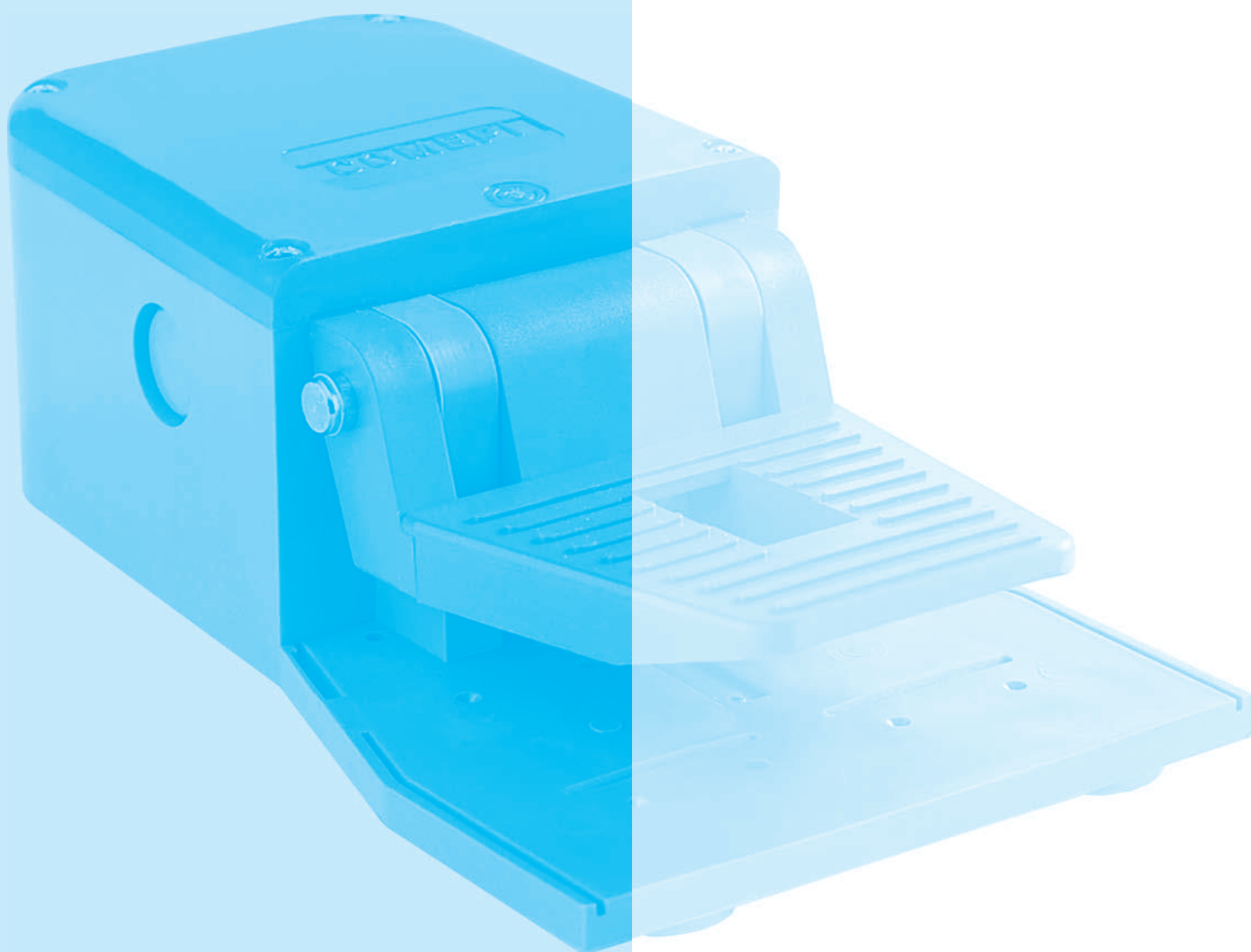




# FOOT SWITCHES



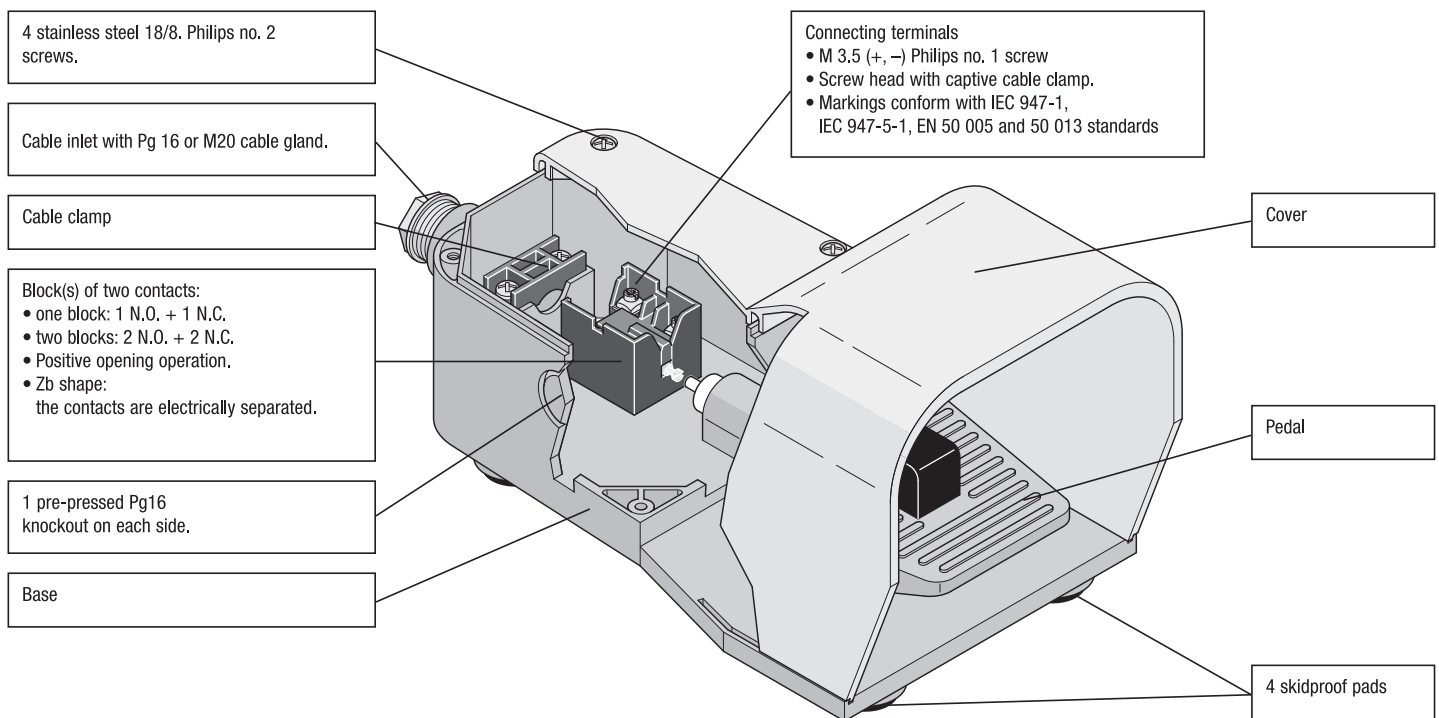
### Applications

Foot switch operated machines such as: shearing machines, spinning machines, spinning lathers, machine tools, wrapping machines, riveting presses, etc. Foot switches come in five operation formats:

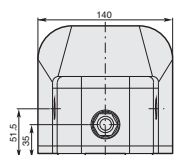
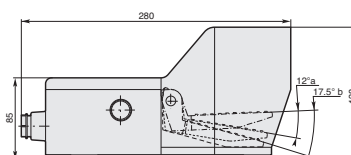
- **Free movement:** contact position follows pedal movement: actuated when the pedal is pushed down, released when pedal is in state of rest.
- **Foot switch locked in neutral position:** same operation as above, after unlocking the pedal with the end of the foot.
- **Foot switch latched in low position:** same operation as free movement, excepted that a state of rest is obtained only after having unlatched the pedal with the end of the foot.
- **Free movement with two-stage actuating force:** two different contact blocks are actuated with a different force on the lever.
- **Foot switch locked in neutral position with two-stage actuating force:** same operation as above, after unlocking the pedal with the end of the foot

### Description of the switch

- **Dimensions:** 280 x 140 x 138mm.
- **Materials: Standard version (IMQ approved):** Base, cover and pedal made of shock resistant ABS material.  
**Self-extinguishing / VO (IMQ, UL, CSA approved):** Base, cover and pedal made of Polycarbonate/ABS-VO.  
**Metal version / VO-M (IMQ, UL, CSA approved):** Cover made in die cast aluminium, base and pedal made of Polycarbonate/ABS-VO.
- **Colour choice:** Grey base; grey, yellow or red cover.
- **Variations:** Grey base, half-red cover. Especially used for emergency stop function.



