Piezo Switch Prolonged Signal

Blue ring illumination
Multicolor variant
with wires (stranded)
PSE 30 RI RGB

PSE 30 RI red

PSE 30 RI green

See below:
**Approvals and Compliances**

## Description

- Available in version Standard, lettered, with Point Illumination or Ring Illumination
- RGB, RGY: flexible input voltage from 5 - 28 VDC at constant brightness
- With color combination RGB and RGY
- 7 possible colors with RGB configuration
- 3 possible colors with RGY configuration Assembly by mounting with nut
- Pins / Wire / Crimp Terminal male / Cable with Faston

## Unique Selling Proposition

- Variety of design options regarding size, colour, shape, connection or lettering
- High reliability, long lifetime with more than 20 mill. actuations
- Easy to clean due to a tightly closed surface (IP 69K)
- With RGB or RGY ring illumination

## Characteristics

- Housing material types: aluminum or stainless steel, ring illuminated version additionally made of polyamide
- Piezo switch for a longer switching signal duration
- For use in harsh environments, both indoors and outdoors (see technical data)

## Other versions on request

- Switch with short switching pulse, type: PSE NO
- Switch for explosion proof applications, type: PSE EX
- Switch with enhanced vandal proof protection, type: PSE HI

## References

Alternative: Other diameter
Alternative: switch normal operation: PSE with cable; PSE NO 16; PSE NO 19; PSE NO 22; PSE NO 24; PSE NO 27; PSE NO 30

## Weblinks

pdf data sheet, html datasheet, General Product Information, CAD-Drawings, Product News, Detailed request for product, Microsite

## Technical Data

| **Electrical Data** | |
|---|---|
| Switching Function | momentary |
| Supply Voltage | 24 VDC Ring Illumination 24 VDC Point Illumination |
| | 5 VDC and 12 VDC variants on request (MOQ 500 pieces) |
| Supply Voltage RGB | 5 - 28 VDC |
| Switching Voltage | max. 32 / 48 VAC/DC |
| Switching current | max. 1 A |
| Electrical Rating | 10 W |
| Lifetime | 20 million actuations at Rated Switching Capacity |
| Switch Resistance OFF | > 10 MΩ |
| Switch Resistance ON | < 1 Ω |
| Capacity | 30 pF |
| N.O. Closing Impulse Duration | min. 15 sec depending on actuating force, time and speed. Longer impulse time up to min. 50 sec available on request. |
| Contact Configuration | free polarity |
| **RGB Illumination** | |
| Current Consumtion (max per color) | 16.5 mA @ 5 VDC |
| | 8.2 mA @ 12 VDC |
| | 5.5 mA @ 24 VDC |
| | 4.8 mA @ 28 VDC |

| **Mechanical Data** | |
|---|---|
| Actuating Force | ≤ 3 N at centric actuation |
| Actuating Travel | 0.002 mm |
| Shock Protection | IK02 |
| Mounting screw torque | 2.5 Nm |
| **Climatical Data** | |
| Operating Temperature | -20 to 60 °C |
| Storage Temperature | -20 to 60 °C |
| IP-Protection | IP67 acc. to IEC 60529, IP69K acc. to DIN 40050-9 |
| Environmental Assessment | +55°C / 93% r.h. acc. to DIN EN 60068-2-30 |
| Salt Spray Test (acc. to DIN 50021-SS) | 24 h / 48 h / 96 h Residence Time |
| **Material** | |
| Housing (depending on type) | Stainless Steel, Aluminum anodized |
| Actuating Area / Insert (with Ring Illumination) | Stainless Steel, Aluminum anodized |
| Illuminated Ring (Ring Illumination) | Polyamide |

## Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in Details about Approvals

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

## Application standards

Application standards where the product can be used

| Organization | Design | Standard | Description |
|---|---|---|---|
| | Suitable for applications acc. | EMC Directive: | EMC directive 2014/30/EU |
| | Suitable for applications acc. | MIL-STD: | 202F Method 107G, 202F Method 204D, 202F Method 213B, 416D Method RS103, 810E Method 501.3, 810E Method 502.3, 810E Method 507.3 |
| VDE | Suitable for applications acc. | VDE Certificate Number: | DIN EN 61000-4-2, DIN EN 61000-4-4, DIN EN 61000-4-5 |
| IEC | Suitable for applications acc. | IEC/UL 62368-1 | Audio/video, information and communication technology equipment - Part 1: Safety requirements |

