

Description



Pizzato Elettrica historical product, the PX and PA foot switches have recorded a continuous growth and success in the market. Modified and updated over time, this cutting-edge series keeps offering new solutions to all flexibility and modularity demands. Moreover, the latest changes have reduced its weight and therefore the environmental impact.

Protection degree IP65

IP65

Designed for use in even the more severe conditions, these devices have passed the test for IP65 according to IEC 60529 and they are suitable for use where a high protection degree for the enclosure is requested. Available also with IP53 for applications requiring high price/quality ratio.

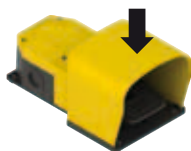
Conduit entry with cable clamp



Inside the housing there is a cable clamp in axis with the conduit entry which keep the electric cable in position; thus avoiding that repeated tractions and movements impact the electrical connections of the contact blocks. Reversible, it can tighten both, large and small cables.

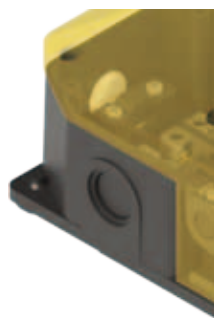
Sturdy cap

800 N



Foot switches of the PX series have a shaped reinforced cap that can bear static loads up to 800 N without breaking. Available further solutions for heavy duty environments: the shock-proof protection made of glass-reinforced polymer and the metal protection (only for PA series) with oversize dimensions for safety shoes.

Side openings



All PX and PA series foot switches have two knock out openings on their sides. Thanks to a dedicated joining KIT a single foot switch can be attached to another Pizzato model thus creating only one sturdy double foot switch. The joining KITs are provided with special gaskets which maintain the device protection degree unaltered, and with a special conduit that allows to pass the wires from one foot switch to the next.

Stainless steel external metallic parts

AISI 304

On request the foot switch can be provided with external metal parts in stainless steel. In this version, all screws, springs and sliding pivots made of galvanized steel are replaced by the more resistant stainless steel. Ideal for applications used in presence of corrosive elements as in the food and pharmaceutical sectors.

Contact blocks



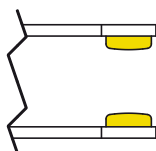
Up to two contact blocks with two contacts each can be fitted in one foot switch. The range of models available is very wide with slow or snap action and different operation travel. All contact blocks are designed with highly reliable double bridge electric contacts; NC contacts have positive opening in accordance with IEC 60947-5-1, they are therefore suitable for safety applications.

Non-skid rubber feet



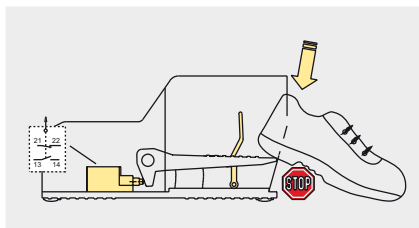
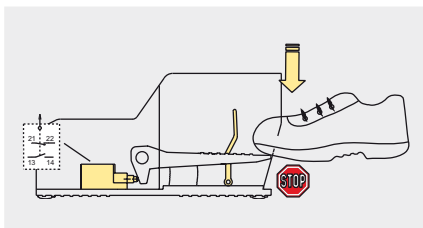
All foot switches are provided with four special non-skid feet which, being hollow in the middle, guarantee smaller contact surface and greater friction. This way the actuation of the foot switch is simple and practical, preventing its sliding away on very smooth and polished floors.

Gold-plated contacts

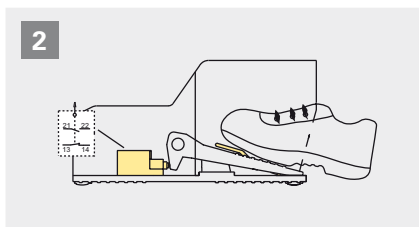
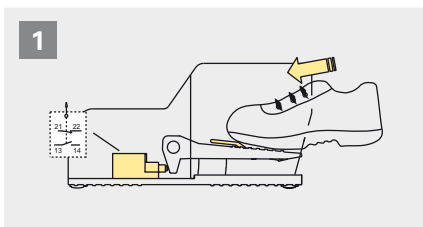


The contact blocks of these devices can be supplied gold-plated upon request. It is ideal for all applications with low voltages or currents and it ensures greater contact reliability. The high-thickness coating > 1 micron ensures the mechanical endurance of the coating over time.

