

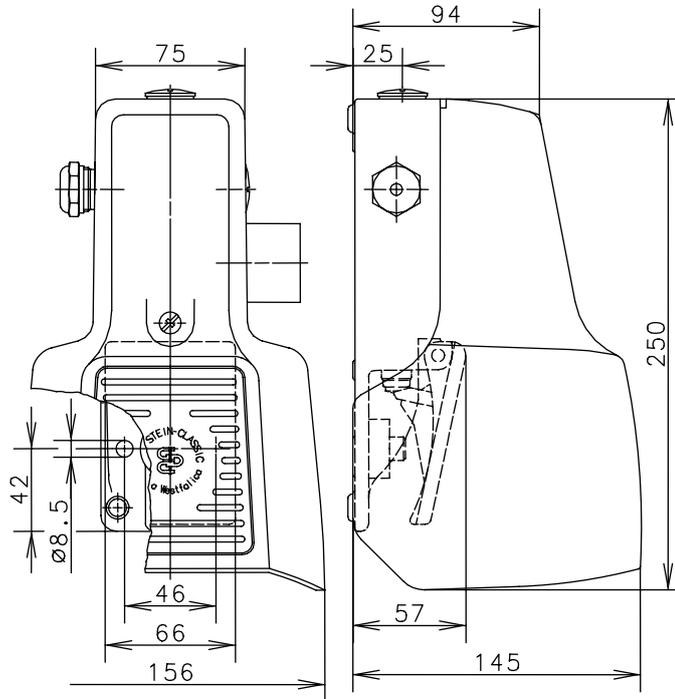
Technical Data

Foot-switch

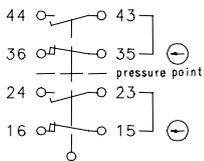
Series F1 UN

Description **F1-UV1Z/UV1ZD UN**

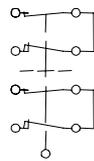
Article number **6161000694**



Switching symbol (Three-Step-Safety Switch with latching function „Off – On – Off“)

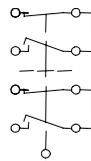


„Off“ position



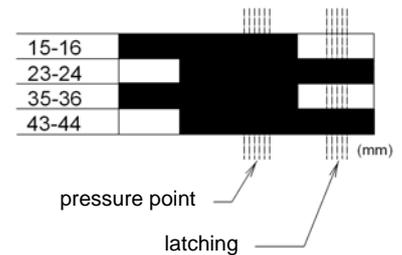
„On“ position

Before the switch latches,
the tactile touch has to be
surmounted.



„Off“ position

Operating diagramme



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Electrical data

Rated insulation voltage	U_i	400V AC
Conv. thermal current	I_{the}	10A
Rated operational voltage	U_e	240V
Utilization category		AC-15, U_e/I_e 240V/3A
Positive opening NC contact	⊖	acc. to IEC/EN 60947-5-1, Annex K
Short-circuit protective device		Fuse 10A gL/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		-30°C to +80°C
Contact type		2 NC, 2 NO. (Zb)
Operating force		Approx. 10N (pedal centre)
Pressure point		≈ 200 N
Mechanical life		
Sequence of the switching position:	Off, On, Off	10 x 10 ⁶ operating cycles
or:	Off, On, Latch, Off	1 x 10 ⁶ operating cycles
Switching frequency		Max. 50/min
Assembly		2 x M8
Connection		screw terminals (M3.5)
Number of connections		8 x M3,5
Protection ground		2 x M4
Conductor cross-sections		Solid: 0.5 ... 1.5mm ² Litz wire with ferrules: 0.5 ... 1.5mm ²
Cable entrance		1 x cable gland M20x1,5 (tightness-range 6 – 12mm) ; 2 x blind cap M20x1,5
Weight		Approx. 1,6kg
Protection type		IP67 in accordance with IEC/EN 60529

ID for safety engineering

In order to reach the indicated SILCL the following instructions must be followed:

- The footswitch must be operated in both operating modes at least once per month.
- A diagnoses ratio of more than 90% must be made sure.

Footswitch function	SIL CL
Working function	1
Panic function	2

The calculation for SILCL are based on the indicated B10d values in the data-sheet and their defined frame conditions and on the following number of operations:

- Working function: 120 operations per day on 365 days per year => 43800 operations per year
- Panic function: 4 operations per day on 365 days per year => 1460 operation per year

B10d -	NC	2 x 10 ⁶ switching cycles
	NO	2 x 10 ⁶ switching cycles @ 0,3 A ohm resistive load

The B10d value of the NO contact was calculated acc. to DIN EN ISO 13849-1 (table C.1, note 1) B10d= 2 x B10. Additionally it is valid only for the switching system but not for the complete footswitch.

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Regulations

VDE 0660 T100, DIN EN 60947-1, IEC 60947-1
VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1

EU Conformity

CE

Safety function (Foot lever)

Three stage safety footswitch with latch

The safety footswitch contacts are wired in series, this allows normal machine operation with the advantage of a safety latched „Emergency stop“ if the pedal is fully depressed.

1. Rest-Machine stopped.
2. Machine start is enabled by depressing pedal to the pressure point, this closed the normally open contacts 23-24 and 43-44.
3. In an emergency, the pedal is fully depressed (beyond the pressure point). The normally closed contacts 15-16 and 35 – 36 are force disconnected stopping the machine, simultaneously the latch engages and holds the contacts in this “Emergency stop” status, preventing an unauthorised re-start of the machine.

„Safety for man and machine“

3. Only after releasing the latch, by pressing the push button mounted in the side of the footswitch body, do the contacts reset allowing normal operation to resume.

Notes

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.