



# SERIES D16, P16, L16 SWITCHES

## PUSHBUTTON SWITCHES - ILLUMINATED

TACT  
SWITCHESNAVIGATION  
SWITCHESPUSHBUTTON  
SWITCHESTOGGLE  
SWITCHESROCKER  
SWITCHESSLIDE  
SWITCHESSNAP-ACTION  
SWITCHESDIP  
SWITCHESKEYLOCK  
SWITCHESROTARY  
SWITCHESDETECTOR  
SWITCHESCAP  
OPTIONS

### SPECIFICATIONS

Contact Rating: 5A@250 VAC-UL, VDE  
8A@125 VAC - UL, CSA  
6A@24 VDC - UL, CSA

Life Expectancy (Mechanical): 100,000 cycles

Life Expectancy (Electrical): 50,000 cycles

Contact Resistance: 100mΩ max. typical; initial @ 2-4 VDC

Insulation Resistance: > 1,000MΩ

Dielectric Strength: > 1,500 volts 1 minute  
> 3,000 volts between poles

Actuation Force: 300g/pole

Operating Temperature: -20°C to 55°C

### FEATURES & BENEFITS

- ▶ Modular interface/contact block design
- ▶ Robust product for industrial applications
- ▶ Attractive front panel design
- ▶ Illuminated options available

### APPLICATIONS/MARKETS

- ▶ Industrial controls
- ▶ Instrumentation
- ▶ Transportation
- ▶ Telecommunications

### MATERIALS

Switch Housing: Polyetherimide (PEI)  
Contact Housing: Diallyl Phthalate (DAP)  
Lens: Polycarbonate (PC)  
Contacts: Silver plated copper alloy  
Terminals: Silver plated copper alloy

### HOW TO ORDER

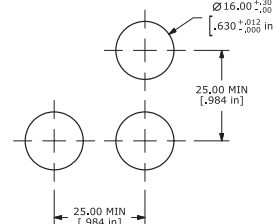
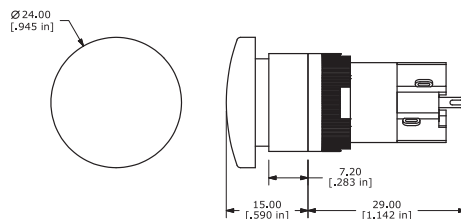
| SERIES                                                                                                                        | MECHANICAL CONFIGURATION                                                                                                                             | PUSHBUTTON HEAD                                                                                                                               | CIRCUIT                                                                                                                                                                        | LAMP TYPE & VOLTAGE                                                                                                              | LAMP COLOR (WHERE APPLICABLE)                                                                                | LENS COLOR                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div></div> <div></div> <div></div> </div> <p>D16 = Solder Lug<br/><br/>P16 = Socket<br/><br/>L16 = Pilot Indicator</p> | <div> <div></div> <div></div> </div> <p>EE = Latching<br/><br/>OA = Momentary<br/><br/>PL* = Pilot Indicator<br/><br/>*For L16 (Pilot Indicator)</p> | <div> <div></div> <div></div> </div> <p>S1<br/>S2<br/>T1<br/>T2<br/>R*<br/>R1</p> <p>*R (Mushroom Head) Available for D16 &amp; P16 Only.</p> | <div> <div></div> </div> <p>0* = Pilot Ind.<br/>1**= SPDT<br/>2 = DPDT<br/>3 = 3PDT<br/>4 = 4PDT</p> <p>*For L16 only (Pilot Indicator)<br/><br/>**P16 available SPDT only</p> | <div> <div></div> </div> <p>0 = None<br/>A<br/>B<br/>C<br/>F<br/>G<br/><br/>H<br/>J<br/>K<br/><br/>M<br/>N<br/>L<br/>D<br/>E</p> | <div> <div></div> <div></div> <div></div> <div></div> </div> <p>Red<br/>Grn<br/><br/>Red<br/>Grn<br/>Yel</p> | <div> <div></div> <div></div> <div></div> <div></div> </div> <p>RED= Red<br/>GRN= Green<br/>BLU= Blue*<br/>WHT= White*<br/>ORG= Orange*<br/>YEL= Yellow*</p> <p>*Not Available For 'R' Mushroom Head.</p> |

▶ ▶ ▶ **Example Ordering Number**  
D16-EE-R1-3-A-BLU

Specifications subject to change without notice.

