

Contents

Foot Switches

Description, Exploded View	62
Ordering Details	63
Technical Data	65
IPM Mini Foot Switches	66
IPS Foot Switches with Covers	67



Foot Switches

IPM Mini Foot Switches ..., IPS Foot Switches with Covers ... Description

Application

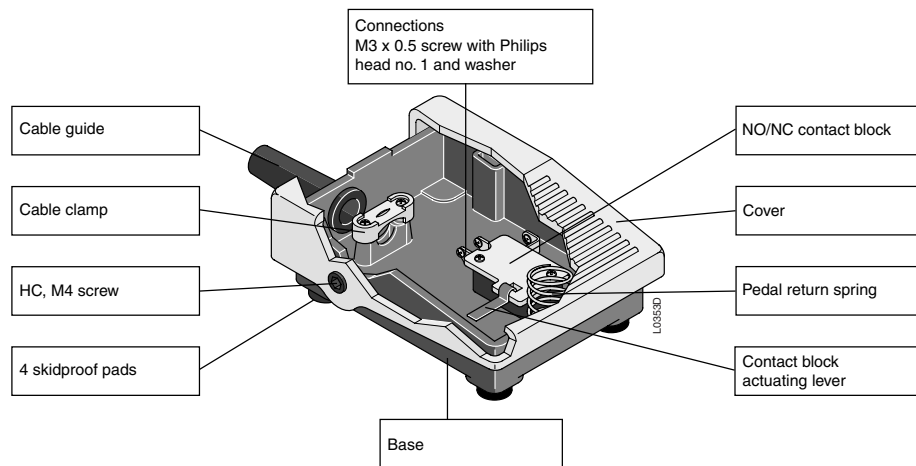
Foot switch operated machines such as: shearing machines, folding machines, spinning lathes, machine tools, wrapping machines, riveting presses, etc.

Foot switches with covers come in three operation formats:

- **Free movement:** 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.

Description of IPM Mini Foot Switches

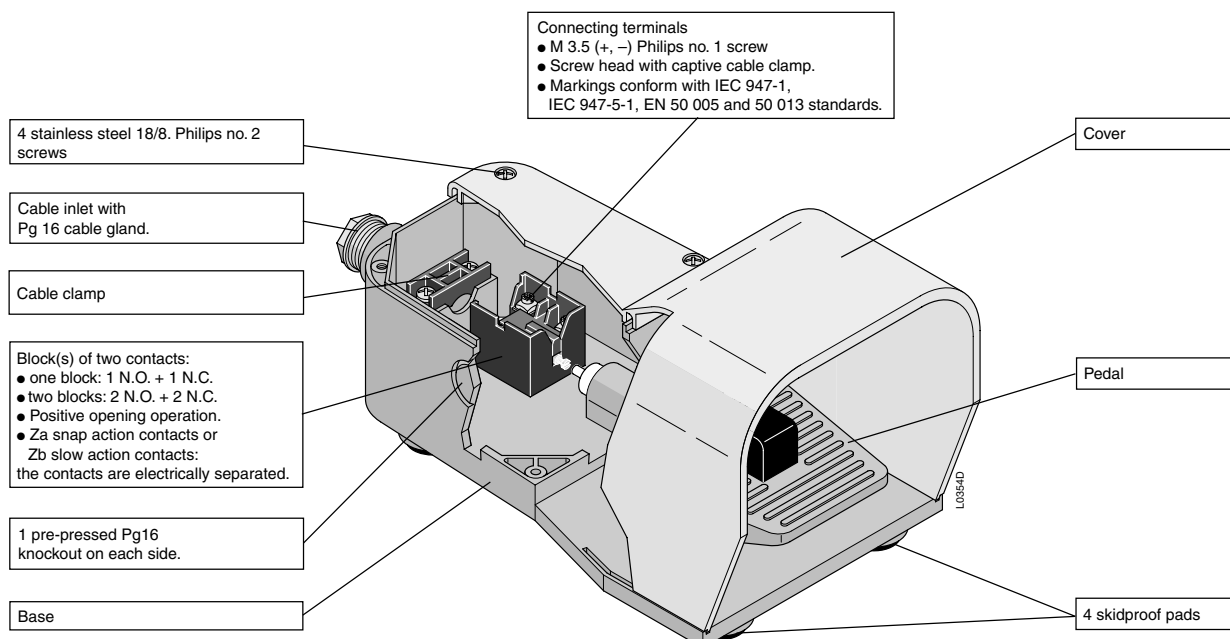
- **Reduced dimensions:** 100 x 75 x 34 mm.
- **Materials:** cover and base made of self-extinguishing ABS.
- **Colour choice:** black or grey base; black, grey, yellow or red cover.