Safety lever

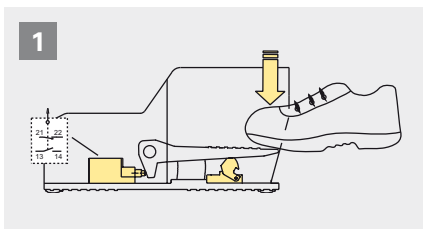


The safety lever prevents the lowering of the pedal actuator in case the foot is not fully inserted into the pedal. This prevents the accidental activation of the pedal.

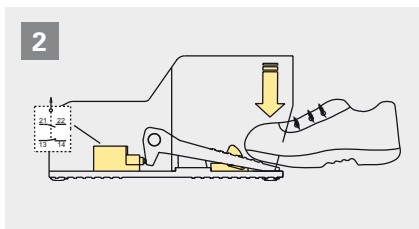


The foot must be completely inserted in order to lower the safety lever and push down the pedal actuator.

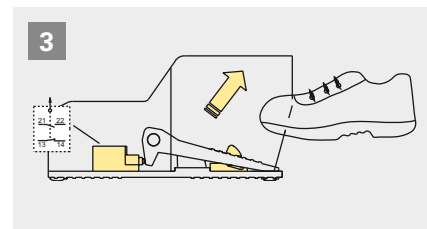
Lock of the pedal actuator



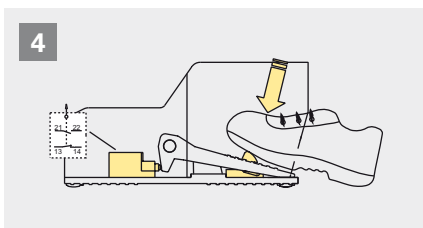
Insertion of the foot in the pedal



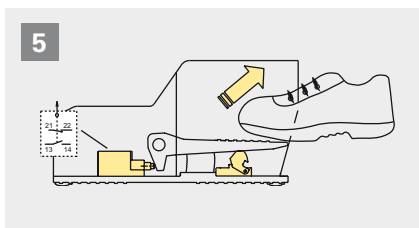
Pushing down the pedal actuator, the contact switches and the device locks the actuator



Releasing the pedal actuator, the lock device keeps it down.

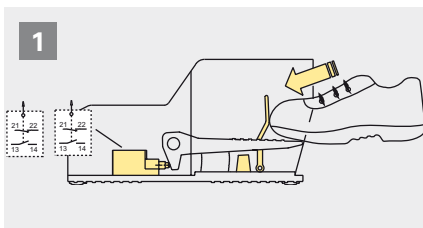


To unlock the pedal actuator, push the locking device

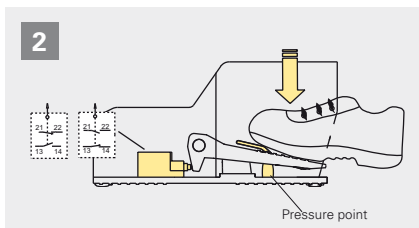


Upon drawing the foot from the foot switch, the pedal actuator and the contacts return to their initial positions

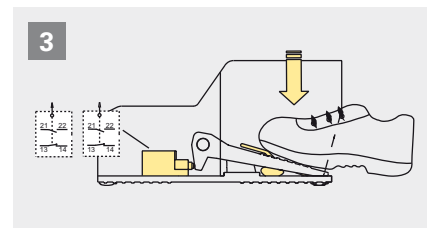
2-stage actuating force



PX foot switches with two overlapped snap action contact blocks (2x 1NO+1NC), two steps actuation force and safety lever.

