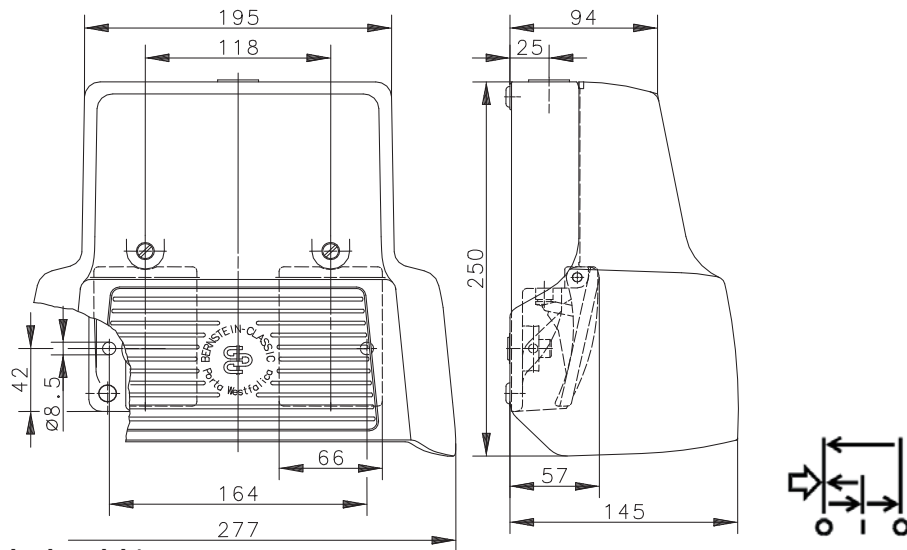


# Foot-switch Series F2 UN

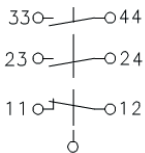
Description **F2-ZSP3D/ZSP3D UN**

Article number **6062000566**

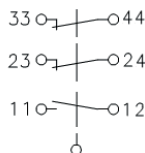


**Switching symbol (applies to both pedals)  
(Three-Step-Safety Switch)**

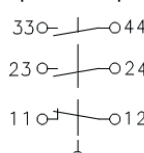
1. position  
Off-position



2. position  
On-position

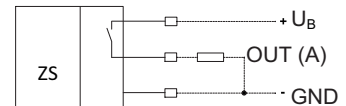


3. position  
Off-position  
with positive opening

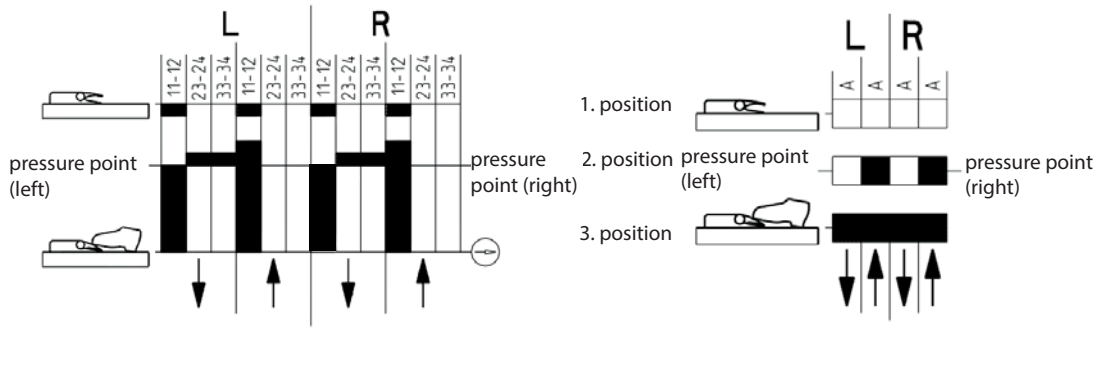


To reach the 3rd position,  
the tactile touch has to be  
surmounted.

Wiring diagram PNP additional board  
(applies to both pedals)



**Operating diagramme**



Electrical data PNP additional board		
Switching element function		PNP, N.O.
Operational voltage range	$U_b$	10 - 39 V DC
Switching current		400 mA
Operational current		< 20 mA
Voltage drop	$U_d$	< 3 V
Short-circuit protection		pulsed
False polarity protection		yes

Electromagnetic compatibility (EMC) PNP additional board	
Electromagnetic field test	IEC 61000-4-3
Electrostatic discharge test	IEC 61000-4-2
Electrical fast transient immunity test	IEC 61000-4-4
Radiated disturbance field strength	EN 55011

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 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
Protective guard (Accident protection cover UN)	AL, die-cast
Actuator	Foot lever (PA)
Ambient air temperature	Operating temperature range: -10 °C to +50 °C Storage temperature range: -25 °C to +70 °C
Contact type (each pedal)	1 NC, 2 NO. (Zb)
Operating force (pedal centre) (each pedal)	1. position 10 N 2. position 25 N
Pressure point (each pedal)	≈ 200 N
Mechanical life (each pedal)	
Sequence of the switching position: 1 – 2 – 1	10 x 10 <sup>6</sup> operating cycles
or: 1 – 2 – 3 – 1	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: 0,14 ... 1,5 mm <sup>2</sup> Litz wire with ferrules: 0,25 ... 1 mm <sup>2</sup> Litz wire with ferrules with plastic sleeve 0,25 ... 1,5 mm <sup>2</sup>
Cable entrance	1 x M20 x 1,5
Weight	≈ 2,3 kg
Protection type	IP67 in accordance with IEC/EN 60529

<b>ID for safety engineering</b>	
B10d	Sequence of the switching position: 1 – 2 – 1    10 x 10 <sup>6</sup> cycles or: 1– 2 – 3 – 1    1 x 10 <sup>6</sup> cycles
<b>Regulations</b>	
	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
<b>EU Conformity</b>	
	acc. to directive 2006/95/EG
<b>Approvals</b>	
	cUL <sub>US</sub>
<b>Function</b>	
<p>Normally open contacts: 23 – 24, 33 – 44; 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 unter 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>	
<b>Notes</b>	
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.	