Description of IPS 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).
- **Colour 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.




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

IPM Mini Foot Switches ...

Ordering Details

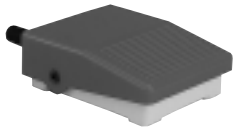
Type	Order code	NO/NC Contact Block	Cover Colour	Unit Weight in kg	Pack ^{ing} 1 piece
					

Black Base

IPM1Y	1SBV 00 1101 R1823	1	Yellow	0.130
IPM1G	1SBV 00 1102 R1823	1	Grey	0.130
IPM1B	1SBV 00 1103 R1823	1	Black	0.130
IPM1R	1SBV 00 1104 R1823	1	Red	0.130

Grey Base

IPM2Y	1SBV 00 1105 R1823	1	Yellow	0.130
IPM2G	1SBV 00 1106 R1823	1	Grey	0.130
IPM2B	1SBV 00 1107 R1823	1	Black	0.130
IPM2R	1SBV 00 1108 R1823	1	Red	0.130



IPM Mini Foot Switch ...

• Additional technical data, dimensions page 65

Foot Switches

IPS Foot Switches with Covers ...

Ordering Details

Type	Order Code	Contact Blocks			Unit Weight in kg
		Snap action		Non-overlapping Slow action	
colour code: <input type="checkbox"/> (Refer to table below)	to be completed with the colour code: <input type="checkbox"/> (Refer to table below)				Pack ^{ing} 1 piece

Free Movement

IPS <input type="checkbox"/> 1A11	1SBV 00 210 <input type="checkbox"/> R1111	1			1.100
IPS <input type="checkbox"/> 1D11	1SBV 00 210 <input type="checkbox"/> R1411			1	1.100
IPS <input type="checkbox"/> 1A22	1SBV 00 210 <input type="checkbox"/> R1122		1 + 1		1.100
IPS <input type="checkbox"/> 1D22	1SBV 00 210 <input type="checkbox"/> R1422			1 + 1	1.100

Locked in Neutral Position

IPS <input type="checkbox"/> 2A11	1SBV 00 220 <input type="checkbox"/> R1111	1			1.100
IPS <input type="checkbox"/> 2D11	1SBV 00 220 <input type="checkbox"/> R1411			1	1.100
IPS <input type="checkbox"/> 2A22	1SBV 00 220 <input type="checkbox"/> R1122		1 + 1		1.100
IPS <input type="checkbox"/> 2D22	1SBV 00 220 <input type="checkbox"/> R1422			1 + 1	1.100

Latched in Low Position

IPS <input type="checkbox"/> 3A11	1SBV 00 230 <input type="checkbox"/> R1111	1			1.100
IPS <input type="checkbox"/> 3D11	1SBV 00 230 <input type="checkbox"/> R1411			1	1.100
IPS <input type="checkbox"/> 3A22	1SBV 00 230 <input type="checkbox"/> R1122		1 + 1		1.100
IPS <input type="checkbox"/> 3D22	1SBV 00 230 <input type="checkbox"/> R1422			1 + 1	1.100

Free Movement Foot Switch with half-red Cover

IPSZ 1A11	1SBV 00 2109 R1111	1			0.800
IPSZ 1D11	1SBV 00 2109 R1411			1	0.800
IPSZ 1A22	1SBV 00 2109 R1122		1 + 1		0.800
IPSZ 1D22	1SBV 00 2109 R1422			1 + 1	0.800

Foot Switch Latched in Low Position with half-red Cover

IPSZ 3A11	1SBV 00 2309 R1111	1			0.800
IPSZ 3D11	1SBV 00 2309 R1411			1	0.800
IPSZ 3A22	1SBV 00 2309 R1122		1 + 1		0.800
IPSZ 3D22	1SBV 00 2309 R1422			1 + 1	0.800

Colour Code

Type	Colour	Order Code
IPS <input type="checkbox"/> 0 <input type="checkbox"/> R...
Y	Yellow	5
G	Grey	6
R	Red	8