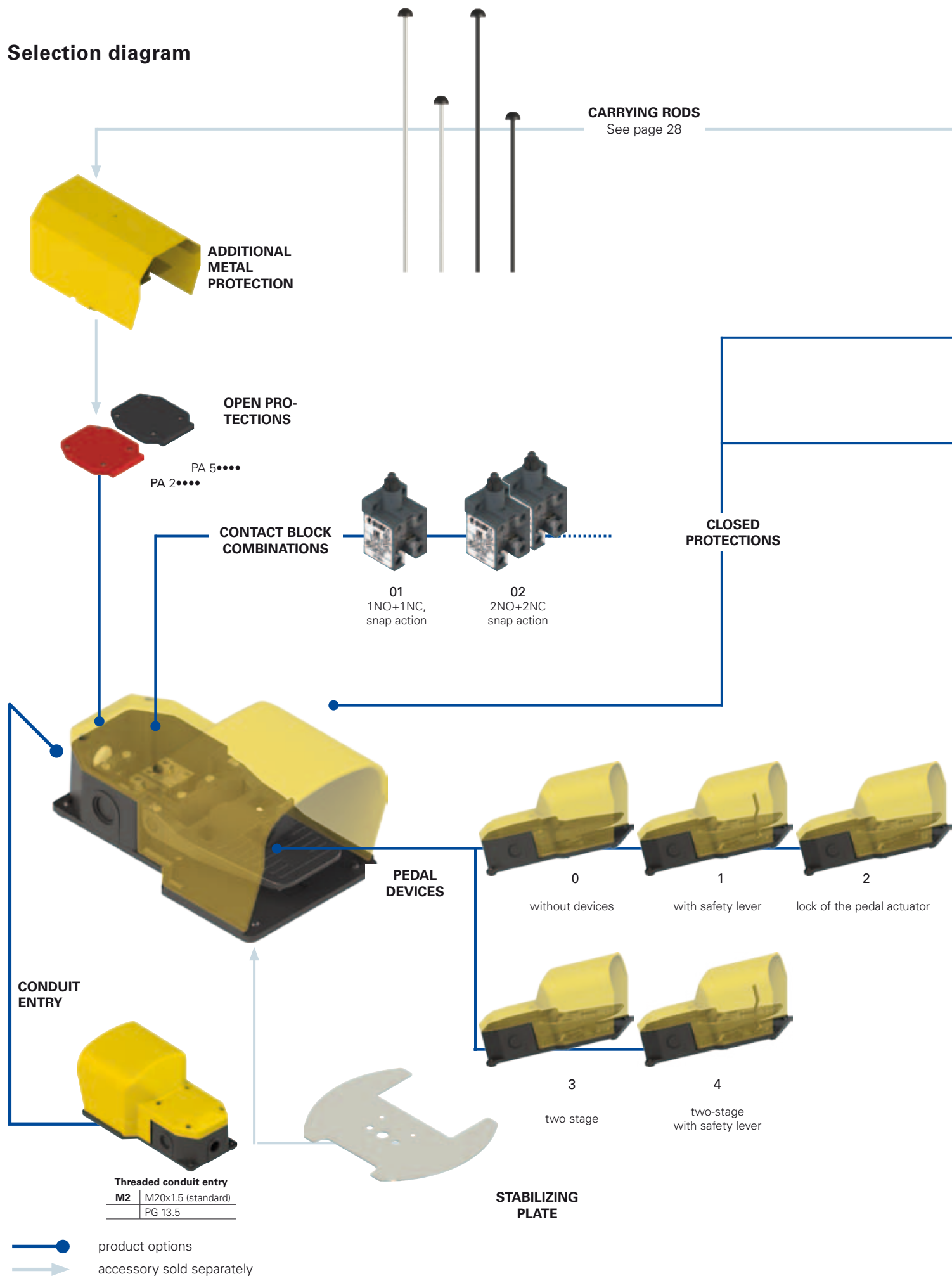


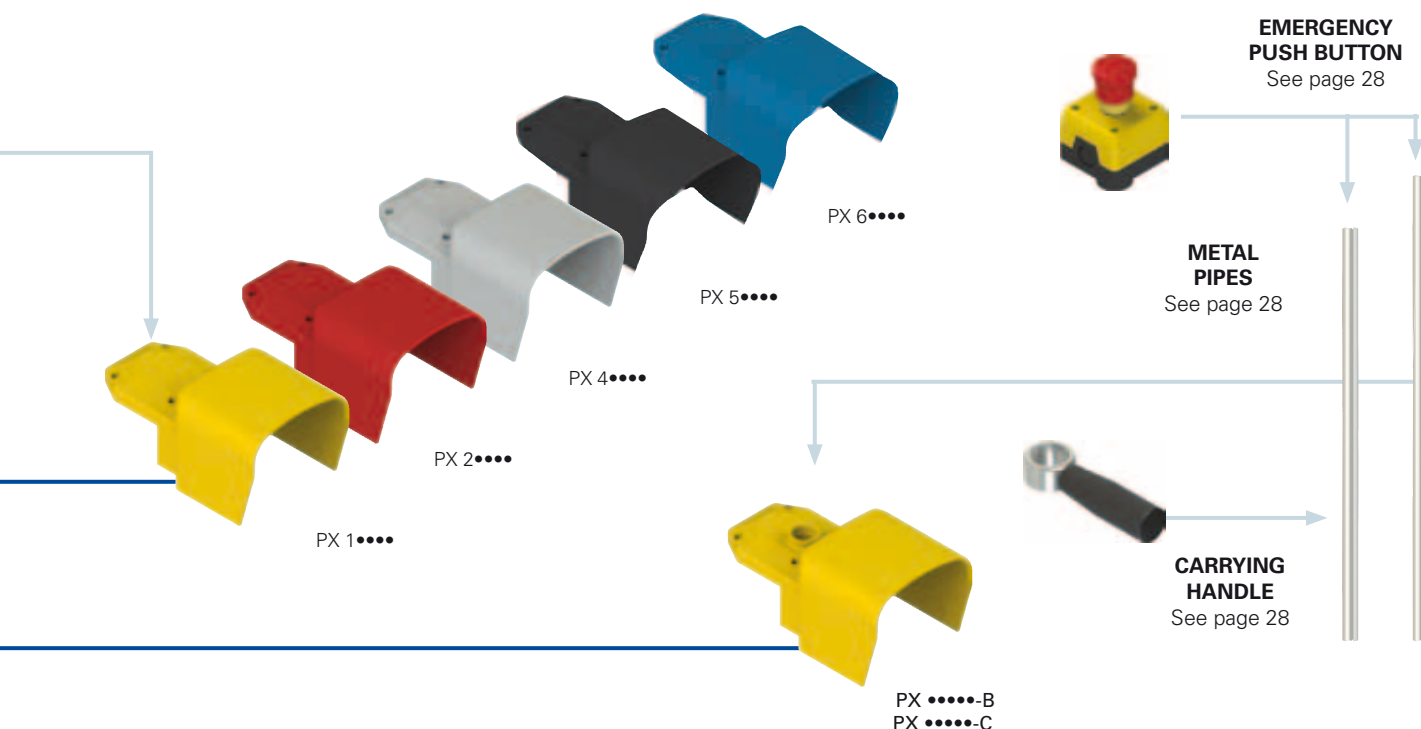
With a light pressure (~19 N) on the pedal actuator, the first contact block switches while the second keeps its state. The pedal actuator stops at pressure point.



Pushing down with higher force (~180 N) on the pedal actuator, the second contact block switches as well. In this position both contact blocks have been switched.

Selection diagram





Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

article		options		options	
PX		10110-AM2		X	
Foot-switches				External metallic parts	
PX	closed version				zinc-plated steel (standard)
PA	open version			X	stainless steel
Colour of protection				Threaded conduit entry	
1	yellow RAL 1023 (standard)			M2	M20x1.5 (standard)
2	red RAL 3020				PG 13.5
4	grey RAL 7035			Accessories (PX series only)	
5	black RAL 9017				without accessories
6	blue RAL 5017			A	with technopolymer carrying rod (400 mm)
Contact block combinations				B	with M25 hole for VF KIT31
01	1NO+1NC, snap action (VF B501)			C	with M25 hole for VF KIT31 with stabilizing plate
02	2x (1NO+1NC), snap action (VF B501+VF B501)			D	with technopolymer carrying rod (660 mm)
03	1NO+1NC, slow action (VF B601)			Protection degree	
04	2x (1NO+1NC), slow action (VF B601+VF B601)			0	IP53
05	2x 2NO, slow action (VF B1001+VF B1001)			1	IP65
06	2x 2NC, slow action (VF B901+VF B901)			Devices	
07	2NC, slow action (VF B901)			0	without devices
08	2NO, slow action (VF B1001)			1	with safety lever
09	1NO+1NC, slow action, make before break (VF B701)			2	lock of the pedal actuator
14	2NO, snap action (VF B1201)			3	without safety lever and with two-stage actuating force (only with contact block combinations 20, 24)
15	2NC, snap action (VF B1101)			4	with safety lever and with two-stage actuating force (only with contact block combinations 20, 24)
20	2x (1NO+1NC), snap action shifted (VF B501+VF B501)				
24	(1NO+1NC)+(2NC), snap action, shifted (VF B501+VF B1101)				

