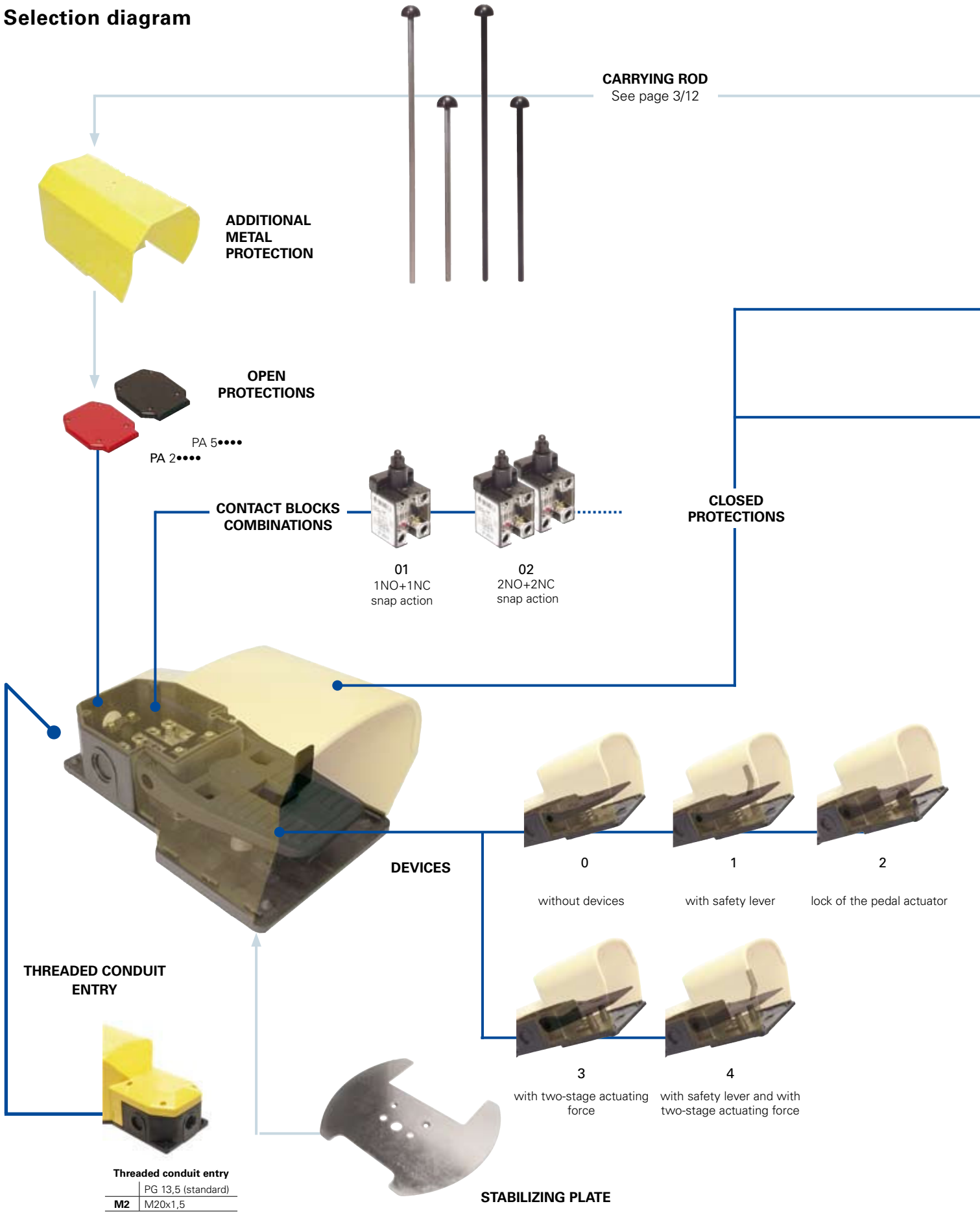


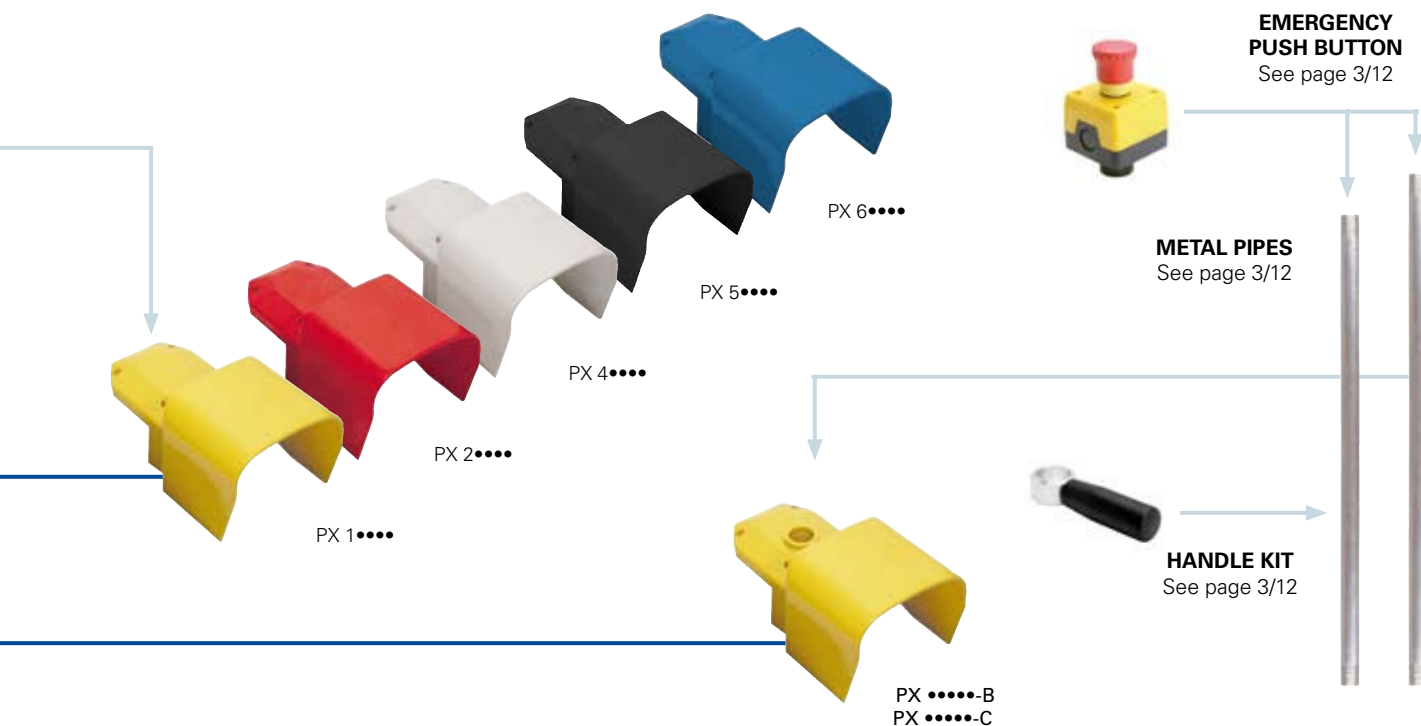
Selection diagram



Threaded conduit entry

	PG 13,5 (standard)
M2	M20x1,5

● product option
 → accessory sold separately


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	
PX 10110		-AM2X	
Foot switches PX with pedal actuator protection PA without pedal actuator protection		External metallic parts <input type="checkbox"/> zinc plated steel (standard) X stainless steel	
Protections colour 1 yellow RAL 1023 2 red RAL 3020 4 grey RAL 7035 5 black RAL 9017 6 blue RAL 5017		Threadedconduitentries <input type="checkbox"/> PG 13,5 (standard) M2 M20x1,5	
Contact blocks combination 01 1NO+1NC, snap action (VF B501) 02 2x (1NO+1NC), snap action (VF B501+VF B501) 03 1NO+1NC, slow action (VF B601) 04 2x (1NO+1NC), slow action (VF B601+VF B601) 05 2x 2NO, slow action (VF B1001+VF B1001) 06 2x 2NC, slow action (VF B901+VF B901) 07 2NC, slow action (VF B901) 08 2NO, slow action (VF B1001) 09 1NO+1NC, slow action overlapped (VF B701) 14 2NO, snap action (VF B1201) 15 2NC, snap action (VF B1101) 20 2x (1NO+1NC), snap action shifted (VF B501+VF B501) 24 (1NO+1NC) + (2NC), snap action shifted (VF B501+VF B1101)		Accessories (only PX series) <input type="checkbox"/> without accessories A complete with polymer carrying rod (400 mm) B with M25 hole for VF KIT31 C with M25 hole for VF KIT31 complete with stabilizing plate D complete with polymer carrying rod (660 mm)	
Contact block features see page 2/179.		Protection degree 0 IP53 1 IP65	
		Devices 0 without devices 1 with safety lever 2 with lock of the pedal actuator 3 without safety lever and with two-stage actuating force (only for contact block combination 20) 4 with safety lever and with two-stage actuating force (only for contact block combination 20)	