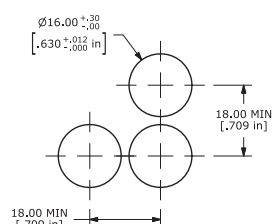
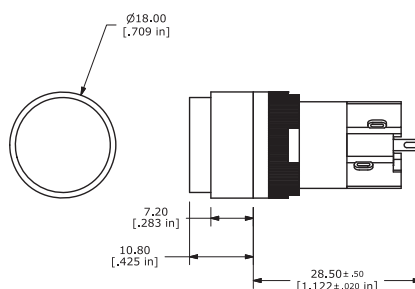
## PUSHBUTTON SWITCHES - ILLUMINATED

## R



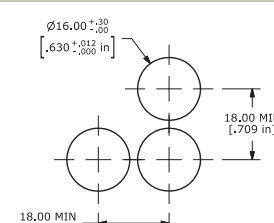
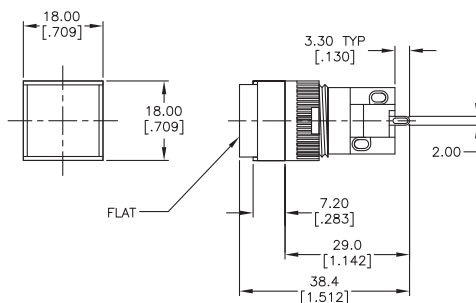
## PANEL MOUNTING

## R1



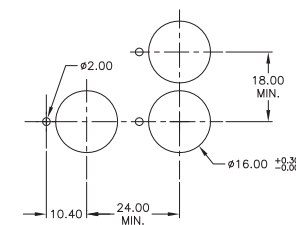
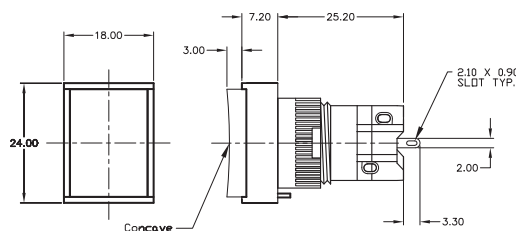
## PANEL MOUNTING

## S1



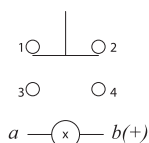
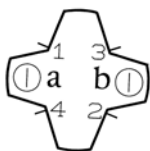
## PANEL MOUNTING

## T1



## PANEL MOUNTING

## SCHEMATIC



## MOUNTING LENGTH

|      | Mounting Length (A) |
|------|---------------------|
| SPDT | 29.0 mm             |
| DPDT | 36.5 mm             |
| 3PDT | 44.0 mm             |
| 4PDT | 51.5 mm             |

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# SERIES P16 SWITCHES

## PUSHBUTTON SWITCHES - ILLUMINATED

### P16 (SOCKET)

**R**

MUSHROOM



PANEL MOUNTING

### P16 (SOCKET)

**R1**

ROUND



PANEL MOUNTING

### P16 (SOCKET)

**S1**

SQUARE



PANEL MOUNTING

### P16 (SOCKET)

**T1**

RECTANGULAR



PANEL MOUNTING

BOTTOM VIEW



SCHEMATIC





E-SWITCH®

# SERIES L16 SWITCHES

PUSHBUTTON SWITCHES - ILLUMINATED

## L16 (PILOT INDICATOR)

**R1**

ROUND



PANEL MOUNTING

## L16 (PILOT INDICATOR)

**S1**

SQUARE



PANEL MOUNTING

## L16 (PILOT INDICATOR)

**T1**

RECTANGULAR



PANEL MOUNTING

BOTTOM VIEW



SCHEMATIC





# SERIES D16, P16, L16 SWITCHES

## PUSHBUTTON SWITCHES - ILLUMINATED

### MECHANICAL CONFIGURATION & CIRCUIT OPTIONS

#### 0 PILOT INDICATOR

Available 'L16' Pilot Indicator Type



SCHEMATIC

#### 1 SPDT\*\*

Available for 'P16' Socket Type and 'D16' Solder Lug



SCHEMATIC

#### 2 DPDT

Available for 'D16' Solder Lug



SCHEMATIC

#### 3 3PDT

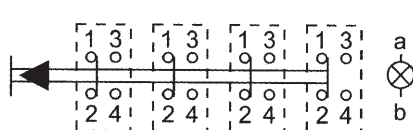
Available for 'D16' Solder Lug



SCHEMATIC

#### 4 4PDT

Available for 'D16' Solder Lug



SCHEMATIC

#### Mechanical Configuration Code

|    |                  |
|----|------------------|
| EE | Latching         |
| OA | Momentary        |
| PL | Pilot Indicator* |

