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Emergency stop trip wire switches, type XY2 C

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Control and signalling units for safety applications

Dialogue components

Applications	Trip wire switches for: <ul style="list-style-type: none">- conveyor systems,- materials handling, machine tools,- electrical testing stations		Foot switches for: <ul style="list-style-type: none">- bending machines, dosing machines, assembly stations, packaging machines, cutting presses, stamping presses,- machine tools (numerical control, lathes, milling machines, grinders, machining centres),- guillotines, cutters, folders, saws,- forging machines, rolling machines, cold metal forming machines		Enabling grip switch for: <ul style="list-style-type: none">- robots,- machine tools,- labellers	Ergonomic two-hand control stations for machine tool control	
							
Features	Length of protected zone: 15 to 100 metres. Can be tripped by the operator at any point in the work zone		Metal, with or without protective cover. Single or double pedal		Plastic enclosure	2 control pushbuttons and 1 Emergency stop pushbutton	
Conformity to standards	XY2 CH, XY2 CE: EN/IEC 60947-5-1, EN/ISO 13850:2006, UL 508 and CSA C22-2 n° 14 (when specified H7) XY2 CB: EN/IEC 60947-5-1, EN/ISO 13850:2006, CSA C22-2 n° 14 (when specified H2)		Without protective cover: EN/IEC 60947-5-1, CSA C22-2 n° 14 With protective cover: NF E 09-031		XPE B, G: EN/IEC 60947-5-1, UL 508, CSA C22-2 n° 14 XPE A, Y: EN/IEC 60947-5-1	EN/IEC 60947-5-1, EN/IEC 60947-5-1, EN/IEC 60204-1, cUL us 508, CSA C22-2 n° 14 EN/IEC 60947-5-1, EN 574/ISO 13851	
Protective treatment	Special version, "TH"				Standard version, "TC"		
Ambient temperature	For operation		- 25...+ 70 °C		XPE B, G: - 25...+ 70 °C XPE A, Y: - 25...+ 55 °C	- 10...+ 60 °C	- 25...+ 70 °C
	For storage		- 40...+ 70 °C				
Electric shock protection conforming to EN/IEC 61140	Class I				Class II	Class I	
Degree of protection conforming to EN/IEC 60529	XY2 CH, XY2 CE: IP 65 XY2 CB: enclosure IP 22, contact housing IP 65		IP 66, IP 669 (with protective cover) XPE B, G: IP 66 XPE Y: IP 55 XPE A: IP 43		IP 66 IP 65 with pushbutton	IP 65	
Positive operation conforming to EN/IEC 60947-5-1 Appendix K	N/C contacts with positive opening operation ➡				2-contact, 3-position with positive opening operation	N/C contacts with positive opening operation	
Rated insulation voltage	XY2 CH, XY2 CE: Ui = 400 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 300 V conforming to UL 508, CSA C22-2 n° 14 XY2 CB: Ui = 500 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 600 V conforming to CSA C22-2 n° 14		Ui = 500 V, degree of pollution 3 conforming to EN/IEC 60947-1, group C conforming to NF C 20-040 and VDE 0110 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14		Ui = 250 V Ui = 125 V for pushbutton conforming to EN/IEC 60947-1	Ui = 600 V, degree of pollution 3 conforming to EN/IEC 60947-1	
Rated impulse withstand voltage conforming to EN/IEC 60947-1	XY2 CH, XY2 CE: Uimp = 4 kV XY2 CB: Uimp = 6 kV		Uimp = 6 kV		Uimp = 2.5 kV	Uimp = 6 kV	
Type references	XY2 C		XPE M, XPE R	XPE A, XPE B, XPE G, XPE Y	XY2 AU	XY2 SB	
Pages	5/7		5/19	5/23	Please consult our catalogue: "Safety solutions using Preventa"		

Emergency stop pushbuttons for: <ul style="list-style-type: none"> - machine tools, - foundries, presses, - automobile industry 	Emergency stop pushbuttons for: <ul style="list-style-type: none"> - assembly and packaging machines, - paper, cardboard and woodworking machines, - food/beverage processing and chemical industries 	Control stations for: <ul style="list-style-type: none"> - assembly and packaging machines, - paper, cardboard and woodworking machines, - food/beverage processing, chemical and automobile industries, mechanical presses 	Beacons and indicator banks	Rotating mirror beacons for long distance signalling applications	Sirens for long distance signalling applications
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Metal bezel and fixing collar	Plastic bezel and fixing collar	Plastic enclosure	Direct fixing or on support tube	Light source included: - halogen bulb 70 W or - incandescent bulb 25 W	Power - 106 db, single tone - 106 db, 2 tone
EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, EN/IEC 60947-5-5, EN/ISO 13850:2006 and EN/IEC 60204-1 (trigger action and mechanical latching mushroom head pushbuttons), JIS C 4520, CSA C22-2 n° 14, UL 508			EN/IEC 60947-5-1, UL 508, CSA C22-2 n°14	EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA C22-2-14	EN/IEC 60947-1, EN/IEC 60947-5-1
Standard version, "TH"			Standard version, "TC"		
- 25...+ 70 °C			See page 4/34	- 20...+ 50 °C	- 40...+ 50 °C
- 40...+ 70 °C					
Classe I	Classe II		Class I: mounted on support tube Class II: mounted directly	Class I	Class II: ~ 120/230 V Class III: ~ 24 V
IP 66, IP 69K (head fitted with bellows ZBZ ●8) Nema type 4X and 12, 13			IP 65 (mounted on fixing base XVB Z0●) IP 66 (mounted directly on base unit)	IP 65	IP 40
N/C contacts with positive opening operation ➞			—		
Standard single and double blocks with screw clamp terminals: Ui = 600 V, degree of pollution 3 Blocks for plug-in connector or Faston connectors: Ui = 250 V, degree of pollution 3 Standard blocks for printed circuit board connection: Ui = 250 V, degree of pollution 3 conforming to EN/IEC 60947-1			Ui = 250 V conforming to EN/IEC 60947-1		
Standard single and double blocks with screw clamp terminals: Uimp = 6 kV Blocks for plug-in connector: Uimp = 4 kV Standard blocks for printed circuit board connection: Uimp = 4 kV			Uimp = 4 kV		Uimp = 1.5 kV (≈ 24 V), Uimp = 4 kV (≈ 120/230 V)
XB4 B	XB5 A	XAL K	XVB L, XVB C	XVR	XVS
1/72	1/152	2/9 and 2/12	4/36	4/57	4/59

Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

Presentation

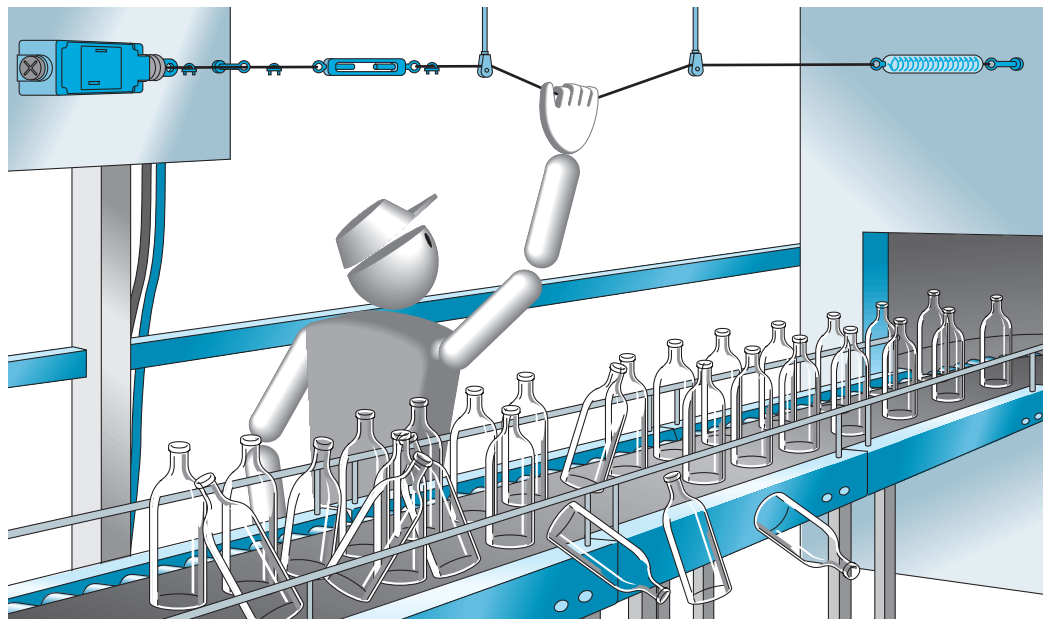
Emergency stop trip wire switches

Emergency stop trip wire switches are designed to:

- avert hazards (dangerous phenomena) at the earliest possible moment, or to reduce risks which could cause injury to persons or damage either to machines or work in progress,
- be tripped by a single human action when a normal Emergency stop function is not available,
- trip in the event of the trip wire breaking.

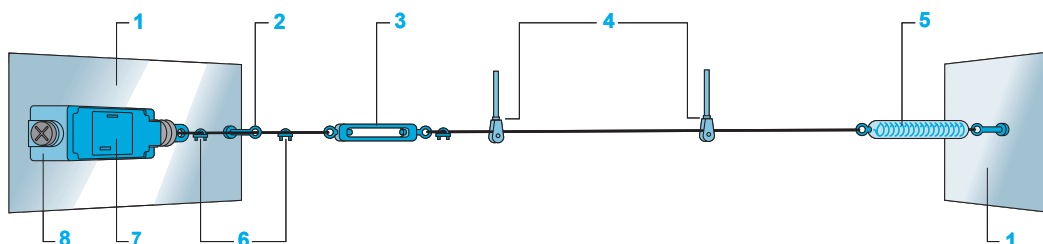
Emergency stop trip wire switches are essential in premises and on machines that are potentially dangerous when in operation. The operator must be able to trigger the stop instruction at any point within their working area.

Application examples: woodworking machines, shears, conveyor systems, transfer machines, printing machines, textile machines, rolling mills, test laboratories, paint shops, surface treatment works.



Installation

Typical installation



- | | | |
|-----------------------|-------------------------------|---------------------|
| 1 Fixing support | 4 Pulley supports and pulleys | 7 Switch adjustment |
| 2 First cable support | 5 End spring | 8 Emergency stop |
| 3 Turnbuckle | 6 Cable grips | |

Notes regarding installation

- All XY2 CH/CE/CB trip wire switches can be fitted with a pilot light to indicate their tripped condition.
- Cable tension adjustment can be performed using:
 - a turnbuckle (to be ordered separately, see page 5/11),
 - a tensioner (integrated in certain XY2 CH models, see page 5/11),
 - a tensioner (to be ordered separately, see page 5/11) for mounting on XY2 CE models.
- This adjustment is simplified by:
 - a cable tension indicator that is available on all models XY2 CH,
 - the availability of versions with a "cable tension indicator" window by stating its reference on the order form (see page 5/10). Example: reference XY2 CE1A250 becomes XY2 CE1D250.
- The use of an end spring is strongly advised for conveyor system applications to ensure operation of the Emergency stop in the event of the cable being pulled towards the switch.
- It is essential that pulleys be used with trip wires that deviate from a straight run, i.e. angled to form a protected zone.
- Important: switches XY2 CB must not be used if the installation requires that the trip wire be angled. Switches XY2 CH and XY2 CE can be used if the installation requires that the trip wire be angled. In this case, the total sum of the angles through which the trip wire bends must not exceed 180° (For further information on instructions to be adhered to, please refer to the installation manual).

Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

Main features



Positive operation: running condition

Latching: stop instruction given (tripped)

Resetting: stop condition (awaiting reset/restart)

1 The switches incorporate positive opening operation contacts, the tripping of the switch being made with positive action.

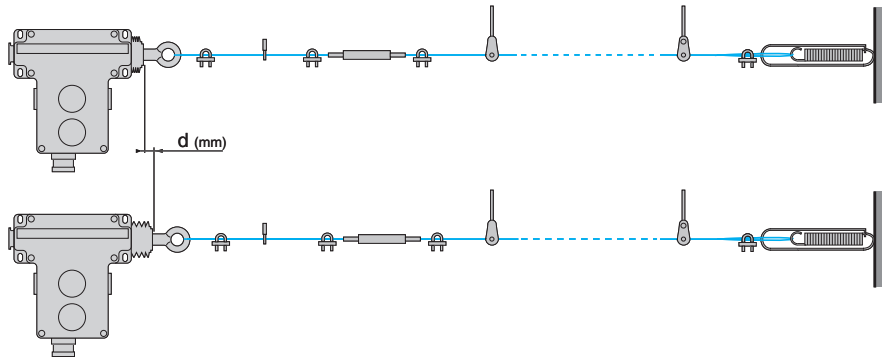
2 The switch latches in the tripped position (N/C safety contact(s) open). The function of the N/O contact is purely for signalling.

