non-illuminated switches can be specified on special order. Switchcraft will install filters for non-standard illumination requirements at nominal cost on special order.

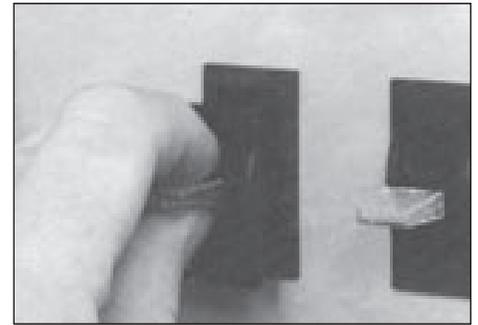
### MOUNTING



Grasp fingernail slots on opposite sides of escutcheon and snap out. Next, grasp lever and pull lever assembly free. Insert switch into panel hole.



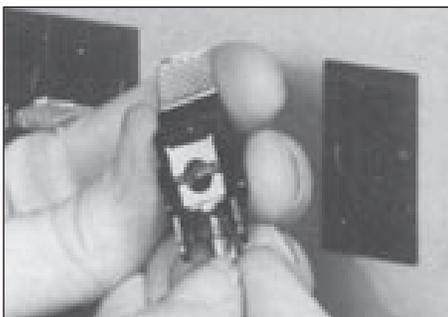
Turn two internal screws clockwise with screwdriver to securely mount switch to panel.



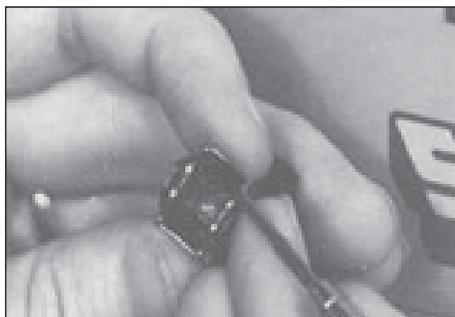
Replace lever assembly and "snap" escutcheon into place. Installation complete!

### RELAMPING/REPLACING COLOR FILTERS

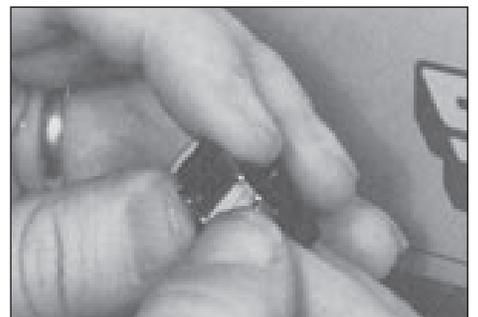
Lever-Lite III switches are designed for simplified lamp installation and replacement, and color filter changes or custom installation in the field or on the OEM production line. Lamps and filters may be changed at any time with ease and without dismounting switch from panel or disturbing wiring.



Remove escutcheon and lever assembly. (see "MOUNTING" above) For relamping, pull lamp out of retainer with finger-tip. Replace lamp.



For color filters, use fingernails or small screwdriver to remove. Gently lift (don't pry) up under edge of filter until it "pops" out.



Place new filter in position and press until it "snaps" in. Replace lever assembly and escutcheon. (see "MOUNTING" above)

## LEVER-LITE® III SERIES 84000 - ILLUMINATED LEVER SWITCHES

### SPECIFYING LEVER-LITE® III SWITCHES

1. Basic Switch - Refer to Part Number table for ordering switches. For special switches, such as talk-listen (intercom) function, special circuit forms, or non-illuminated switches, contact factory for price and delivery.
2. Illumination - Supplied with standard color filters installed. Switchcraft will install other combinations at nominal extra cost.
3. Lamps - Lamps are not supplied with switches.

### SPECIFICATIONS

**Mounting/Retaining Clips and Covers:** Steel, plated.  
**Contact Ratings:** Welded cross bar palladium contacts rated at 1A, 200W maximum AC non-inductive load are standard. Other contacts available. See "SPECIAL ORDER FEATURES" on page 295.

**Springs:** Copper alloy, plated.  
**Lamp Terminals:** Copper alloy, plated.  
**Lamp Socket:** Zinc, plated.  
**Terminals:** Copper alloy, plated, straight solder lugs.  
**Housing, Escutcheon, Knob, Actuator and Switching Stacks Insulation:** Molded plastic.  
**Temperature Range:** -22°F to 158°F (-30°C to +70°C).  
**Dielectric Strength:** 1 kV DC.  
**Leakage Resistance:** 1,000 MΩ or greater.