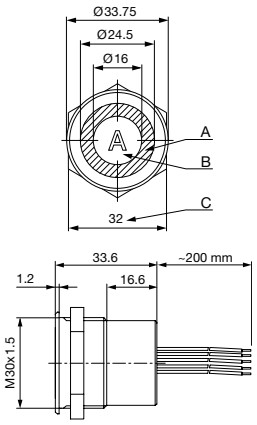
## Compliances

The product complies with following Guide Lines

| Identification | Details | Initiator | Description |
|---|---|---|---|
| RoHS COMPLIANT | RoHS | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863 |
| REACH | REACH | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force. |

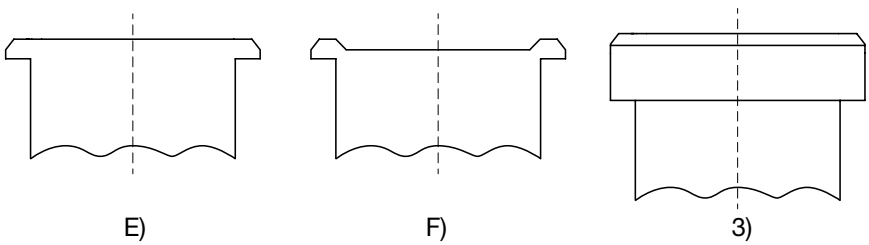
## Dimension [mm]

PSE 30 RI




Version available on request

Design actuating area



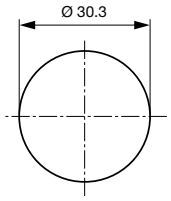
Legend:
A = Illumination Area
B = Actuating Area
C = Width Across Flats
I = Crimp Terminal male 6.3 x 0.8
PI = Point Illumination
RI = Ring Illumination

Lettering:
- either with/without lettering
- position of the connections with respect to the position of the lettering is not defined

F) with finger guidance
E) without finger guidance
3) elevated front design: M19 (standard, others on request)

## Dimension

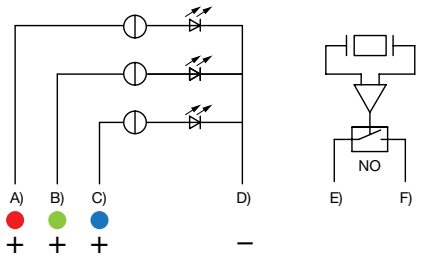
PSE M30 RGB




Drilling diagram

## Diagrams

PSE M22 / M30 RI RGB

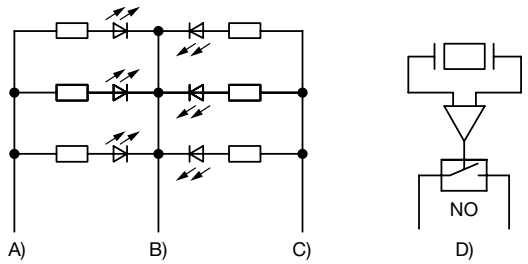



A) Cable 1 (color of the LED), Supply voltage
B) Cable 2 (color of the LED), Supply voltage
C) Cable 3 (color of the LED), Supply voltage
D) Cable 4 (black), Common mass
E) Cable 5/6 (white), Input and output PSE switch
F) Cable 5/6 (white), Input and output PSE switch

Illumination options for RGB

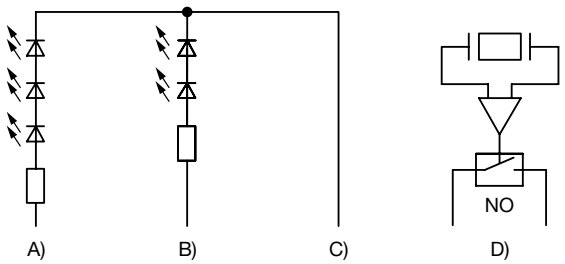
| Lighting type | Active terminal A) ● | Active terminal B) ● | Active terminal C) ● | Resulting Color |
|---|---|---|---|---|
| Multicolor Singlecolor | A | | | Red ● |
| Multicolor Singlecolor | | B | | Green ● |
| Multicolor Singlecolor | | | C | Blue ● |
| Multicolor RGB Additive 2 | A | B | | Yellow ● |
| Multicolor RGB Additive 2 | A | | C | Magenta ● |
| Multicolor RGB Additive 2 | | B | C | Cyan ● |
| Multicolor RGB Additive 3 | A | B | C | White ○ |

PSE M24 RI / PSE M27 RI / PSE M30 RI, 5 V




A) Cable 1 (color of the LEDs), Supply voltage first LED group
B) Cable 2 (black), Common mass of both LED groups
C) Cable 3 (color of the LEDs), Supply voltage second LED group
D) Cable 4 and 5 (white), Input and output PSE switch