3 The switches incorporate a reset button, which re-closes the safety contact(s). Restarting of the machine must only be achieved by manual operation of a control device within the machine start circuit, remote to the trip wire switch.

Trip wire expansion and contraction: d

Temperature variations likely to be encountered in the protected zone will obviously cause the trip wire to expand or contract.

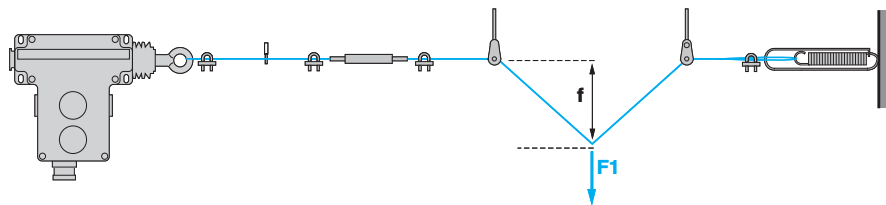
To enable instant verification that the trip wire is at its correct tension (and for making any necessary adjustments), trip wire switches XY2 CH and XY2 CE incorporate a trip wire tension indicator.



Tripping force: F1 Tripping deflection: f

The tripping force **F1** is the force necessary on the trip wire to cause the switch to trip.

The tripping deflection **f** is the distance that the trip wire has to be deflected from its taut position to the point at which the switch trips.



Adjustment values (with end spring)

For Emergency stop trip wire switches type XY2 CE: the adjustment values depend on the positions of the cam located inside the switch. Adjustment is made by rotating the cam after the switch has been installed.

Each notched position of the cam is referenced by the letters A to F, and the selected letter is visible through a viewing port.

Temperature range: < 25 °C.

Type	Position of cam	Max. length of cable	End spring	Average tripping deflection values f and tripping forces F1 for a distance of 5 m between cable supports and cable used							
				Force F1 (daN)				Deflection f (mm) for:			
				Standard		Light		Standard force		Light force	
				Cable Ø 3.2 mm	Cable Ø 5 mm	Cable Ø 3.2 mm	Cable Ø 5 mm	Cable Ø 3.2 mm	Cable Ø 5 mm	Cable Ø 3.2 mm	Cable Ø 5 mm
XY2 CH	—	15 m	XY2 CZ703	2.4	3	—	—	190	230	—	—
XY2 CE	A	50 m	XY2 CZ702	7	7	4	4.4	270	260	240	250
	B			8.6	8.4	4.4	4.8	300	280	250	270
	C			10.1	9.6	4.8	5.1	320	300	270	270
	D			11	10.2	4.6	5.3	330	320	280	280
	E			12.5	12.3	5.8	6	360	340	310	290
	F			14.4	13.3	6.4	6.6	390	360	330	320
XY2 CB	—	100 m	XY2 CZ702	4.5	—	—	—	325	—	—	—

Standards

Trip wire switches XY2 CH, XY2 CE and XY2 CB meet all the requirements of the harmonised European standard **EN/ISO 13850:2006**, relating to Emergency stop devices.

All the trip wire switches are **CE** marked and supplied with an EC declaration of conformity.

Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

Environment

Conformity to standards	Products	XY2 CH, XY2 CE: EN/IEC 60947-5-1, EN/ISO 13850:2006, UL 508 and CSA C 22-2 n° 14 (with suffix H7) XY2 CB: EN/IEC 60947-5-1, EN/ISO 13850:2006, CSA C 22-2 n° 14 (with suffix H2)
	Machine assemblies	XY2 CH, XY2 CE, XY2 CB: EN/IEC 60204-1, Machinery directive: 98/37/EC and 91/368/EEC, Work equipment directive: 89/655/EEC
Product certifications		XY2 CH: UL-CSA (with suffix H7), CCC (1) XY2 CE: UL-CSAA300-Q300 (with suffix H7), CCC (1) XY2 CB: CSAA600-Q600 (with suffix H2)
Protective treatment	Standard version	"TC"
	Special version	"TH"
Ambient air temperature	For operation	- 25...+ 70 °C
	For storage	- 40...+ 70 °C
Vibration resistance		XY2 CH: 10 gn (10...150 Hz) XY2 CE: 10 gn (10...300 Hz) conforming to EN/IEC 60068-2-6
Shock resistance		XY2 CH, XY2 CE: 50 gn (duration 11 ms) conforming to EN/IEC 60068-2-27
Electric shock protection		Class I conforming to EN/IEC 61140 and NF C 20-030
Degree of protection		XY2 CH, XY2 CE: IP 65 XY2 CB: enclosure IP 22, contact housing IP 65, conforming to EN/IEC 60529 and NF C 20-010
Mechanical life		XY2 CH, XY2 CE (Emergency stop), XY2 CB: 10 000 operating cycles
Length of protected zone (trip wire)		XY2 CH: ≤ 15 metres, XY2 CE: ≤ 50 metres, XY2 CB: ≤ 100 metres and ≤ 2 x 100 metres
Distance between cable supports		5 m
Cable entries		See dimensions, page 5/13.

Contact block characteristics

Rated operational characteristics	XY2 CH, XY2 CE: AC-15: A300 or Ue = 240 V, Ie = 3 A DC-13: Q600 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A XY2 CB: AC-15: A600 or Ue = 600 V, Ie = 1.2 A DC-13: Q600 or Ue = 600 V, Ie = 0.1 A conforming to EN/IEC 60947-5-1 Appendix A	
Nominal thermal current	10 A	
Rated insulation voltage	XY2 CH, XY2 CE: Ui = 400 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 300 V conforming to UL 508, CSA C22-2 n° 14 XY2 CB: Ui = 500 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 600 V to CSA C22-2 n° 14	
Rated impulse withstand voltage	XY2 CH, XY2 CE: Uimp = 4 kV, XY2 CB: Uimp = 6 kV conforming to EN/IEC 60947-1	
Positive operation	N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Section 3	
Contact operation	XY2 CH, XY2 CE (Emergency stop), XY2 CB: N/C + N/C or N/C + N/O slow break	
Resistance across terminals	≤ 25 mΩ conforming to NF C 93-050 method A or EN/IEC 60255-7 category 3	
Terminal referencing	Conforming to CENELEC EN 50013	
Short-circuit protection	XY2 CH, XY2 CE, XY2 CB: 10 A cartridge fuse type gG (gl) conforming to EN/IEC 60269	

