

Piezo Switch N.O.



Point Illumination

PSE M22 PI



RI dotted green

PSE M22 RI

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 or 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
- With RGB or RGY ring illumination

See below:

Approvals and Compliances

Characteristics

- Housing material types: aluminum or stainless steel, ring illuminated version additionally made of polyamide
- For use in harsh environments, both indoors and outdoors (see technical data)

Other versions on request

- switch for longer switching signal duration, type: PSE IV
- Switch for explosion proof applications, type: PSE EX
- Switch with enhanced vandal proof protection, type: PSE HI

References

- Alternative: switch vandal improved: [PSE HI 22](#)
- Alternative: switch for EX proved applications: [PSE EX 16](#); [PSE EX 19](#); [PSE EX 22](#)
- Alternative: Other diameter
- Alternative: switch with prolonged signal: [PSE AE 16](#); [PSE AE 30](#); [PSE IV 19](#)

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. 42 / 60 VAC/DC |
| Switching Current | max. 100 mA |
| Electrical Rating | 1 W |
| Lifetime | 20 million actuations at Rated Switching Capacity |
| Switch Resistance OFF | > 10 MΩ |
| Switch Resistance ON | < 20Ω actuated (Ta = 25°C) |
| Capacity | 5 nF |
| N.O. Closing Impulse Duration | 20- 1000 ms depending on actuating force, time and speed |
| Contact Configuration | free polarity |
| RGB Illumination | |
| 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 ambient temperature |
| Actuating Travel | 0.002 mm |
| Shock Protection | IK 02 |
| Mounting screw torque | 2.5 Nm |

Climatical Data

| | |
|--|---|
| Operating Temperature | -40 to 85 °C |
| Storage Temperature | -40 to 85 °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 |
|--|--------------------------------|----------------|--|
|  | Designed for applications acc. | IEC/UL 62368-1 | IEC 62368-1 includes the basic requirements for safety of audio, video, information technology and office equipment. |

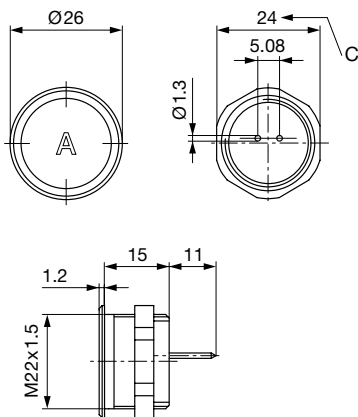
Compliances

The product complies with following Guide Lines

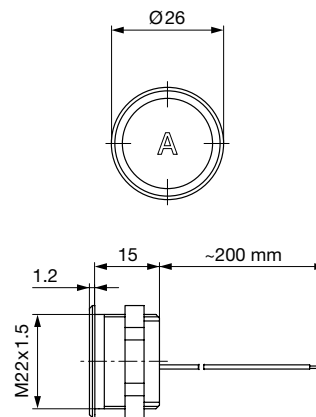
| Identification | Details | Initiator | Description |
|--|---------|-------------|---|
|  | RoHS | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863 |
|  | REACH | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction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

Dimension [mm]

