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

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.

Approvals

Approval Reference Type:

Approval Logo	Certification Body	Description
		DGUV Test Certificate: FW 11040 Requirements for Food Processing Equipment

Application standards
Application standards where the product can be used

| Organization	Design	Standard	Description
	Designed for applications acc.	EMC:	EMC directive 2004/108/EWG
	Designed for applications acc.	MIL-STD Certificate Number:	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	Designed for applications acc.	VDE Certificate Number:	DIN EN 61000-4-2, DIN EN 61000-4-4, DIN EN 61000-4-5
IEC	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

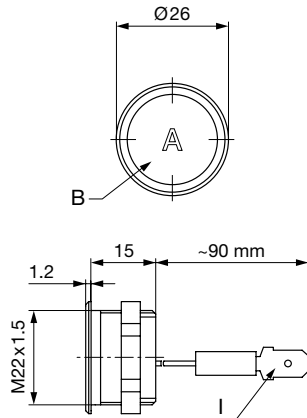| Identification	Details	Initiator	Description
RoHS COMPLIANT	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
REACH	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH")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

Dimension [mm]
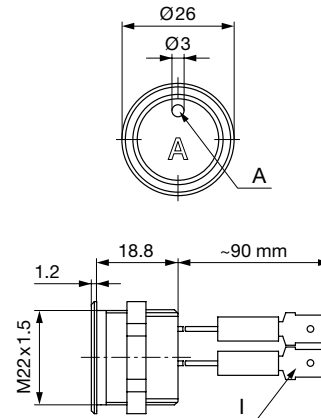PSE M22 with Pins   PSE M30 with cable PUR
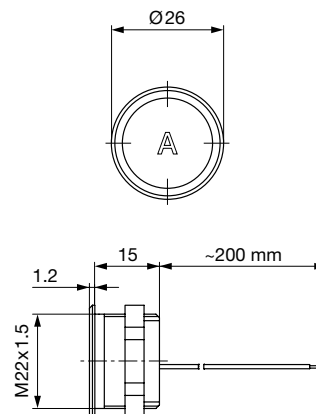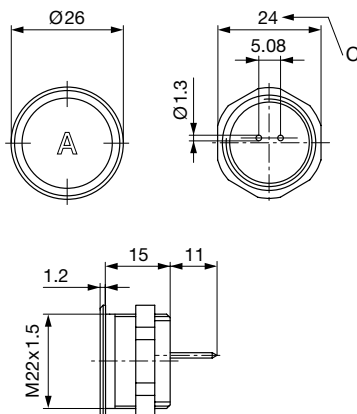
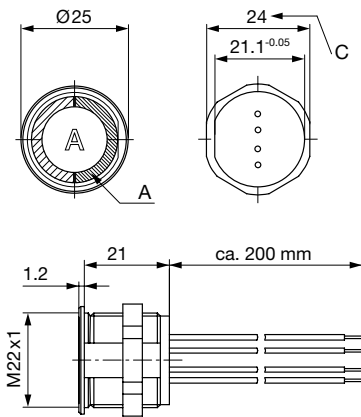Version available on request

PSE M22 with Crimp Terminal male

Ø26

A

B

15   ~90 mm

1.2

M22x1.5

I

Version available on request

PSE M22 RI with Wires

Ø25   24

21.1⁻⁰·⁰⁵   C

A

21   ca. 200 mm

1.2

M22x1

PSE M22 RI RGB with wires

Ø25

Ø16

24

A

B   C

30   ca. 200 mm

1.2

M22x1

PSE M22 PI with Crimp Terminal male

Ø26

Ø3

A

A

18.8   ~90 mm

1.2

M22x1.5

I

PSE M22 RI with Plug Connector

Ø25   24

21.1⁻⁰·⁰⁵   C

A

21   ca. 8

1.2
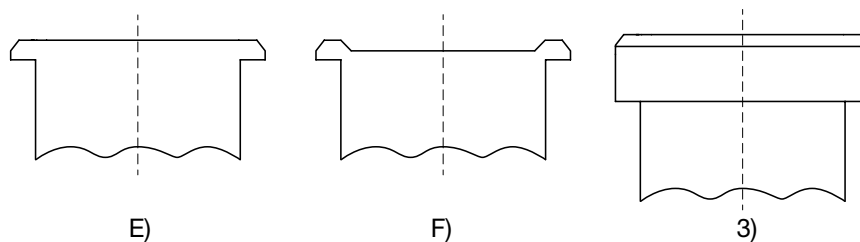
M22x1
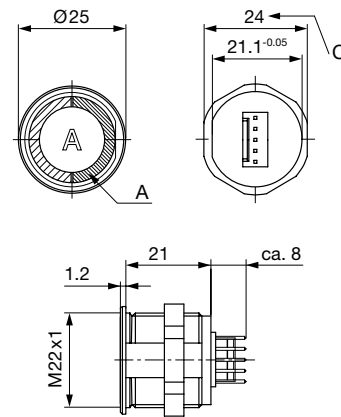
Version available on request
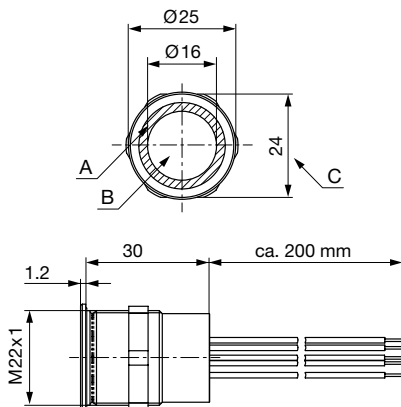
Design actuating area