Rated operational power
(Electrical durability)

Operating rate: 3600 operating cycles/hour
Load factor: 0.5

XY2 CH, XY2 CE

Conforming to EN/IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

a.c. supply ~ 50...60 Hz

XY2 CB

Conforming to EN/IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

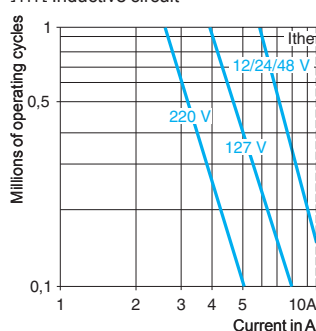
a.c. supply ~ 50...60 Hz

Power broken in VA (1)

Inductive circuit

Voltage V	24	48	127	220
VA	250	250	500	500

Inductive circuit



Voltage V	24	48	120
W	15	23	30

d.c. supply ---

Power broken in W (1)

Inductive circuit

Voltage V	24	48	120
W	50	100	100

(1) For 1 million operating cycles.

Contact connection

Screw clamp terminals
Clamping capacity: min. 1 x 0.5 mm², max. 2 x 1.5 mm²
Minimum tightening torque: 0.8 N.m
Maximum tightening torque: 1.2 N.m

(1) Only products XY2 CH without pilot light and XY2 CE without pilot light or with 24, 48 or 130 V pilot light are CCC and UL-CSA approved.

General:
pages 5/4 and 5/5

References:
pages 5/7 to 5/12

Dimensions:
page 5/13

Control and signalling units for safety applications

Emergency stop trip wire switches,
type XY2 C



XY2 CH13250

Latching Emergency stops

(integrated turnbuckle, cable and end spring to be ordered separately) ⁽¹⁾

Without pilot light

Length of cable	Colour of enclosure	Reset		Type of contact	Cable anchor point	Reference	Weight kg
≤ 15 m	Grey RAL 7032	By booted pushbutton –	1 1	N/C + N/O slow break	RH side or LH side	XY2 CH13250 (3)	0.865
		By mushroom head pushbutton –	1 1			XY2 CH13350 (3)	0.900
		By key operated pushbutton (key n° 421) (2) –	1 1			XY2 CH13450 (3)	0.910
		By flush pushbutton –	2 –	N/C + N/C slow break	RH side or LH side	XY2 CH13170 (3)	0.865
		By booted pushbutton –	2 –			XY2 CH13270 (3)	0.865
		By mushroom head pushbutton –	2 –			XY2 CH13370 (3)	0.865
		By key operated pushbutton (key n° 421) (2) –	2 –			XY2 CH13470 (3)	0.910
		Grey RAL 3000 (4)	By booted pushbutton –	1 1	N/C + N/O slow break	RH side or LH side	XY2 CH13258 (3)
	2 –			N/C + N/C slow break	XY2 CH13278 (3)		0.865

With pilot light (direct supply)

≤ 15 m	Grey RAL 7032	By booted pushbutton	24 V	1 1	N/C + N/O slow break	RH side or LH side	XY2 CH13253	0.900
				2 –	N/C + N/C slow break	RH side or LH side	XY2 CH13273	0.900

Latching Emergency stops

(turnbuckle, cable and end spring to be ordered separately) ⁽¹⁾

Without pilot light

≤ 50 m (5)	Grey RAL 7032	By booted pushbutton –		1 1	N/C + N/O slow break	RH side	XY2 CE1A250 (6)	1.450
						LH side	XY2 CE2A250 (6)	1.450
				2 –	N/C + N/C slow break	RH side	XY2 CE1A270 (6)	1.450
						LH side	XY2 CE2A270 (6)	1.450
		By key operated pushbutton (key n° 421) (2)		1 1	N/C + N/O slow break	RH side	XY2 CE1A450 (6)	1.465
						LH side	XY2 CE2A450 (6)	1.465
				2 –	N/C + N/C slow break	RH side	XY2 CE1A470 (6)	1.470
						LH side	XY2 CE2A470 (6)	1.470

With pilot light (direct supply)

≤ 50 m (5)	Grey RAL 7032	By booted pushbutton	24 V, 48 V, 130 V (bulb not included)	2 2	N/C + N/O slow break	RH side	XY2 CE1A296	1.470
						LH side	XY2 CE2A296	1.470
			230 V (bulb not included)	2 2	N/C + N/O slow break	RH side	XY2 CE1A297	1.470
						LH side	XY2 CE2A297	1.470

Other versions

See order forms on pages 5/8 and 5/9.

XY2 CE with reset by Ø 40 mm mushroom head pushbutton or with integral cable tensioner and support.

Please consult your Regional Sales Office.

(1) See separate components, page 5/11.

(2) Ø 30 spring return, mushroom head, key operated pushbutton. Locking and key withdrawal in the rest (unactuated) position.

(3) For ISO M20 threaded cable entry version, add H29 to the end of the reference selected. Example: XY2 CH13250 becomes XY2 CH13250H29.

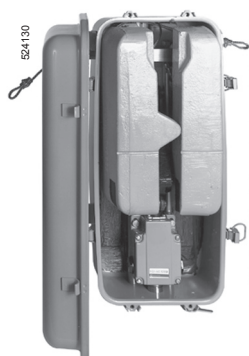
(4) Only available on Emergency stop enclosures type XY2 CH1325● and XY2 CH1327● for standard, H29 and TK versions.

(5) Available with window for viewing cable tension indicator, for adjustment whilst the cover is closed (see versions XY2 CE●D●●● and XY2 CE●E●●● on the order form, page 5/10).

(6) ATEX version available (products for explosive atmospheres). To order, add EX to the end of the reference. Example: XY2 CE1A250 becomes XY2 CE1A250EX.