### Dimensions (in mm)



#### Symbols

Example: 

P	S	1	2	1	1	/	V0
---	---	---	---	---	---	---	----

Structure: 

P						/	
---	--	--	--	--	--	---	--

**Type**  
**S** = Simple Foot Switch  
**D** = Double Foot Switch

**Electrical connection**  
**1** = Pg 16 cable gland  
**2** = M20 cable gland

**Devices**  
**1** = Free movement of the lever  
**2** = Movement of the lever dependent of the safety device notch  
**3** = Device to maintain the lever in lowered down position  
**4** = Free movement with two-stage actuating force  
**5** = With safety device notch and two-stage actuating force

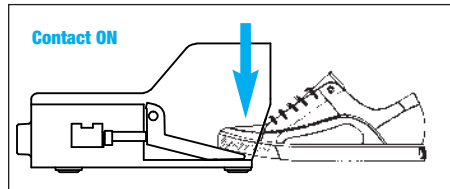
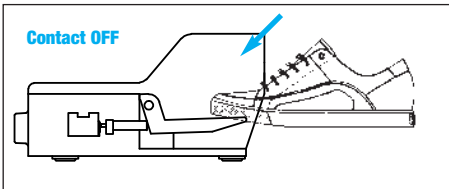
**Contact blocks**  
**1** - One (NO+NC) snap action contact  
**2** - One (NO+NC) slow action contact  
**3** - Two (NO+NC) snap action contacts  
**4** - Two (NO+NC) slow action contacts

**Cover material**  
**-** = Shock resistant ABS (standard)  
**V0** = UL approved self-extinguishing  
**V0-M** = UL approved with aluminium cover

**Cover colour** **1** = Yellow / **2** = Grey / **3** = Yellow + Grey (PD series)  
**4** = Red / **5** = Half red cover / **6** = Light grey base and cover

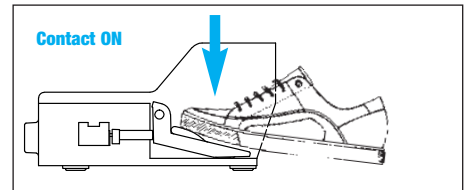
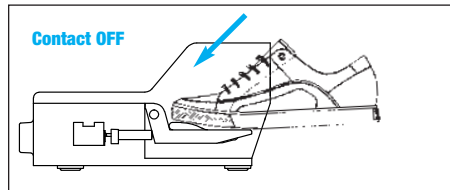
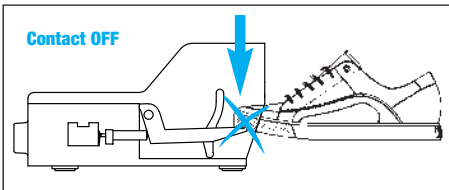
#### Devices

##### 1: Free movement of the lever



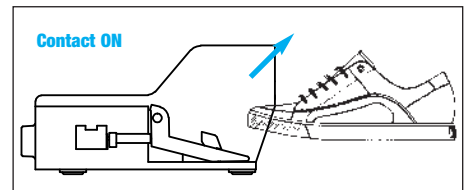
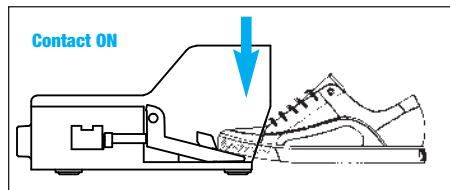
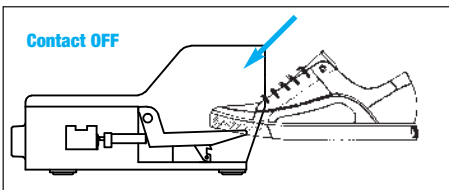
The lever can be actuated without any particular device.

