

Piezo Switch Prolonged Signal



Piezo Switch with prolonged impulse  
 Standard version  
 Non-illuminated  
 PSE M22 IV



Multicolor  
 Blue ring illumination  
 PSE M22 RI RGB

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: Other diameter [PSE IV 30](#)

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                      | 12 / 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                                                                                                         |
| <b>RGB Illumination</b>             |                                                                                                                       |
| Current Consumption (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 |
|  | Suitable for applications acc. | VDE Certificate Number: | DIN EN 61000-4-2, DIN EN 61000-4-4, DIN EN 61000-4-5                                                                             |
|  | Suitable for applications acc. | IEC/UL 62368-1          | Audio/video, information and communication technology equipment - Part 1: Safety requirements                                    |

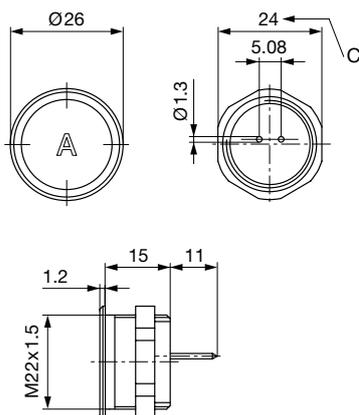
### Compliances

The product complies with following Guide Lines

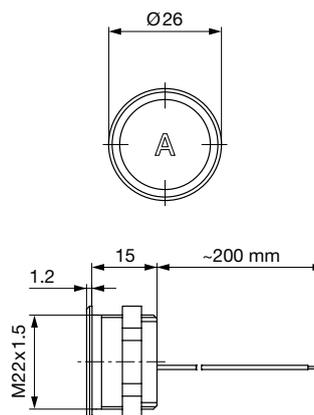
| Identification                                                                     | Details                                        | Initiator   | Description                                                                                                                                                                                           |
|------------------------------------------------------------------------------------|------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <a href="#">CE declaration of conformity</a>   | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
|   | <a href="#">UKCA declaration of conformity</a> | SCHURTER AG | The UKCA marking declares that the product complies with the applicable requirements laid down in the British Amendment of Regulation (EC) 765/2008.                                                  |
|  | RoHS                                           | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863                                                                                                                                                    |
|  | 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 22 with Pins