### K-131 COLOR FILTER KIT

Kit is available for changing or replacing color filters to meet illumination requirements. Each kit contains 3 filters of each color: Amber, Blue, Green, Red, White and Yellow.

### SWITCHCRAFT PART NUMBER K-131

### REPLACEMENT LEVERS

Number G6083 (for locking lever)  
 Number G6084 (for non-locking lever)

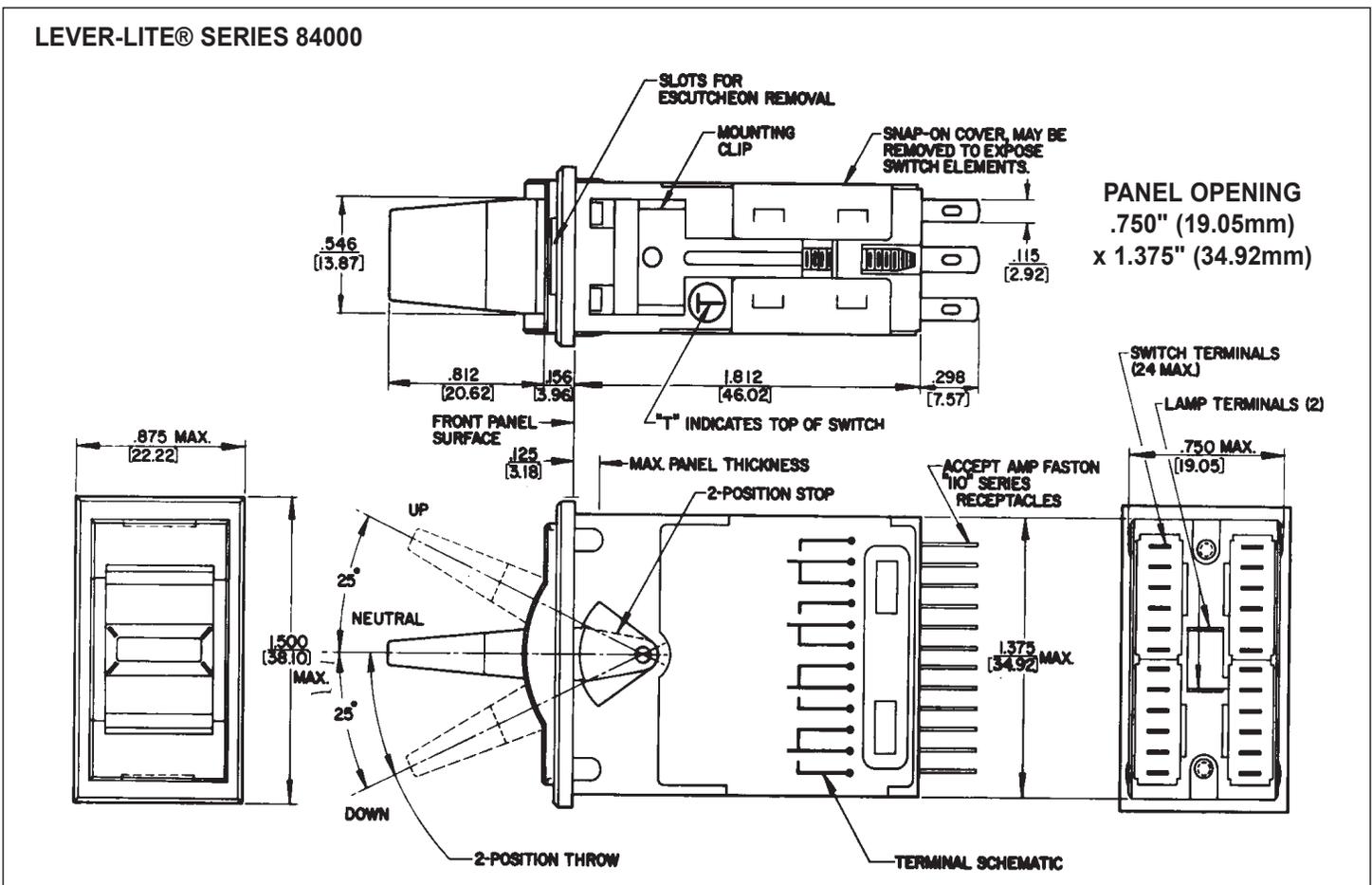
### PART NUMBERS TWO POSITION

Part Numbers		Switching
Non-Locking	Locking	
◇84206	84206L	2-C
◇84212	◇84212L	4-C

