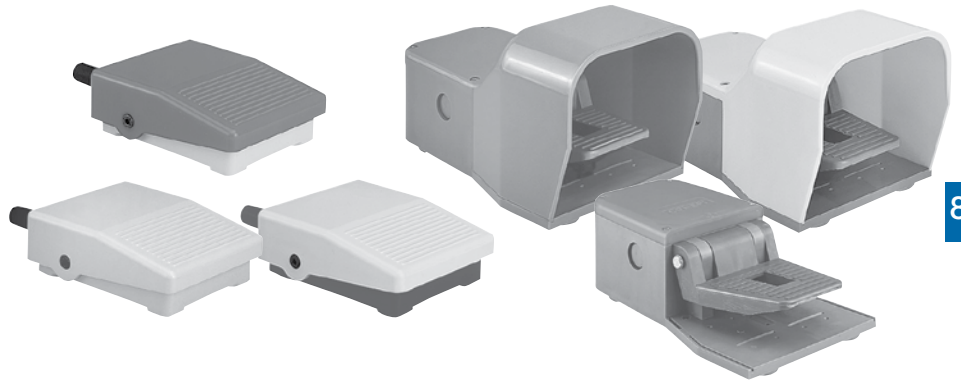


# Plastic Foot switches



## Foot switches



### Description of Mini foot switches

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

### Description of foot switches with covers

- Dimensions: 285 x 140 x 145.
- Materials: base, cover and pedal made of shock resistant Bayblend® FR 90 material (alloyed polycarbonate and ABS).
- Color choice: grey base; grey, yellow or red cover.
- Variations: grey base, half-red cover.  
Especially used for emergency stop function.

Note: this emergency stop function must never contain the «locked in neutral position» device.

UL Listed file #E191693

### Application

Foot switch-operated machines such as: shearing machines, folding machines, spinning lathes, machine tools, wrapping machines, riveting presses, etc.

Foot switches with covers come in three operation formats:

- **Free movement:** contact position follows pedal movement: actuated when the pedal is pushed down, released when pedal is in a 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, except that a state of rest is obtained only after having unlatched the pedal with the end of the foot.

## General information

### IPM Mini foot switches, IPS Foot switches with covers Description

#### Application

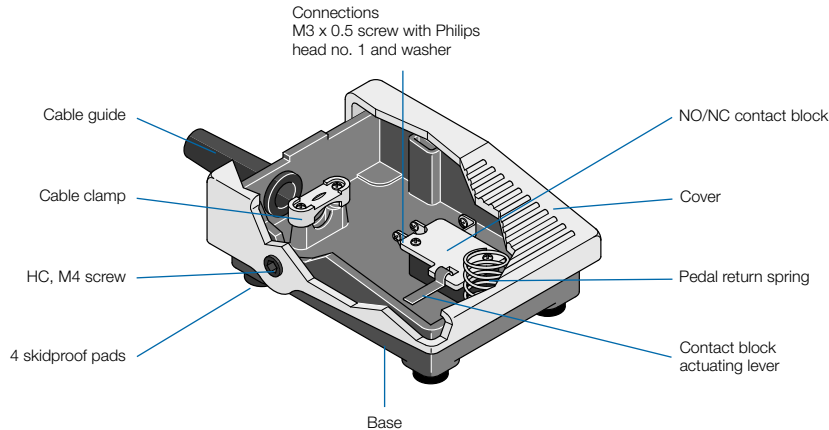
Foot switch-operated machines such as: shearing machines, folding machines, spinning lathes, machine tools, wrapping machines, riveting presses, etc.

Foot switches with covers come in three operation formats:

- **Free movement** (momentary): contact position follows pedal movement: actuated when the pedal is pushed down, released when pedal is in a 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** (maintained): same operation as free movement, except that a state of rest is obtained only after having unlatched the pedal with the end of the foot.