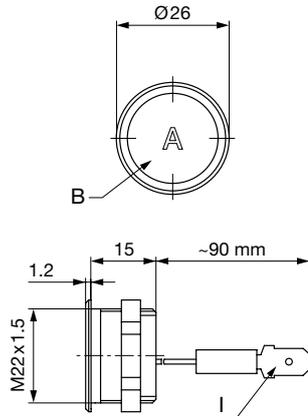


PSE M22 with Wire



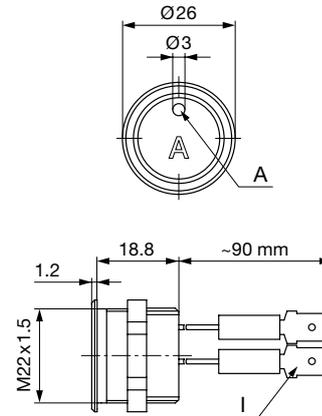
Version available on request

PSE M22 with Crimp Terminal male

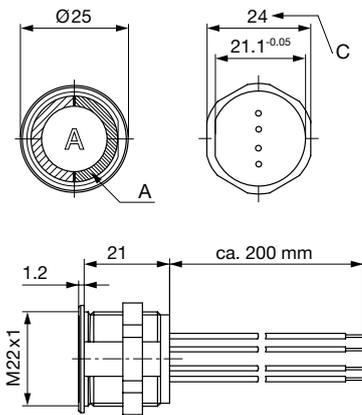


Version available on request

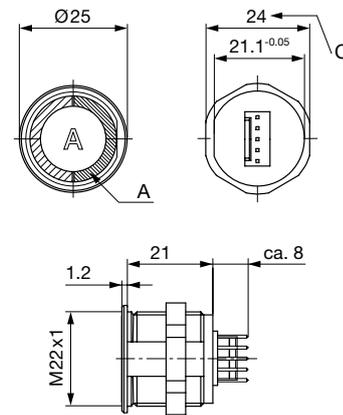
PSE M22 PI with Crimp Terminal male



PSE M22 RI with Wires

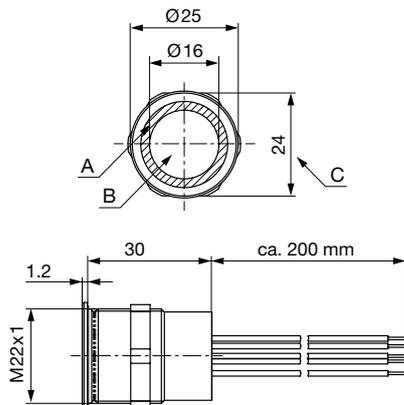


PSE M22 RI with Plug Connector

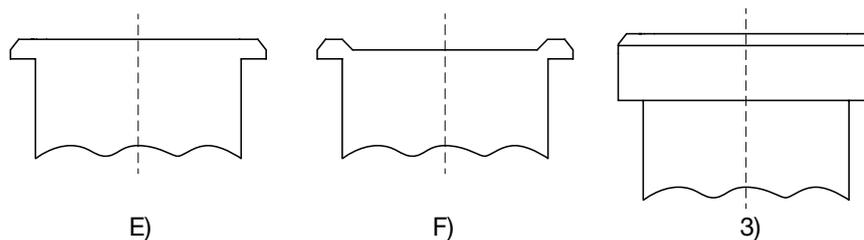


Version available on request

PSE M22 RI RGB with wires



Design actuating area



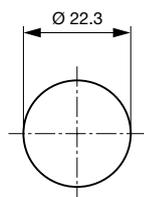
Legend:  
 A = Illumination Area  
 B = Actuating Area  
 C = Width Across Flats  
 I = Crimp Terminal male 6.3 x 0.8  
 PI = Point Illumination  
 RI = Ring Illumination

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)

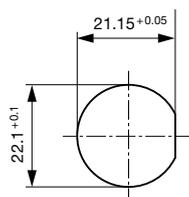
**Dimension**

PSE 22 RGB



Drilling diagram

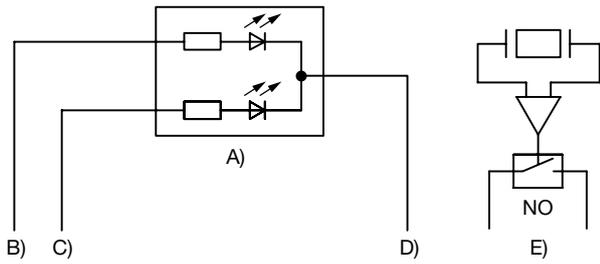
PSE M22 RI (excl. RGB)



Drilling diagram

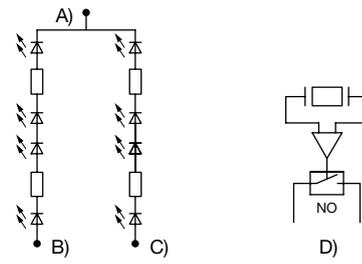
Diagrams

PSE PI



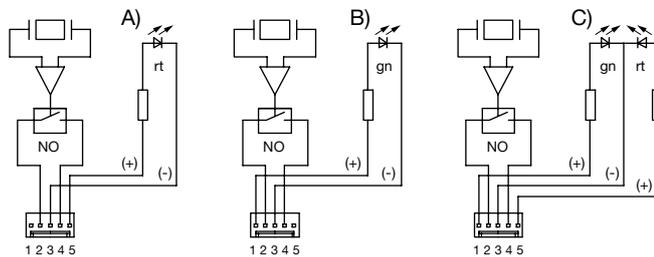
- A) Double-LED (2 colors, 3 pins) or simple LED (2 pins)
- B) Cable 1 (color 1 of the LED), Supply voltage
- C) Cable 2 (color 2 of the LED), Supply voltage
- D) Cable 3 (black), Mass
- E) Cable 4 and 5 (white), input and output PSE switch

