PSE EX 16

Piezo Switch for Explosive Environments



PSE M16 EX

Description

- Piezo switch certified according to ATEX and IECEx
- Assembly by mounting with nut
- Pins, Crimp Terminal male, AMP

Approvals

- EMC: EMC directive 2004/108/EWG
- ATEX Approval Test Report:
  SEV 13 ATEX 0170
  IECEx SEV 13.0011
- ATEX Approval Marking:
  Ex II 2 GD
  Ex ib IIC T6...T5 Gb
  Ex ib IIIC T85°C...T100°C Db
- 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 Certificate Number: DIN EN 61000-4-2, DIN EN 61000-4-4

Characteristics

- Housing material types: aluminum, brass chrome-plated or stainless steel
- High reliability, long lifetime with more than 20 mill. actuations
  Easy to clean due to a tightly closed surface (IP 69K)
- for use in harsh environments, in potentially explosive applications and environments where volatile fumes, gases and dust are present

References

Alternative: Standard version PSE NO 16

Weblinks

html-datasheet, General Product Information, CE declaration of conformity, RoHS, CHINA-RoHS, e-Shop, CAD-Drawings, Product News, Detailed request for product

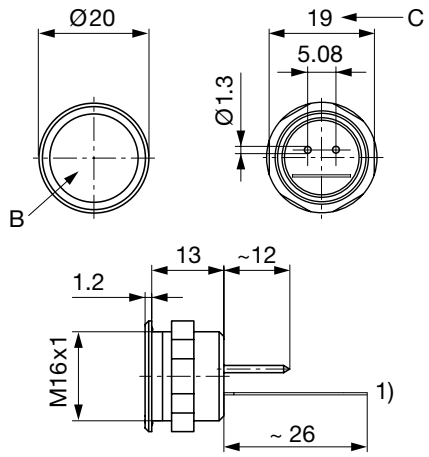
Technical Data

Electrical Data	
Switching Function	N.O.
Switching Voltage	Ui max. 24 / 24 VAC/DC
Switching Current	Ii max. 40 mA
Rated Breaking Capacity (Temperature Class T5/T100°C)	Pi max. 0.96 W
Rated Breaking Capacity (Temperature Class T6/T85°C)	Pi max. 0.7 W
Lifetime	20 million at Rated Switching Capacity
Switch Resistance OFF	> 10 kΩ
Switch Resistance ON	< 20 mΩ
Capacity	5 pF
N.O. Closing Impulse Duration	20- 1000 ms
Contact Configuration	free polarity

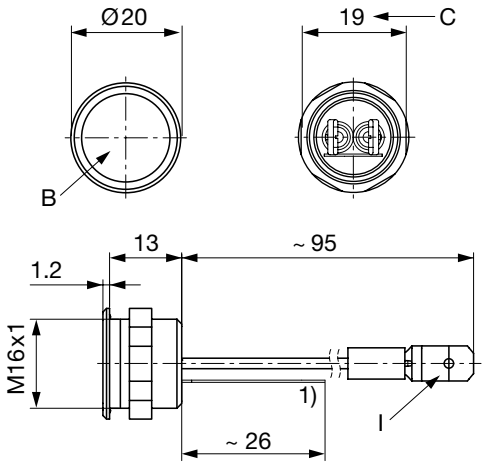
Mechanical Data	
Actuating Force	≤ 3 N at ambient temperature
Actuating Travel	0.002 mm
Shock Protection	IK 02
Tightening Torque	2.5 Nm
Climatical Data	
Operating Temperature	-20 to +60 °C
Storage Temperature	-20 to +60 °C
IP-Protection	IP 67 Front Side submerged (1m water column), IP 69K Front side High Pressure cleaner test, Front Side / Rear Side DIN EN 60068-2-30 Db (Moist heat - air test with 55°C / 93% humidity)
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time
Material	
Housing (depending on type)	Stainless Steel, Aluminium anodized, Polyamide, Chromed Brass

Dimension

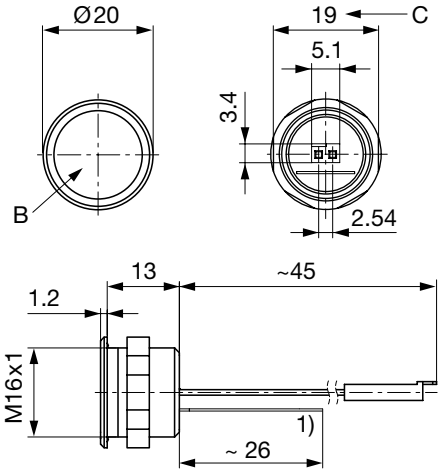
PSE M16 with Pins



PSE M16 with Crimp Terminal male



PSE M16 with AMP

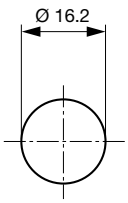


Legend:
1) = Type label
B = Actuating area
C = Width across flats
I = Crimp terminal male 3.6 x 0.8
- Wire (Standard: 0.14 mm² / 200 mm wire-length)
- Pins (with connection terminal 0701.9225)
- AMP

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

Dimension

PSE M16

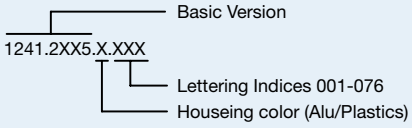


Drilling diagram

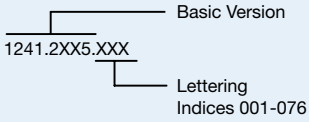
Lettering

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

All Variants

Mounting Diameter [mm]	Terminal	Housing Material	Colour of Housing	Config. Code	Order Number
16	Pins	Aluminum	gold	PSE M 16 EX	1241.2415.1
16	Pins	Aluminum	red	PSE M 16 EX	1241.2415.3
16	Pins	Aluminum	blue	PSE M 16 EX	1241.2415.4
16	Pins	Aluminum	green	PSE M 16 EX	1241.2415.5
16	Pins	Aluminum	black	PSE M 16 EX	1241.2415.7
16	Pins	Aluminum	Alu natural	PSE M 16 EX	1241.2415.8
16	Pins	Stainless Steel	Stainless Steel	PSE M 16 EX	1241.2615

Annotation to the protection type:
- The explosion protected piezo switch element (PSE EX) has the function of a NO (normally open) switch.
- Permissible voltage and current of the PSE EX are limited, so that the PSE EX is intrinsically safe in accordance with EN60079-11 (see Technical Data).
- The use of the PSE EX is permitted in areas where the formation of explosive athmospheres caused by gases, fumes, mist or dust mixing with air occurs occasionally. The explosion protected PSE is classified according to EN 600079-0 in the device group II, category 2.

Attention:
- The permissible operating temperature is - 20°C to 60°C.
- The approval will cease when the type label is removed.
- The switch has to be installed and used according to IEC/EN 60079-14 and IEC/EN 60079-25.

The listed item numbers represent a selection of the range of piezo switches.
Other mounting diameters, materials, colors, connections and symbols are available on request.
Special materials for use in salt and chlorinated environment on request.

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

Packaging unit 10 in cardboard box packed in air cushion bag with instruction manual



- Actuating elements in ESD safe packaging
- Screw nuts and sealing rings in a bag (enclosd in the box)

Accessories

	Description
	Connecting Terminal PSE Connecting Terminal

30.10.2014

The specifications, descriptions and illustrations indicated in this document are based on current information. All content is subject to modifications and amendments. Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability and test each product selected for their own applications.