PSE M24 RI / PSE M27 RI / PSE M30 RI, 12/24 V

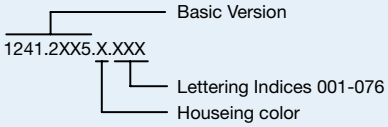



A) Cable 1 (color of the LEDs), Supply voltage first LED group
B) Cable 3 (color of the LEDs), Supply voltage second LED group
C) Cable 2 (black), Common mass of both LED groups
D) Cable 4 and 5 (white), Input and output PSE switch

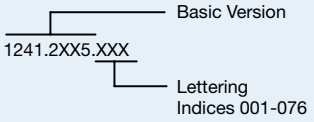
## Marking

| The last three digits in the order number define the lettering: | |
|---|---|
| 001-076 | Standard Lettering |
| 101- | Customized Lettering |

**Lettering - Aluminium / Plastic Material**




**Lettering - Stainless Steel**




## Order Index Lettering

| Laser Marking | | | |
|---|---|---|---|
| 001 =**A** | 021 =**U** | 041 =÷ | 061 =**EIN** |
| 002 =**B** | 022 =**V** | 042 = ✳ | 062 =**AUS** |
| 003 =**C** | 023 =**W** | 043 ==**=** | 063 =**AUF** |
| 004 =**D** | 024 =**X** | 044 = # | 064 =**AB** |
| 005 =**E** | 025 =**Y** | 045 = ↔ | 065 =**ON** |
| 006 =**F** | 026 =**Z** | 046 = ↕ | 066 =**OFF** |
| 007 =**G** | 027 =**0** | 047 = → | 067 =**UP** |
| 008 =**H** | 028 =**1** | 048 = ← | 068 =**DOWN** |
| 009 =**I** | 029 =**2** | 049 = ↓ | 069 =**HIGH** |
| 010 =**J** | 030 =**3** | 050 = ↑ | 070 =**LOW** |
| 011 =**K** | 031 =**4** | 051 = % | 071 =**ON/OFF** |
| 012 =**L** | 032 =**5** | 052 = √ | 072 =**START** |
| 013 =**M** | 033 =**6** | 053 =**CTRL** | 073 =**RESET** |
| 014 =**N** | 034 =**7** | 054 =**RETURN** | 074 =2023-04-18 |
| 015 =**O** | 035 =**8** | 055 =**SHIFT** | 075 =2023-04-18 |
| 016 =**P** | 036 =**9** | 056 =**LOCK** | 076 =2023-04-18 |
| 017 =**Q** | 037 =**+** | 057 =**STOP** | 077 =2023-04-18 |
| 018 =**R** | 038 =**-** | 058 =**ENTER** | |
| 019 =**S** | 039 =**.** | 059 =**BACK** | |
| 020 =**T** | 040 = x | 060 =**LINE** | |
| Please note that the font size depends on the number of characters | | | |

## Lettering Colour of Laser Lettering

| **Material** | **Lettering Colour** | | |
|---|---|---|---|
| Stainless Steel | black | Filled letters | |
| Aluminum natural anodized | light grey | Filled letters | (only after customer approval) |
| Aluminum coloured anodized | light grey | Filled letters | |

## All Variants

| Mounting Diameter | Terminal | Housing Material, Torsion Protection | Colour of Housing | Actuator area | Illumination, LED | Config. Code | Order Number |
|---|---|---|---|---|---|---|---|
| 30 | Flexible wire | Stainless Steel ,no | - | F | RI dotted, red / green, 5 - 28 VDC | PSE M 30 IV RI | 1241.3058 |
| 30 | Flexible wire | Stainless Steel ,no | - | E | RI homogeneous, RGB, 5 - 28 VDC | PSE M 30 IV RI | 3-104-254 |

Nut with gasket are enclosed in the box.

Other mounting diameters, materials, colors, connections, supply voltages possible available on request.
Special materials e.g. Marine grade stainless steel for use in salt and chlorinated environment on request.

The MOQ for standard laser lettering on standard variants is a packing unit.

5 VDC and 12 VDC RI variants on request (MOQ 500 pieces)

Availability for all products can be searched real-time:https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER

Legend:

Type: PSE

NO = normaly open

IV = prolonged signal

RU = PI = Point Illumination

RI = Ring Illumination

LE = Lettered

K = Plastics

Alu = Aluminium

ES = Stainless steel

F = Finger guidance

E = without finger guidance

**Packaging unit** 10 in box with insert or packed in air cushion bags

- Actuating elements in ESD safe packaging
- Screw nuts and sealing O-ring in a bag (enclosed in the box)

## Accessories

| | Description |
|---|---|
|  | Connecting_Terminal_PSE<br>Connecting Terminal |
|  | Power_Supply<br>Power Supply IP42 for LED- and Illumination applications indoor 90~264 VAC => 24 VDC 0.34 A 8 W |

17.08.2023