

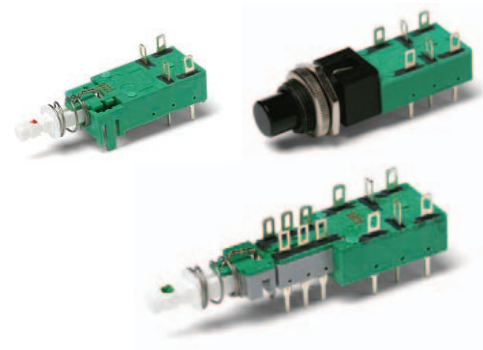
# C&K NE-18 Series Mains / Power Switches

## Features/Benefits

- Chassis or panel mount
- Various buttons and illumination
- Various contact configurations

## Typical Applications

- Mains/power switching
- Consumer electronics
- Audio equipment
- Digital products



A

Pushbutton

## Specifications

### POWER CONTACT:

SWITCHING POWER MAX. AC/DC: NE18: 1500/100 W,  
NE18CTII: 1000/100 W; AC (Inductive  $\cos \phi = 0.6$ ): NE18: 900W,  
NE18CTII: 600W.

SWITCHING VOLTAGE MAX. AC/DC: 250/100V

### SWITCHING CURRENT MAX. AC/DC

AC (Inductive  $\cos \phi = 0.6$ ): NE18:  $6 A^2$ /1 A, NE18CTII:  $4 A^2$ /1 A

INRUSH CURRENT MAX. AC<sup>1</sup>): NE18: 36 A, NE18CTII: 64 A

DIELECTRIC STRENGTH (50 Hz, 1 min.): 2000 V

OPERATING LIFE AT MAX. LOAD AND AT MAX. INRUSH  
CURRENT:  $\sim 10^4$  operations<sup>5</sup>)

CONTACT RESISTANCE: Initial: 50m $\Omega$ ; After  $10^4$  operations: 70m $\Omega$ .

INSULATION RESISTANCE:  $\sim 10^{12} \Omega$  chassis – nearest contact;

$\sim 10^{12} \Omega$  mains contact – mains contact;  $\sim 10^{12} \Omega$  mains contact –  
mains contact after  $10^4$  operations.

### LOW VOLTAGE CONTACT:

SWITCHING POWER MAX.: 12W

SWITCHING VOLTAGE MAX.: 24V

SWITCHING CURRENT MAX.: 0.5A

TOTAL TRAVEL: 4.7mm (.185 inch)

LATCHING TRAVEL: 3.3mm (.130 inch)

OPERATING FORCE: Without auxiliary low voltage contacts:

NE18: 7N (700 grams); NE18CTII: 9.5N (950 grams).

With auxiliary low voltage contacts: NE18: 8N (800 grams);

NE18CTII: 11N (1100 grams).

SEALING: Dust proof.

## Materials

HOUSING, ACTUATOR & TERMINAL BOARD: Thermoplastic  
polyester (UL 94V-0).

MOVABLE CONTACT: Silver nickel alloy, silver plated.

FIXED CONTACTS: Silver nickel alloy, silver plated.

COMMON CONTACTS & TERMINALS: Copper alloy, silver plated.

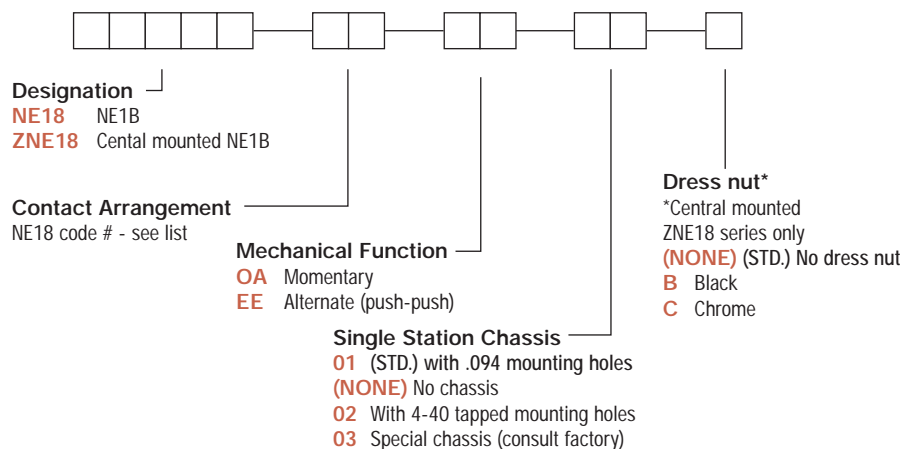
RETURN SPRING: Music wire.

**NOTE:** Specifications and materials listed above are for switches with standard options.  
For information on specific and custom switches, consult Customer Service Center.

## Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages A-79 thru A-106. For additional options not shown in catalog, consult Customer Service Center.

If requesting only a switch, select the switch as noted below. Buttons are sold separately.



