

# ALCOSWITCH PUSH BUTTON SWITCH IPE SERIES, LED HOLDERS AND CONTACT BLOCKS

---

## INTRODUCTION

TE Connectivity (TE)'s ALCOSWITCH push button switch IPE series offers a versatile range of high-quality switches designed to meet the diverse needs of various industries. Available in both illuminated and non-illuminated versions, these switches are equipped with flush head and extended head.

## FEATURES

- Available in illuminated/non-illuminated
- Snap mounting for compact contact blocks
- Stackable design for contact block
- Electrical life >500,000 and mechanical life >1,000,000 Cycles
- Inbuilt LVGP (Low Voltage Glow Protection)
- Passes surge test 2 kV & HV test of 1.5 kV
- IP 65 rated



## APPLICATIONS

- Industrial control panels
- Automotive and transportation
- Aerospace and defense
- Medical equipment
- Consumer electronics
- Telecommunications
- Marine applications



## APPROVALS

- RoHS directive 2002/95/E compliant
- REACH compliant and Pb free
- UL E303778



# ALCOSWITCH PUSH BUTTON SWITCH IPE SERIES

## TYPICAL PERFORMANCE CHARACTERISTICS

|                      | Flush Head<br>(Non-illuminated)                                                   | Flush Head<br>(illuminated)                                                       | Extended Head<br>(Non-illuminated)                                                  | Extended Head<br>(illuminated)                                                      |
|----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                      |  |  |  |  |
| Function type        | Push                                                                              |                                                                                   |                                                                                     |                                                                                     |
| Degree of protection | IP65                                                                              |                                                                                   |                                                                                     |                                                                                     |
| Actuating force      | 350 gmf                                                                           |                                                                                   |                                                                                     |                                                                                     |
| Contact material     | N/A                                                                               |                                                                                   |                                                                                     |                                                                                     |
| Housing material     | Polyamide/Nylon                                                                   |                                                                                   |                                                                                     |                                                                                     |
| Collar               | ABS                                                                               |                                                                                   |                                                                                     |                                                                                     |
| Lens cap             | PC (polycarbonate)                                                                |                                                                                   |                                                                                     |                                                                                     |
| Life expectancy      | Min. 1 Million Cycles                                                             |                                                                                   |                                                                                     |                                                                                     |

| Compatible contact blocks/LED holders |                               |
|---------------------------------------|-------------------------------|
| Contact blocks/LED holders            | Ref. <a href="#">Page 5-8</a> |