Main data

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

Utilization categories

Alternate current: AC15 (50÷60 Hz)

Ue (V)	250	400	500
Ie (A)	6	4	1

Direct current: DC13

Ue (V)	24	125	250
Ie (A)	6	1,1	0,4

Markings:



Approval GOST: POCC IT.AB24.B04512
 Contact blocks cULus omologation see page 2/179

Installation for safety applications:

Use only switches marked with the symbol ⊕. The safety circuit must always be connected with the **NC contacts** (normally closed contacts: 11-12, 21-22 or 31-32) as stated in the **standard EN 60947-5-1, encl. K, par. 2.**

⚠ If not expressly indicated in this chapter, for the right installation and the correct utilization of all articles see requirements indicated from page 7/1 to page 7/12.

Housing

Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin and with double insulation □

Actuating force: 16 N

One threaded conduit entry

Protection degree: IP53 or IP65 according to EN 60529 with cable gland having equal or higher protection degree

General data

Ambient temperature: from -25°C to +80°C

Max actuation frequency: 3600 operations cycles¹/hour

Mechanical endurance: 20 million operations cycles¹

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

Electrical data

Thermal current (Ith): 10 A

Rated insulation voltage (Ui): 500 Vac 600 Vdc

Rated impulse withstand voltage U_{imp}: 6 kV

Conditional short circuit current: 1000 A according to EN 60947-5-1

Protection against short circuits: fuse 10 A 500 V type aM

Pollution degree: 3

Cross section of the conductors (flexible copper wire)

Contact block combinations:	min.	1 x 0,5 mm ²	(1 x AWG 20)
	max.	2 x 2,5 mm ²	(2 x AWG 14)

In conformity with standards:

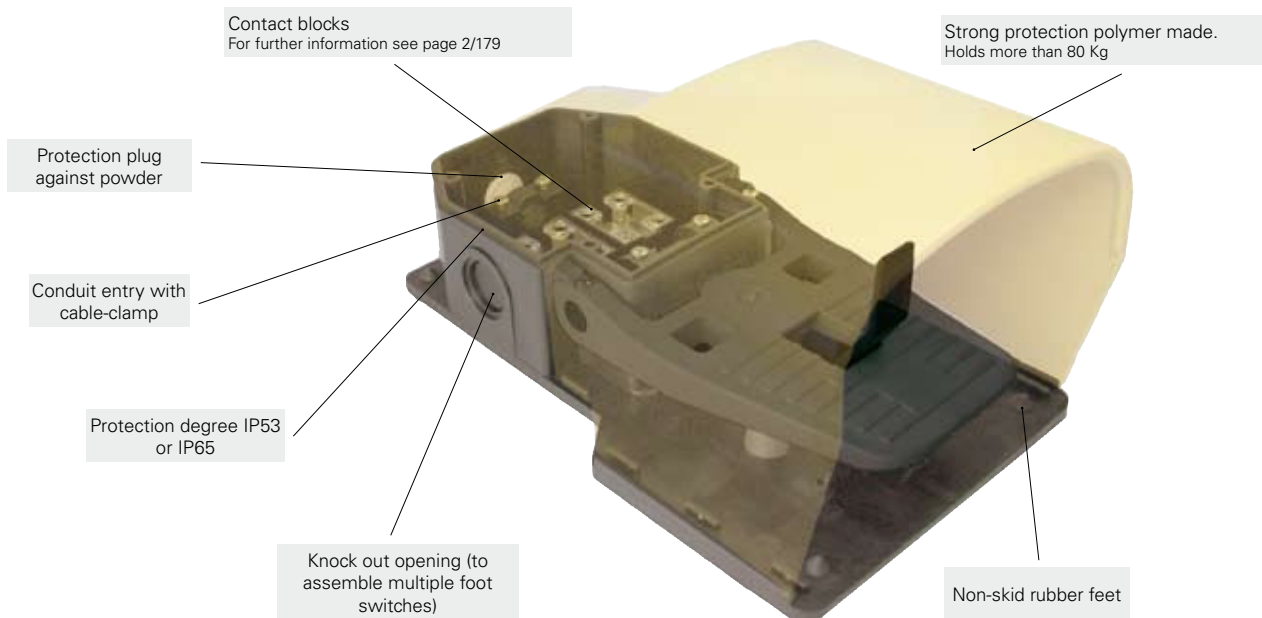
IEC 60947-5-1, EN 60947-5-1, IEC 60529, EN 60529, VDE 0660-200, CENELEC EN 50013.

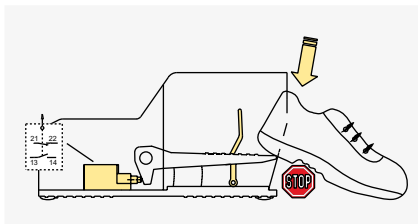
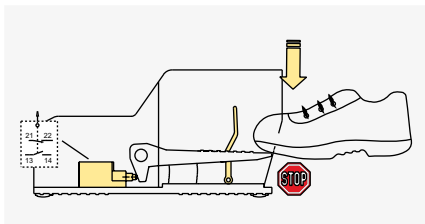
In conformity with requirements requested by:

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

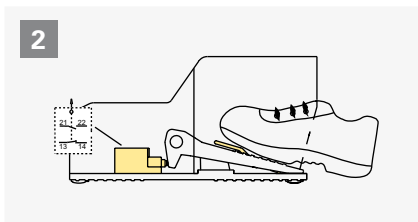
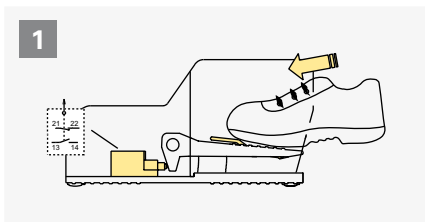
Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1, VDE 0660-206.

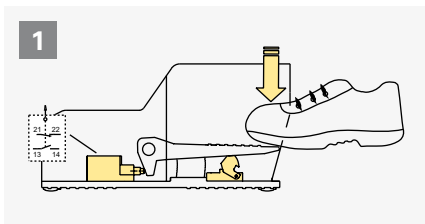


Devices: safety lever (e.g. article PX 10110)


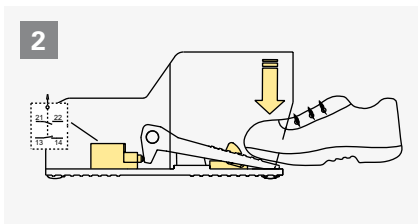
The safety lever prevents the pedal actuator from lowering when the foot is not completely inserted, thus preventing casual or accidental actuation.



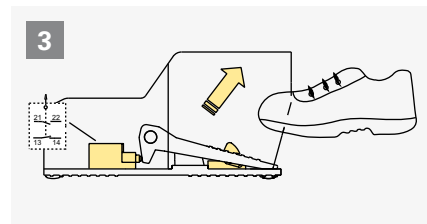
The foot must be completely inserted in order to lower the safety lever and push down the pedal actuator.

Devices: lock of the pedal actuator (e.g. article PX 10120)


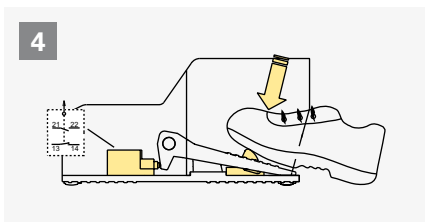
Insertion of the foot in the foot switch



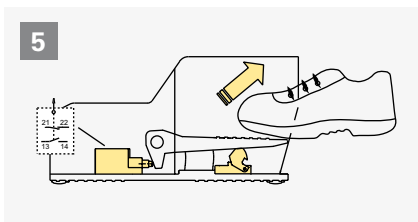
Pushing down the pedal actuator, the contact switches and the device locks the actuator



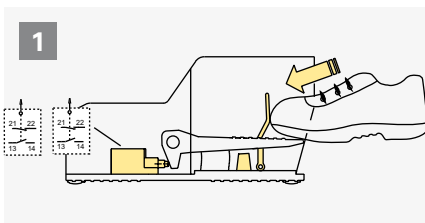
Releasing the pedal actuator, the lock device keeps it down



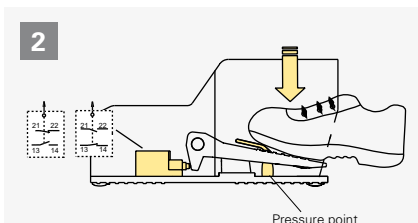
To unlock the pedal actuator, push the locking device



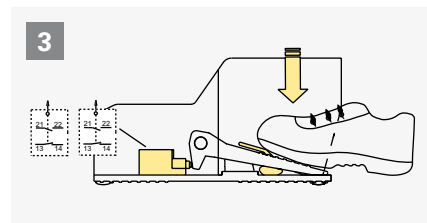
With drawing the foot from the foot switch, the pedal actuator and the contacts return to their initial positions

Devices: actuating force in 2 stages (e.g. article PX 12040)


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.