# C&K NE-18 Series Mains / Power Switches

Pushbutton

A

## Order Code - Buttons

### Solid Buttons



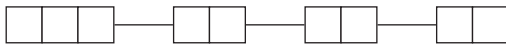
- |               |  |
|---------------|--|
| <b>Style</b>  | <b>Button Color</b>                        |
| F01 FMR       | 01 (STD.) Black                            |
| F02 FG*       | 02 White                                   |
| F03 F1.12-H-5 | 03 Red                                     |
| F06 F1.12-H-4 | 04 Light gray                              |
| F07 F1.15-H-4 | 09 Chrome, standard for F03 only           |
| F12 FSC       |  |
| F13 FSD       |  |
| F14 FU12      | †Black/chrome, standard for F06 & F07 only |
| F15 FSB       |  |
| F16 FE        |  |
| F19 FA        |  |
| F21 F001      |  |

### Illuminated Buttons with Chassis



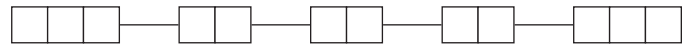
- |              |                            |                    |
|--------------|----------------------------|--------------------|
| <b>Style</b> | <b>Shell Color</b>         | <b>Lamp Holder</b> |
| F21 FRV      | 01 (STD.) Black            | FL1                |
| F22 FSR      |                            | FL2                |
|              | <b>Lens Color</b>          |                    |
|              | 02 White                   |                    |
|              | 03 Red                     |                    |
|              | 06 Yellow                  |                    |
|              | 08 Green                   |                    |
|              | 12 Orange                  |                    |
|              | 16 Clear / White           |                    |
|              | <b>North American Lamp</b> |                    |
|              | 01 6V / 30ma               |                    |
|              | 02 12V / 30ma              |                    |
|              | 03 24V / 30ma              |                    |
|              | <b>European Lamp</b>       |                    |
|              | 04 5V / 60ma               |                    |
|              | 05 6V / 40ma               |                    |
|              | 06 12V / 40ma              |                    |
|              | 07 24V / 20ma              |                    |

### Mechanical Indicator Buttons



- |              |                    |                           |                          |
|--------------|--------------------|---------------------------|--------------------------|
| <b>Style</b> | <b>Shell Color</b> | <b>Out Position Color</b> | <b>In Position Color</b> |
| F01 FA100    | 01 (STD.) Black    | 01 (STD.) Black           | 02 White                 |
| F02 FA101    |                    |                           | 06 Yellow                |
| F05 FA110    |                    |                           | 07 Blue                  |
| F07 FA120    |                    |                           | 08 Green                 |
| F08 FA201    |                    |                           | 12 Orange                |
| F11 FA200*   |                    |                           |                          |

### Central Mounted Illuminated Buttons



- |                 |                    |                    |
|-----------------|--------------------|--------------------|
| <b>Style</b>    | <b>Shell Color</b> | <b>Lamp Holder</b> |
| F24 FLB* (F200) | 01 (STD.) Black    | LZ1                |
| F25 FLC*        | 02 White           | LZ2                |
|                 | 05 Gray            |                    |
|                 | <b>Lens Color</b>  |                    |
|                 | 03 Red             |                    |
|                 | 06 Yellow          |                    |
|                 | 07 Blue            |                    |
|                 | 08 Green           |                    |
|                 | 12 Orange          |                    |
|                 | 16 Clear / White   |                    |
|                 | <b>Light Type</b>  |                    |
|                 | 01 Lamp, 6V        |                    |
|                 | 02 Lamp, 12V       |                    |
|                 | 03 Lamp, 28V       |                    |
|                 | 04 LED, green      |                    |
|                 | 05 LED, red        |                    |
|                 | 06 LED, yellow     |                    |
|                 | 07 Neon, 110-220AC |                    |

\*Button options for central mounting configurations, use 'FG' for central mount with chrome dress nut, use 'FA200', 'FLB' or 'FLC' for central mount with black dress nut.

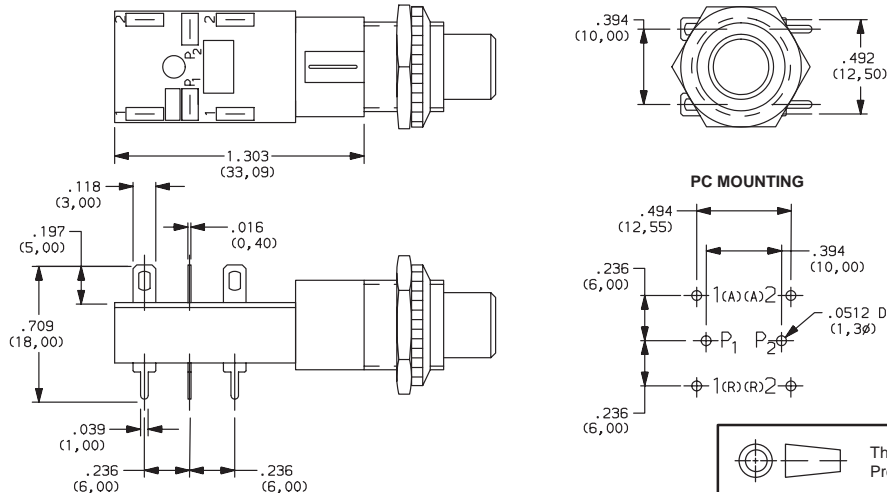
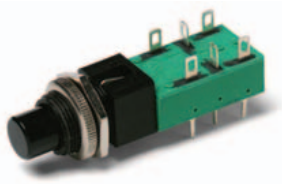
## BUTTON REMOVAL

A button of a push-push switch should only be removed in the "OFF" non-latching position.