Other combinations on request.
For characteristics of contact blocks see page 31.



Main features

- Technopolymer housing, shock-proof
- Protection degree IP53 or IP65
- 14 contact blocks available
- Various auxiliary devices available
- Assembled through special joining kits

Utilization categories

Alternating current: AC15 (50÷60 Hz)

U _e (V)	250	400	500
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I _e (A)	6	4	1
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Direct current: DC13

U _e (V)	24	125	250
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I _e (A)	6	1.1	0.4
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Markings and quality marks:

complete foot switch



EAC approval: RU C-IT DM94.B.01024

internal contact block



UL approval: E131787

CCC approval: 2013010305600704

EAC approval: RU C-IT DM94.B.01024

Technical data

Housing

Housing with double insulation:

Base:

Cap:

Tightening torque, cover screws:

Actuating force:

One threaded conduit entry:

Tightening torque, cable clamp screws:

Protection degree:



glass fiber reinforced technopolymer, self-extinguishing and shock-proof technopolymer, self-extinguishing and shock-proof

0.8 ... 1.2 Nm

16 N

M20x1.5 (standard)

0.8 ... 1 Nm

IP53 (P•••••0-M2) or IP65 (P•••••1-M2)

acc. to EN 60529 with cable gland having equal or higher protection degree

General data

Ambient temperature:

-25°C ... +80°C

Safety parameters:

B_{10d}:

20,000,000 for NC contacts

Max. operation frequency:

3600 operating cycles¹/hour

Mechanical endurance:

10 million operating cycles¹

(1) One operation cycle means two movements, one to close and one to open contacts, as defined in EN 60947-5-1.

Electrical data

Thermal current (I_{th}):

10 A

Rated insulation voltage (U_i):

500 Vac 600 Vdc

Rated impulse withstand voltage U_{imp}:

6 kV

Conditional short circuit current:

1000 A acc. to EN 60947-5-1

Protection against short circuits:

type aM fuse 10 A 500 V

Pollution degree:

3

Cable cross section (flexible copper strands)

Contact block combinations (all):

min.	1 x 0.5 mm ²	(1 x AWG 20)
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max.	2 x 2.5 mm ²	(2 x AWG 14)
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Terminal screw tightening torque:

0.6 ... 0.8 Nm

In conformity with standards:

IEC 60947-5-1, EN 60947-5-1, IEC 60947-1, EN 60947-1, EN 60529.

In conformity with the requirements of:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and EMC Directive 2004/108/EC.

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1.

Installation for safety applications:

Use only switches marked with the symbol ⊕ aside the product code. Always connect the safety circuit to the **NC contacts** (normally closed contacts: 11-12, 21-22 or 31-32) as stated in **standard EN 60947-5-1, encl. K, par. 2**.



Dimensional drawings

All measures in the drawings are in mm

Contact type:

R = snap action
L = slow action
LO = slow action
make before

break
RS = snap action
shifted

Contact block combinations

	open version	closed version	closed version with M25 hole for VF KIT31	
01 R	PA 20100-M2 → 1NO+1NC	PX 10110-M2 → 1NO+1NC	PX 10110-BM2 → 1NO+1NC	
02 R	PA 20200-M2 → 2x (1NO+1NC)	PX 10210-M2 → 2x (1NO+1NC)	PX 10210-BM2 → 2x (1NO+1NC)	
03 L	PA 20300-M2 → 1NO+1NC	PX 10310-M2 → 1NO+1NC	PX 10310-BM2 → 1NO+1NC	
04 L	PA 20400-M2 → 2x (1NO+1NC)	PX 10410-M2 → 2x (1NO+1NC)	PX 10410-BM2 → 2x (1NO+1NC)	
05 L	PA 20500-M2 2x 2NO	PX 10510-M2 2x 2NO	PX 10510-BM2 2x 2NO	
06 L	PA 20600-M2 → 2x 2NC	PX 10610-M2 → 2x 2NC	PX 10610-BM2 → 2x 2NC	
07 L	PA 20700-M2 → 2NC	PX 10710-M2 → 2NC	PX 10710-BM2 → 2NC	
08 L	PA 20800-M2 2NO	PX 10810-M2 2NO	PX 10810-BM2 2NO	
09 LO	PA 20900-M2 → 1NO+1NC	PX 10910-M2 → 1NO+1NC	PX 10910-BM2 → 1NO+1NC	
14 R	PA 21400-M2 2NO	PX 11410-M2 2NO	PX 11410-BM2 2NO	
15 R	PA 21500-M2 → 2NC	PX 11510-M2 → 2NC	PX 11510-BM2 → 2NC	
20 RS	PA 22000-M2 → 1NO+1NC (1 cont.) 1NO+1NC (2 cont.)	PX 12010-M2 → 1NO+1NC (1 cont.) 1NO+1NC (2 cont.)	PX 12010-BM2 → 1NO+1NC (1 cont.) 1NO+1NC (2 cont.)	
24 RS	PA 22400-M2 → 1NO+1NC (1 cont.) 2NC (2 cont.)	PX 12410-M2 → 1NO+1NC (1 cont.) 2NC (2 cont.)	PX 12410-BM2 → 1NO+1NC (1 cont.) 2NC (2 cont.)	

Contact block data on page 31.

Legend

- Closed contact
- Open contact
- Positive opening travel
- Pushing the switch / Releasing the switch

Stock items

PA 20100-M2
PX 10100-M2
PX 10110-M2
PX 10111-M2
PX 10210-M2

Items with code on **green** background are stock items

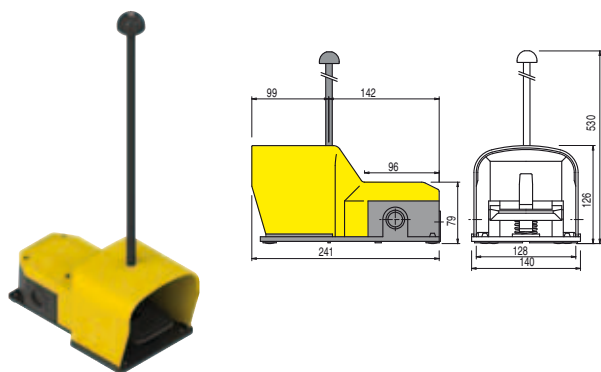
Accessories See page 127

→ The 2D and 3D files are available at www.pizzato.com



Combination examples

All measures in the drawings are in mm

Foot switch, closed version, with 400 mm technopolymer carrying rod

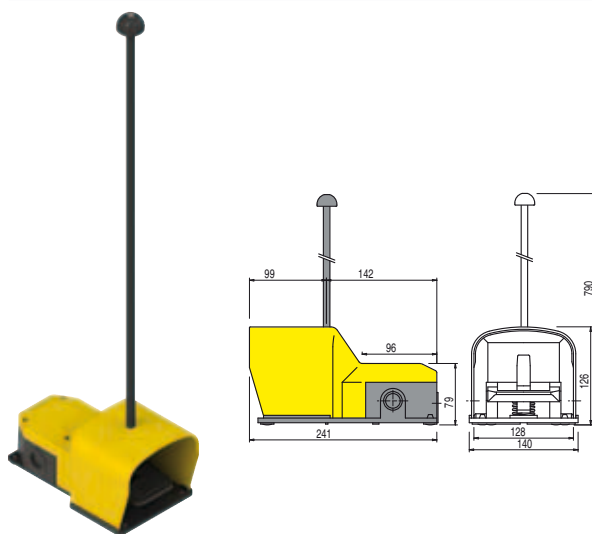


How to order:



			
PX 10110-M2	VF KIT21		

This article can also be purchased with single code PX 10110-AM2. In this case the cap is supplied already drilled for fixing the carrying rod.

