

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

# SERIES D16, P16, L16 SWITCHES

## PUSHBUTTON SWITCHES - ILLUMINATED



### SPECIFICATIONS

|                               |                                                                   |
|-------------------------------|-------------------------------------------------------------------|
| Contact Rating:               | 5A@250 VAC-UL, VDE<br>8A@125 VAC - UL, CSA<br>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<br>> 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                                                                                                                       |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| D16 = Solder Lug<br><br>P16 = Socket<br><br>L16 = Pilot Indicator | EE = Latching<br><br>OA = Momentary<br><br>PL* = Pilot Indicator<br><br>*For L16 (Pilot Indicator) | S1<br>S2<br>T1<br>T2<br>R*<br>R1<br><br>*R (Mushroom Head) Available for D16 & P16 Only. | 0* = Pilot Ind.<br>1**= SPDT<br>2 = DPDT<br>3 = 3PDT<br>4 = 4PDT<br><br>*For L16 only (Pilot Indicator)<br>**P16 available SPDT only | 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 | Red<br>Grn<br>BLU= Blue*<br>WHT= White*<br>ORG= Orange*<br>YEL= Yellow*<br><br>Red<br>Grn<br>Yel | RED= Red<br>GRN= Green<br>BLU= Blue*<br>WHT= White*<br>ORG= Orange*<br>YEL= Yellow*<br><br>*Not Available For 'R' Mushroom Head. |

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

Specifications subject to change without notice.



E-SWITCH®

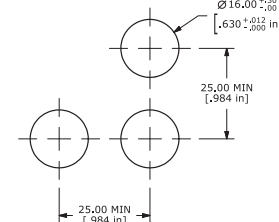
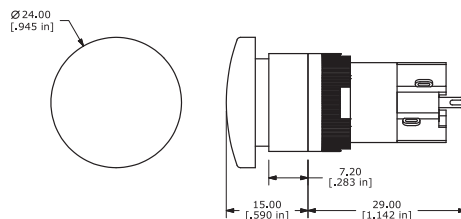
# SERIES D16 SWITCHES

## PUSHBUTTON SWITCHES - ILLUMINATED

### D16 (SOLDER LUG)

**R**

MUSHROOM

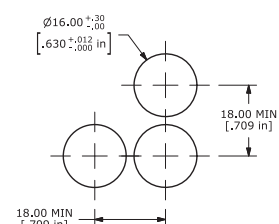
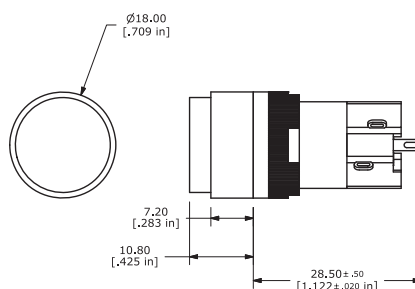


PANEL MOUNTING

### D16 (SOLDER LUG)

**R1**

ROUND

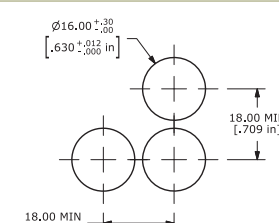
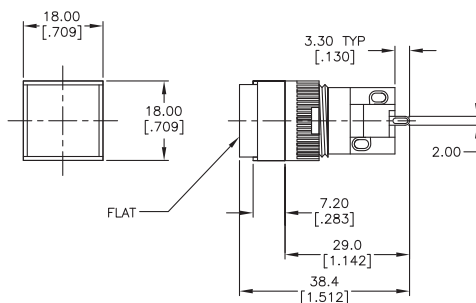


PANEL MOUNTING

### D16 (SOLDER LUG)

**S1**

SQUARE

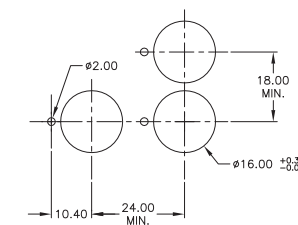
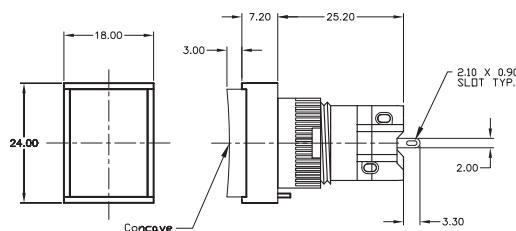