#### Description of Mini foot switches

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

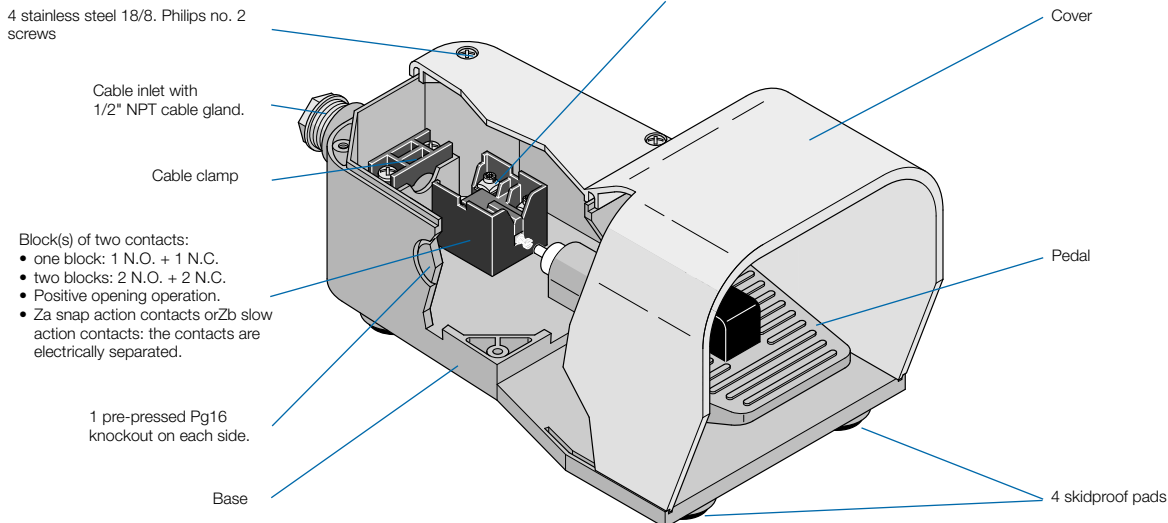


#### Description of foot switches with covers

- Dimensions: 285 x 140 x 145.
- Materials: base, cover and pedal made of shock resistant Bayblend® FR 90 material (alloyed polycarbonate and ABS).
- Color choice: grey base; grey, yellow or red cover.
- Variations: grey base, half-red cover. Especially used for emergency stop function.

Note: this emergency stop function must never contain the «locked in neutral position» device.

- Connecting terminals
- M 3.5 (+, -) Philips no. 1 screw
  - Screw head with captive cable clamp.
  - Markings conform with IEC 947-1, IEC 947-5-1, EN 50 005 and 50 013 standards.

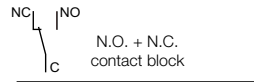


**Comment:** Foot switches with covers can be assembled on a plate and equipped with a transportation handle. Upon request, instead of the handle an emergency stop button can be installed above a tube that allows for connection cable passage.

# Foot switches

## Mini foot switches, IP 40

### IPM Mini foot switches

|  |   | Cover color | Unit weight in kg<br>Packing 1 piece | Catalog number |
|---|---|-------------|--------------------------------------|----------------|
| <b>Black base</b>   |   |             |                                      |                |
|   | 1 | Yellow      | 0.130                                | IPM1Y          |
|   | 1 | Grey        | 0.130                                | IPM1G          |
|   | 1 | Black       | 0.130                                | IPM1B          |
|   | 1 | Red         | 0.130                                | IPM1R          |
| <b>Grey base</b>  |   |             |                                      |                |
|   | 1 | Yellow      | 0.130                                | IPM2Y          |
|   | 1 | Grey        | 0.130                                | IPM2G          |
|   | 1 | Black       | 0.130                                | IPM2B          |
|   | 1 | Red         | 0.130                                | IPM2R          |