## DESIGNATION & SWITCHES WITH STANDARD OPTIONS



### ZNE1838EECF0201



Dimensions are shown: IN (mm)  
Dimensions subject to change

# C&K NE-18 Series Mains / Power Switches

## DESIGNATION & SWITCHES WITH STANDARD OPTIONS

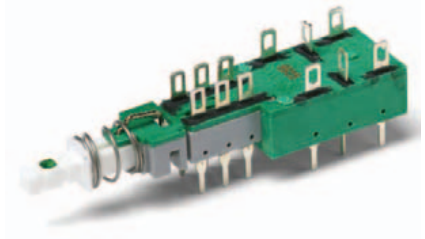
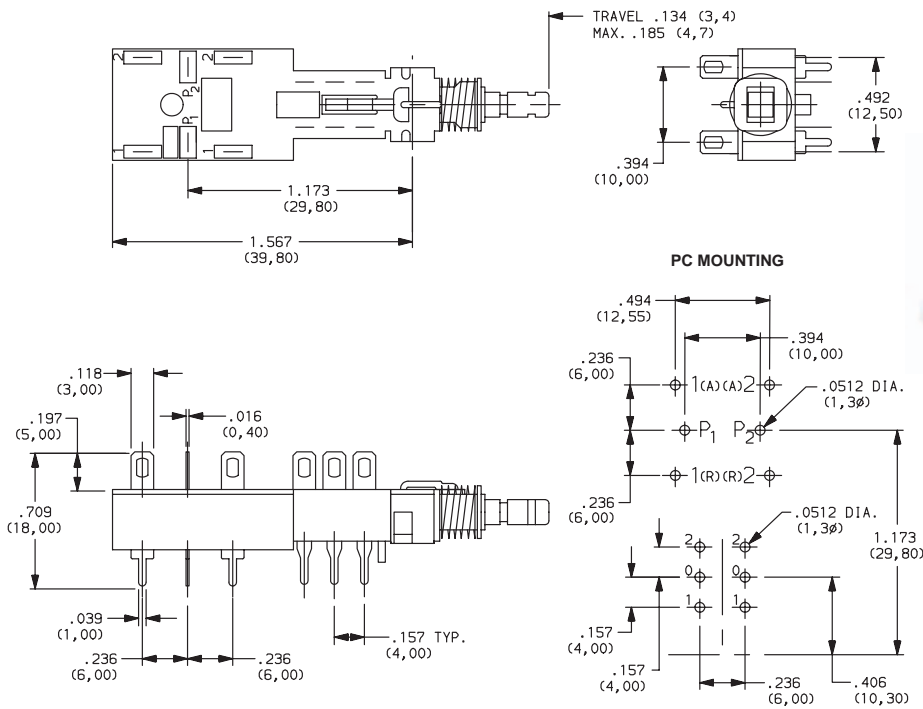


### NE1839EE

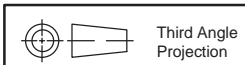
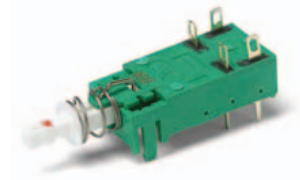
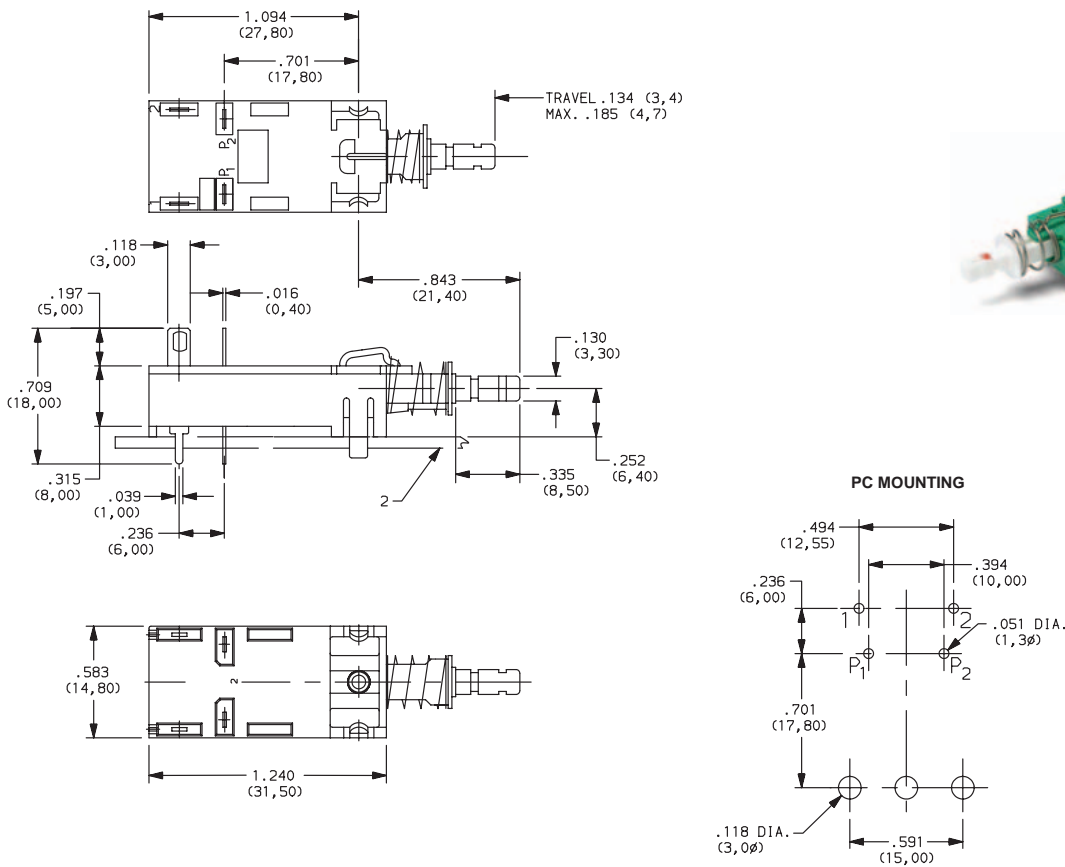