Control and signalling units for safety applications

Emergency stop trip wire switches,
type XY2 C





XY2 CB30

Latching Emergency stops

(end spring included, turnbuckle and cable to be ordered separately) ⁽¹⁾

Without pilot light

Length of cable	Colour of enclosure	Reset	Type of contact		Cable anchor point	Reference	Weight kg				
≤ 100 m	Blue	From inside enclosure		1	N/C + N/O slow break	LH side	XY2 CB10 (2)	18.750			
						RH side	XY2 CB20 (2)	18.750			
			2	–	N/C + N/C slow break	LH side	XY2 CB104	18.750			
						RH side	XY2 CB204	18.750			
			≤ 2 x 100 m	Blue	From inside enclosure		1	N/C + N/O slow break	RH and LH sides	XY2 CB30 (2)	29.250
								2	–	N/C + N/C slow break	RH and LH sides

With pilot light

Length of cable	Colour of enclosure	Reset	Supply voltage	Type of contact	Cable anchor point	Reference	Weight kg	
■ Direct supply								
≤ 100 m	Blue	From inside enclosure	24 V	1 1	N/C + N/O slow break	LH side	XY2 CB11	19.550
						RH side	XY2 CB21	19.550
			48 V	1 1	N/C + N/O slow break	LH side	XY2 CB12	19.550
						RH side	XY2 CB22	19.550
≤ 2 x 100 m	Blue	From inside enclosure	24 V	1 1	N/C + N/O slow break	RH and LH sides	XY2 CB31	25.600
			48 V	1 1	N/C + N/O slow break	RH and LH sides	XY2 CB32	30.050
■ Supply via integral transformer (3)								
≤ 100 m	Blue	From inside enclosure	127 V/6 V	1 1	N/C + N/O slow break	LH side	XY2 CB13	15.600
						RH side	XY2 CB23	15.600
			220 V/6 V	1 1	N/C + N/O slow break	LH side	XY2 CB14	15.600
						RH side	XY2 CB24	15.600
≤ 2 x 100 m	Blue	From inside enclosure	127 V/6 V	1 1	N/C + N/O slow break	RH and LH sides	XY2 CB33	25.600
			220 V/6 V	1 1	N/C + N/O slow break	RH and LH sides	XY2 CB34	25.600

(1) See separate components, page 5/11. End spring XY2 CZ702 included.

(2) For 1/2" NPT threaded cable entry version, add the suffix H2 to the reference selected. Example : XY2CB10 becomes XY2CB10H2.

(3) Bulb DL1 CB006 included.

Control and signalling units for safety applications

Emergency stop trip wire switches,
type XY2 C

Complete units, pre-assembled

Customer			Schneider Electric Industries SA	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

How to use this form:

- indicate the number of Emergency stop switches required,
- complete the basic reference.

Reference

Number of identical Emergency stops	<input type="text"/>	XY2 CH	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Model									
Emergency stop (latching)		1							
Degree of protection									
IP 65 (standard bellows) without tensioner		1							
IP 65 (silicone bellows) without tensioner		2							
IP 65 (standard bellows) with integral tensioner		3							
IP 65 (silicone bellows) with integral tensioner		4							
Type of reset									
Emergency stop (1)	Flush	1							
Reset by spring return pushbutton	Booted	2							
	Mushroom head, Ø 30	3							
	Key operated mushroom head, Ø 30 (key n° 421)	4							
	Key operated mushroom head, Ø 30 (key n° 455)	5							
	Key operated mushroom head, Ø 30 (2)	9							
Contact block for Emergency stop function (3)									
Slow break	1 N/C + N/O (N/O staggered)	5							
	1 N/C + N/C	7							
Pilot light									
Without pilot light		0							
With 24 V direct supply pilot light		3							
With 48 V direct supply pilot light		4							
With 130 V direct supply pilot light		5							
With 230 V direct supply pilot light		7							
1/2" NPT tapped cable entries								H7 (4)	
ISO M20 tapped cable entries								H29	
Increased protective treatment against corrosion									TK (5)

(1) Opening of a circuit + mechanical latching in the open position.

(2) Other key numbers:

458A	520E	1242A	1243E	1344A	1422A	1431E
2123E	2132E					

(3) Emergency stop trip wire switches can only be fitted with slow break contact blocks.

(4) Only for versions without pilot light. For versions with pilot light, order an H4 version.

(5) Protective treatment TK is only possible for switches with silicone bellows (XY2 CH12...TK, XY2 CH14...H29TK...).

Control and signalling units for safety applications

Emergency stop trip wire switches,
type XY2 C

Complete units, pre-assembled

Customer			Schneider Electric Industries SA	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

How to use this form:

- indicate the number of Emergency stop switches required,
- complete the basic reference.

Reference

Number of identical Emergency stops		<input type="text"/>	XY2 CE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Model									
Emergency stop (latching)	Anchor point on RH side, standard force	1							
	Anchor point on LH side, standard force	2							
	Anchor point on RH side, light force	5							
	Anchor point on LH side, light force	6							
Degree of protection and "cable tension indicator" window									
IP 65 (standard bellows) without "cable tension indicator" window		A							
IP 65 (silicone bellows) without "cable tension indicator" window		C							
IP 65 (standard bellows) with "cable tension indicator" window		D							
IP 65 (silicone bellows) with "cable tension indicator" window		E							
Type of reset									
Emergency stop (1)	Flush	1							
Reset by spring	Booted	2							
return pushbutton	Mushroom head, Ø 30	3							
	Key operated mushroom head, Ø 30 (n° 421)	4							
	Key operated mushroom head, Ø 30 (n° 455)	5							
	Key operated mushroom head, Ø 30 (2)	9							
Contact block for Emergency stop function (3)									
Slow break	1 N/C + N/O	5							
	1 N/C + N/C	7							
	2 N/C + N/O (compulsory with pilot light) (4)	9							
Pilot light									
Without pilot light		0							
With 24-48-130 V direct supply pilot light. Bulb not included (provide for 2 contact blocks)		6							
With 230 V direct supply, via integral resistor, pilot light. Bulb included (provide for 2 contact blocks) (5)		7							
1/2" NPT tapped cable entries								H7 (6)	
Increased protective treatment against corrosion									TK (7)

(3) Emergency stop trip wire switches can only be fitted with slow break contact blocks.

(4) The use of a pilot light means selecting a switch fitted with 2 N/C + N/O contacts: XY2 CE●●●9.

(5) Replacement bulb: DL1 CE130.

(6) For versions with pilot light, order an H4 version.

(7) Protective treatment TK is only possible for switches with silicone bellows (XY2 CE●C●●TK, XY2 CE●E●●H7TK...).