PANEL MOUNTING

### D16 (SOLDER LUG)

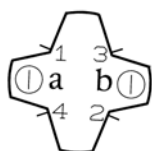
**T1**

RECTANGULAR

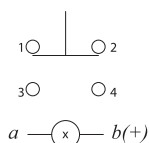


PANEL MOUNTING

### BOTTOM VIEW



### 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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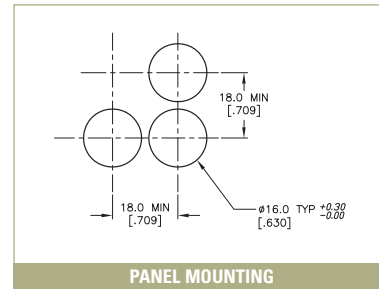
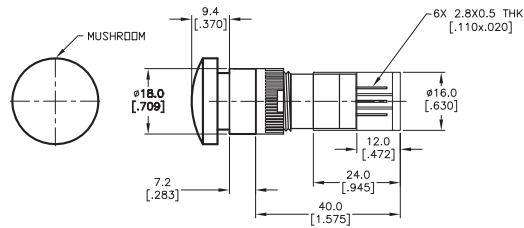
# SERIES P16 SWITCHES

## PUSHBUTTON SWITCHES - ILLUMINATED

### P16 (SOCKET)

**R**

MUSHROOM

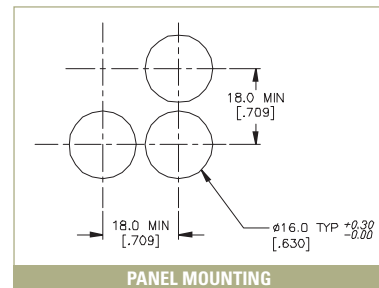
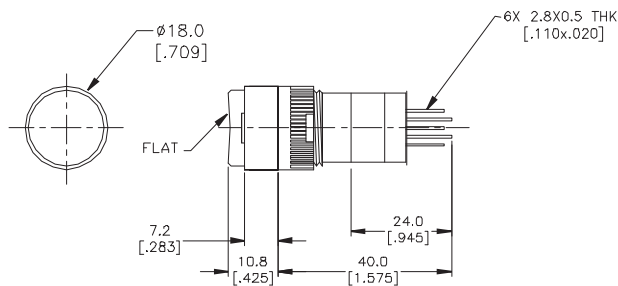


PANEL MOUNTING

### P16 (SOCKET)

**R1**

ROUND

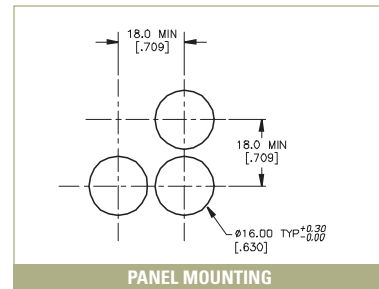
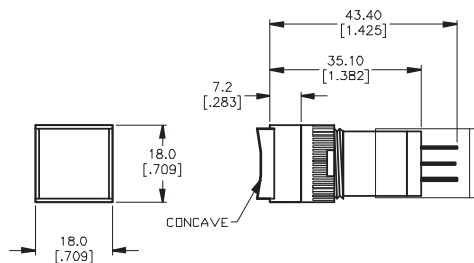


PANEL MOUNTING

### P16 (SOCKET)

**S1**

SQUARE

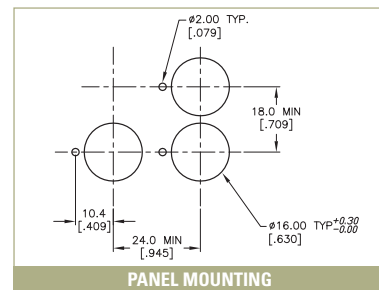
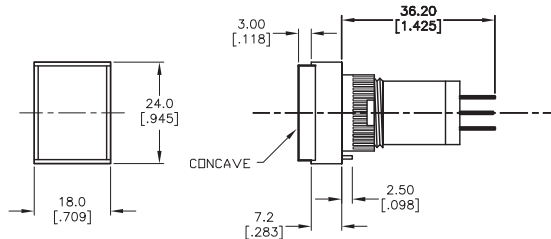


PANEL MOUNTING

### P16 (SOCKET)

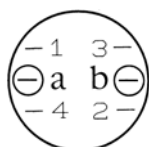
**T1**

RECTANGULAR

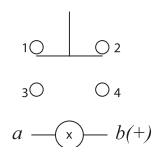


PANEL MOUNTING

BOTTOM VIEW



SCHEMATIC





E-SWITCH®

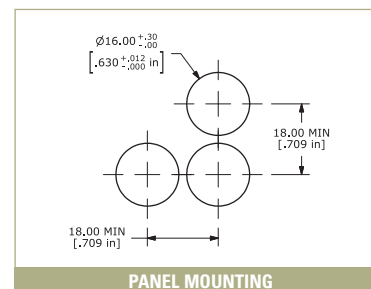
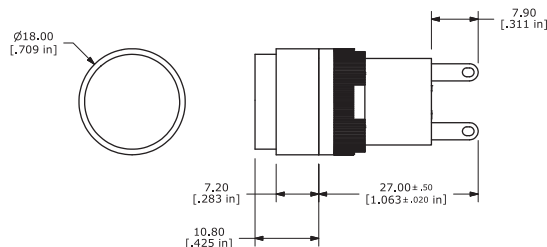
# SERIES L16 SWITCHES