## DIMENSIONS (Unit:mm)

### Flush Head (Illuminated/ Non-illuminated)

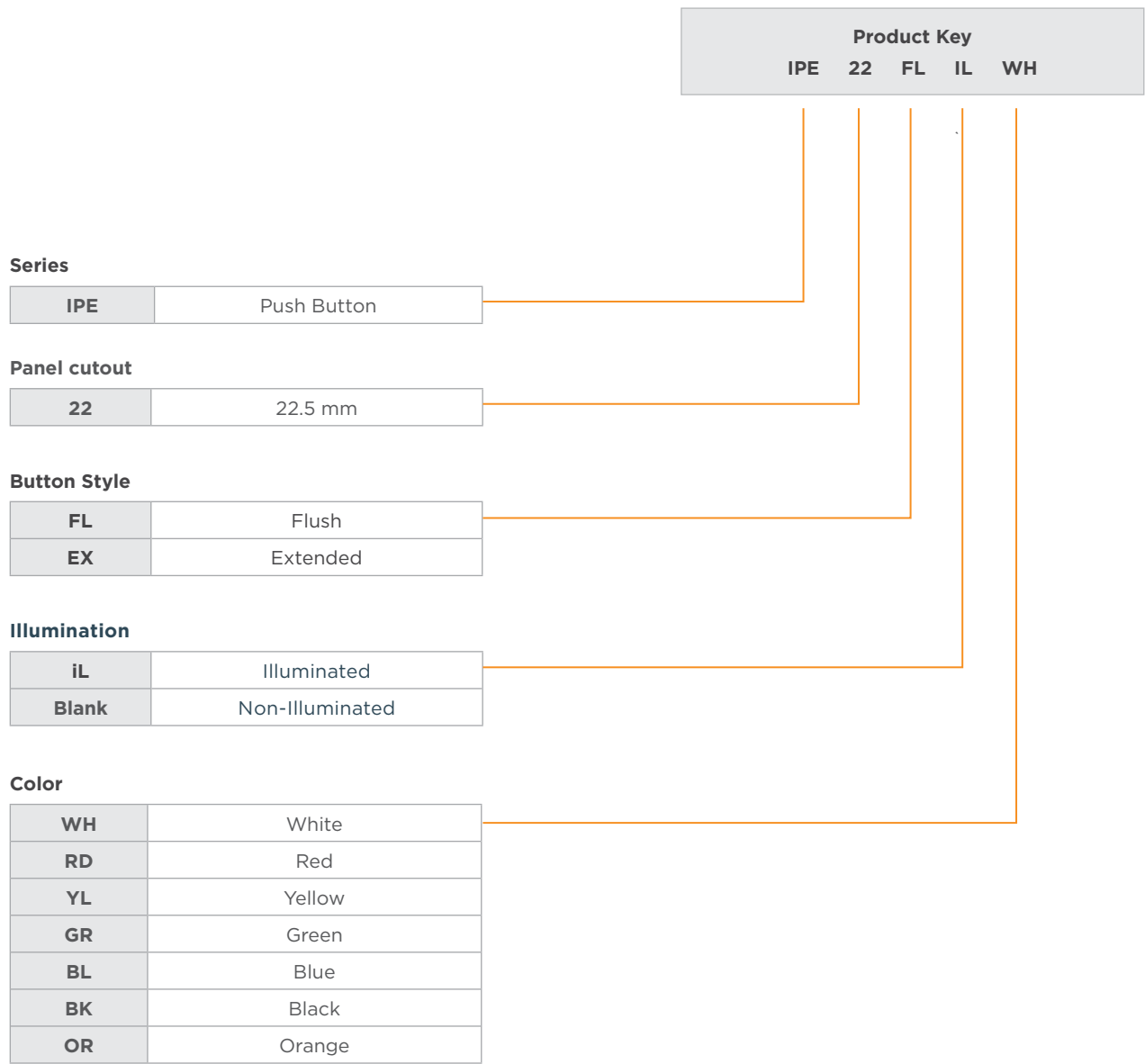


### Extended Head (Illuminated/ Non-illuminated)



# ALCOSWITCH PUSH BUTTON SWITCH IPE SERIES

## PRODUCT CODE STRUCTURE



## ALCOSWITCH PUSH BUTTON SWITCH IPE SERIES

### PRODUCT INFORMATION - FLUSH HEAD

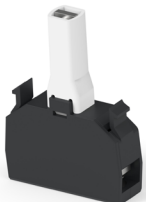
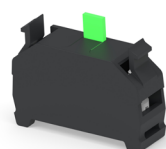
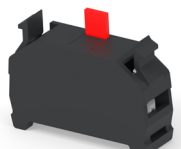
| Description                          | Illumination | Actuator Color | TE Smart Part Number | TE Part Number              |
|--------------------------------------|--------------|----------------|----------------------|-----------------------------|
| Push button flush red                | No           | Red            | IPE22FLRD            | <a href="#">2492672-1</a>   |
| Push button flush green              | No           | Green          | IPE22FLGR            | <a href="#">2492672-2</a>   |
| Push button flush yellow             | No           | Yellow         | IPE22FLYL            | <a href="#">2492672-3</a>   |
| Push button flush blue               | No           | Blue           | IPE22FLBL            | <a href="#">2492672-4</a>   |
| Push button flush black              | No           | Black          | IPE22FLBK            | <a href="#">2492672-5</a>   |
| Push button flush white              | No           | White          | IPE22FLWH            | <a href="#">2492672-6</a>   |
| Push button flush orange             | No           | Orange         | IPE22FLOR            | <a href="#">2492672-7</a>   |
| Illuminated push button flush red    | Yes          | Red            | IPE22FLILRD          | <a href="#">2492672-8</a>   |
| Illuminated push button flush green  | Yes          | Green          | IPE22FLILGR          | <a href="#">2492672-9</a>   |
| Illuminated push button flush yellow | Yes          | Yellow         | IPE22FLILYL          | <a href="#">1-2492672-0</a> |
| Illuminated push button flush blue   | Yes          | Blue           | IPE22FLILBL          | <a href="#">1-2492672-1</a> |
| Illuminated push button flush white  | Yes          | White          | IPE22FLILWH          | <a href="#">1-2492672-2</a> |