• Additional technical data, dimensions page 66



IPSY 1A11

1SBV01354



IPSZ 1A11

1SBV01053

Foot Switches

Technical Data

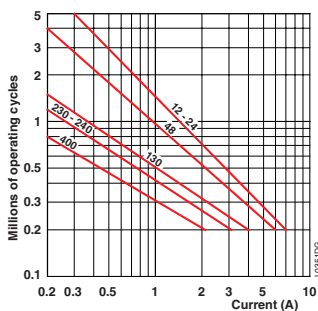
General Technical Data

		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	– 10 ... + 70
– for storage	°C	– 25 ... + 80	– 30 ... + 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	1.2	0.25
Operating angle	Degree	2 to 4	15
Cable inlet		Cable guide ø min. 6 mm; ø max. 8.5 mm	Pg 16

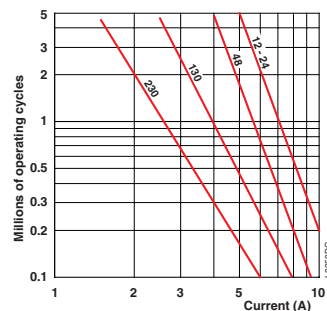
Electrical Data

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} ($\theta \leq 40$ °C)	A	15	10 (according to IEC 947-1)
Short-circuit protection $U_e \leq 500$ V a.c. - gG (gl) 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	A	–	10
24 V	A	–	5.5
130 V	A	–	3.1
230 V	A	–	3
240 V	A	–	1.8
400 V	A	–	2.8
DC-13 acc. to IEC 947-5-1	A	–	0.6
24 V	A	–	0.27
110 V	A	–	
250 V	A	–	
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		(Refer to contact blocks page 66)	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

• Ordering details pages 63 to 64

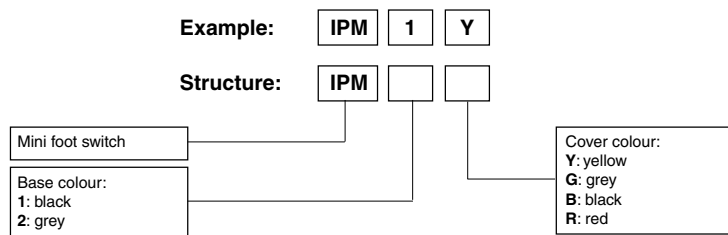
Foot Switches

IPM Mini Foot Switches ... Assortment

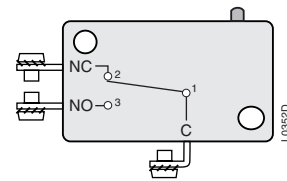


		Yellow cover	Grey cover	Black cover	Red cover
Black base	Type	IPM1Y	IPM1G	IPM1B	IPM1R
	Order code	1SBV 00 1101 R1823	1SBV 00 1102 R1823	1SBV 00 1103 R1823	1SBV 00 1104 R1823
Grey base	Type	IPM2Y	IPM2G	IPM2B	IPM2R
	Order code	1SBV 00 1105 R1823	1SBV 00 1106 R1823	1SBV 00 1107 R1823	1SBV 00 1108 R1823
Weight (packing per unit)	kg	0.130	0.130	0.130	0.130

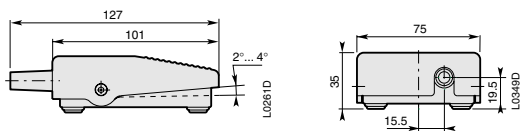
Symbols



NO/NC Contact Block

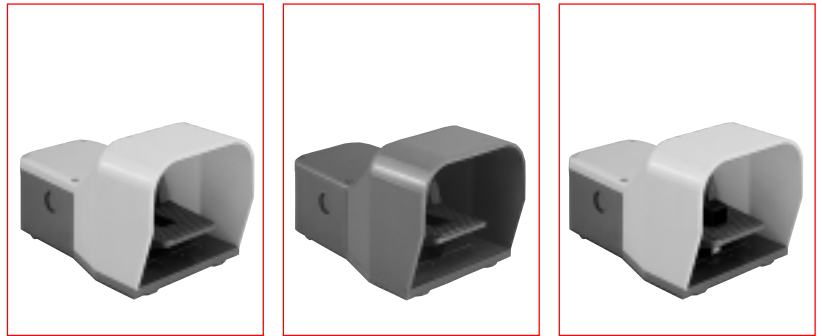


Dimensions (in mm)