PUSHBUTTON SWITCHES - ILLUMINATED

## L16 (PILOT INDICATOR)

**R1**

ROUND

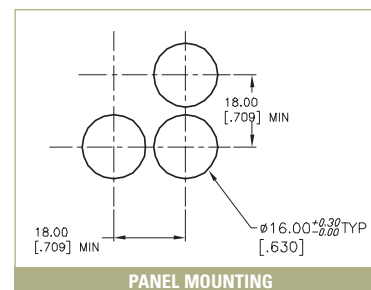
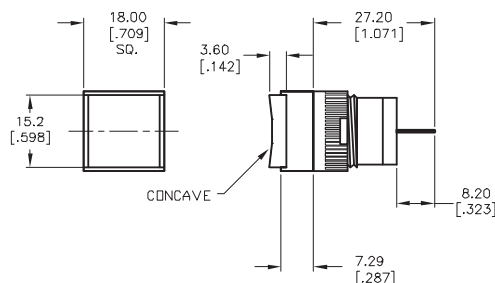


PANEL MOUNTING

## L16 (PILOT INDICATOR)

**S1**

SQUARE

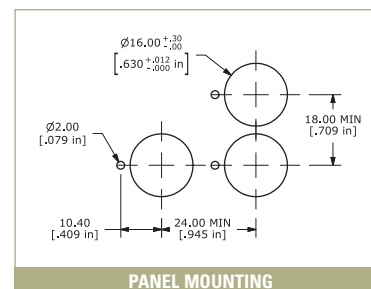
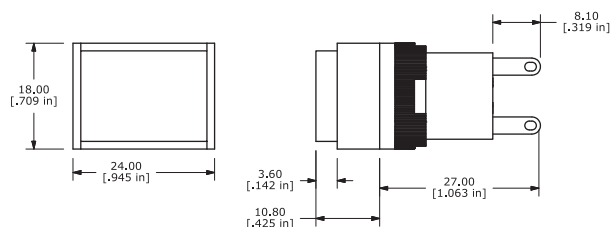


PANEL MOUNTING

## L16 (PILOT INDICATOR)

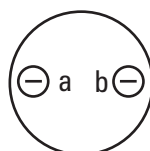
**T1**

RECTANGULAR

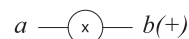


PANEL MOUNTING

BOTTOM VIEW



SCHEMATIC





# SERIES D16, P16, L16 SWITCHES

## PUSHBUTTON SWITCHES - ILLUMINATED

### MECHANICAL CONFIGURATION & CIRCUIT OPTIONS

#### 0 PILOT INDICATOR

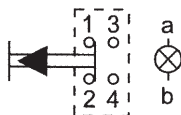
Available 'L16' Pilot Indicator Type



SCHEMATIC

#### 1 SPDT\*\*

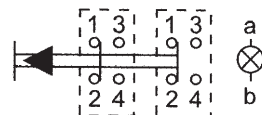
Available for 'P16' Socket Type and 'D16' Solder Lug



SCHEMATIC

#### 2 DPDT

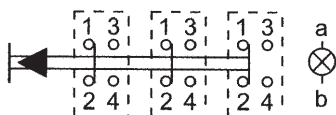
Available for 'D16' Solder Lug



SCHEMATIC

#### 3 3PDT

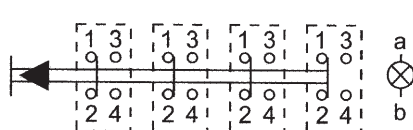
Available for 'D16' Solder Lug



SCHEMATIC

#### 4 4PDT

Available for 'D16' Solder Lug



SCHEMATIC

#### Mechanical Configuration Code

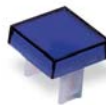
|    |                  |
|----|------------------|
| EE | Latching         |
| OA | Momentary        |
| PL | Pilot Indicator* |

\*'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 |

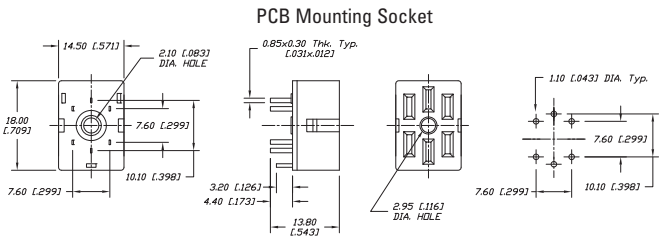
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| ILLUSTRATION                                                                                                                                                              | CATEGORY                                          | DESCRIPTION                                                                                                                                                                 | 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 |

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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