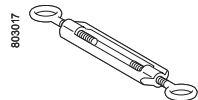
458A	520E	1242A	1243E	1344A	1422A	1431E
2123E	2132E					

Control and signalling units for safety applications

Emergency stop trip wire switches,
type XY2 C



XY2 CZ203



XY2 CZ402



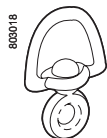
XY2 CZ503



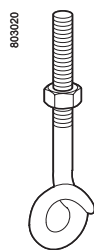
XY2 CZ524



XY2 CZ601



XY2 CZ602



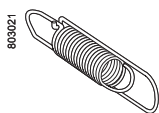
XY2 CZ705



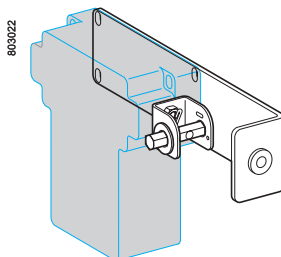
XY2 CZ708



XY2 CZ701



XY2 CZ702



XY2 CZ917

Separate components

Description	For use with	Diameter mm	Length m	Reference	Weight kg
Galvanised cables with red sheath	XY2 CH, XY2 CE and XY2 CB	3.2	10.5	XY2 CZ301	0.280
			15.5	XY2 CZ3015	0.410
			25.5	XY2 CZ302	0.690
			50.5	XY2 CZ305	1.360
			100.5	XY2 CZ310	2.700
	XY2 CH and XY2 CE	5	15.5	XY2 CZ1015	0.850
			25.5	XY2 CZ102	1.400
			50.5	XY2 CZ105	2.750
			100.5	XY2 CZ110	5.500

Description	Type	For use with	Sold in lots of	Unit reference	Weight kg
Tensioner	—	XY2 CE only	1	XY2 CZ203	0.09
Turnbuckles	M6 x 60 + locknut	All models (1)	1	XY2 CZ402	0.060
	M8 x 70 + locknut	All models (1)	1	XY2 CZ404	0.100
Cable grips	Single	Cable Ø 3 to 5 mm	10	XY2 CZ503	0.007
	Double	Cable Ø 3 to 5 mm	10	XY2 CZ513	0.016
	Clamp	Cable Ø 3.2 mm	10	XY2 CZ523	0.050
		Cable Ø 5 mm	10	XY2 CZ524	0.080
Cable supports	Fixed	All models	10	XY2 CZ601	0.030
	Swivelling	All models	1	XY2 CZ602	0.130
	Pulley support	XY2 CH and XY2 CE	1	XY2 CZ705	0.060
Pulley	Cable Ø 5 mm max.	XY2 CH and XY2 CE	1	XY2 CZ708	0.002
Cable end protectors		Cable Ø 3.2 mm	10	XY2 CZ701	0.002
		Cable Ø 5 mm	10	XY2 CZ704	0.010
End springs		XY2 CH	1	XY2 CZ703	0.035
		XY2 CE and XY2 CB	1	XY2 CZ702	0.080

Mounting kits

Contents	For use with	Cable diameter mm	Length of cable m	Reference	Weight kg
1 tensioner XY2 CZ203 + 1 bracket	XY2 CE	—	—	XY2 CZ917	0.612
1 galvanised cable + 1 cable grip XY2 CZ523 + 1 end spring XY2 CZ703	XY2 CH	3.2	10	XY2 CZ9310	0.415
			15	XY2 CZ9315	0.535
1 galvanised cable + 4 cable grips XY2 CZ523 + 1 turnbuckle XY2 CZ404 + 1 cable support XY2 CZ601	XY2 CE	3.2	25	XY2 CZ9325	10
+ 3 cable end protectors XY2 CZ701 + 1 end spring XY2 CZ702	XY2 CE and XY2 CB	3.2	50	XY2 CZ9350	1.980
1 galvanised cable + 4 cable grips XY2 CZ524 + 1 turnbuckle XY2 CZ404 + 1 cable support XY2 CZ601 + 3 cable end protectors XY2 CZ704 + 1 end spring XY2 CZ702	XY2 CE	5	25	XY2 CZ9525	1.905
			50	XY2 CZ9550	3.280

Documentation

Description	For use with	Reference	Weight kg
Installation manual	XY2 CH and XY2 CE	XCOM2512	0.200

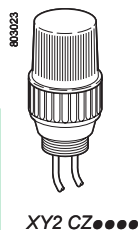
(1) Emergency stop trip wire switches XY2 CH13●●● and XY2 CH14●●● incorporate a cable tensioner as standard. Therefore, there is no need to order a turnbuckle.

Control and signalling units for safety applications

Emergency stop trip wire switches,
type XY2 C

Replacement parts

Description	Type	Reference	Weight kg	
Reset pushbutton (blue), spring return for XY2 CH and XY2 CE	Flush with "R" marked on push	ZA2 BA639	0.030	
	Booted	ZA2 BP6	0.025	
	Mushroom head, Ø 30	ZA2 BC64	0.045	
	Key operated mushroom head, Ø 30 (key n° 421)	ZA2 BS06212	0.090	
	Key operated mushroom head, Ø 30 (key n° 455)	ZA2 BS062	0.090	
Keys for reset button	N° 421	Q99900911	0.006	
	N° 455	Q99900901	0.006	
Pilot light head assembly	Orange, for XY2 CH and XY2 CE	ZA2 BV05	0.015	
Pilot light lens	Orange, for XY2 CH and XY2 CE	ZB2 BV015	0.003	
Fixing nut	Black plastic nut for head ZA2 B	ZA2 BZ901	0.002	
Fixing nut tightening tool	Black plastic socket wrench for fixing nut ZA2 BZ901	ZA2 BZ901	0.060	
Pilot lights With bulb DL1 AA●●● included	Orange, for XY2 CH	24 V	XY2 CZ0024 (1)	0.035
		48 V	XY2 CZ0048 (1)	0.035
		130 V	XY2 CZ0130 (1)	0.035
		230 V	XY2 CZ0230 (1)	0.035
	Red, for XY2 CB	24 V	9001 KP35R9	0.134
		48 V	9001 KP36R9	0.134
		120 V	9001 KP1R9	0.210
		230 V	9001 KP7R9	0.210