| Illuminated push button flush orange | Yes          | Orange         | IPE22FLILOR          | <a href="#">1-2492672-3</a> |

### PRODUCT INFORMATION - EXTENDED HEAD

| Description                             | Illumination | Actuator Color | TE Smart Part Number | TE Part Number              |
|-----------------------------------------|--------------|----------------|----------------------|-----------------------------|
| Push button extended red                | No           | Red            | IPE22EXRD            | <a href="#">2492673-1</a>   |
| Push button extended green              | No           | Green          | IPE22EXGR            | <a href="#">2492673-2</a>   |
| Push button extended yellow             | No           | Yellow         | IPE22EXYL            | <a href="#">2492673-3</a>   |
| Push button extended blue               | No           | Blue           | IPE22EXBL            | <a href="#">2492673-4</a>   |
| Push button extended black              | No           | Black          | IPE22EXBK            | <a href="#">2492673-5</a>   |
| Push button extended white              | No           | White          | IPE22EXWH            | <a href="#">2492673-6</a>   |
| Push button extended orange             | No           | Orange         | IPE22EXOR            | <a href="#">2492673-7</a>   |
| Illuminated push button extended red    | Yes          | Red            | IPE22EXILRD          | <a href="#">2492673-8</a>   |
| Illuminated push button extended green  | Yes          | Green          | IPE22EXILGR          | <a href="#">2492673-9</a>   |
| Illuminated push button extended yellow | Yes          | Yellow         | IPE22EXILYL          | <a href="#">1-2492673-0</a> |
| Illuminated push button extended blue   | Yes          | Blue           | IPE22EXILBL          | <a href="#">1-2492673-1</a> |
| Illuminated push button extended white  | Yes          | White          | IPE22EXILWH          | <a href="#">1-2492673-2</a> |
| Illuminated push button extended orange | Yes          | Orange         | IPE22EXILOR          | <a href="#">1-2492673-3</a> |

