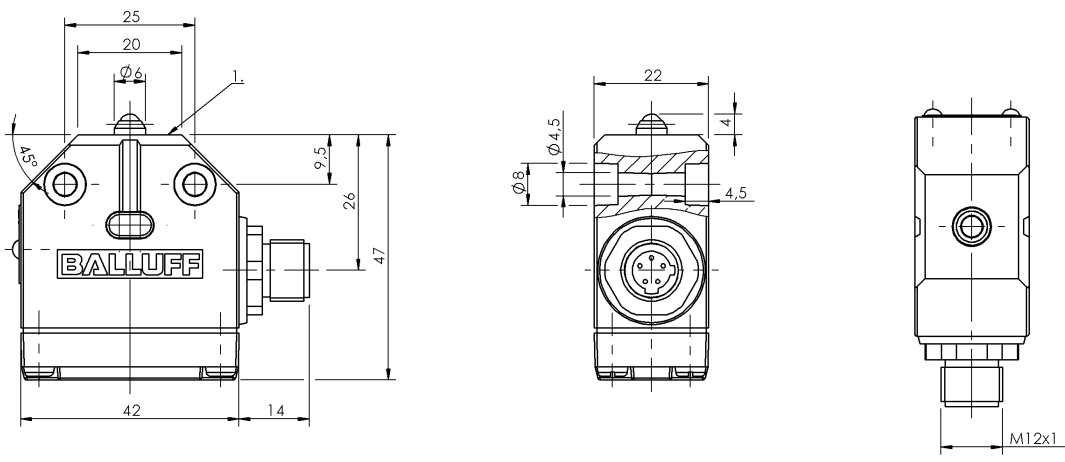
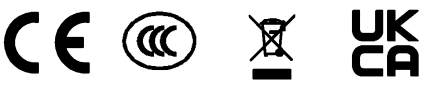


Mechanical Cam Switches  
BNS 819-100-K-13-S80  
Order Code: BNS0068

**BALLUFF**



1) Reference edge



Basic features

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

Display/Operation

|                    |                          |
|--------------------|--------------------------|
| Function indicator | 1. Switch position: None |
|--------------------|--------------------------|

Electrical connection

|                 |                               |
|-----------------|-------------------------------|
| Connection      | M12x1-Flange male, 5-pin      |
| Connection type | 1. Switch position: Connector |

Electrical data

|                               |                                                               |
|-------------------------------|---------------------------------------------------------------|
| Connector, order code         | BKS-S 80-W-PU-05 (right-angle)<br>BKS-S 80-G-PU-05 (straight) |
| Continuous current            | 1. Switch position: 0.1 A                                     |
| Rated operating voltage Ue    | 1. Switch position: 250 V AC                                  |
| Switching function mechanical | Single-pin changeover                                         |
| Switching rate                | 1. Switch position: 200/min                                   |

Environmental conditions

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

Functional safety

|                       |                                    |
|-----------------------|------------------------------------|
| B10d (EN ISO 13849-1) | BSE 74.1: 10 mil. switching cycles |
|-----------------------|------------------------------------|

Material

|                                      |                                            |
|--------------------------------------|--------------------------------------------|
| Housing material                     | Aluminium, Anodized                        |
| Housing material, surface protection | Anodized                                   |
| Material contacts                    | 1. Switch position: Gold                   |
| Plunger material                     | 1. Switch position: 1.4034 stainless steel |

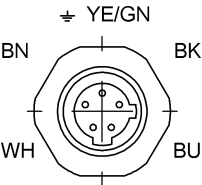
Mechanical data

|                                     |                                                  |
|-------------------------------------|--------------------------------------------------|
| Approach direction                  | any                                              |
| Approach speed                      | 1. Switch position: 9 m/min                      |
| Dimension                           | 42 x 22 x 47 mm                                  |
| Distance cam - reference edge       | 1. Switch position: 2.30...2.80 mm               |
| Flange, feed-through                | None                                             |
| Installation                        | any                                              |
| Life expectancy mechanical          | 1. Switch position: 10 mil. switching operations |
| Number of switching positions       | Ball Mechanical                                  |
| Plunger spacing 1st switch position | 11 mm                                            |
| Plunger style                       | 1st switch position: Ball                        |
| Switch actuation force              | 1. Switch position: 8 N                          |
| Switching element                   | 1. Switch position: BSE 74.1                     |

Range/Distance

|                 |                              |
|-----------------|------------------------------|
| Reproducibility | 1. Switch position: ±0.03 mm |
|-----------------|------------------------------|

Connector Drawings



View of connector side

Wiring Diagrams

