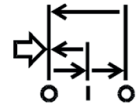
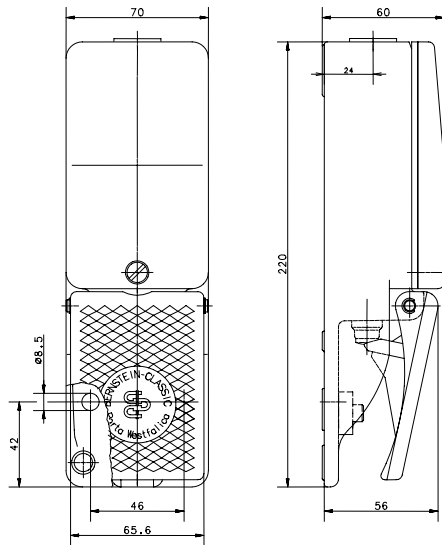


# Foot-switch Series F1

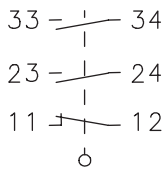
Description **F1-ZSD**

Article number **6161500815**

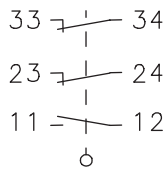


### Switching symbol (Three-Step-Safety Switch)

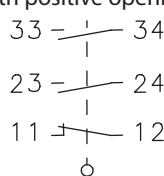
1. position  
Off-position



2. position  
On-position

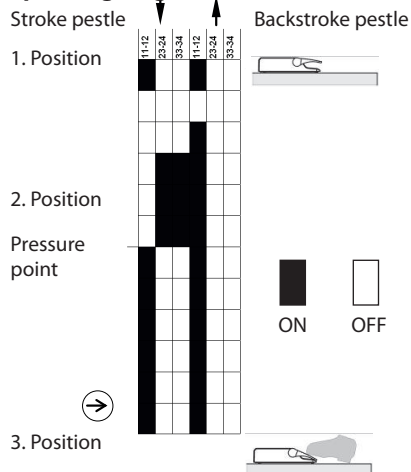


3. position  
Off-position  
with positive opening



To reach the 3rd position,  
the tactile touch has to be  
surmounted.

### Operating diagramme



| Electrical Data                 |           |  |
|---------------------------------|-----------|--|
| Rated insulation voltage        | $U_i$     | 250 V  |
| Conv. thermal current           | $I_{the}$ | 5 A  |
| Rated impulse withstand voltage | $U_{imp}$ | 2,5 KV   |
| Rated operational voltage       | $U_e$     | 240 V AC and 24 V DC   |
| Utilization category            |           | AC-15, $U_e / I_e$ 240 V AC / 1,5 A 50-60 Hz<br>DC-13, $U_e / I_e$ 24 V DC / 1,0 A |
| Direct opening action           | ⊖         | acc. to IEC/EN 60947-5-1, annex K (pedal stop)                                     |
| Short-circuit protective device |           | D-Fuse 4 A gG  |
| Protection class                |           | I  |

| Mechanical data                     |                                |  |
|-------------------------------------|--------------------------------|--|
| Enclosure                           |                                | AL, die-cast   |
| Cover                               |                                | AL, die-cast, RAL 9016 (traffic white)   |
| Actuator                            |                                | Foot lever (PA)  |
| Ambient air temperature             |                                | Operating temperature range: -10 °C to +50 °C<br>Storage temperature range: -25 °C to +70 °C |
| Contact type (each pedal)           |                                | 1 NC, 2 NO. (Zb)   |
| Operating force (pedal centre)      | 1. position<br>2. position     | 10 N<br>25 N   |
| Pressure point (each pedal)         |                                | ≈ 200 N  |
| Mechanical life (each pedal)        |                                |  |
| Sequence of the switching position: | 1 – 2 – 1<br>or: 1 – 2 – 3 – 1 | 10 x 10 <sup>6</sup> operating cycles<br>1 x 10 <sup>6</sup> operating cycles                |
| Switching frequency                 |                                | max. 30/min  |
| Assembly                            |                                | 2 x M8   |
| Connection                          |                                | screw connections (M3,5)   |
| Protection ground                   |                                | 2 x M4   |
| Conductor cross-sections            |                                | Solid: 0,5 ... 1,5 mm <sup>2</sup><br>Litz wire with ferrules: 0,5 ... 1,5 mm <sup>2</sup>   |
| Cable entrance                      |                                | 1 x M20 x 1,5  |
| Weight                              |                                | ≈ 1,6 kg   |
| Protection type                     |                                | IP67 in accordance with IEC/EN 60529   |

| ID for safety engineering           |                                |   |
|-------------------------------------|--------------------------------|---|
| B10d                                |                                |   |
| Sequence of the switching position: | 1 – 2 – 1<br>or: 1 – 2 – 3 – 1 | 10 x 10 <sup>6</sup> cycles<br>1 x 10 <sup>6</sup> cycles |

| Regulations |  |
|-------------|--|
|             | VDE 0660 T100, DIN EN 60947-1, IEC 60947-1     |
|             | VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1 |
|             | DIN EN 61326-3-1                               |
|             | DIN EN ISO 13849-1                             |

| EU Conformity |  |
|---------------|--|
|               | acc. to directive 2014/35/EU (Low-Voltage-Directive) |

| Approvals |                   |
|-----------|-------------------|
|           | DGUV              |
|           | cUL <sub>US</sub> |

| Function  |  |
|---|--|
| <p>Normally open contacts: 23 – 24, 33 – 34; Signalling contact: 11 – 12</p> <ul style="list-style-type: none"> <li>• Position 1: OFF position of the operating contacts (the pedal is not actuated)</li> <li>• Position 2: ON position of the operating contacts (the pedal is actuated to as far as the pressure point)</li> <li>• Position 3: OFF position of the operating contacts (the pedal is fully actuated)</li> </ul> <p>If the three-stage enable switch is actuated in position 2, it returns to position 1 when it is released. The three-stage enable switch changes from position 2 to position 3, if it gets further pressed under after the resistance of the pressure point.</p> <p>The actuation of the operating contacts is made by a positive opening.</p> <p>Once the pedal is not pressed, the three-stage enable switch returns to position 1.</p> <p>The operating contacts are opened in the return stroke.</p> |  |

| Notes   |  |
|---|--|
| <p>The specified protection classification (IP code) applies only when the cover is closed and the appropriate cable is used, in accordance with the clamping range of the above mentioned cable gland.</p> |  |