Foot switch, closed version, with 660 mm technopolymer carrying rod

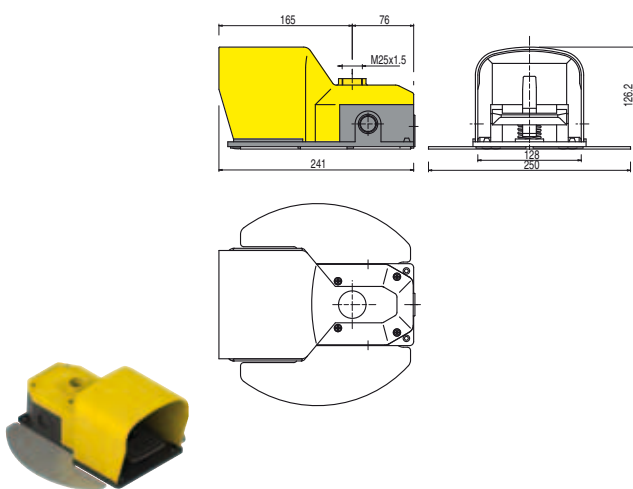


How to order:



			
PX 10110-M2	VF KIT22		

This article can also be purchased with single code PX 10110-DM2. In this case the cap is supplied already drilled for fixing the carrying rod.

Foot switch closed version with M25x1.5 hole and stabilizing plate

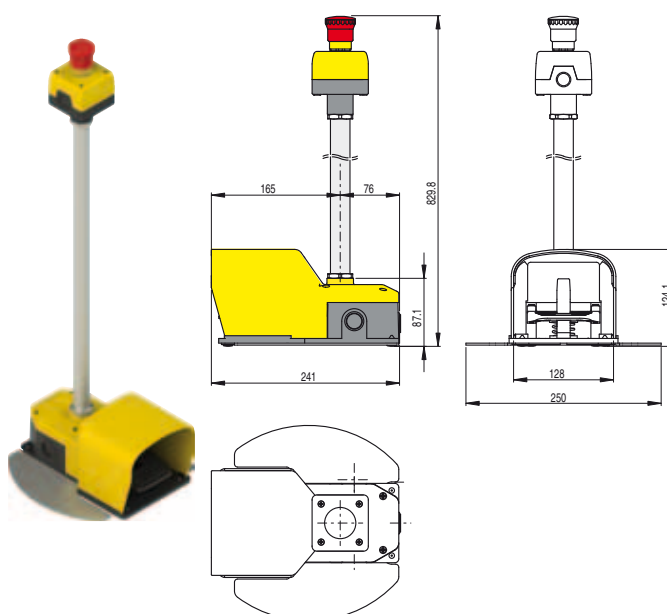


How to order:

			
PX 10110-BM2	VF KIT60		

This article can also be purchased with single code PX 10110-CM2.

Foot switch closed version with metal pipe, stabilizing plate and emergency button 1 NC

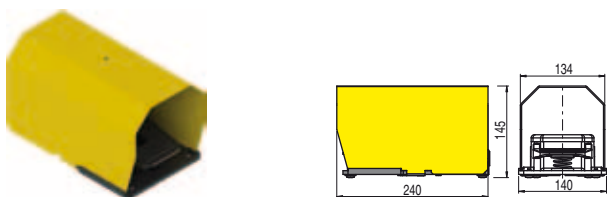


How to order:

			
PX 10110-BM2	VF KIT60	VF KIT31	VF KIT32

Combination examples

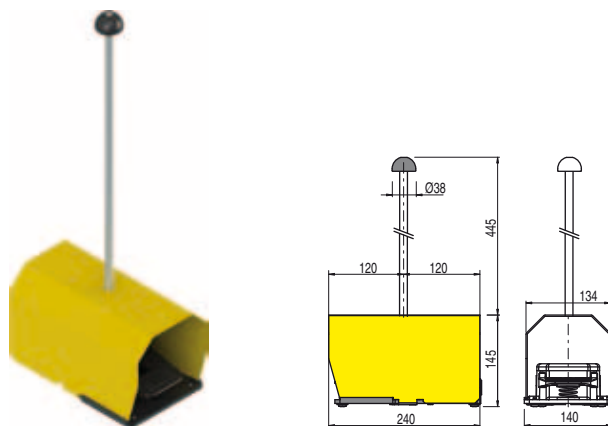
Foot switch open version with additional metal protection.
Ideal for heavy duty applications with safety shoes.