IPM1R



IPM1Y



IPM1G

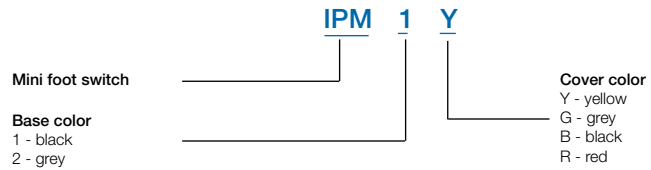


IPM1B



IPM1R

### Catalog number explanation



# Foot switches

## Foot switches with covers, IP 65

### IPS foot switches



IPSY1A11



IPSR1A11



IPSG1A11



IPSZ1A11

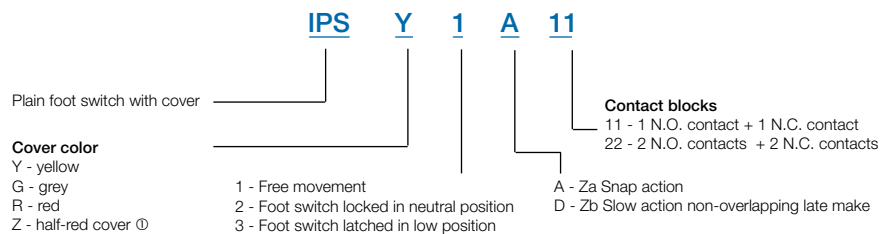
| Contact blocks (set of 1 N.O. + 1 N.C.)                        |       |                             |       | Unit weight in kg | Catalog number |
|--|-------|-----------------------------|-------|-------------------|----------------|
| Snap action  |       | Non-overlapping slow action |       |                   |                |
| Za   | Za    | Zb                          | Zb    | Packing 1 piece   |                |
| <b>Free movement</b>   |       |                             |       |                   |                |
| 1  | —     | 1                           | —     | 1.100             | IPSA1A11       |
| —  | —     | —                           | —     | 1.100             | IPSA1D11       |
| —  | 1 + 1 | —                           | —     | 1.100             | IPSA1A22       |
| —  | —     | —                           | 1 + 1 | 1.100             | IPSA1D22       |
| <b>Locked in neutral position</b>                              |       |                             |       |                   |                |
| 1  | —     | 1                           | —     | 1.100             | IPSA2A11       |
| —  | —     | —                           | —     | 1.100             | IPSA2D11       |
| —  | 1 + 1 | —                           | —     | 1.100             | IPSA2A22       |
| —  | —     | —                           | 1 + 1 | 1.100             | IPSA2D22       |
| <b>Latched in low position</b>                                 |       |                             |       |                   |                |
| 1  | —     | 1                           | —     | 1.100             | IPSA3A11       |
| —  | —     | —                           | —     | 1.100             | IPSA3D11       |
| —  | 1 + 1 | —                           | —     | 1.100             | IPSA3A22       |
| —  | —     | —                           | 1 + 1 | 1.100             | IPSA3D22       |
| <b>Free movement foot switch with half-red cover</b>           |       |                             |       |                   |                |
| 1  | —     | 1                           | —     | 0.800             | IPSZ1A11       |
| —  | —     | —                           | —     | 0.800             | IPSZ1D11       |
| —  | 1 + 1 | —                           | —     | 0.800             | IPSZ1A22       |
| —  | —     | —                           | 1 + 1 | 0.800             | IPSZ1D22       |
| <b>Foot switch latched in low position with half-red cover</b> |       |                             |       |                   |                |
| 1  | —     | 1                           | —     | 0.800             | IPSZ3A11       |
| —  | —     | —                           | —     | 0.800             | IPSZ3D11       |
| —  | 1 + 1 | —                           | —     | 0.800             | IPSZ3A22       |
| —  | —     | —                           | 1 + 1 | 0.800             | IPSZ3D22       |

### Color code

To select a foot switch color, substitute the appropriate color code for the Δ in the catalog number

|        |   |
|--------|---|
| Yellow | Y |
| Grey   | G |
| Red    | R |

### Catalog number explanation



① Incompatible with locked in neutral position function.

# Technical data

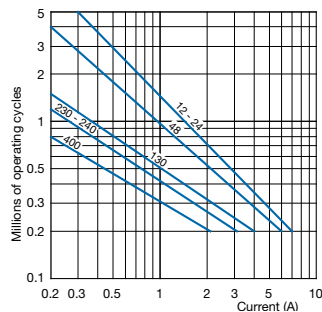
## General technical data

|  | Mini foot switch                         | Foot switch with cover   |
|--|--|--|
| <b>Standards</b>   | IEC 1058-1                               | IEC 947-5-1  |
| <b>Certifications &amp; Approvals</b>                                | —  | UL - CSA - BG  |
| <b>Air temperature</b> near the device                               |  |  |
| – during operation   | °C                                       | – 10 ... + 70  |
| – for storage  | °C                                       | – 25 ... + 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 |
| Degree of protection (according to IEC 529 and EN 60 529)            | IP 40                                    | IP 65  |
| Actuation torque   | N.m                                      | 0.25   |
| Operating angle  | Degree                                   | 2 to 4   |
| Cable inlet  | Cable guide<br>ø min. 6mm; ø max. 8.5 mm | Pg 16  |