Dimensional drawings

Contacts type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = snap action shifted

without pedal actuator protection

with pedal actuator protection

with pedal actuator protection with M25 hole for VF KIT31

Contact block combination

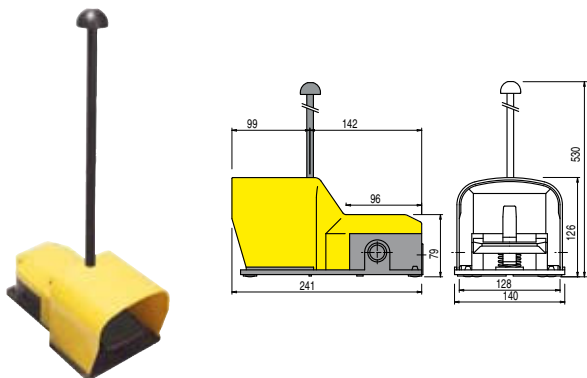
Contact block combination	without pedal actuator protection	with pedal actuator protection	with pedal actuator protection with M25 hole for VF KIT31	
01	R PA 20100 1NO+1NC	PX 10110 1NO+1NC	PX 10110-B 1NO+1NC	
02	R PA 20200 2x (1NO+1NC)	PX 10210 2x (1NO+1NC)	PX 10210-B 2x (1NO+1NC)	
03	L PA 20300 1NO+1NC	PX 10310 1NO+1NC	PX 10310-B 1NO+1NC	
04	L PA 20400 2x (1NO+1NC)	PX 10410 2x (1NO+1NC)	PX 10410-B 2x (1NO+1NC)	
05	L PA 20500 2x 2NO	PX 10510 2x 2NO	PX 10510-B 2x 2NO	
06	L PA 20600 2x 2NC	PX 10610 2x 2NC	PX 10610-B 2x 2NC	
07	L PA 20700 2NC	PX 10710 2NC	PX 10710-B 2NC	
08	L PA 20800 2NO	PX 10810 2NO	PX 10810-B 2NO	
09	LO PA 20900 1NO+1NC	PX 10910 1NO+1NC	PX 10910-B 1NO+1NC	
20	LS PA 22000 2x (1NO+1NC)	PX 12010 2x (1NO+1NC)	PX 12010-B 2x (1NO+1NC)	

Legend

- Contact closed
- Contact open
- Positive opening stroke
- Pressing the switch / Releasing the switch

Items available in stock

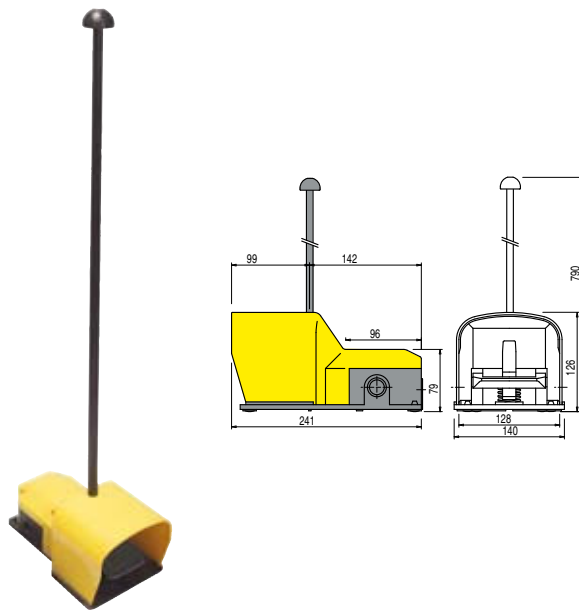
- PA 20100
- PX 10100
- PX 10110
- PX 10111
- PX 10210

Combination examples
Foot switch with pedal actuator protection and polymer carrying rod (400 mm)


How to order:

PX 10110	VF KIT21			

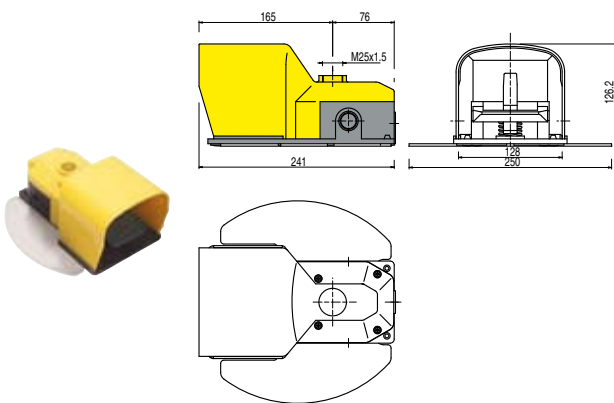
This article can be bought also with single code PX 10110-A. In this case the cover is supplied already pierced for the carrying rod fixing.