How to order:

PA 20100-M2	VF KIT71		

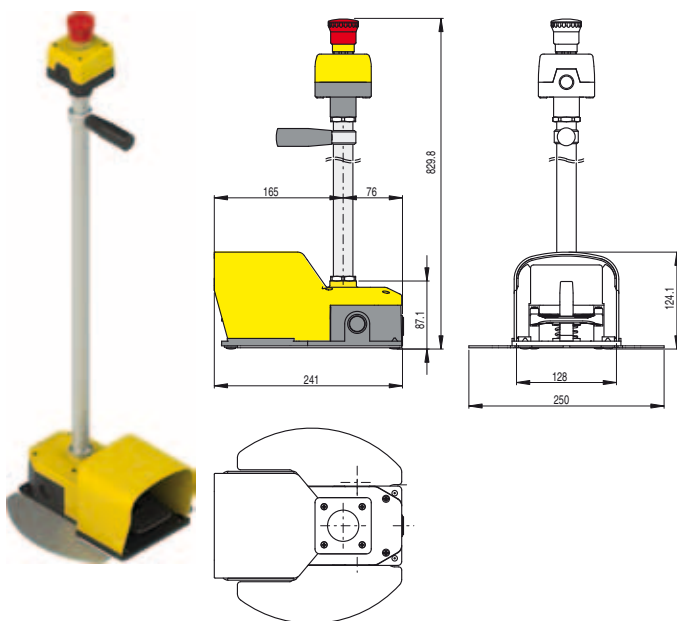
Foot switch, open version and metal protection with 400 mm metal carrying rod For heavy-duty work environments, cap with increased dimensions for safety shoes.



How to order:

PA 20100-M2	VF KIT71	VF KIT25	

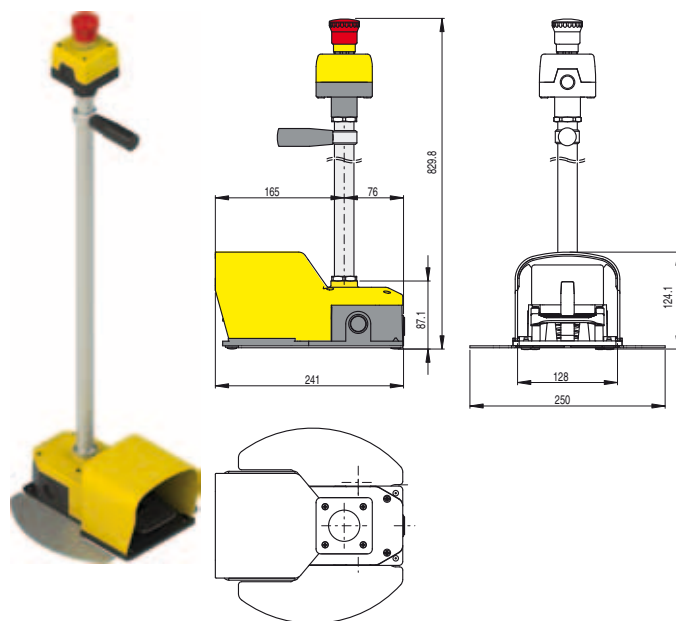
Foot switch, closed version with metal pipe, stabilizing plate, carrying handle and emergency button 1 NC



How to order:

PX 10110-BM2	VF KIT60	VF KIT31	VF KIT32	VF KIT50

Foot switch, closed version with shifted contacts, two-stage actuating force, metal pipe, stabilizing plate, carrying handle and emergency button 1 NC



How to order:

PX 12040-BM2	VF KIT60	VF KIT31	VF KIT32	VF KIT50