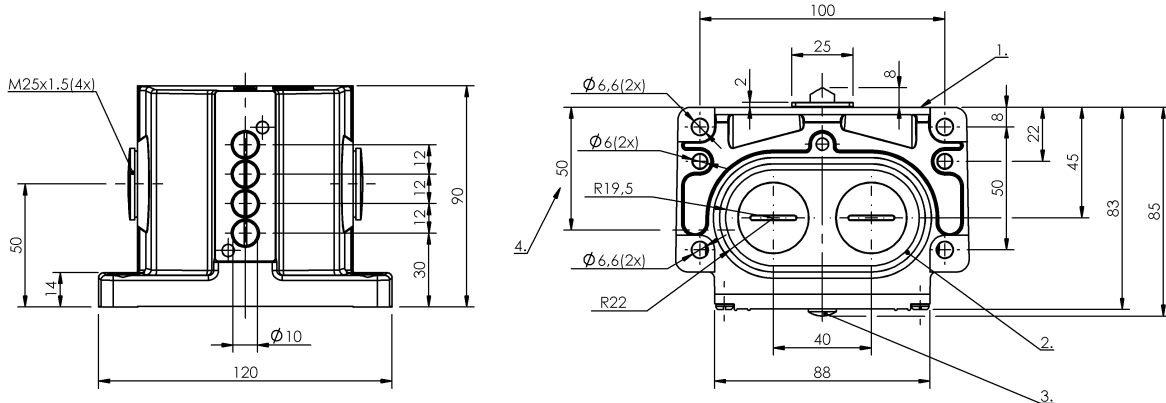


Mechanical Cam Switches  
**BNS 819-D04-D12-100-10-FD**  
 Order Code: BNS00FL

**BALLUFF**



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



**Basic features**

|                            |                                  |
|----------------------------|----------------------------------|
| <b>Approval/Conformity</b> | CE<br>UKCA<br>CCC<br>WEEE        |
| <b>Basic standard</b>      | IEC 60947-5-1                    |
| <b>DIN switch</b>          | DIN 43697                        |
| <b>Operating principle</b> | 1-4. Switch position: Mechanical |
| <b>Version</b>             | Snap contact                     |

**Display/Operation**

|                           |                                     |
|---------------------------|-------------------------------------|
| <b>Function indicator</b> | 1-4. Switch position: FD - 6...60 V |
|---------------------------|-------------------------------------|

**Electrical connection**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Connection type</b> | 1-4. Switch position: Screw terminal |
|------------------------|--------------------------------------|

**Electrical data**

|                                      |   |
|--------------------------------------|---|
| <b>Continuous current</b>            | 1-4. Switch position: 6 A   |
| <b>Rated operating voltage Ue</b>    | 1-4. Switch position: 250 V AC  |
| <b>Switching function mechanical</b> | Double-interrupting galvanically isolated<br>One NO and one NC<br>Dual changeover |
| <b>Switching rate</b>                | 1-4. Switch position: 300/min   |

**Environmental conditions**

|                            |            |
|----------------------------|------------|
| <b>Ambient temperature</b> | -5...85 °C |
| <b>IP rating</b>           | IP67       |

**Functional safety**

|                              |                                    |
|------------------------------|------------------------------------|
| <b>B10d (EN ISO 13849-1)</b> | BSE 30.0: 30 mil. switching cycles |
|------------------------------|------------------------------------|

**Material**

|   |  |
|---|--|
| <b>Housing material</b>                     | Aluminium, Anodized                          |
| <b>Housing material, surface protection</b> | Anodized                                     |
| <b>Material contacts</b>                    | 1-4. Switch position: Silver, gold plated    |
| <b>Plunger material</b>                     | 1-4. Switch position: 1.4034 stainless steel |

**Mechanical data**

|  |  |
|--|--|
| <b>Approach direction</b>                  | longitudinal, parallel to attachment surface       |
| <b>Approach speed</b>                      | 1-4. Switch position: 40 m/min                     |
| <b>Dimension</b>                           | 120 x 90 x 85 mm                                   |
| <b>Distance cam - reference edge</b>       | 1-4. Switch position: 4.50...5.00 mm               |
| <b>Flange, feed-through</b>                | 2 threaded exit M25                                |
| <b>Installation</b>                        | Vertical   |
| <b>Life expectancy mechanical</b>          | 1-4. Switch position: 30 mil. switching operations |
| <b>Number of switching positions</b>       | 4x Chisel Mechanical                               |
| <b>Plunger spacing 1st switch position</b> | 30 mm  |
| <b>Plunger style</b>                       | 1-4th switch position: Chisel                      |
| <b>Switch actuation force</b>              | 1-4. Switch position: 20 N                         |
| <b>Switching element</b>                   | 1-4. Switch position: BSE 30.0                     |

Range/Distance

Reproducibility  
Switch position spacing

1-4. Switch position:  $\pm 0.002$  mm  
12 mm

## Wiring Diagrams

BSE 30.0