Description	Type		Sold in lots of	Unit reference	Weight kg
Incandescent bulbs	Screw base fitting for XY2 CH	24 V - 6 W	10	DL1 AA024	0.004
		48 V - 6 W	10	DL1 AA048	0.004
		130 V - 6 W	10	DL1 AA127	0.004
		230 V - 6 W	10	DL1 AA220	0.004
	BA 9s base fitting for XY2 CE and XY2 CB	24 V - 2.6 W	10	DL1 CE024	0.002
		48 V - 2.6 W	10	DL1 CE048	0.002
	BA 9s base fitting for XY2 CE	130 V - 2.6 W	10	DL1 CE130	0.002
	BA 9s base fitting for XY2 CB 120 V and 230 V	6 V - 1.2 W	10	DL1 CB006	0.002
Packet of 5 collars	For mounting DL1 AA127 and DL1 AA220 bulbs in pilot lights XY2 CZ●●●●	5	XY2 CZ908	0.018	
Dust and damp protecting bellows	For XY2 CE	Polychloroprene	1	XY2 CZ901	0.017
		Silicone	1	XY2 CZ904	0.005
	For XY2 CH	Polychloroprene	1	XY2 CZ902	0.017
		Silicone	1	XY2 CZ903	0.005
Adaptor	For XY2 CB	ISO M20	5	DE9 RP13520	0.050

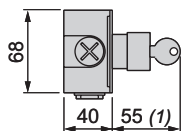
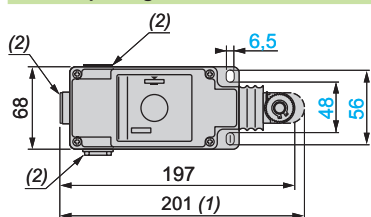
(1) Only for use as replacement parts for switches pre-fitted with pilot lights. CCC and UL-CSA approvals no longer apply if a pilot light XY2 CZ●●●● is mounted on Emergency stops XY2 CH.

Control and signalling units for safety applications

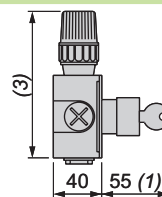
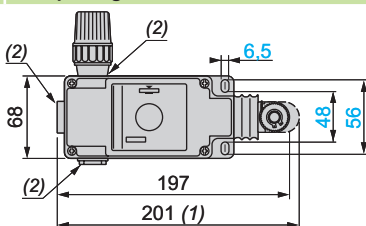
Emergency stop trip wire switches,
type XY2 C

XY2 CH

Without pilot light

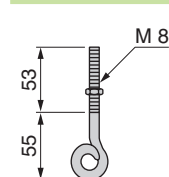


With pilot light

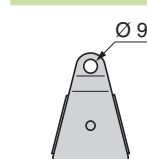


Accessories

XY2 CZ705



XY2 CZ708



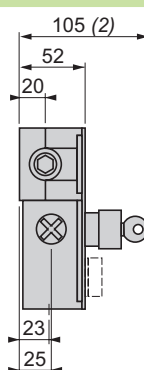
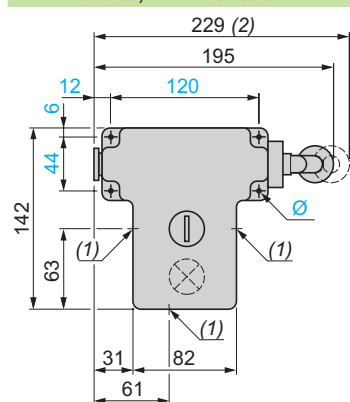
(1) Maximum extension.

(2) Tapped entries for n° 13 (Pg 13.5) cable gland. For ISO M20 the reference becomes XY2 CH●●●●●H29.

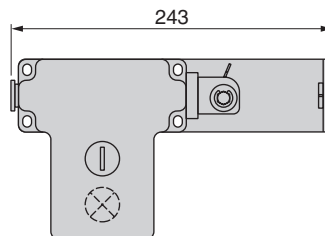
(3) 121 mm: 24 V and 48 V versions. 131 mm: 130 V and 230 V versions.

XY2 CE

XY2 CE●A●●●, XY2 CE●C●●●



XY2 CE●A●●● + XY2 CZ917 (tensioner + bracket)



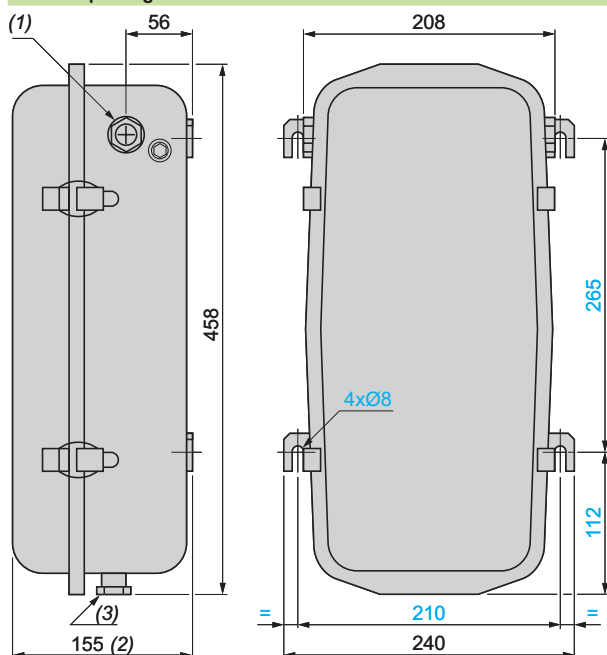
(1) 3 plain holes for n° 13 (Pg 13.5) or ISO M20 cable gland.

(2) Maximum extension.

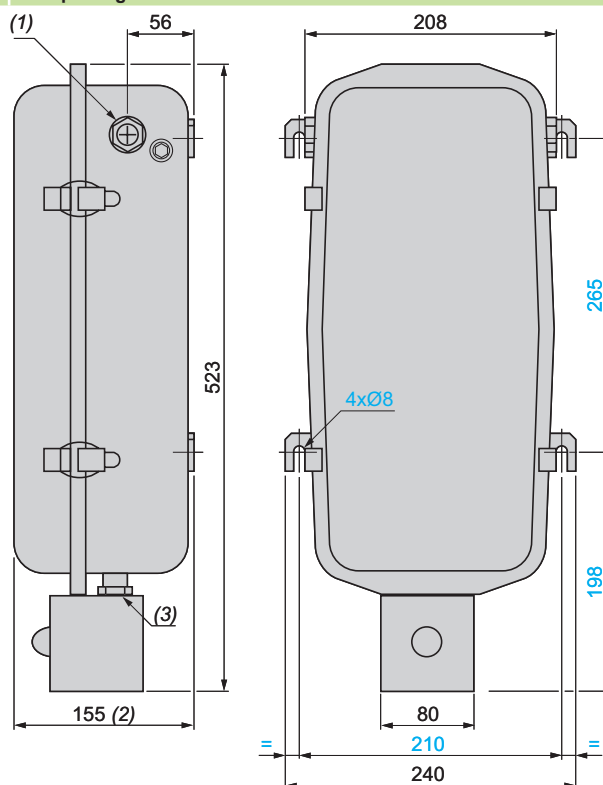
Ø: 4 elongated holes Ø 6 mm.