## ALCOSWITCH LED HOLDERS AND CONTACT BLOCKS

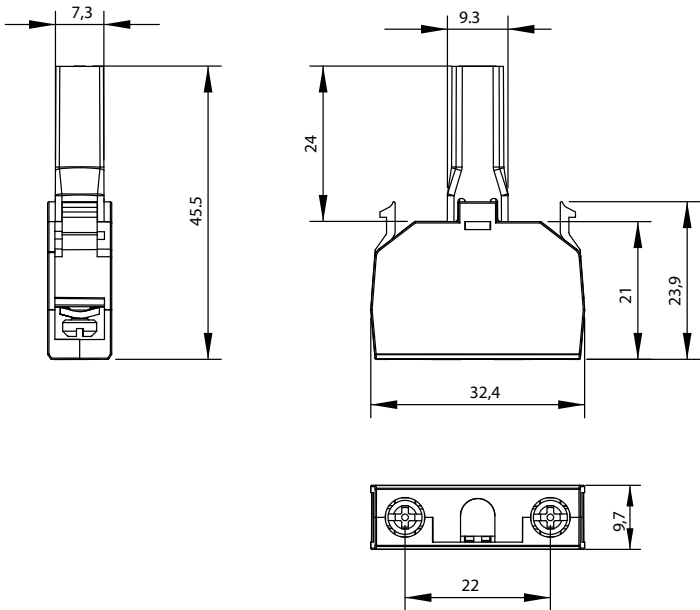
### PERFORMANCE CHARACTERISTICS

|                                         |            | LED Holder                                                                                              | Contact Block- NO                                                                          | Contact Block - NC                                                                  |
|-----------------------------------------|------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                         |            |                        |          |  |
| Rated voltage                           |            | 12 V AC/DC, 24 V AC/DC, 240 V AC                                                                        | 230 V AC                                                                                   |                                                                                     |
| Rated current                           |            | -                                                                                                       | AC15 - 6 A, AC12 - 10 A,<br>(IEC60947-5-1)                                                 |                                                                                     |
| Operating voltage                       |            | -20% to +10% of rated voltage                                                                           | -                                                                                          |                                                                                     |
| Rated insulation voltage                |            | -                                                                                                       | 600 V AC                                                                                   |                                                                                     |
| Type of LED                             |            | Side View SMD LED's                                                                                     | -                                                                                          |                                                                                     |
| Available colors                        |            | Red / Green / Yellow /<br>Orange / Blue / White                                                         | -                                                                                          |                                                                                     |
| Life cycle                              | Electrical | LED - 100,000 burning hours                                                                             | @ Rated current 10 A, 500,000 Operations                                                   |                                                                                     |
|                                         | Mechanical | -                                                                                                       | 1,000,000 Operations                                                                       |                                                                                     |
| Operating frequency                     |            | 50 / 60 Hz                                                                                              | 50 / 60 Hz                                                                                 |                                                                                     |
| Actuating force                         |            | -                                                                                                       | 350 gmf                                                                                    |                                                                                     |
| Operating temperature                   |            | -25 °C ~ 65 °C                                                                                          | -30 °C ~ 60 °C                                                                             |                                                                                     |
| Storage temperature                     |            | -30 °C ~ 70 °C                                                                                          | -25 °C ~ 70 °C                                                                             |                                                                                     |
| Wire termination capacity               |            | 0.5mm², 1.5 - 2.5 mm²                                                                                   | -                                                                                          |                                                                                     |
| Terminal torque                         |            | 0.8 Nm                                                                                                  | -                                                                                          |                                                                                     |
| LVGP (Low Voltage<br>Glow Protection)   |            | Available                                                                                               | -                                                                                          |                                                                                     |
| Surge test                              |            | 2 KV                                                                                                    | -                                                                                          |                                                                                     |
| mV drop @ 16A                           |            | -                                                                                                       | 200 mV max. (Initial value)                                                                |                                                                                     |
| Insulation resistance                   |            | -                                                                                                       | 100 MΩ min. (@500 VDC)                                                                     |                                                                                     |
| Recommended tightening torque           |            | -                                                                                                       | 0.8 Nm                                                                                     |                                                                                     |
| Terminals                               |            | -                                                                                                       | Suitable for flexible or solid conductors from<br>1x0.5 sq.mm ~ 2x1.5 sq.mm or 1x2.5 sq.mm |                                                                                     |
| HV Test for 60 sec.                     |            | 1.5 KV                                                                                                  | 1.5 KV (all terminals shorted together and body)                                           |                                                                                     |
| Degree of protection                    |            | Above Panel : IP65, For<br>Terminals : IP20                                                             | Terminals : IP20                                                                           |                                                                                     |
| Contact material                        |            | Ag-Ni                                                                                                   |                                                                                            |                                                                                     |
| Terminal details                        |            | Terminal LH - Brass with silver plating<br>Terminal RH - Brass with silver plating<br>Screw washer type |                                                                                            |                                                                                     |
| Polymer details (base<br>material only) |            | Housing - polyamide/ nylon<br>Housing cover - polyamide/ nylon<br>Housing cap - PC (polycarbonate)      | Housing - polyamide /nylon<br>Cover - polyamide /nylon<br>Slide - polyamide                |                                                                                     |

