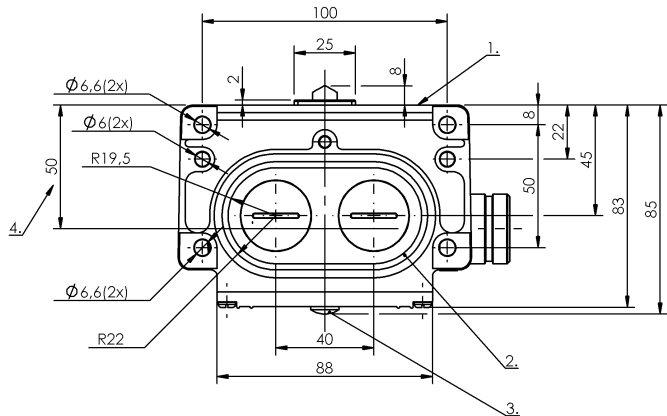
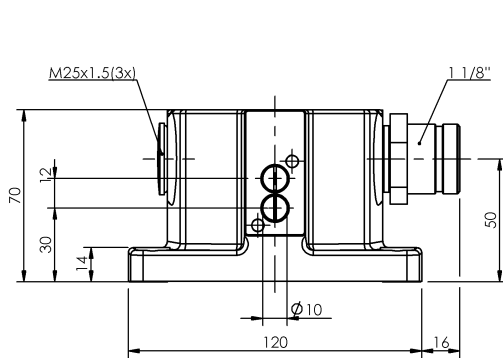


Mechanical Cam Switches  
**BNS 819-D02-D12-100-10-FD-S90R**  
 Order Code: BNS00A5

**BALLUFF**



1) Reference edge, 2) Sealing ring, 3) Function indicator FD/FE/LL, 4) Cable passage



**Basic features**

Approval/Conformity	CE WEEE EAC
Basic standard	IEC 60947-5-1
DIN switch	DIN 43697
Operating principle	1-2. Switch position: Mechanical
Version	Snap contact

**Display/Operation**

Function indicator	1-2. Switch position: FD - 6...60 V
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**Electrical connection**

Connection	1 1/8"-Flange male, 12-pin
Connection type	1. Switch position: Connector

**Electrical data**

Continuous current	1-2. Switch position: 5 A
Rated operating voltage Ue	1-2. Switch position: 6...60 V
Switching function mechanical	Dual changeover One NO and one NC galvanically isolated Double-interrupting
Switching rate	1-2. Switch position: 300/min

**Environmental conditions**

Ambient temperature	-5...85 °C
IP rating	IP67

**Functional safety**

B10d (EN ISO 13849-1)	BSE 30.0: 30 mil. Switching operations
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**Material**

Housing material	Aluminum, Anodized
Housing material, surface protection	Anodized
Material contacts	1-2. Switch position: Silver, gold plated
Plunger material	1-2. Switch position: Stainless steel (1.4034)

**Mechanical data**

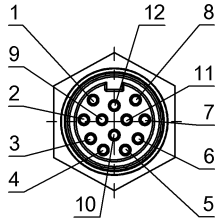
Approach direction	longitudinal, parallel to attachment surface
Approach speed	1-2. Switch position: 40 m/min
Dimension	120 x 70 x 85 mm
Distance cam - reference edge	1-2. Switch position: 4.50...5.00 mm
Flange, feed-through	2 threaded exit M25
Installation	Vertical
Life expectancy mechanical	1-2. Switch position: 30 million Switching operations
Number of switching positions	2x Chisel
Plunger spacing 1st switch position	30 mm
Plunger style	1-2nd switch position: Chisel
Switch actuation force	1-2. Switch position: 20 N
Switching element	1-2. Switch position: BSE 30.0

Range/Distance

Reproducibility  
 Switch position spacing

1-2. Switch position:  $\pm 0.002$  mm  
 12 mm

### Connector Drawings



View of connector side

### Wiring Diagrams