### THREE POSITION

Part Numbers		Position 1	Position 2
◇84306	84306L	1-C	1-C
◇84312	84312L	2-C	2-C
◇84324	84324L	4-C	4-C

◇ Special order only; contact Switchcraft.





12010



12011



12012



12015



12013



12016



12014



12017

## LEV-R® SWITCH SERIES 12000

### Electrical

**Contact Ratings:** Fine silver contacts rated at 3A, 300W maximum AC non-inductive load standard. Other contacts available

**Leakage Resistance:** 1,000 MΩ or greater

**Dielectric Strength:** 250 VDC

### Material

**Frame:** Copper alloy, plated (3,000, 13,000); Steel, plated (12,000)

**Bushing and Shaft:** Copper alloy, plated

**Springs:** Copper alloy

**Knob:** Black molded thermoplastic

**Mounting Hardware:** Knurled copper alloy locknut T10711, supplied. P10531 hex locknut, special order

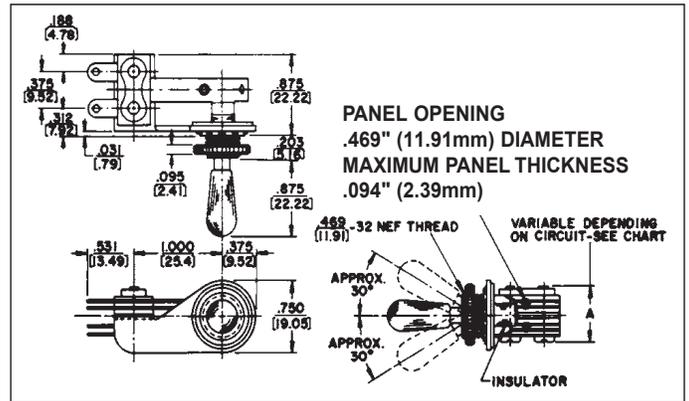
**Insulation:** Rigid plastic spacers with plastic tubing through stack. Rigid plastic and/or thermoplastic lifters. Thermoplastic cam on actuator end

## PART NUMBERS

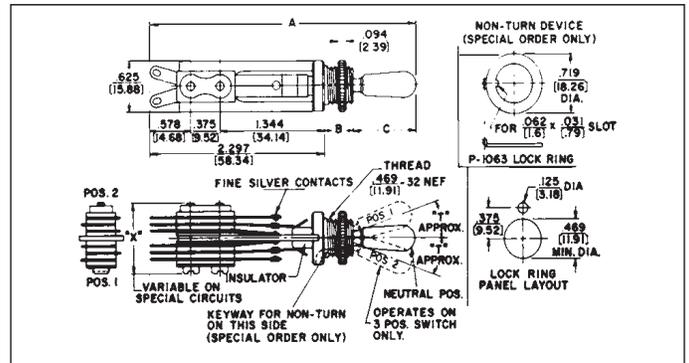
TWO POSITION NON-LOCKING\*+    THREE POSITION NON-LOCKING\*

Part Number	Stack Hgt. "X" & "Y" (max.)	Switching	Part Number	Stack Hgt. "X" & "Y" (max.)	Switching
◇12001	.719 (18.26)	1-A	◇12010	.703 (17.86)	1-B 1-B
◇12002	.688 (17.48)	1-B	◇12011	.703 (17.86)	1-B 1-B
◇12003	.750 (19.05)	1-C	◇12012	.766 (19.46)	1-B 1-B
◇12003D	.813 (20.65)	1-D	◇12013	.703 (17.86)	1-B 1-C
◇12004	.906 (23.01)	2-A	◇12014	.703 (17.86)	1-B 1-B
◇12005	.875 (22.22)	2-B	◇12015	1.078 (27.49)	2-B 2-B
◇12006	1.000 (25.40)	2-C	◇12016	.703 (17.86)	1-B 1-B
◇12006D	1.063 (27.00)	2-D	◇12017	.703 (17.86)	1-B 1-B
			◇12033	.719 (18.26)	1-K
			◇12034	.813 (20.65)	1-A 1-A
			◇12035	.750 (19.05)	1-B 1-B
			◇12036	.875 (22.22)	1-C 1-C
			◇12036D	1.000 (25.40)	1-D 1-D
			◇12037	.875 (22.22)	2-K

