

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.

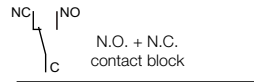


Comment: Foot switches with covers can be assembled on a plate and equipped with a transportation handle. Upon request, instead of the handle an emergency stop button can be installed above a tube that allows for connection cable passage.

Foot switches

Mini foot switches, IP 40

IPM Mini foot switches

|  | | Cover color | Unit weight in kg Packing 1 piece | Catalog number |
|---|---|-------------|--------------------------------------|----------------|
| Black base | | | | |
| | 1 | Yellow | 0.130 | IPM1Y |
| | 1 | Grey | 0.130 | IPM1G |
| | 1 | Black | 0.130 | IPM1B |
| | 1 | Red | 0.130 | IPM1R |
| Grey base | | | | |
| | 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

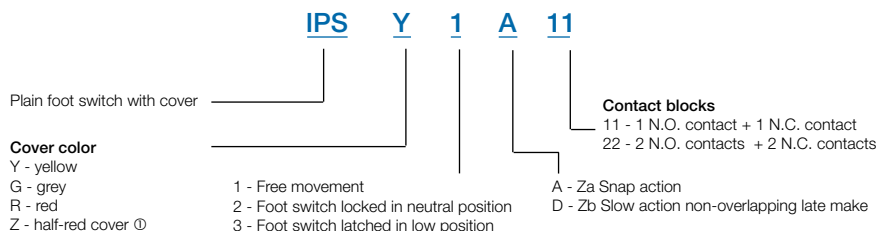
| Contact blocks (set of 1 N.O. + 1 N.C.) | | | | Unit weight in kg | Catalog number |
|--|-------|-----------------------------|-------|-------------------|----------------|
| Snap action | | Non-overlapping slow action | | | |
| Za | Za | Zb | Zb | Packing 1 piece | |
| Free movement | | | | | |
|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

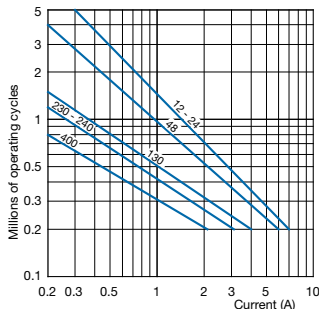
General technical data

| | Mini foot switch | Foot switch with cover |
|--|--|--|
| Standards | IEC 1058-1 | IEC 947-5-1 |
| Certifications & Approvals | — | UL - CSA - BG |
| Air temperature near the device | | |
| – during operation | °C | – 10 ... + 70 |
| – for storage | °C | – 25 ... + 80 |
| Climatic withstand | — | according to IEC 68-2-3 and salty mist according to IEC 68-2-11 |
| Shock withstand (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 ø min. 6mm; ø max. 8.5 mm | Pg 16 |

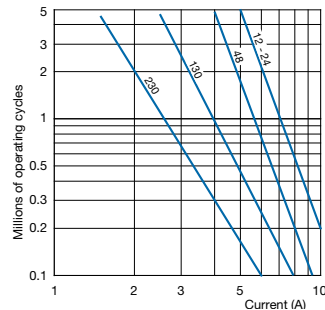
8 Electrical data

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

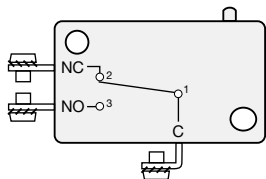
Technical data & approximate dimensions

Mini-footswitches

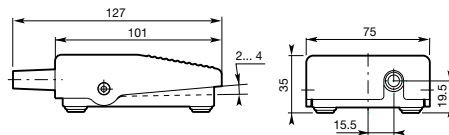
IPM Mini foot switches

| Base color | | Yellow cover | Grey cover | Black cover | Red cover |
|---------------------------|----------------|--------------|------------|-------------|-----------|
| Black base | Catalog number | IPM1Y | IPM1G | IPM1B | IPM1R |
| Grey base | 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



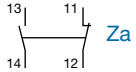
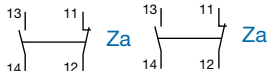
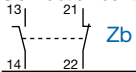
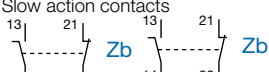
Dimensions (mm)



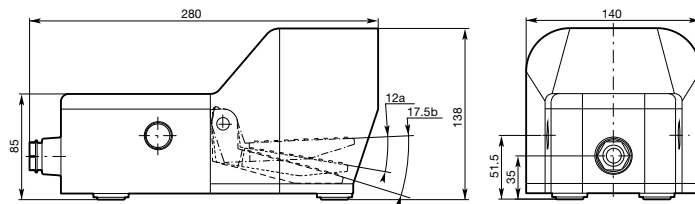
Technical data & approximate dimensions

Foot switches with covers

IPS Foot switches

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

Dimensions (mm)



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