Multiple position switches per DIN 43697 for standard applications

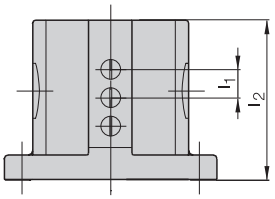
- Dual-chamber system with IP 67 protection: wear-free membrane with hermetic sealing from plunger mechanism and switch chamber
- Maintenance-free, self-lubricating plunger guide with slide bearing

Multiple position switches with anticrystallization plungers

- For use with aggressive, resinifying liquid media
- In dry areas with very fine chip presence

IO-Link

- Simple installation: Standard M12 connectors
- No cable gland needed, factory sealed to IP 67
- Can be connected in seconds
- High diagnostic capability: Parallel processing for normally open/normally closed signals



Available sizes

Number of plungers		2	3	4	5	6	8	10	12
Dimension	l_1 = 12 mm	70	80	90	105	120	140	170	200
l_2 at	l_1 = 16 mm	70	90	105	120	140	170	200	240

dimensions in mm

Ordering example:
BNS 819-D02-D16-100-10-S4R-IO

BNS 819-D_ _-_ _ _-100-10-_ _ _ -IO

No. of plungers

02	2×
03	3×
04	4×
...	

Plunger type

D	Chisel
K	Ball
R	Roller
L	Roller bearing
E	Anticrystallization chisel plunger

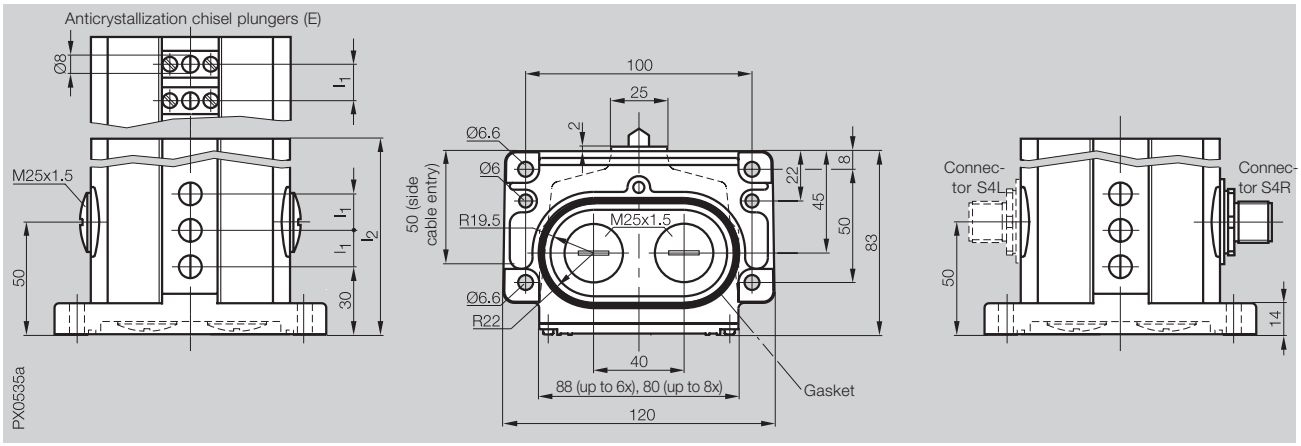
Plunger spacing

12	12 mm
16	16 mm

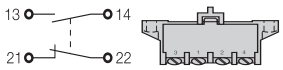
Connector

S4R	5-pin, right side
S4L	5-pin, left side

Type	**Multiple Position Switches Series 100**
Output signal	**IO-Link**
Plunger spacing	12 mm or 16 mm
Mounting and function dimensions	per DIN 43697



Plunger style	Chisel (**D**), ball (**K**), Roller (**R**), roller bearing (**L**) or anticrystallization plungers (**E**)
Plunger material	Stainless steel, contact surfaces induction hardened
Housing material	Cast aluminum, corrosion-resistant, anodized finish
Connection type	M12 connector
Ambient operating temperature	–5...+85 °C
Enclosure rating per IEC 60529	IP 67

With switch element	**BSE 30.0**
Ordering code	BNS ...-100-**10**-...
Wiring diagram, style	

Switch element	
Contact material	Silver, gold plated
Switching principle	Snap switch
Contact system	Dual changeover, one NO and one normally-closed, galvanically isolated
Electrical data	see catalog “The Mechanical Line”

Mechanical data		
Plunger point to reference surface		8 mm
Switchpoint to reference surface		6 mm
Maximum plunger travel D, K, R, L		5,5 mm
Maximum plunger travel E		4 mm
Switching actuating force on plunger		min. 20 N
Switching frequency		max. 300/min
Approach velocity	plunger D	40 m/min
	plunger E	30 m/min
	plunger K	8 m/min
	plunger R	20 m/min
	plunger L	120 m/min
Repeata-bility	plunger D, E, K	±0.002 mm
	plunger R, L	±0.01 mm

IO-Link	
Mode	COM 2
Baud rate	38.4 Kbaud
Parameter	N.O./N.C.