## 12000 SERIES RA LEV-R SWITCHES



## 12000 SERIES STRAIGHT LEV-R SWITCHES



## INTERCOM SWITCHES

Part Number	Stack Height "X" & "Y"	Switching
◇12033T	.719 (18.26)	1-K
◇12037T	.875 (22.22)	2-K

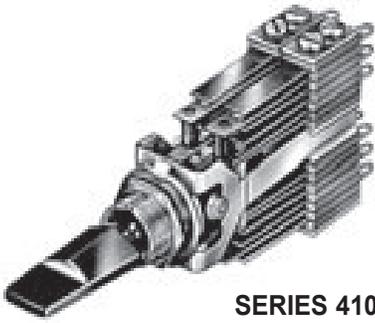
\* Add prefix "R" to part number if non-turn mounting is required. (Special order).

+ Add suffix "L" to part number if locking type is required.

◇ Special order only; contact Switchcraft.

Knobs			
T12742	Black	T127410	Ivory
T12745	White	P2912	Amber

**Knobs must be ordered separately.**



**SERIES 41000**

**Frame:** Steel, plated.

**Bushing and Actuator:** Copper alloy, plated.

**Springs:** Copper alloy.

**Contact Ratings:** Welded cross bar palladium contacts rated at 2A, 200W maximum, AC non-inductive load are standard. See "SPECIAL ORDER FEATURES".

**Terminals:** Tin dipped solder lugs.

**Mounting Hardware:** Supplied with one copper alloy-plated hex locknut (P10531); and one non-turn washer (P10639).

**Insulation:** Rigid plastic spacers with plastic tubing through the stack assembly. Lifters of thermoplastic.

**Lifter-Roller Assembly:** Molded plastic.

**Knob:** Supplied with a paddle style, screw-on black plastic knob. See "SPECIAL ORDER FEATURES".

**Temperature Range:** -22°F to 158°F (-30°C to +70°C).

**Leakage Resistance:** 1,000 MΩ or greater.

## MOLDED DUST COVERS

Dust cover is an environment and electrical shield, protecting and improving appearance and increasing switch dependability. Covers enshroud complete switch, preventing build-up of dust, dirt, contamination.

## SPECIAL ORDER FEATURES

1. Talk-Listen (Intercom) function.
2. Fine silver and other alloys available for contacts.  
See page 294.
3. UL recognized switches. See page 294.

## LT® SWITCH PART NUMBERS

### 2 POSITION NON-LOCKING\*

Part Numbers	Switching	Stack Heights Dimension "X" max.
◇41203	1-C	.531 (13.49)
41206	2-C	.531 (13.49)
◇41208	4-A	.615 (15.62)
41212	4-C	.750 (19.05)

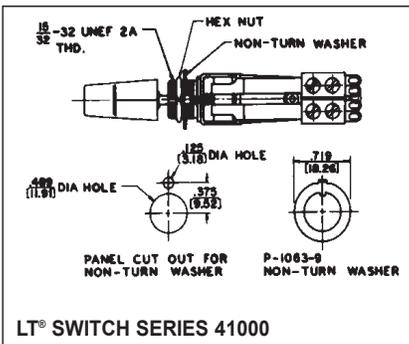
### 3 POSITION NON-LOCKING\*

	Position 1	Position 2	Dim. "Y"	Dim. "X"
◇41306	1-C	1-C	.531 (13.49)	.531 (13.49)
◇41308	2-A	2-A	.500 (12.7)	.500 (12.7)
41312	2-C	2-C	.531 (13.49)	.531 (13.49)
41324	4-C	4-C	.750 (19.05)	.750 (19.05)

\*Add suffix "L" to part number for locking type.

To avoid ordering special switches, order a larger standard circuit, providing the circuit meets your requirements.

◇ Special order only; contact Switchcraft.



LT® SWITCH SERIES 41000