Foot switch with pedal actuator protection and polymer carrying rod (660 mm)


How to order:

PX 10110	VF KIT22			

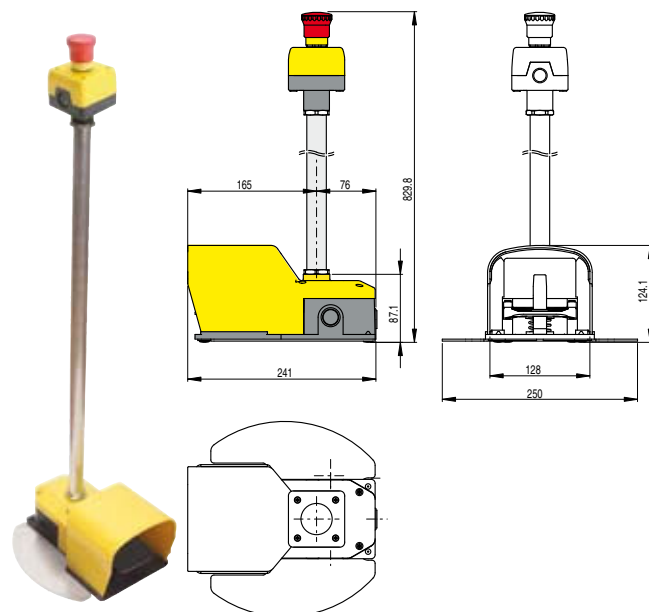
This article can be bought also with single code PX 10110-D. In this case the cover is supplied already pierced for the carrying rod fixing.

Foot switch with pedal actuator protection having a hole M25x1,5 and stabilizing plate


How to order:

PX 10110-B	VF KIT60			

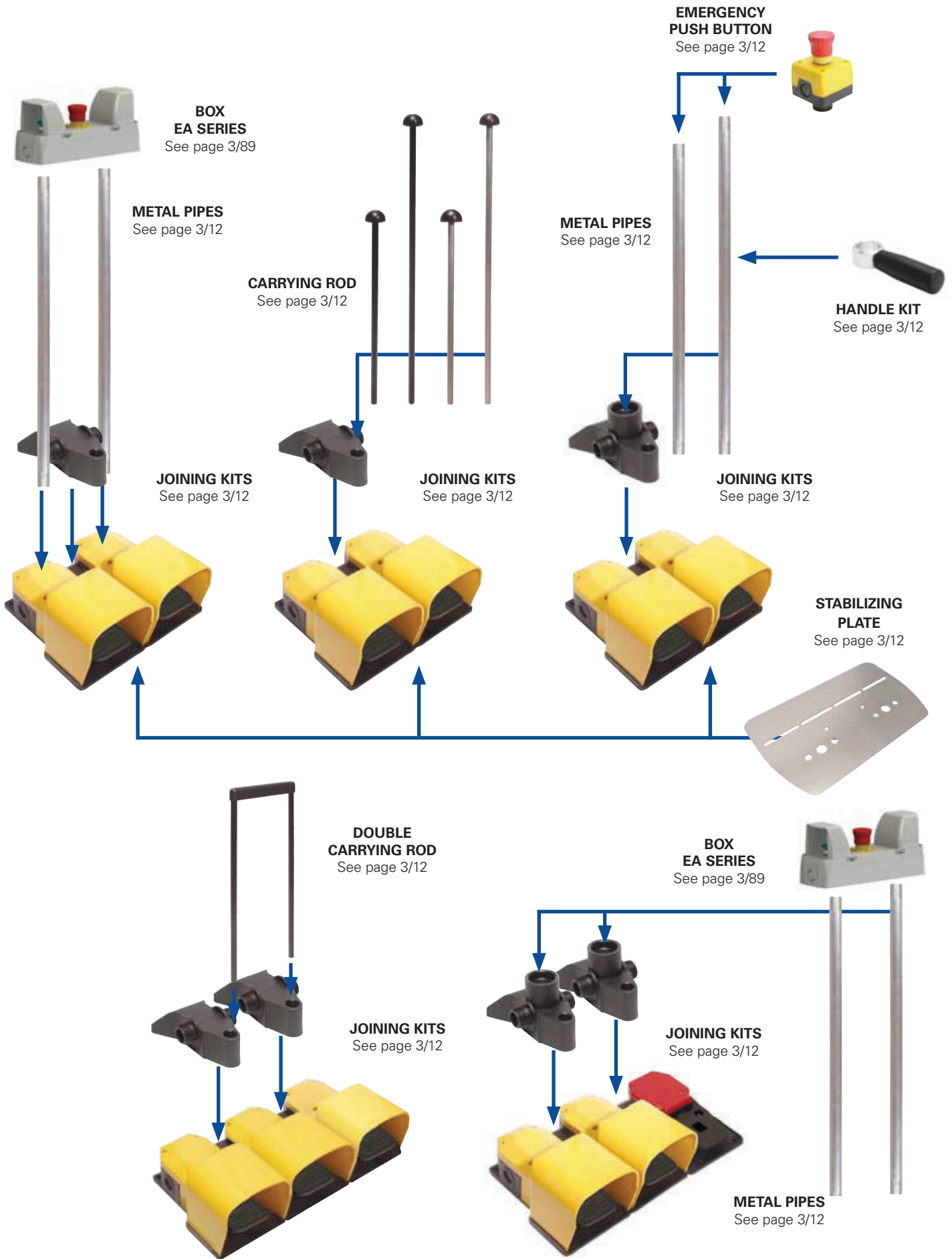
This article can be bought also with single code PX 10110-C.

Foot switch with pedal actuator protection and metal pipe, stabilizing plate and emergency push button 1NC


How to order:

PX 10110-B	VF KIT60	VF KIT31	VF KIT32	

Combination diagrams



● product option
 → accessory sold separately

Already existing combinations of double foot switches

If you wish to purchase foot switches already assembled, please contact our sales office. Before contacting our offices, please look at the following table where some already assigned multiple foot switches combination are listed.