\*'L16' Series only

### LAMP TYPE & VOLTAGE OPTIONS

| ILLUSTRATION                                                                        | CATEGORY                                                                            | DESCRIPTION         | COLOR                  | PART NO.                            |                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------|------------------------|-------------------------------------|-------------------------------------|
|  | Incandescent                                                                        | A = 6V AC/DC 200 mA | Not Applicable         | 50-004-02                           |                                     |
|                                                                                     |                                                                                     | B = 14V AC/DC 80 mA |                        | 50-004-04                           |                                     |
|                                                                                     |                                                                                     | C = 28V AC/DC 40 mA |                        | 50-004-05                           |                                     |
|                                                                                     |                                                                                     | D = 48V AC/DC 25 mA |                        | 50-004-06                           |                                     |
|                                                                                     |                                                                                     | E = 60V AC/DC 20 mA |                        | 50-004-07                           |                                     |
|                                                                                     |                                                                                     | L = 33V AC/DC 35 mA |                        | 50-004-08                           |                                     |
|                                                                                     |                                                                                     | N = 14V AC/DC 40 mA |                        | 50-004-03                           |                                     |
|                                                                                     |                                                                                     | M = 6V AC/DC 40 mA  |                        | 50-004-01                           |                                     |
|  | Neon                                                                                | F = 110V AC         | green<br>red           | 50-004-11<br>50-004-12              |                                     |
|                                                                                     |                                                                                     | G = 220V AC         | green<br>red           | 50-004-13<br>50-004-14              |                                     |
|                                                                                     |  | LED                 | H = 6V DC              | green<br>red<br>yellow              | 50-004-16<br>50-004-17<br>50-004-18 |
|                                                                                     |                                                                                     |                     | J = 12V DC             | green<br>red<br>yellow              | 50-004-19<br>50-004-20<br>50-004-21 |
| K = 24V DC                                                                          |                                                                                     |                     | green<br>red<br>yellow | 50-004-22<br>50-004-23<br>50-004-24 |                                     |



| ILLUSTRATION                                                                        |                                            | STYLE         | SHAPE   | COLOR                                             | PART NO.                                                                   |
|-------------------------------------------------------------------------------------|--------------------------------------------|---------------|---------|---------------------------------------------------|----------------------------------------------------------------------------|
|    | Available<br>Color Lens<br>(Acrylic Resin) | Round         | Concave | blue<br>green<br>orange<br>red<br>white<br>yellow | 50-001-01<br>50-001-02<br>50-001-03<br>50-001-04<br>50-001-05<br>50-001-06 |
|    |                                            | Rectangular   | Concave | blue<br>green<br>orange<br>red<br>white<br>yellow | 50-002-01<br>50-002-02<br>50-002-03<br>50-002-04<br>50-002-05<br>50-002-06 |
|    |                                            | Square        | Concave | blue<br>green<br>orange<br>red<br>white<br>yellow | 50-003-01<br>50-003-02<br>50-003-03<br>50-003-04<br>50-003-05<br>50-003-06 |
|  |                                            | Mushroom Head | Convex  | green<br>red                                      | 50-012-01<br>50-012-02                                                     |
|  |                                            | Round         | Flat    | blue<br>green<br>orange<br>red<br>white<br>yellow | 50-001-11<br>50-001-12<br>50-001-13<br>50-001-14<br>50-001-15<br>50-001-16 |
|  |                                            | Rectangular   | Flat    | blue<br>green<br>orange<br>red<br>white<br>yellow | 50-002-11<br>50-002-12<br>50-002-13<br>50-002-14<br>50-002-15<br>50-002-16 |
|  |                                            | Square        | Flat    | blue<br>green<br>orange<br>red<br>white<br>yellow | 50-003-11<br>50-003-12<br>50-003-13<br>50-003-14<br>50-003-15<br>50-003-16 |