# ALCOSWITCH LED HOLDERS AND CONTACT BLOCKS

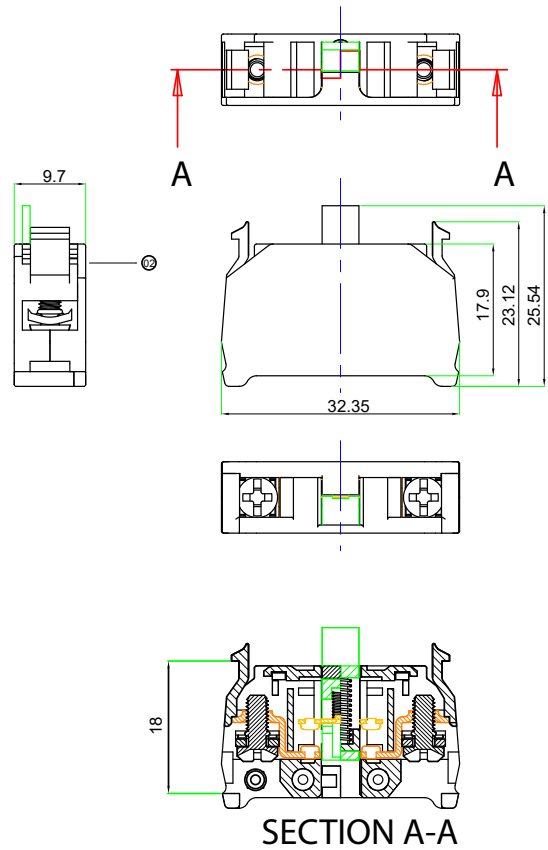
## DIMENSIONS (Unit:mm)