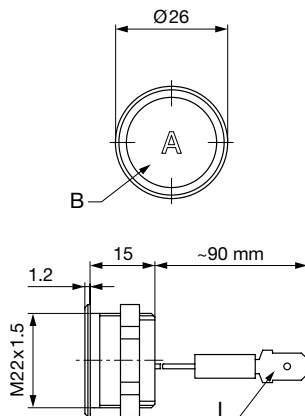
PSE M22 with Pins



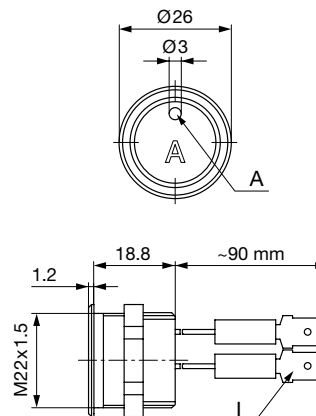
PSE M22 with Wire



PSE M22 with Crimp Terminal male



PSE M22 PI with Crimp Terminal male

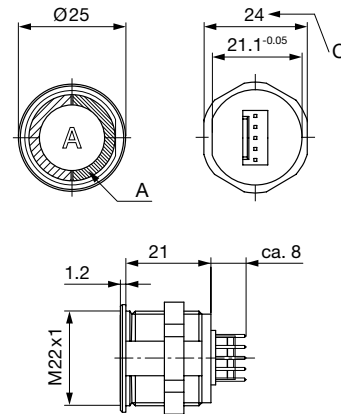


Version available on request

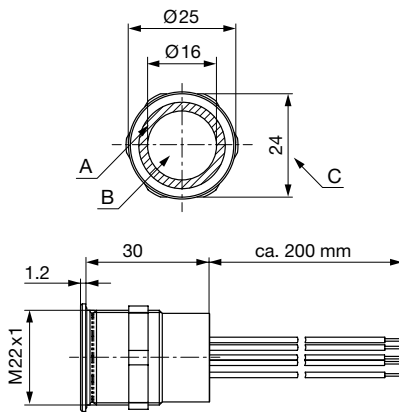
PSE M22 RI with Wires



PSE M22 RI with Plug Connector



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

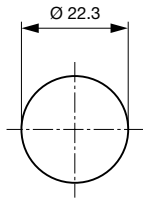
Lettering:

- 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)

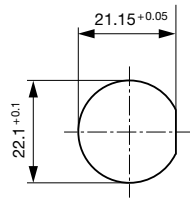
Dimension

PSE M22 (incl. RGB)



Drilling diagram

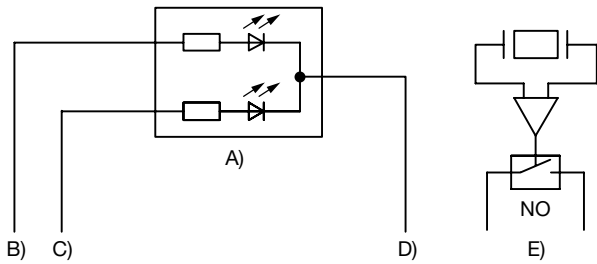
PSE M22 RI (excl. RGB)



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

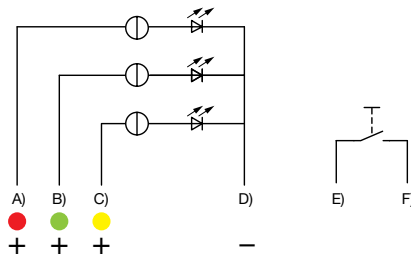
PSE M22 RI with Quick Connect Terminal, 12/24 V



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

PI = point illumination
 RI = ring illumination

PSE M22 / M30 RI RGY

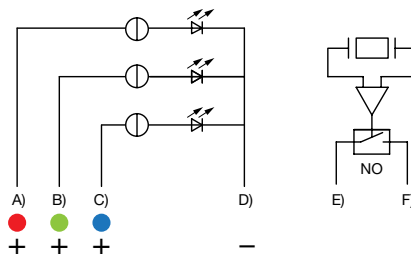


- A) Cable (color of the LED), Supply voltage
- B) Cable (color of the LED), Supply voltage
- C) Cable (color of the LED), Supply voltage
- D) Cable (black), Common mass
- E) Cable (white), Input and output MCS switch
- F) Cable (white), Input and output MCS switch

Illumination options for RGY

| Lighting type | Active terminal A) ● | Active terminal B) ● | Active terminal C) ● | Resulting Color |
|------------------------|---|---|--|--|
| Multicolor Singlecolor | A | | | Red ● |
| Multicolor Singlecolor | | B | | Green ● |
| Multicolor Singlecolor | | | C | Yellow ● |

PSE M22 / M24 / M27 / 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

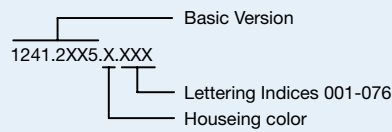
| Lighting type | Active terminal A) ● | Active terminal B) ● | Active terminal C) ● | Resulting Color |
|---------------------------|---|---|--|--|
| Multicolor Singlecolor | A | | | Red ● |
| Multicolor Singlecolor | | B | | Green ● |
| Multicolor Singlecolor | | | C | Blue ● |
| Multicolor RGB Additive 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 ○ |