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| ILLUSTRATION                                                                                                                                                              | CATEGORY                                          | DESCRIPTION                                                                                                                                                                 | PART NO.                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
|                                                                                          | Lamp Extractor<br>* Also available for LA Series  | Lamp removing tool                                                                                                                                                          | 50-005-01                                        |
|                                                                                          | Blanking Plate Block                              | PVC stopper to stuff the superfluous hole of the panel board                                                                                                                | 50-013-01                                        |
|                                                                                          | Connector<br>* Also available for LA Series       | Insulation Socket<br>2.8 x 0.5 mm                                                                                                                                           | 50-014-01                                        |
| <br> | PCB Mounting Socket                               |                                                                                                                                                                             | 50-015-01                                        |
|                                                                                        | Mounting Wrench<br>* Also available for LA Series | Use this for tightening the switch in the mounting hole                                                                                                                     | 50-006-01                                        |
|                                                                                        | Lens Removing Tool                                | Use this for replacing the fitted color lens                                                                                                                                | 50-007-01                                        |
|                                                                                        | Spray Cover                                       | Meets requirement of IP65, two pieces of transparent plastic, rectangular head                                                                                              | 50-010-01                                        |
|                                                                                        | Protection Cap                                    | To avoid faulty operation, housing for locking, transparent<br>For square head (90°)<br>For square head (180°)<br>For rectangular head (90°)<br>For rectangular head (180°) | 50-011-01<br>50-011-11<br>50-011-02<br>50-011-12 |

# Mouser Electronics

Authorized Distributor

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## E-Switch:

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[D16OAR11JREDRED](#) [D16OAT12CWHT](#) [D16OAS12CWHT](#) [D16EER11HGRNGRN](#) [D16OAR11ARED](#) [D16-OA-T1-2-](#)  
[B-WHT](#) [D16EET11](#) [D16EER1KGRNGRN](#) [P16OAT11CGRN](#) [D16OAT11JRED](#) [D16EER12CORG](#) [D16EER40RED](#)  
[D16EES11BWHT](#) [D16EES12BRED](#) [D16EES12FGRNWHT](#) [D16EES12JGRNGRN](#) [D16OAR2FREDRED](#)  
[D16OAR2JREDRED](#) [D16OAS12JREDRED](#) [D16OAT11KREDWHT](#) [D16OAT11KYELWHT](#) [D16OAT120WHT](#)  
[D16OAT12CRED](#) [D16OAT12JGRNGRN](#) [D16OAT23KGRNGRN](#) [L16PLR10FREDBLU](#) [L16PLR10GGRNGRN](#)  
[L16PLT10CRED](#) [P16EER11BGRN](#) [P16EER11BWHT](#) [P16EER11GREDRED](#) [P16OAR110G](#) [P16OAT11JGRNGRN](#)  
[D16OAS11KGRNGRN](#) [D16OAS22JREDRED](#) [D16OAR11FGRNGRN](#) [D16OAR11FREDRED](#) [D16EER11HREDRED](#)  
[D16EER12KGRNGRN](#) [D16EET12HGRNGRN](#) [D16EER10RED](#) [D16EER110GRN](#) [D16EER110ORG](#) [D16EER110RED](#)  
[D16EER110WHT](#) [D16EER11BGRN](#) [D16EER11BORG](#) [D16EER11BRED](#) [D16EER11BWHT](#) [D16EER11BYEL](#)  
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[D16EER11HYELYEL](#) [D16EER11JGRNWHT](#) [D16EER11JREDRED](#) [D16EER11KGRNGRN](#) [D16EER11KYELYEL](#)  
[D16EER11NGRN](#) [D16EER12CBLU](#) [D16EER12CWHT](#) [D16EER12DBLU](#) [D16EER12FGRNGRN](#)  
[D16EER12FREDRED](#) [D16EER13GGRNGRN](#) [D16EER14BBLU](#) [D16EER14BGRN](#) [D16EER14BRED](#)  
[D16EER1FGRNGRN](#) [D16EER1HREDRED](#) [D16EER1JREDRED](#) [D16EER1MRED](#) [D16EER20RED](#)  
[D16EER2HREDRED](#) [D16EER2JREDRED](#) [D16EER2KREDRED](#) [D16EES110GRN](#) [D16EES110RED](#) [D16EES110YEL](#)  
[D16EES11ABLU](#) [D16EES11AGRN](#) [D16EES11ARED](#) [D16EES11AWHT](#) [D16EES11AYEL](#) [D16EES11GGRNGRN](#)  
[D16EES11HGRNGRN](#) [D16EES11HREDRED](#) [D16EES11JGRNGRN](#) [D16EES11JREDRED](#) [D16EES11JYELYEL](#)  
[D16EES11KGRNGRN](#) [D16EES11KYELYEL](#) [D16EES120WHT](#)