##### 2: Movement of the lever dependent of the safety device notch

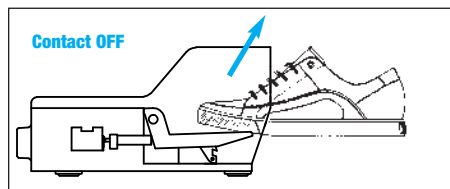
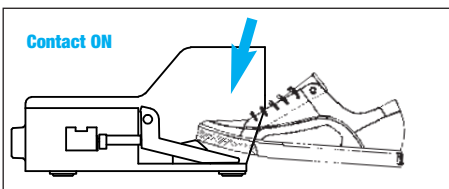


The pedal can be actuated only by lowering the safety lever fully inserting the foot, thus preventing any accidental actuation.

##### 3: Device to maintain the lever in lowered position

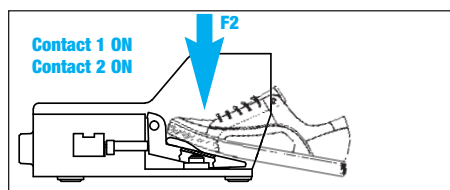
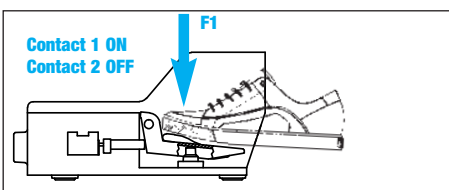


By pushing the lever the contact switches and the lever remains locked in lowered position.



Push the locking device in order to unlock the pedal actuator.  
 Once you release the lever the contacts return to their initial position.

##### 4: Free movement with two-stage actuating force



By applying a light pressure F1 on the lever, the first contact block will be actuated while the second keeps in state.  
 An higher pressure F2 on the lever will switch also the second contact block.

##### 5: With safety device notch and two-stage actuating force

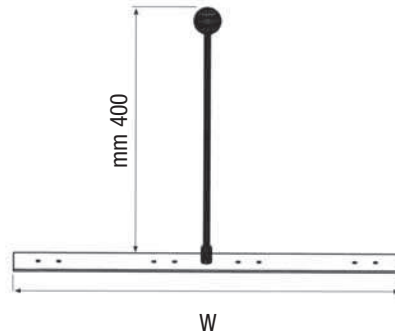
Same as above but the pedal can be actuated only by completely inserting the foot in the device.

### Carrying Rod Kits

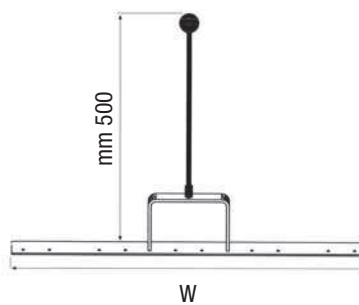
#### Example of application



#### Type A



#### Type B

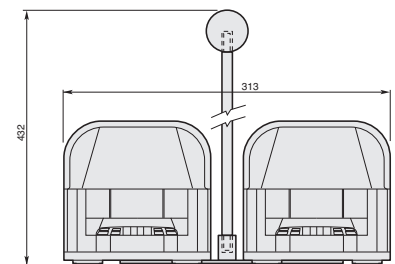


Order Code	Description	W (mm)	Type
PD1000	Max 2 Foot Switches*	350	A
PD1001	Max 3 Foot Switches*	520	B
PD1002	Max 4 Foot Switches*	700	A
PD1003	Max 5 Foot Switches*	850	B

\* Foot Switches not included

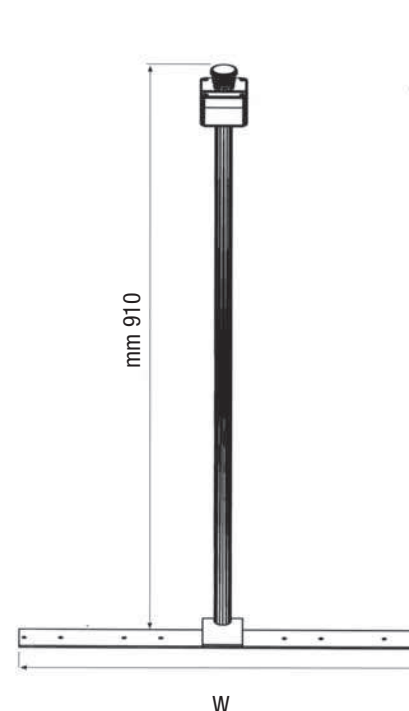
Note: Each carrying rod kit includes necessary fixing screws and cable glands for the specified number of foot switches.