A

Pushbutton



### NE1845EE



Dimensions are shown: IN (mm)  
Dimensions subject to change

# C&K NE-18 Series Mains / Power Switches

## CONTACT ARRANGEMENT



Pushbutton  
**A**

OPTION CODE Contact capacity and availability	STYLE	ELECTRICAL CIRCUIT
<b>37</b>	NE18 — 2AX	DPST
<b>38</b>	NE18 — 2UX	DPDT
<b>51</b>	2U + NE18 — 2AX	DPST*
<b>52 (4A/64)</b>	NE18CTII — 2AX	DPST
<b>39</b>	2U + NE18 — 2UX	DPDT*
<b>41</b>	NE18 — 2AP	DPST
<b>42</b>	NE18 — 2UP	DPDT
<b>43</b>	NE18 — 2AW	DPST
<b>44</b>	NE18 — 2UW	DPDT
<b>45</b>	NE18 — 2ASX	DPST

OPTION CODE Contact capacity and availability	STYLE	ELECTRICAL CIRCUIT
<b>46</b>	NE18 — 2USX	DPDT
<b>47</b>	NE18 — 2ASP	DPST
<b>48</b>	NE18 — 2USP	DPDT
<b>49</b>	NE18 — 2ASW	DPST
<b>50</b>	NE18 — 2USW	DPDT
<b>53 (4A/64)</b>	2U + NE18CTII — 2AX	DPST
<b>54</b>	2U + NE18 — 2AW	DPST
<b>55</b>	2U + NE18 — 2AP	DPST
<b>56</b>	2U + NE18 — 2UW	DPDT
<b>57</b>	2U + NE18 — 2UP	DPDT

- \* 2U + Denotes auxiliary set of low current contacts DPDT  
 2A = DPST  
 2U = DPDT  
 S = Snap-in mounting  
 X = Solder lug/PC pins  
 W = Solder lugs only  
 P = PC pins only

- NOTES  
 1. Contact plating is silver on all Power Switches.  
 2. The electrical function is Break Before Make (BBM) on all Power Switches.  
 3. The terminals will be epoxy sealed.

TYPE	POSSIBLE CONTACT ARRANGEMENT		CONTACT SPACING	PROTECTION CLASS (CEE 24)	APPROVALS
	POWER CONTACTS <sup>1)</sup>	AUXILIARY CONTACTS			
NE18	2A <sup>2)</sup>	2U	> 3mm (.118 inch)	II	VDE, BSI, DEMKO, NEMKO, SEMKO, SEV, CSA, UL
NE18	2A <sup>2)</sup> 2R 2U	2U	> 3mm (m) (.118 inch)	I	VDE, MEEI, BSI <sup>3)</sup> , DEMKO, NEMKO, SEMKO, SEV, CSA, UL
NE18CTII	2A <sup>2)</sup>	2U	> 3mm (.118 inch)	II	VDE, BSI, DEMKO, CSA, SEMKO, SEV, UL, NEMKO

- 1) A = make contact, R = break contact, U = changeover contact, m = VDE sign for switches with a contact spacing (air gap) < 3mm (.118 inch) according to VDE 0630/CEE 24.  
 2) With 2A mains contacts: Mounting only by PC pins is not sufficient.  
 3) BSI only for 2U mains contacts.