Code	Left foot switch	Joining device	Right foot switch	Additional kits
PC 2-1	PX 10110	VF KIT20	PX 10110	VF KIT21
PC 2-2	PX 10111	VF KIT20	PX 10111	
PC 2-3	PX 20110	VF KIT20	PX 10210	VF KIT21
PC 2-4	PX 20110	VF KIT20	PX 10110	VF KIT21
PC 2-5	PX 10110	VF KIT20	PX 20110	VF KIT21
PC 2-6	PX 10120	VF KIT20	PX 10110	VF KIT21
PC 2-7	PX 10310	VF KIT20	PX 10310	VF KIT21
PC 2-8	PX 10410	VF KIT20	PX 10410	VF KIT21
PC 2-9	PX 10210	VF KIT20	PX 10210	VF KIT21
PC 2-10	PX 10301	VF KIT20	PX 10301	
PC 2-11	PX 10100	VF KIT20	PX 10100	
PC 2-12	PX 10111	VF KIT20	PX 10111	VF KIT21
PC 2-13	PX 10120	VF KIT20	PX 10120	VF KIT21
PC 2-14	PX 10411	VF KIT20	PX 10411	VF KIT21
PC 2-15	PX 10211	VF KIT20	PX 10201	
PC 2-16	PX 10211	VF KIT20	PX 10211	VF KIT21
PC 2-17	PX 10100	VF KIT20	PX 10210	VF KIT21
PC 2-18	PA 20100	VF KIT20	PX 10110	VF KIT21
PC 2-19	PA 20101	VF KIT20	PX 10111	VF KIT21
PC 2-20	PA 20300	VF KIT20	PX 10310	VF KIT21
PC 2-21	PA 20120	VF KIT20	PX 10110	VF KIT21
PC 2-22	PA 20121	VF KIT20	PX 10111	VF KIT21
PC 2-23	PA 20200	VF KIT20	PX 10810	VF KIT21
PC 2-24	PA 20100	VF KIT20	PX 10210	VF KIT21
PC 2-25	PA 20100	VF KIT20	PX 10100	VF KIT21
PC 2-26	PA 20100	VF KIT20	PA 20100	VF KIT21
PC 2-27	PA 20400	VF KIT20	PA 20400	VF KIT21
PC 2-28	PX 10110	VF KIT30	PX 10110	
PC 2-29	PA 20100	VF KIT30	PX 10110	
PC 2-30	PX 10111	VF KIT30	PX 10111	
PC 2-31	PX 10110-B	VF KIT20	PX 10110-B	
PC 2-32	PX 10111	VF KIT30	PX 10111	VF KIT29+ VF KIT32+VF KIT50
PC 2-33	PX 20210	VF KIT20	PX 20210	
PC 2-34	PX 20410	VF KIT20	PX 20410	
PC 2-35	PX 20211-M2	VF KIT20	PX 20211-M2	
PC 2-37	PX 10421	VF KIT20	PX 10401	
PC 2-38	PX 10210	VF KIT20	PX 20210	VF KIT21
PC 2-39	PX 40220	VF KIT20	PX 40200	
PC 2-40	PA 20100-M2	VF KIT20	PX 10110-M2	VF KIT22
PC 2-41	PX 10110	VF KIT20	PA 20100	
PC 2-42	PX 10111	VF KIT30	PX 10111	VF KIT31+ VF KIT32
PC 2-43	PX 10100	VF KIT30	PX 10210	VF KIT31+ VF KIT33
PC 2-44	PX 10810	VF KIT30	PX 10110	VF KIT31+ VF KIT32
PC 2-45	PX 40100	VF KIT30	PX 40100	VF KIT31+ VF KIT33
PC 2-46	PA 20100	VF KIT30	PX 10110	VF KIT31+ VF KIT36
PC 2-47	PX 10110	VF KIT30	PX 12040	VF KIT31+ VF KIT34
PC 2-48	PX 10110	VF KIT20+VF KIT61	PX 10110	VF KIT21
PC 2-49	PX 10111	VF KIT30+VF KIT61	PX 10111	VF KIT29+ VF KIT32+VF KIT50
PC 2-50	PX 40310	VF KIT30	PA 20300	VF KIT29+ VF KIT32

Already existing combinations of triple foot switches

Code	Left foot switch	Joining device	Center foot switch	Joining device	Right foot switch	Additional kits
PC 3-1	PX 10110	VF KIT20	PA 20100	VF KIT20	PX 10110	
PC 3-2	PX 10100	VF KIT20	PX 10100	VF KIT20	PX 10100	
PC 3-3	PX 10110	VF KIT20	PA 20100	VF KIT20	PX 10110	VF KIT40
PC 3-4	PX 10110	VF KIT30	PX 10110	VF KIT30	PX 10110	2x VF KIT31 + 2x VF KIT18

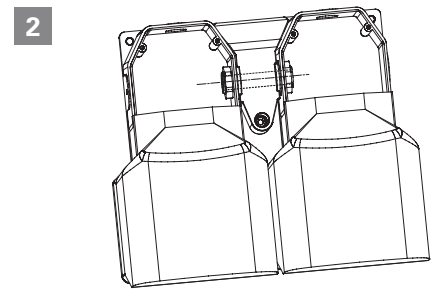
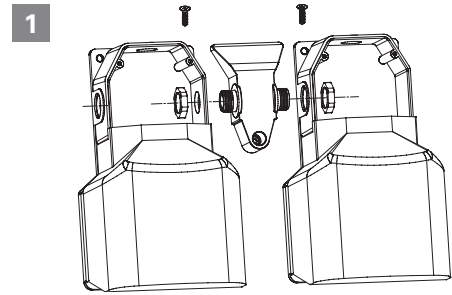
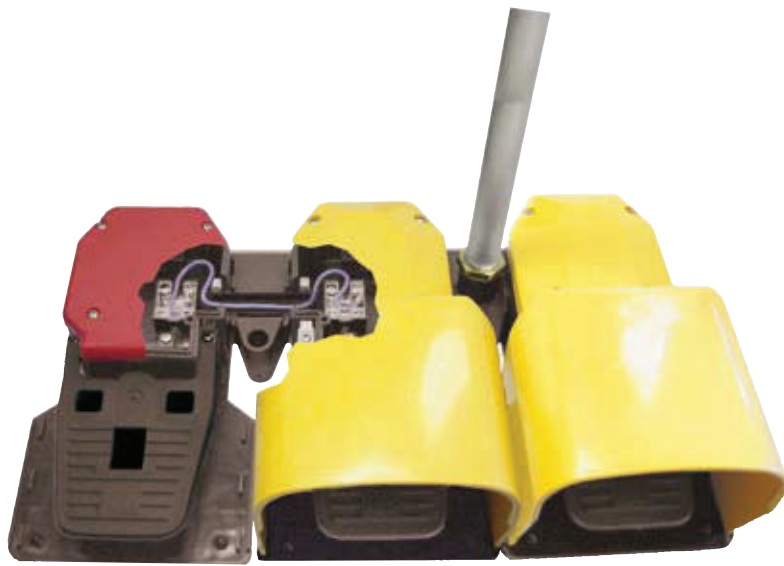
Note:

VF KIT21, 22, 26, 29, 31, 32, 33, 34, 35, 40, 50 kits are not supplied assembled because, in order to be wired, kits should be in any case disassembled.

How to join several foot switches

Pat. pending

All single foot switches are equipped with knock-out openings on their sides, where the threaded end of the joining kit will be inserted. By clamping the threaded nuts of the joining kits you create a sealed cable conduit from one foot switch to the next. Then, with the supplied screws, the joining kits allow the mechanical clamping and the stabilization of the two (or more) single foot switches in a single object.



Besides the possibility of joining two to four single foot switches, the joining kits offer the possibility to install a carrying rod or an metal pipe. The metal pipe allows the electrical connection between the contact blocks of foot switches and an emergency push button connected through the same pipe, keeping a protection degree IP65.



Joining devices for modular multiple foot switches

Article	Description
VF KIT20	Joining devices



Foot switches joining device made of polymer thermoplastic resin with a hole for a carrying rod, complete with nuts, gaskets and self-tapping screws to fasten two single foot switches. Protection degree IP65.

Article	Description
VF KIT30	Joining devices



Foot switches joining devices made of polymer thermoplastic resin with threaded hole M25x1,5 (for VF KIT31 - VF KIT29) complete with nuts, gaskets and self-tapping screws to fasten two single foot switches. Protection degree IP65.

Auxiliary devices for modular multiple foot switches

Article	Description
VF KIT21	Carrying rod kit, L=400 mm
VF KIT22	Carrying rod kit, L=660 mm



Carrying rod (to be connected to VF KIT20) complete with the self-tapping screw to fasten it.

Article	Description
VF KIT25	Carrying rod kit made of metal, L=400 mm
VF KIT26	Carrying rod kit made of metal, L=660 mm



Carrying rod made of metal (to be connected to VF KIT20) complete with the self-tapping screw to fasten it.

Article	Description
VF KIT40	Double carrying rod kit, L=400 mm
VF KIT41	Double carrying rod kit, L=660 mm



Double carrying rod with handle, complete with self-tapping screws to fasten the rods. This kit has to be connected with two VF KIT20.

Article	Description
VF KIT31	Metal pipe Ø 25 mm, L=660 mm
VF KIT29	Metal pipe Ø 25 mm, L=740 mm



Metal pipe Ø 25 mm with threaded ends M25x1,5 (for VF KIT32, VF KIT33, VF KIT34, VF KIT35) complete with metal nuts and gaskets. Protection degree IP65.

Article	Description
VF KIT18	Metal nuts



M25x1,5 metal nuts, to connect VF KIT31 or VF KIT29 to EA boxes.

10 pieces in each pack.

Article	Description
VF KIT32	Emergency push button kit, 1NC
VF KIT33	Emergency push button kit, 1NC+1NO
VF KIT34	Emergency push button kit, 2NC
VF KIT35	Boxe for push buttons kit Ø 22 mm



Emergency Ø 40 mm push button kit with mechanical positive action complying with EN 60947-5-1 and EN ISO 13850, to be combined with VF KIT31-VF KIT29. Protection degree IP65.

Article	Description
VF KIT50	Handle kit



Metal handle kit for Ø 25 mm pipe kit (VF KIT31-VF KIT29).

Article	Description
VF KIT60	Metallic stabilizing plate



Metallic stabilizing plate for single foot switch.

Article	Description
VF KIT61	Metallic stabilizing plate



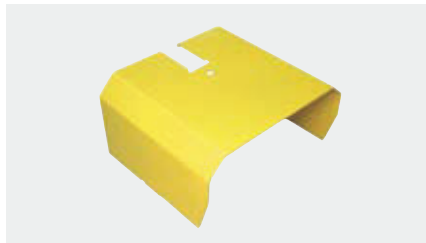
Metallic stabilizing plate for double foot switches.

Article	Description
VF KIT71	Yellow metal protection for single footswitch



Additional metal protection for PA series. For heavy-duty work environment, oversize dimensions for safety shoes. Not applicable with VF KIT60.

Article	Description
VF KIT81	Yellow metal protection for double footswitches



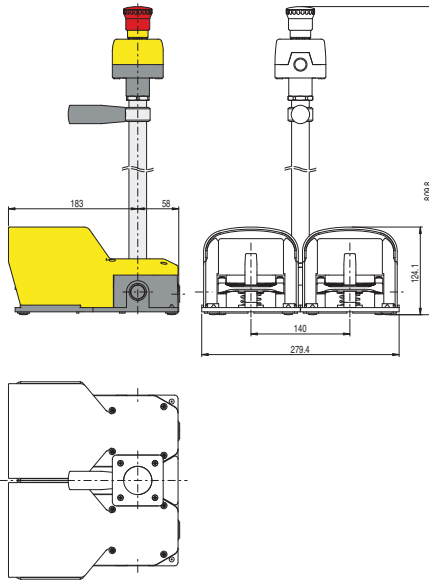
Additional metal protection for PC series. For heavy-duty work environment, oversize dimensions for safety shoes. Not applicable with VF KIT61.