#### Example of double foot switch application



### Metal Steel Frame

#### Example of application



Order Code	Description	W (mm)
GR2025	For 1 Foot Switch only*	230
GR2026	Max 2 Foot Switches*	350
GR2027	Max 3 Foot Switches*	530
GR2028	Max 4 Foot Switches*	700

\* Foot Switches not included

**Attention!**  
Push button and plastic box not included:  
please consult our "Control Units Ø22"  
catalog.

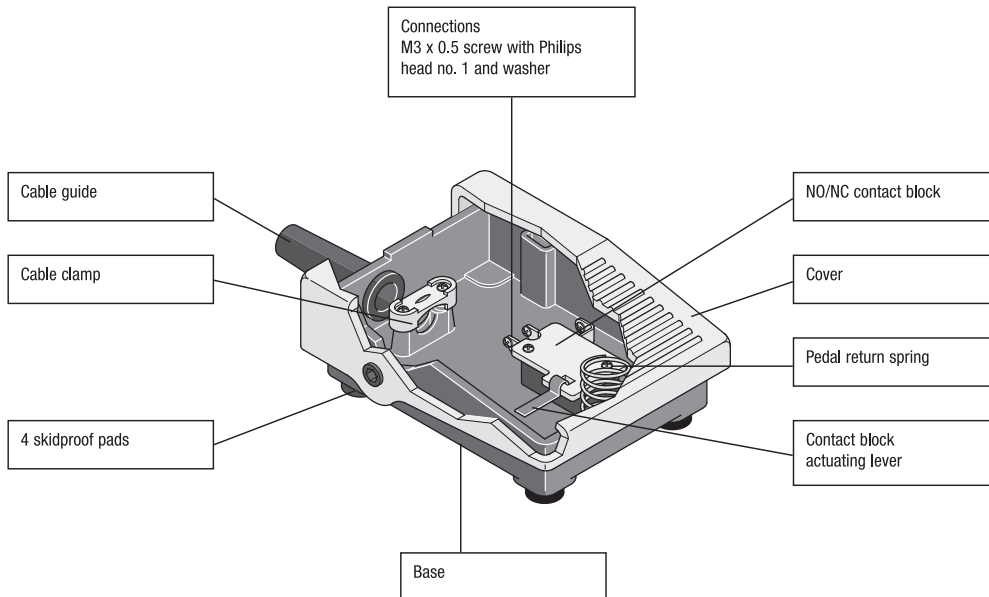
Note: Each carrying rod kit includes necessary fixing screws and cable glands for the specified number of foot switches.

### Applications

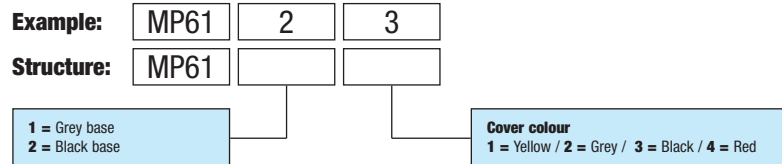
Comepi foot switches of the MP series are plastic foot switches in mini design that besides their robust form and technical versatility are specially convincing for their functionality and ergonomic design. They can be applied on foot switch operated machines such as: shearing machines, spinning lathers, machine tools, wrapping machines, riveting presses, etc.

### Description of MP6... Mini Foot Switches

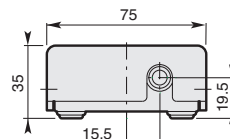
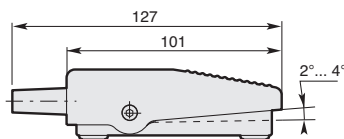
- **Dimensions:** 100 x 75 x 34 mm.
- **Materials:** cover and base made of self-extinguishing ABS.
- **Colour choice:** black or grey base; black, grey, yellow or red cover.