## MECHANICAL FUNCTION

OPTION CODE	FUNCTION
<b>OA</b>	Momentary
<b>EE</b>	Alternate (push-push)



Dimensions are shown: IN (mm)  
 Dimensions subject to change

# C&K NE-18 Series Mains / Power Switches

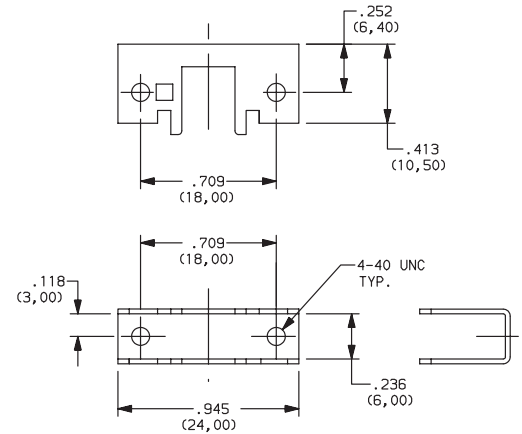
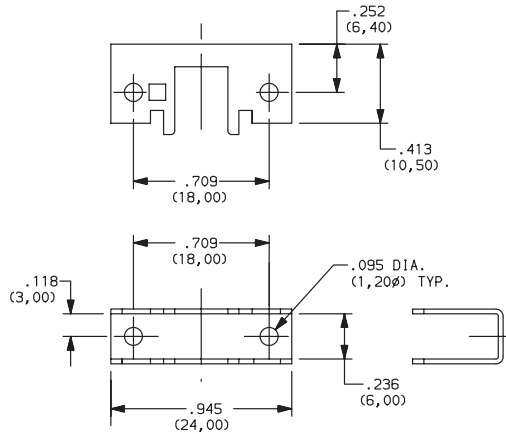
## SINGLE STATION CHASSIS



**01** (STD.) WITH .094 MOUNTING HOLES

**(NONE)** NO CHASSIS

**02** WITH 4-40 TAPPED MOUNTING HOLES



**03** SPECIAL CHASSIS (CONSULT FACTORY)



**A**

Pushbutton

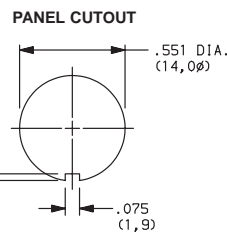
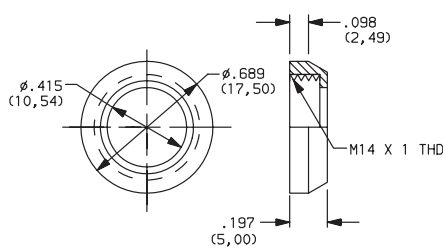
## DRESS NUT



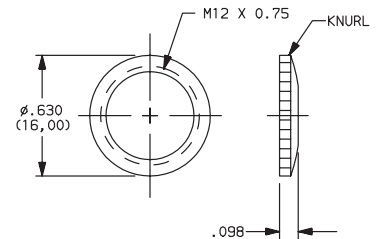
**(NONE)** (STD.) NO DRESS NUT

**B** BLACK

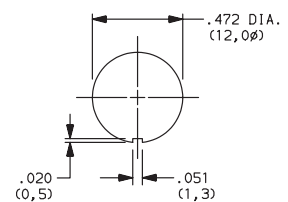
**C** CHROME



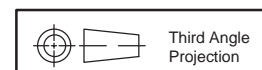
NOTE: Available with ZNE18 designation and FA200, FLB or FLC buttons.



PANEL CUTOUT



NOTE: Available with ZNE18 designation and FG button.