Multiple position switches for standard applications

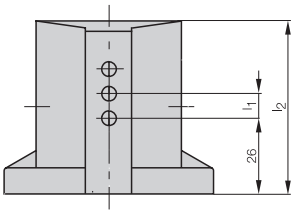
- Smallest plunger spacing for electromechanical multiple position switches (8 mm or 10 mm)
- Dual-chamber system with IP 67 protection: wear-free membrane with hermetic sealing from plunger mechanism and switch chamber
- Maintenance-free, self-lubricating plunger guide with slide bearing

Multiple position switches with anticrystallization plungers

- For use with aggressive, resinifying liquid media
- In dry areas with very fine chip presence

IO-Link

- Simple installation: Standard M12 connectors
- No cable gland needed, factory sealed to IP 67
- Can be connected in seconds
- High diagnostic capability: Parallel processing for normally open/normally closed signals



Available sizes

Number of plungers		2	3	4	5	6	8	10
Dimension l_2 at	l_1 = 8 mm	49	59	64	72	80	96	112
	l_1 = 10 mm	49	59	72	80	89	112	129

dimensions in mm

Ordering example:
BNS 819-B04-D08-46-12-S4R-IO

BNS 819-B_ _-_ _ _-46-12-_ _ _-IO

No. of plungers

02	2×
03	3×
04	4×
...	

Plunger type

D	Chisel
K	Ball
R	Roller
E	Anticrystallization chisel plunger

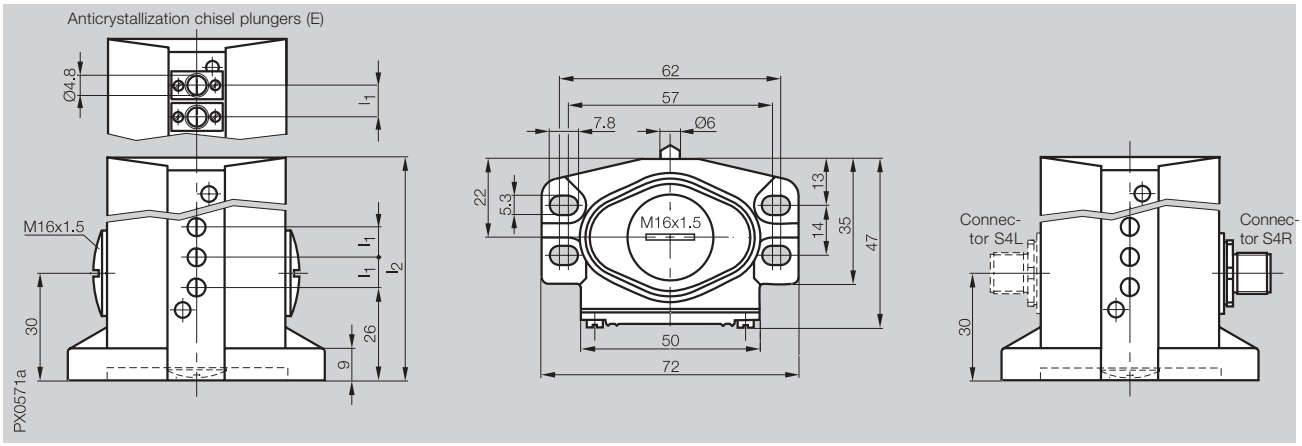
Plunger spacing

08	8 mm
10	10 mm

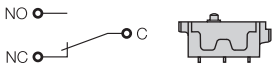
Connector

S4R	5-pin, right side
S4L	5-pin, left side

Type	**Multiple Position Switches Series 46**
Output signal	**IO-Link**
Plunger spacing	8 mm or 10 mm



Plunger style	Chisel (**D**), ball (**K**), roller (**R**) or anticrystallization plungers (**E**)
Plunger material	Stainless steel, contact surfaces induction hardened
Housing material	Cast aluminum, corrosion-resistant, anodized finish
Connection type	M12 connector
Ambient operating temperature	–5...+80 °C
Enclosure rating per IEC 60529	IP 67

With switch element	**BSE 73**
Ordering code	BNS ...-46-1**2**-...
Wiring diagram, style	

Switch element

Contact material	Gold
Switching principle	Snap switch
Contact system	Single-pole changeover
Connection type	Solder connection
Electrical data	see catalog “The Mechanical Line”

Mechanical data

Plunger point to reference surface		4 mm
Switchpoint to reference surface		3.5 mm
Maximum plunger travel		3.5 mm
Switching actuating force on plunger		min. 8 N
Switching frequency		max. 200/min
Approach velocity	plunger D, E	20 m/min (D), 10 m/min (E)
	plunger K	9 m/min
	plunger R	60 m/min
Repeata-bility	Plunger D, E	±0.02 mm
	Plunger K	±0.03 mm
	Plunger R	±0.05 mm

IO-Link

Mode	COM 2
Baud rate	38.4 Kbaud
Parameter	N.O./N.C.