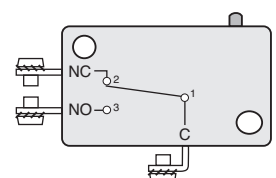
### Symbols



### Dimensions (in mm)



### NO / NC Contact Block



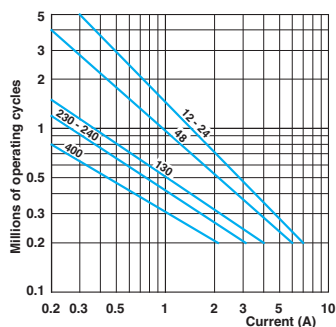
### General Technical Data

Standards	Mini Foot Switch		Foot Switch with Cover	
	IEC 1058-1		IEC 947-5-1	
<b>Certifications - Approvals</b>	-		UL - CSA (upon request)	
<b>Air temperature</b> near the device				
- during operation	°C	- 10 ... + 70		- 10 ... + 70
- for storage	°C	- 25 ... + 80		- 30 ... + 80
<b>Climatic withstand</b>		-		according to IEC 68-2-3 and salty mist according to IEC 68-2-11
<b>Shock withstand</b> (according to IEC 68-2-27 and EN 60 068-2-27)	g	-		50g (1/2 sinusoidal shock for 11 ms) no change in contact position
<b>Degree of protection</b> (according to IEC 529 and EN 60 529)		IP 40		IP 65
<b>Operating Torque</b>	N.m	1.2		0,25
<b>Operating angle</b>	Degree	2 to 4		15
<b>Cable inlet</b>		Cable guide ø 6 mm; ø max. 8.5		Pg 16

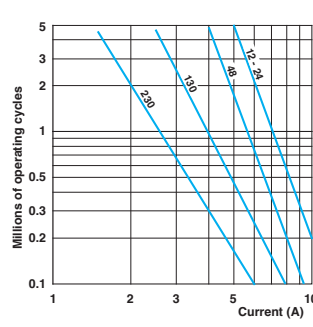
### Electrical Data

<b>Rated insulation voltage <math>U_i</math></b>	V	250	690 (according to IEC 947-1 and EN 60-947-1) Degree of pollution 3
<b>Rated impulse withstand voltage <math>U_{imp}</math></b> (according to IEC 947-1 and EN 60 947-1)	kV	1	6
<b>Conventional free air thermal current <math>I_{th}</math></b> $\theta < 40\text{ }^\circ\text{C}$		15	10 (according to IEC 947-1)
<b>Short-circuit protection</b> $U_p < 500\text{ V a.c.} - \text{gG (gl) type fuses}$	A	10	10
<b>Rated operational current</b>	A	3 (250 V a.c.)	A 600 (according to UL 508 and CSA C22-2 n° 14)
	A	0.06 (230 V d.c.)	Q 600 (according to UL 508 and CSA C22-2 n° 14)
AC-15 (according to IEC 947-5-1)	24 V A	-	10
	120 V A	-	6
	230 V A	-	3.1
	240 V A	-	3
	400 V A	-	1.8
DC-13 (according to IEC 947-5-1)	24 V A	-	2.8
	125 V A	-	0.55
	250 V A	-	0.27
<b>Resistance between contacts</b>	mΩ	30	25
<b>Connecting terminals</b>		M3 x 0.5 screw with Philips head no. 1 and washer	M3.5 (+, -) pozidriv with cable clamp
<b>Positive opening operation</b> (according to IEC 947-5-1)		-	⊖
<b>Connecting capacity</b>	1 or 2 x mm <sup>2</sup>	-	0.75 ... 2.5
<b>Terminal marking</b>		(Refer to contact block page 62)	According to EN 50 013
<b>Mechanical durability</b>	Millions of operations	10	30
<b>Electrical durability</b>	Operations	100 000	utilization categories AC-15 and DC-13 (Load factor of 0.5 according to curves below)

#### AC-15 - Snap action



#### AC-15 - Slow action



DC-13	Snap action		Slow action	
	Power breaking for a durability of 5 million operating cycles			
Voltage	24 V	9.5 W	12 W	
Voltage	48 V	6.8 W	9 W	
Voltage	110 V	3.6 W	6 W	