Dimensions are shown: IN (mm)  
Dimensions subject to change

# C&K NE-18 Series Mains / Power Switches

## SOLID BUTTON

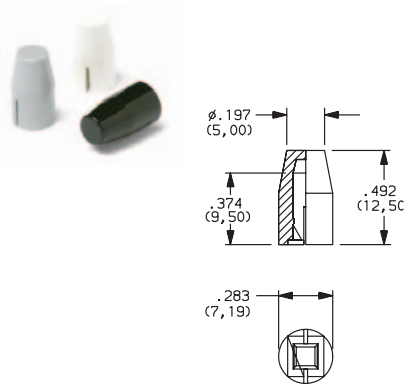


Pushbutton

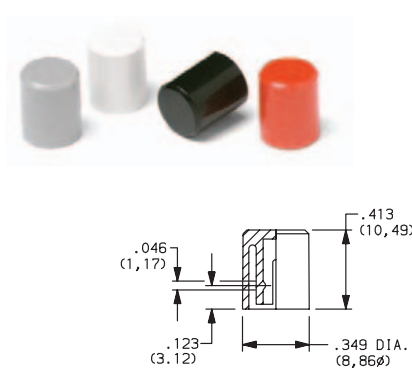
### STYLE

A

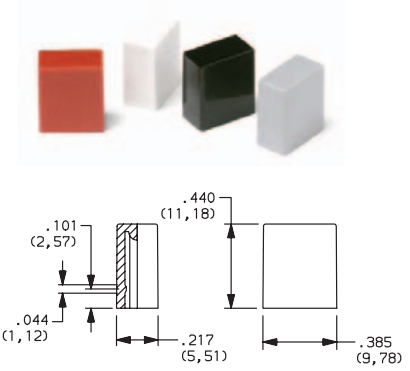
**F01** FMR



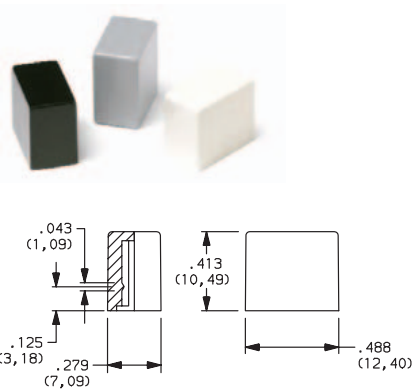
**F02** FG



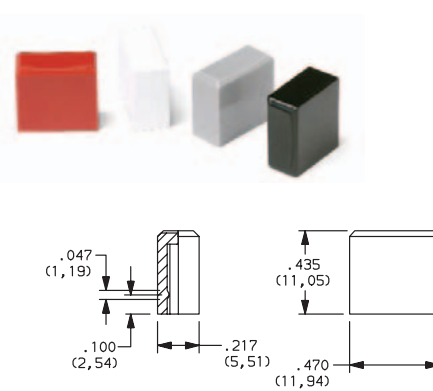
**F12** FSC



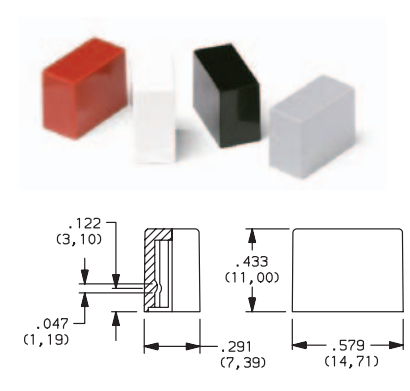
**F13** FSD



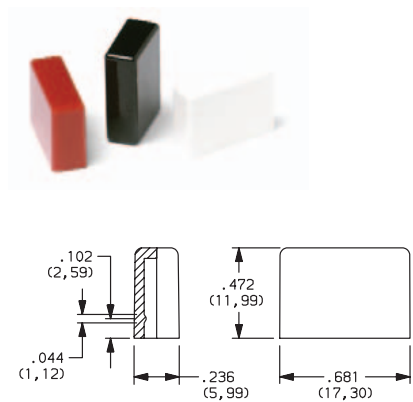
**F14** FU12



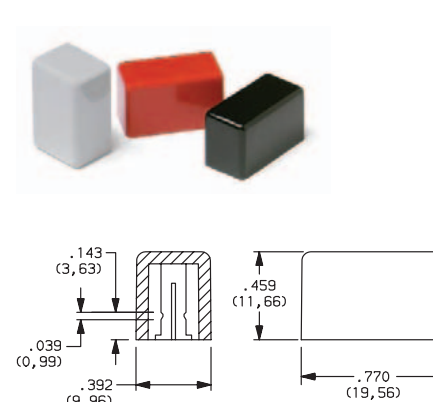
**F15** FSB



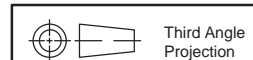
**F16** FE



**F19** FA



OPTION CODE	COLOR
01	(STD.) BLACK
02	WHITE
03	RED
04	LT. GRAY



Dimensions are shown: IN (mm)  
Dimensions subject to change

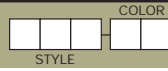
# C&K NE-18 Series Mains / Power Switches



A

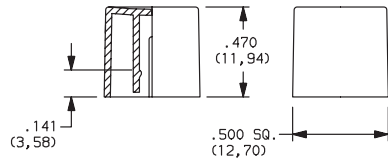
Pushbutton

## SOLID BUTTON

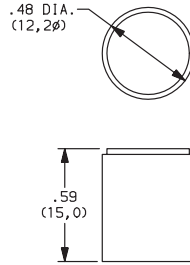


### STYLE

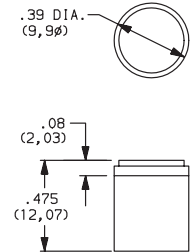
**F21** F001



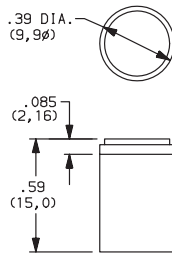
**F03** F1.12-H-5



**F06** F1.12-H-4

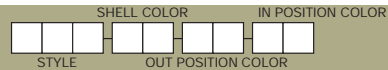


**F07** F1.15-H-4



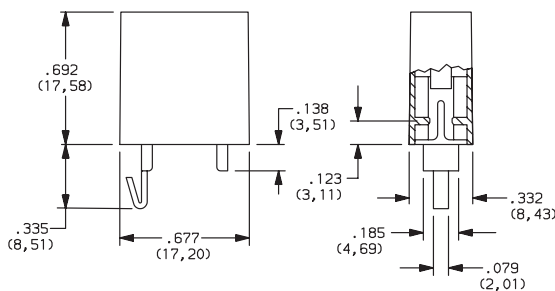
OPTION CODE	COLOR
01	(STD.) BLACK
02	WHITE
03	RED
04	LT. GRAY
09	BLACK/CHROME (F03,F06 & F07 buttons only)