Lettering

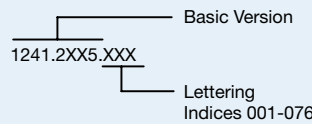
The last three digits in the order number define the lettering:

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

Lettering - Aluminium / Plastic Material



Lettering - Stainless Steel



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 =⓪ |
| 018 =R | 038 =- | 058 =ENTER | |
| 019 =S | 039 =. | 059 =BACK | |
| 020 =T | 040 =x | 060 =LINE | |

All Variants

| Mounting Diameter | Terminal | Housing Material, Torsion Protection | Colour of Housing | Actuator area | Illumination, LED | Config. Code | Order Number |
|-------------------|---------------|--------------------------------------|-------------------|---------------|-----------------------------------|----------------|-----------------------------|
| 22 | Flexible wire | Stainless Steel ,no | - | F | non-illuminated | PSE M 22 NO | 1241.3004 |
| 22 | Flexible wire | Stainless Steel ,no | - | E | Point Illumination, green, 24 VDC | PSE M 22 NO PI | 1241.3594.M |
| 22 | Flexible wire | Aluminum ,yes | Alu natural | F | RI dotted, blue, 24 VDC | PSE M 22 NO RI | 1241.3413 |
| 22 | Flexible wire | Aluminum ,yes | Alu natural | E | RI dotted, green, 24 VDC | PSE M 22 NO RI | 1241.3257 |
| 22 | Flexible wire | Aluminum ,yes | Alu natural | E | RI dotted, red / green, 24 VDC | PSE M 22 NO RI | 1241.3258 |

| 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, red, 24 VDC | PSE M 22 NO RI | 1241.3256 |
| 22 | Flexible wire | Aluminum ,no | Alu natural | F | RI homogeneous, RGB, 5 - 28 VDC | PSE M 22 NO RI | 1241.3663 |
| 22 | Flexible wire | Aluminum ,no | Alu natural | F | RI homogeneous, RGY, 5 - 28 VDC | PSE M 22 NO RI | 1241.3664 |
| 22 | Flexible wire | Stainless Steel ,no | - | E | RI homogeneous, RGB, 5 - 28 VDC | PSE M 22 NO RI | 1241.3669 |
| 22 | Plug Connector | Aluminum ,yes | Alu natural | E | RI dotted, green, 24 VDC | PSE M 22 NO RI | 1241.3260 |
| 22 | Plug Connector | Aluminum ,yes | Alu natural | E | RI dotted, red / green, 24 VDC | PSE M 22 NO RI | 1241.3261 |
| 22 | Plug Connector | Aluminum ,yes | Alu natural | E | RI dotted, red, 24 VDC | PSE M 22 NO RI | 1241.3259 |
| 22 | Quick Connect Terminal | Aluminum ,no | Alu natural | F | Point Illumination, blue, 24 VDC | PSE M 22 NO PI | 1241.3244.M |
| 22 | Quick Connect Terminal | Aluminum ,no | Alu natural | F | Point Illumination, green, 24 VDC | PSE M 22 NO PI | 1241.3089.M |
| 22 | Quick Connect Terminal | Aluminum ,no | Alu natural | F | Point Illumination, red, 24 VDC | PSE M 22 NO PI | 1241.3020.M |
| 22 | Quick Connect Terminal | Aluminum ,no | red | F | Point Illumination, red, 24 VDC | PSE M 22 NO PI | 1241.3166.M |
| 22 | Quick Connect Terminal | Aluminum ,no | Alu natural | F | Point Illumination, yellow, 24 VDC | PSE M 22 NO PI | 1241.3047.M |
| 22 | Pins | Aluminum ,no | red | F | non-illuminated | PSE M 22 NO | 1241.3005 |
| 22 | Pins | Aluminum ,no | green | F | non-illuminated | PSE M 22 NO | 1241.3006 |
| 22 | Pins | Aluminum ,no | black | F | non-illuminated | PSE M 22 NO | 1241.3007 |
| 22 | Pins | Aluminum ,no | Alu natural | F | non-illuminated | PSE M 22 NO | 1241.3008 |
| 22 | Pins | Stainless Steel ,no | - | F | non-illuminated | PSE M 22 NO | 1241.3075 |

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)

Most Popular.

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

Legend:

Type: PSE

NO = normally 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 rings 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

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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