Note: VF KIT21, 22, 26, 29, 31, 32, 33, 34, 35, 40, 50 kits are not supplied assembled.

Items with code on the **green** background are available in stock

Combination examples

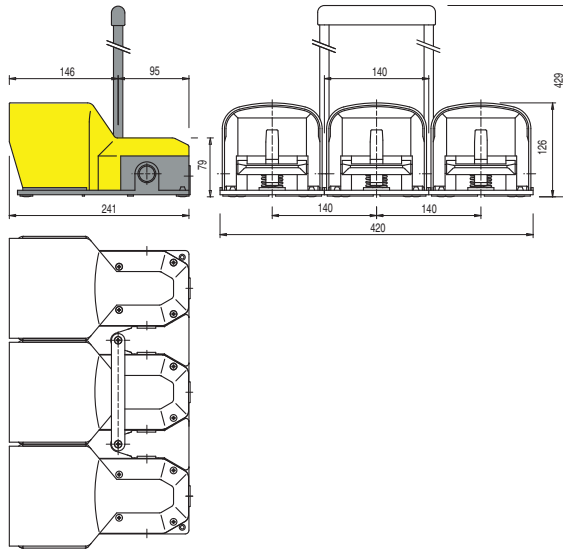
Double foot switches with joining device, metal pipe, stabilizing plate and emergency push button 1 NC



How to order:

2x PX 10110	VF KIT30
VF KIT50	VF KIT31
VF KIT32	

Triple foot switches with two joining devices and double carrying rod



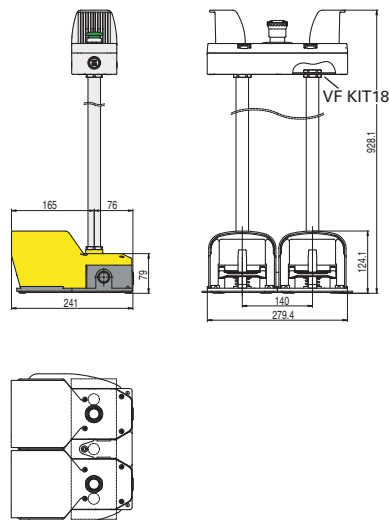
How to order:

3x PX 10110	2x VF KIT20
VF KIT40	

Double foot switches with joining device, two metal pipes and EL series box

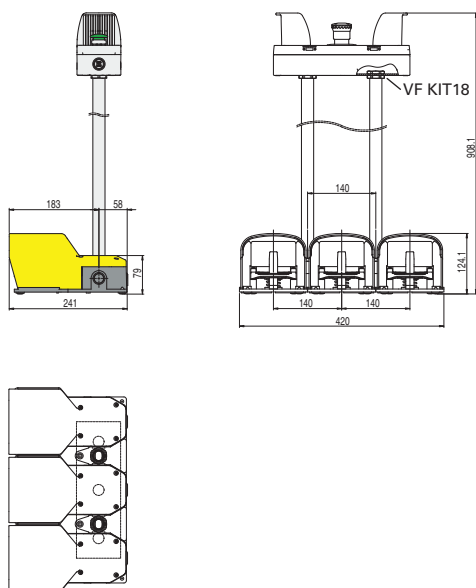


BOX
EA SERIES
See page 3/89



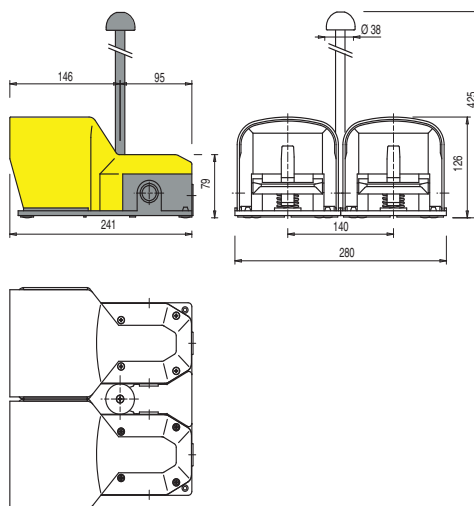
How to order:

2x PX 10110-B	VF KIT20
2x VF KIT29	2x VF KIT18
VF KIT61	EA AC37011

Triple foot switches with two joining devices, two metal pipes and EL series box


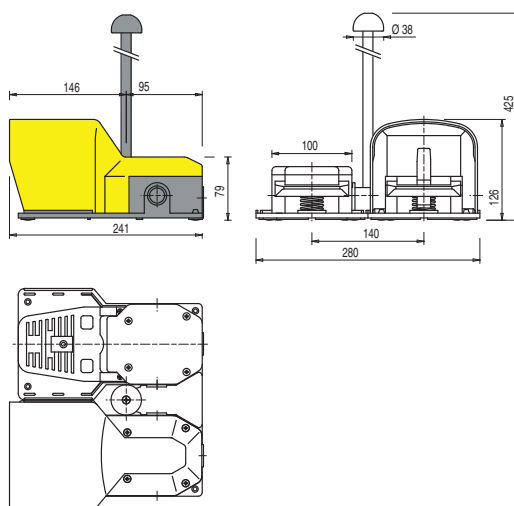
How to order:

3x PX 10110	2x VF KIT30
2x VF KIT29	2x VF KIT18
EA AC37011	

Double foot switches with joining device and carrying rod


How to order:

2x PX 10110	VF KIT20
VF KIT21	

Double foot switches (with and without pedal actuator protection) with joining device and carrying rod


How to order:

PX 10110	PA 20100
VF KIT20	VF KIT21