

Single position switches for standard applications

- Dual-chamber system with IP 67 protection: wear-free membrane with hermetic sealing from plunger mechanism and switch chamber
- Maintenance-free, self-lubricating plunger guide with slide bearing
- Plunger can be rotated in two approach directions

Single position switch with wiper plate

- Increased function security under extreme conditions of use
- Wiper plate prevents plunger from sticking in the guide
- For use in wet areas with strongly adhering media

Switching elements for low-current applications

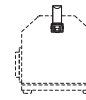
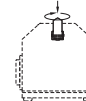
Snap switch elements BSE 73.1 or BSE 74.1 have specially formed gold contacts making them suitable for low currents ≥ 10 mA.

Connection variants

- Thread for cable gland M12x1.5 for series 99, Thread for cable gland M16x1.5 for series 100
- Connector (note permissible operating voltage for the connectors, see page 132).

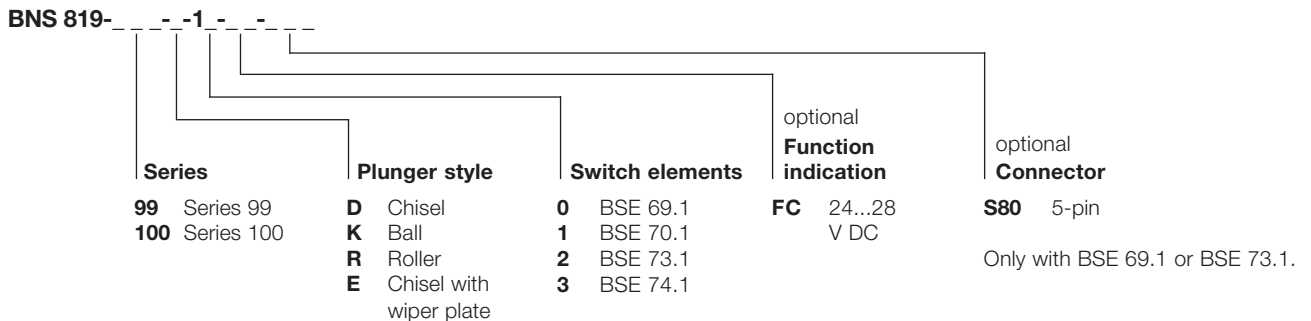
Approach from two directions possible (parallel and diagonally)

Press plunger down and turn to desired direction; release plunger.

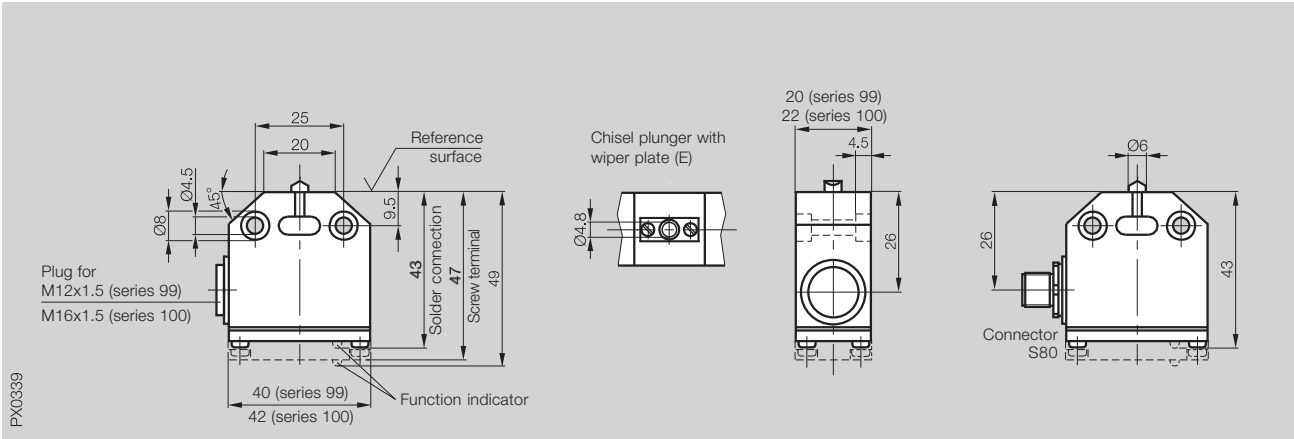


Ordering example:

BNS 819-100-E-12-FC-S80



Type	Single position switch



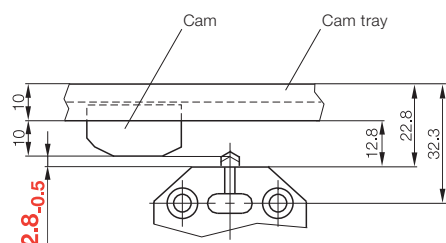
Plunger style	Chisel (D), Ball (K), Roller (R) or Chisel with wiper plate (E)
Plunger material	Stainless steel, contact surfaces induction hardened
Housing material	Cast aluminum, corrosion-resistant, anodized finish
Connection type	Cable gland (M12x1.5 series 99, M16x1.5 series 100) or connector
Ambient temperature range	-5...+85 °C
Degree of protection per IEC 60529	IP 67
Function indicator	LED 24...28 V DC (FC)

With switch element	BSE 69.1	BSE 73.1	BSE 70.1	BSE 74.1
Ordering code	BNS 819-99/100-_-10	BNS 819-99/100-_-12	BNS 819-99/100-_-11	BNS 819-99/100-_-13
Wiring diagram, style				

Switch element				
Contact material	Silver	Gold	Silver	Gold
Switching principle	Snap switch		Snap switch	
Contact system	Single-pole changeover		Single-pole changeover	
Connection type	Solder connection		Screw terminal	
Electrical data	see page 117		see page 117	
Approval	UL, CSA, CCC		UL, CSA, CCC	

Mechanical data				
Plunger point to reference surface	4 mm		4 mm	
Switchpoint to reference surface	3.5 mm		3.5 mm	
Maximum plunger travel	3.5 mm		3.5 mm	
Switching actuating force on plunger	min. 8 N		min. 8 N	
Switching frequency	max. 200/min		max. 200/min	
Approach speed	Plunger D	20 m/min	Plunger D	20 m/min
	Plunger E	10 m/min	Plunger E	10 m/min
	Plunger K	9 m/min	Plunger K	9 m/min
	Plunger R	60 m/min	Plunger R	60 m/min
Repeatability	Plunger D, E	± 0.02 mm	Plunger D, E	± 0.02 mm
	Plunger K	± 0.03 mm	Plunger K	± 0.03 mm
	Plunger R	± 0.05 mm	Plunger R	± 0.05 mm

Installation



Note!
To ensure switching function, the dimension 2.8-0.5 is especially critical.

1.1
Multiple position switches series
100
62
61
72
46
40
Single position switches series
F 60
99
100

5.1
5.2
5.3