## MECHANICAL BUTTON

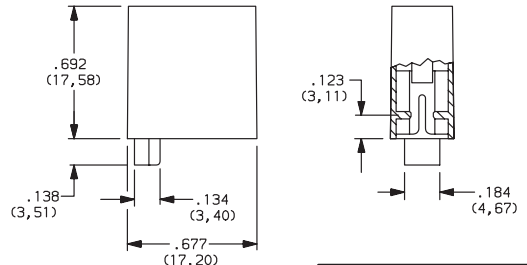


### STYLE

**F01** FA100



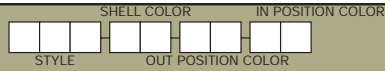
**F02** FA101



Third Angle Projection  
Dimensions are shown: IN (mm)  
Dimensions subject to change

# C&K NE-18 Series Mains / Power Switches

## MECHANICAL BUTTON



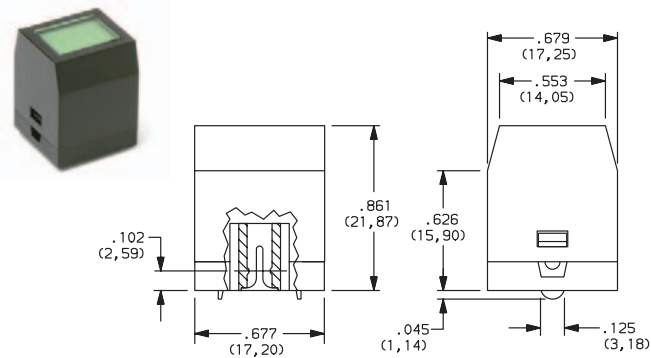
### STYLE



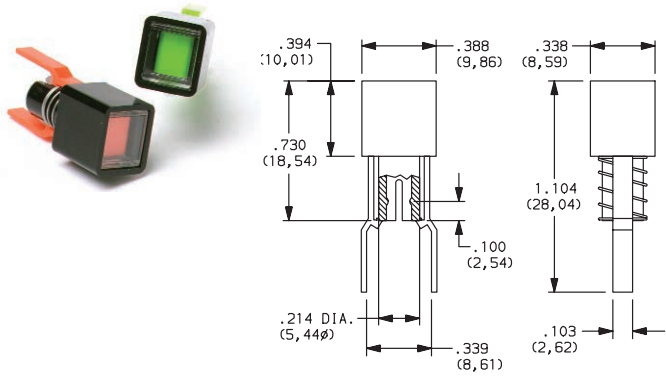
A

Pushbutton

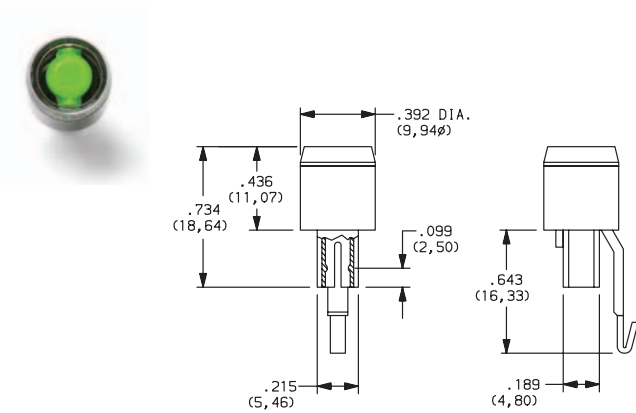
**F05** FA110



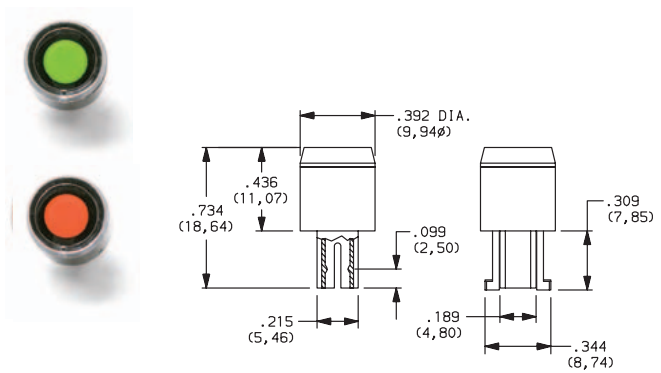
**F07** FA120



**F08** FA201



**F11** FA200



### SHELL COLOR

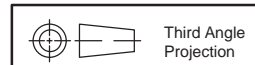
**01** (STD.) BLACK

### IN POSITION COLOR

### OUT POSITION COLOR

**01** (STD.) BLACK

OPTION CODE	COLOR
<b>02</b>	WHITE
<b>06</b>	YELLOW
<b>07</b>	BLUE
<b>08</b>	GREEN
<b>12</b>	ORANGE



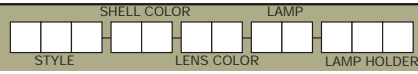
Third Angle  
Projection

Dimensions are shown: IN (mm)  
Dimensions subject to change



# C&K NE-18 Series Mains / Power Switches

## ILLUMINATED BUTTON WITH CHASSIS

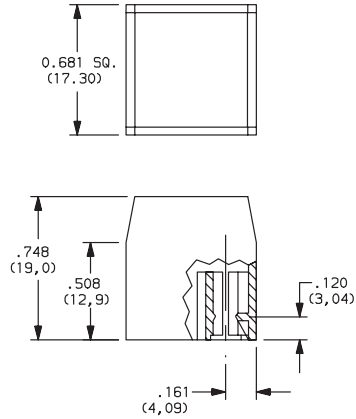


A

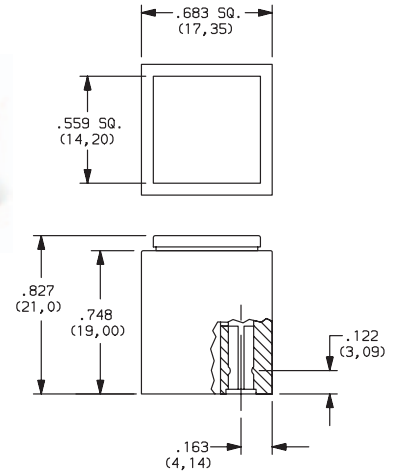
Pushbutton

### STYLE

**F21** FRV



**F22** FSR



### SHELL COLOR

**01** (STD.) BLACK

### LENS COLOR

OPTION CODE	COLOR
<b>02</b>	WHITE
<b>03</b>	RED
<b>06</b>	YELLOW
<b>08</b>	GREEN
<b>12</b>	ORANGE
<b>16</b>	CLEAR / WT.

### LAMP

#### North America

OPTION CODE	LAMP
<b>01</b>	6V / 30mA
<b>02</b>	12V / 30mA
<b>03</b>	24V / 30mA