Foot Switches

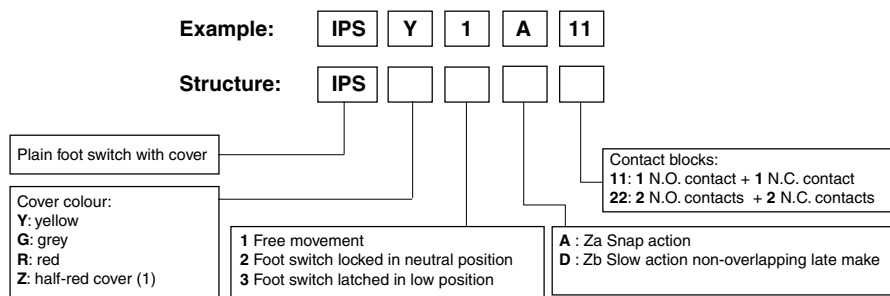
IPS Foot Switches with Covers ... Assortment



Operating Formats

		Free movement	Locked in neutral position	Latched in low position
Snap action contacts	Type Order code ⊖ (Positive opening operation of the N.C. contact)	IPS □ 1A11 1SBV 00 210 □ R1111 ⊕	IPS □ 2A11 1SBV 00 220 □ R1111 ⊖	IPS □ 3A11 1SBV 00 230 □ R1111 ⊕
Snap action contacts	Type Order code ⊖ (Positive opening operation of the N.C. contact)	IPS □ 1A22 1SBV 00 210 □ R1122 ⊖	IPS □ 2A22 1SBV 00 220 □ R1122 ⊖	IPS □ 3A22 1SBV 00 230 □ R1122 ⊖
Non-overlapping Slow action contacts	Type Order code ⊖ (Positive opening operation of the N.C. contact)	IPS □ 1D11 1SBV 00 210 □ R1411 ⊖	IPS □ 2D11 1SBV 00 220 □ R1411 ⊖	IPS □ 3D11 1SBV 00 230 □ R1411 ⊖
Non-overlapping Slow action contacts	Type Order code ⊖ (Positive opening operation of the N.C. contact)	IPS □ 1D22 1SBV 00 210 □ R1422 ⊕	IPS □ 2D22 1SBV 00 220 □ R1422 ⊕	IPS □ 3D22 1SBV 00 230 □ R1422 ⊕
Weight (packing per unit)		kg 1.10	1.10	1.10

Symbols

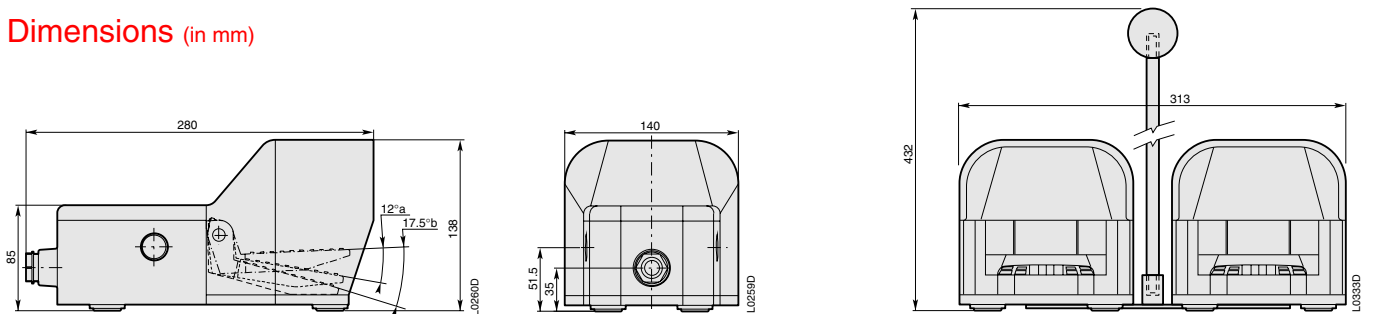


(1) Incompatible with locked in neutral position function.

Colour Code

Type	Cover Colour	Order Code
IPS □ 0 □ R...
Y	Yellow	5
G	Grey	6
R	Red	8
Z	1/2 Red cover (1)	9

Dimensions (in mm)



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

Example of double foot switch utilization

Notes