E) F) 3)

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
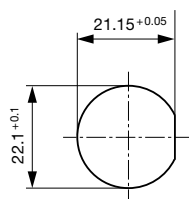3) elevated front design: M19 (standard, others on request)
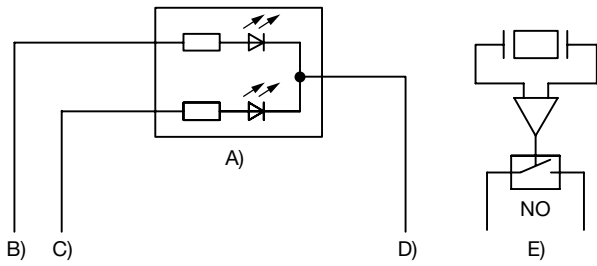
Dimension

PSE M22 RGB

Ø 22.3
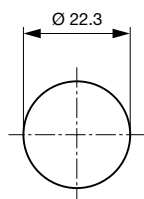
Drilling diagram

PSE M22 RI (excl. RGB)
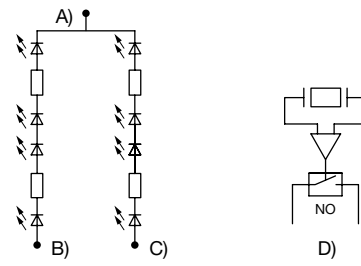
$21.15^{+0.05}$

$22.1^{+0.1}$

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
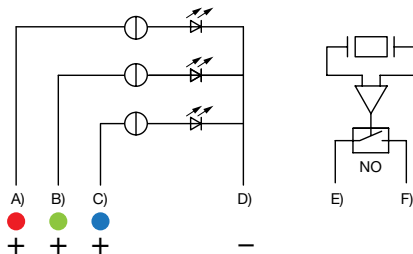D) Cable 3 and 4 (white), Input and output PSE switch

PSE M22 RI with Quick Connect Terminal, 12/24 V
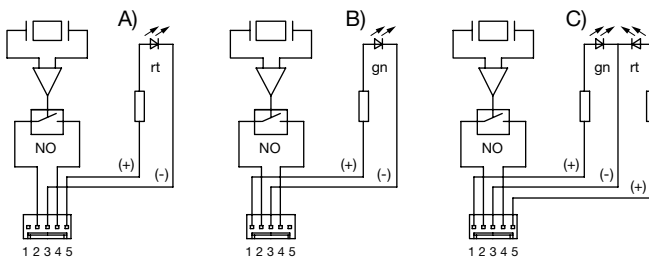
A) Illuminated red
B) Illuminated green
C) Illuminated red/green

Lighting type	Active terminal A) 🔴	Active terminal B) 🟢	Active terminal C) 🟡	Resulting Color	
Multicolor Singlecolor	A			Red	🔴
Multicolor Singlecolor		B		Green	🟢
Multicolor Singlecolor			C	Yellow	🟡

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	⚪

Marking

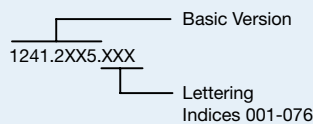| The last three digits in the order number define the lettering:	
001-076	Standard Lettering
101-	Customized Lettering

Lettering - Aluminium / Plastic Material

Basic Version
1241.2XX5.X.XXX
Lettering Indices 001-076
Houseing color
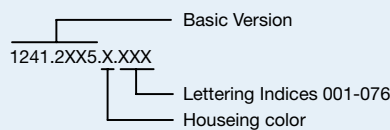
Lettering - Stainless Steel

Basic Version
1241.2XX5.XXX
Lettering Indices 001-076

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

All Variants

Mounting Diameter	Terminal	Housing Material, Torsion Protection	Colour of Housing	Actuator area	Illumination, LED	Config. Code	Order Number
22	Flexible wire	Aluminum ,no	Alu natural	F	non-illuminated	PSE M 22 IV	1241.3998
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

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

Mounting Diameter	Terminal	Housing Material, Torsion Protection	Colour of Housing	Actuator area	Illumination, LED	Config. Code	Order Number

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

14.04.2021