PSE M22 RI with Wires, 12/24 V



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

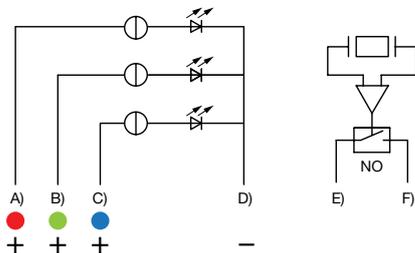
PSE M22 RI with Quick Connect Terminal, 12/24 V



- A) Illuminated red
- B) Illuminated green
- C) Illuminated red/green

| Lighting type          | Active terminal A) <span style="color: red;">●</span> | Active terminal B) <span style="color: green;">●</span> | Active terminal C) <span style="color: yellow;">●</span> | Resulting Color                              |
|------------------------|-------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|----------------------------------------------|
| Multicolor Singlecolor | A                                                     |                                                         |                                                          | Red <span style="color: red;">●</span>       |
| Multicolor Singlecolor |                                                       | B                                                       |                                                          | Green <span style="color: green;">●</span>   |
| Multicolor Singlecolor |                                                       |                                                         | C                                                        | Yellow <span style="color: yellow;">●</span> |

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) <span style="color: red;">●</span> | Active terminal B) <span style="color: green;">●</span> | Active terminal C) <span style="color: blue;">●</span> | Resulting Color                                |
|---------------------------|-------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|------------------------------------------------|
| Multicolor Singlecolor    | A                                                     |                                                         |                                                        | Red <span style="color: red;">●</span>         |
| Multicolor Singlecolor    |                                                       | B                                                       |                                                        | Green <span style="color: green;">●</span>     |
| Multicolor Singlecolor    |                                                       |                                                         | C                                                      | Blue <span style="color: blue;">●</span>       |
| Multicolor RGB Additive 2 | A                                                     | B                                                       |                                                        | Yellow <span style="color: yellow;">●</span>   |
| Multicolor RGB Additive 2 | A                                                     |                                                         | C                                                      | Magenta <span style="color: magenta;">●</span> |
| Multicolor RGB Additive 2 |                                                       | B                                                       | C                                                      | Cyan <span style="color: cyan;">●</span>       |
| Multicolor RGB Additive 3 | A                                                     | B                                                       | C                                                      | White <span style="color: white;">○</span>     |

Marking

The last three digits in the order number define the lettering:

|         |                      |
|---------|----------------------|
| 001-076 | Standard Lettering   |
| 101-    | Customized Lettering |

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                                |

**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 =       |
| 015 =O        | 035 =8  | 055 =SHIFT  | 075 =       |
| 016 =P        | 036 =9  | 056 =LOCK   | 076 =       |
| 017 =Q        | 037 =+  | 057 =STOP   | 077 =       |
| 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

**Variants**

| Mounting Diameter | Terminal      | Housing Material, Torsion Protection | Colour of Housing | Actuator area | Illumination, LED               | Config. Code   | Order Number |
|-------------------|---------------|--------------------------------------|-------------------|---------------|---------------------------------|----------------|--------------|
| 22                | Flexible wire | Aluminum ,yes                        | Alu natural       | E             | RI dotted, green, 24 VDC        | PSE M 22 IV RI | 1241.3334    |
| 22                | Flexible wire | Aluminum ,yes                        | Alu natural       | E             | RI dotted, red / green, 24 VDC  | PSE M 22 IV RI | 1241.3335    |
| 22                | Flexible wire | Stainless Steel ,no                  | ES natural        | E             | RI homogeneous, RGB, 5 - 28 VDC | PSE M 22 IV RI | 3-100-525    |
| 22                | Flexible wire | Aluminum ,no                         | Alu natural       | F             | non-illuminated                 | PSE M 22 IV    | 1241.3998    |

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/info-center/support-tools/stock-check-distributors>

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](#)  
Connecting Terminal



[Power\\_Supply](#)  
Power Supply IP42 for LED- and Illumination applications indoor 90~264 VAC => 24 VDC 0.34 A 8 W