### LED Holder



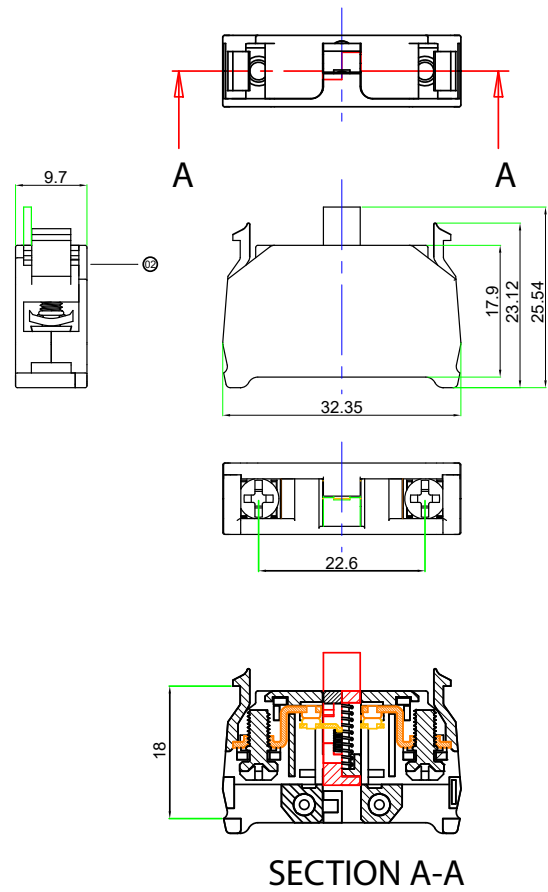
Tolerance:  $\pm 0,5$  mm

### Contact Block - NO



Tolerance:  $\pm 0,5$  mm

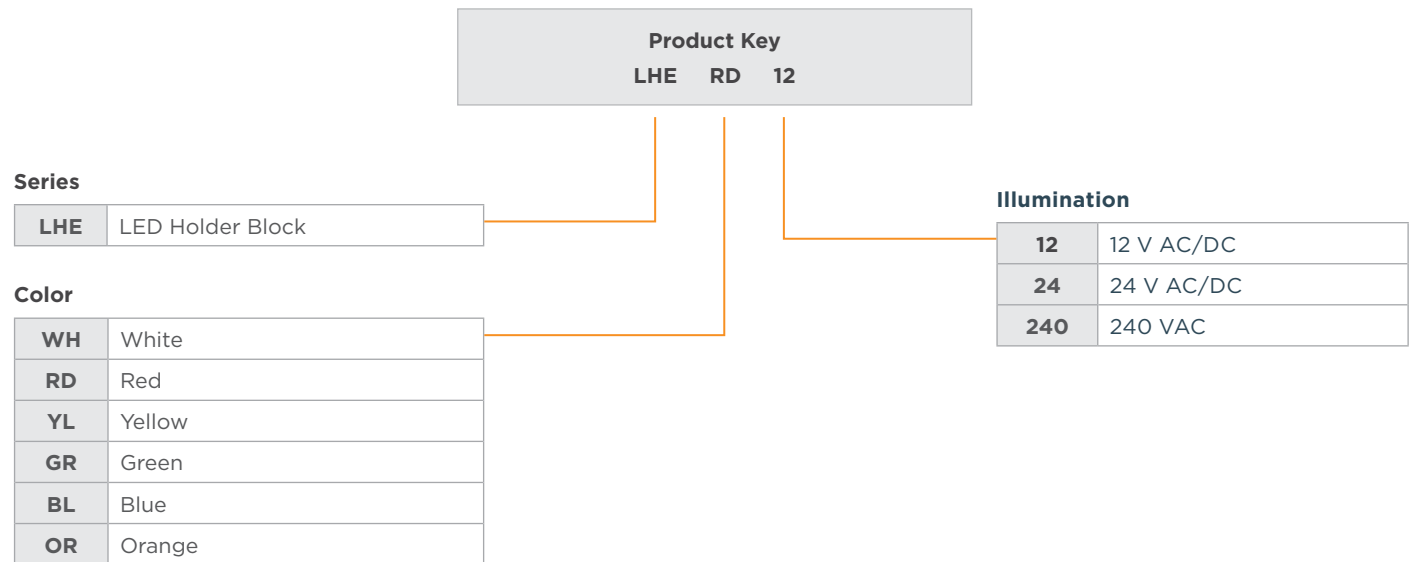
### Contact Block - NC



Tolerance:  $\pm 0,5$  mm

## ALCOSWITCH LED HOLDERS AND CONTACT BLOCKS

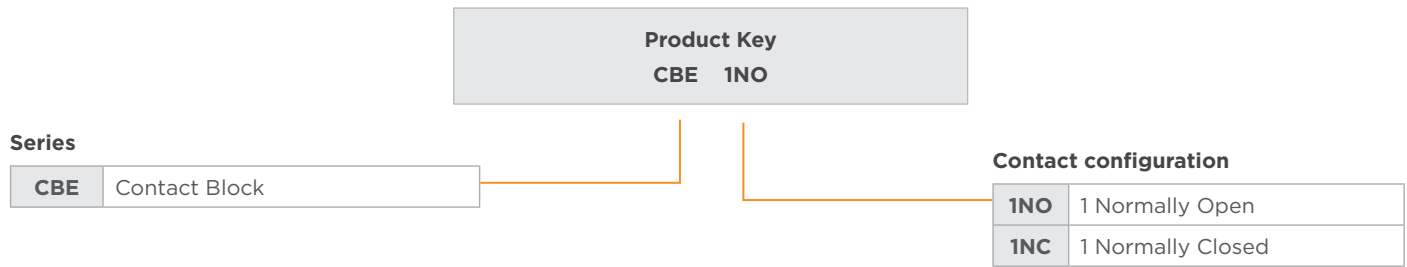
### PRODUCT CODE STRUCTURE - LED HOLDER



### PRODUCT INFORMATION - LED HOLDER

| TE Smart Part Number | Description                 | LED Color | TE Part Number              |
|----------------------|-----------------------------|-----------|-----------------------------|
| LHERD240             | LED holder red 240 VAC      | Red       | <a href="#">2492721-1</a>   |
| LHEGR240             | LED holder green 240 VAC    | Green     | <a href="#">2492721-2</a>   |
| LHEYL240             | LED holder yellow 240 VAC   | Yellow    | <a href="#">2492721-3</a>   |
| LHEBL240             | LED holder blue 240 VAC     | Blue      | <a href="#">2492721-4</a>   |
| LHEWH240             | LED holder white 240 VAC    | White     | <a href="#">2492721-5</a>   |
| LHEOR240             | LED holder orange 240 VAC   | Orange    | <a href="#">2492721-6</a>   |
| LHERD24              | LED holder red 24 VAC/DC    | Red       | <a href="#">2492721-7</a>   |
| LHEGR24              | LED holder green 24 VAC/DC  | Green     | <a href="#">2492721-8</a>   |
| LHEYL24              | LED holder yellow 24 VAC/DC | Yellow    | <a href="#">2492721-9</a>   |
| LHEBL24              | LED holder blue 24 VAC/DC   | Blue      | <a href="#">1-2492721-0</a> |
| LHEWH24              | LED holder white 24 VAC/DC  | White     | <a href="#">1-2492721-1</a> |
| LHEOR24              | LED holder orange 24 VAC/DC | Orange    | <a href="#">1-2492721-2</a> |
| LHERD12              | LED holder red 12 VAC/DC    | Red       | <a href="#">1-2492721-3</a> |
| LHEGR12              | LED holder green 12 VAC/DC  | Green     | <a href="#">1-2492721-4</a> |
| LHEYL12              | LED holder yellow 12 VAC/DC | Yellow    | <a href="#">1-2492721-5</a> |