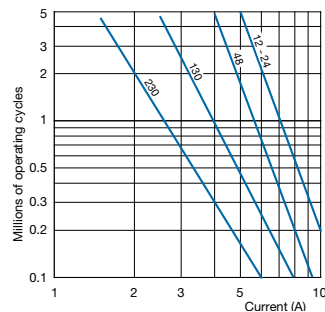
## 8 Electrical data

|   |  |  |   |
|---|--|--|---|
| Rated insulation voltage $U_i$  | V  | 250  | 500<br>(according to IEC 947-1 and EN 60-947-1)<br>Degree of pollution 3  |
| Rated impulse withstand voltage $U_{imp}$<br>(according to IEC 947-1 and EN 60 947-1) | kV                                       | 1  | 6   |
| Conventional free air thermal current $I_{th}$<br>( $q < 40$ °C)                      | A  | 15   | 10 (according to IEC 947-1)   |
| Short-circuit protection<br>$U_e < 500$ V a.c. - gG (gI) type fuses                   | A  | 10   | 10  |
| Rated operational current   | A  | 3 (250 V a.c.)<br>0.06 (230 V d.c.)                  | A 600 (according to UL 508 and CSA C22-2 n° 14)<br>Q 600 (according to UL 508 and CSA C22-2 n° 14)                    |
| AC-15 acc. to IEC 947-5-1   | 24 V<br>130 V<br>230 V<br>240 V<br>400 V | A<br>A<br>A<br>A<br>A                                | 10<br>5.5<br>3.1<br>3<br>1.8  |
| DC-13 acc. to IEC 947-5-1   | 24 V<br>110 V<br>250 V                   | A<br>A<br>A  | 2.8<br>0.6<br>0.27  |
| Resistance between contacts   | mΩ                                       | 30   | 25  |
| Connecting terminals  |  | M3 x 0.5 screw<br>with Philips head no. 1 and washer | M3.5 (+, -) screw<br>with Philips head no. 1 with cable clamp   |
| Positive opening operation<br>(according to IEC 947-5-1)                              |  | —  | ⊕   |
| Connecting capacity   | 1 or 2 x mm <sup>2</sup>                 | —  | 0.5 – 2.5   |
| Terminal marking  |  | —  | According to EN 50 013  |
| Mechanical durability   | Millions of operations                   | 10   | 30  |
| Electrical durability   | Operations                               | 100,000  | According to IEC 947-5-1,<br>utilization categories AC-15 and DC-13<br>(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         |

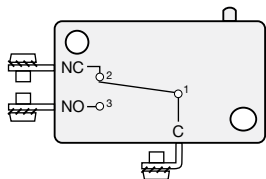
# Technical data & approximate dimensions

## Mini-footswitches

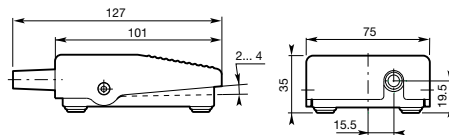
### IPM Mini foot switches

| Base color                |                | Yellow cover | Grey cover | Black cover | Red cover |
|---------------------------|----------------|--------------|------------|-------------|-----------|
| <b>Black base</b>         | Catalog number | IPM1Y        | IPM1G      | IPM1B       | IPM1R     |
| <b>Grey base</b>          | Catalog number | IPM2Y        | IPM2G      | IPM2B       | IPM2R     |
| Weight (packing per unit) | kg             | 0.130        | 0.130      | 0.130       | 0.130     |

### N.O. + N.C. Contact block



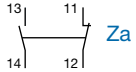
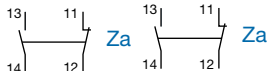
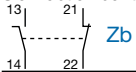
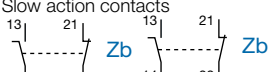
### Dimensions (mm)



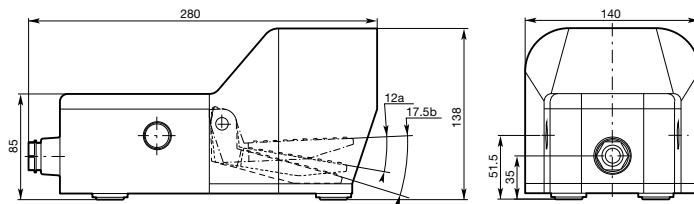
# Technical data & approximate dimensions

## Foot switches with covers

### IPS Foot switches

|  |  | Free movement | Locked in neutral position | Latched in low position |
|--|--|---------------|----------------------------|-------------------------|
| Snap action contacts<br>                 | Catalog number<br>⊖ (Positive opening operation of the N.C. contact) | IPS1A11<br>⊖  | IPS2A11<br>⊖               | IPS3A11<br>⊖            |
| Snap action contacts<br>                 | Catalog number<br>⊖ (Positive opening operation of the N.C. contact) | IPS1A22<br>⊖  | IPS2A22<br>⊖               | IPS3A22<br>⊖            |
| Non-overlapping Slow action contacts<br> | Catalog number<br>⊖ (Positive opening operation of the N.C. contact) | IPS1D11<br>⊖  | IPS2D11<br>⊖               | IPS3D11<br>⊖            |
| Non-overlapping Slow action contacts<br> | Catalog number<br>⊖ (Positive opening operation of the N.C. contact) | IPS1D22<br>⊖  | IPS2D22<br>⊖               | IPS3D22<br>⊖            |
| Weight (packing per unit)  | kg   | 1.10          | 1.10                       | 1.10                    |

### Dimensions (mm)



Plain foot switch  
 a = pre-travel  
 b = total travel