#### Europe

OPTION CODE	LAMP
<b>04</b>	5V / 60mA
<b>05</b>	6V / 40mA
<b>06</b>	12V / 40mA
<b>07</b>	24V / 20mA

### LAMP HOLDER

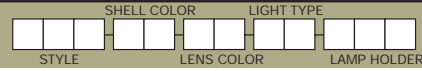
OPTION CODE	DESCRIPTION
<b>FL1</b>	Standard version. No electrical connection to module. Lamps are illuminated by applying voltage to the solder lugs of the lampholder contacts.
<b>FL2</b>	For use only on modules with solder lugs on top face. One of the lampholder contacts is electrically linked with the module by means of a blade spring connecting the normally closed contact of the left side front changeover.



Dimensions are shown: IN (mm)  
Dimensions subject to change

# C&K NE-18 Series Mains / Power Switches

## CENTRAL MOUNTED ILLUMINATED BUTTON



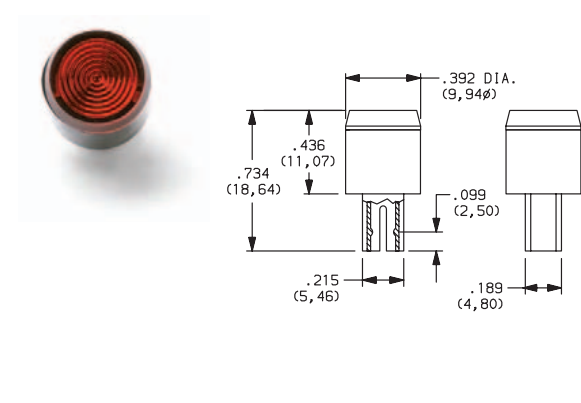
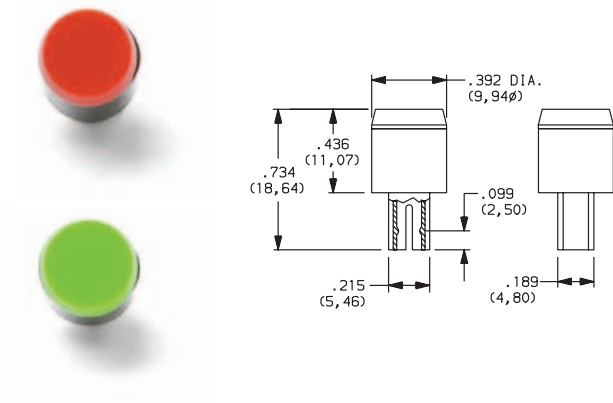
### STYLE

A

**F24** FLB (F200)

**F25** FLC

Pushbutton



### SHELL COLOR

OPTION CODE	COLOR
01	(STD.) BLACK
02	WHITE
05	GRAY

### LENS COLOR

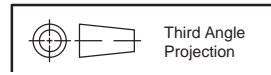
OPTION CODE	COLOR
03	RED
06	YELLOW
07	BLUE
08	GREEN
12	ORANGE
16	CLEAR / WT.

### LIGHT TYPE

OPTION CODE	DESCRIPTION
01	Lamp, 6V
02	Lamp, 12V
03	Lamp, 28V
04	LED, green
05	LED, red
06	LED, yellow
07	Neon, 110-220AC

### LAMP HOLDER

OPTION CODE	DESCRIPTION
LZ1	Illumination dependent on button position. Button depressed, lamp on.
LZ2	Illumination independent of button position.



Dimensions are shown: IN (mm)  
Dimensions subject to change