| LHEBL12              | LED holder blue 12 VAC/DC   | Blue      | <a href="#">1-2492721-6</a> |
| LHEWH12              | LED holder white 12 VAC/DC  | White     | <a href="#">1-2492721-7</a> |
| LHEOR12              | LED holder orange 12 VAC/DC | Orange    | <a href="#">1-2492721-8</a> |

PRODUCT CODE STRUCTURE - CONTACT BLOCK



PRODUCT INFORMATION - CONTACT BLOCK

| TE Smart Part Number | Description        | TE Part Number |
|----------------------|--------------------|----------------|
| CBE1NO               | 1 NO contact block | 2492669-1      |
| CBE1NC               | 1 NC contact block | 2492669-2      |

te.com

©2024 TE Connectivity Ltd. All Rights Reserved.

ALCOSWITCH, TE Connectivity, TE connectivity (logo) and Every Connection Counts are trademarks owned or licensed by the TE Connectivity Ltd. family of companies. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this document, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any changes to the information contained herein without prior notice. TE Connectivity assumes only those obligations set forth in the terms and conditions for this product and shall in no event be liable for any incidental, indirect, or consequential damages arising out of the sale, resale, use, or misapplication of the product. TE expressly disclaims any implied warranties with respect to the information contained herein, including, but not limited to, implied warranties of merchantability or fitness for a particular purpose. Dimensions, specifications and/or information contained herein are for reference purposes only and are subject to change without notice. Consult TE for the latest dimensions, specifications and/or information. Users of TE Connectivity products must make their own assessment as to whether the respective product is suitable for the respective desired application.

09/24 ED



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[IPE22EXYL](#) [2492673-3](#)