XY2 CB

Without pilot light



With pilot light



(1) 2 access points for operating cable.

(2) + 125 for opening cover.

(3) 1 tapped entry for n° 13 (Pg 13.5) cable gland. For ISO M20 use adaptor DE9 RP13520.

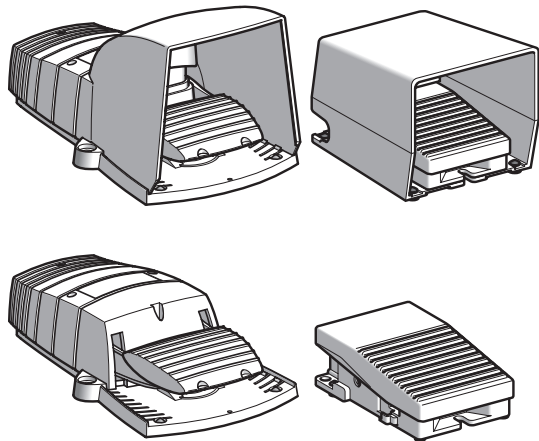
Control and signalling units for safety applications

Foot switches, Harmony type XPE

Presentation

Foot switches type XPE are an ideal solution for providing start and stop instructions for many types of industrial machines, running in various operating modes: normal (pulsed) start, inching, hold to run.

The range comprises metal case foot switches (heavy duty, high risk) complying to very strict regulations, and plastic case foot switches (light duty, low risk).



Fitted with a protective cover, the foot switches are for applications where, for each issuing of the start instruction, a high level of danger exists (**high risk**).

Foot switches **without a protective cover** are suitable for applications where the issuing of the start instruction presents a **reduced level of danger**.

Contact

Switches incorporate snap action contacts with positive opening operation

The foot switches can incorporate **one or two N/C + N/O contact blocks**.

Positive opening operation on release of pedal: the hold down or return to the rest position of the pedal (machine stop) is positive acting.

Terminology

Positive opening operation

A switch meets this requirement when all its N/C contacts can be switched to the open position with certainty, i.e. there are no flexible links between the moving contacts and the actuator to which the operating force is applied.

All pedal operated foot switches incorporate a snap action N/C + N/O contact block with positive opening operation, and conform fully to standard IEC 60947-5-1 Section 3.

Snap action contact (quick break)

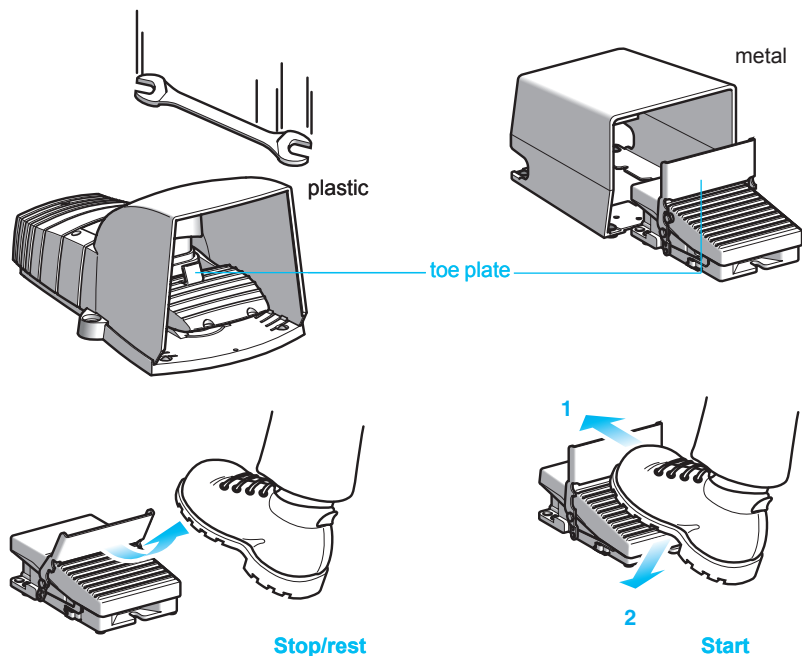
The displacement speed of the moving contacts is not related to the speed at which the contact actuator is operated. This feature gives consistent electrical performance, even when the contact actuator device is operated at low speeds.

Control and signalling units for safety applications

Foot switches, Harmony type XPE

Start instructions

Foot switches XPE with protective cover are ideally suited for issuing a safety “Start” instruction for potentially dangerous machines.



The protective cover over the operating pedal avoids the risk of accidental operation, either by human action or by falling objects, which could result in unintentional starting of the machine.

A trigger mechanism (**toe plate**) enables locking of the pedal in the rest (released) position.

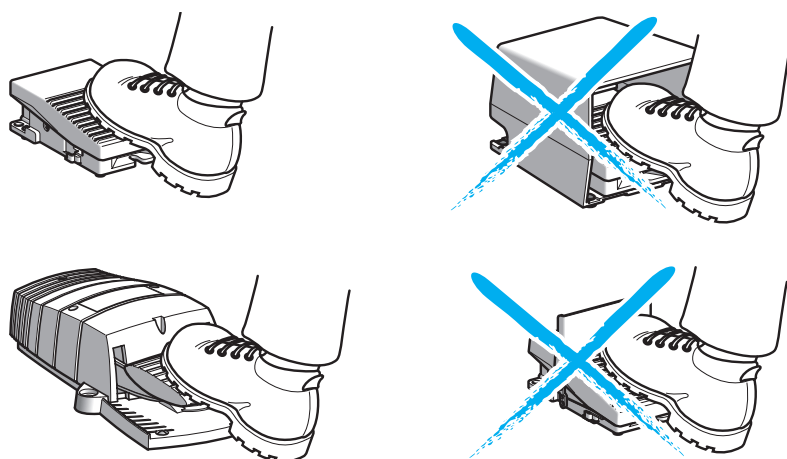
Positive action is required on the toe plate **1** before the pedal **2** can be depressed to start the machine.

On releasing the pedal to stop the machine, the trigger mechanism re-engages and locks the pedal in the rest position.

5

Normal stop instructions

All foot switches of the XPE range can be used for issuing a normal stop instruction to a machine.



Never use the protective cover nor the trigger mechanism for this type of application. Access to the stop control must be as unrestricted as possible and without any constraints.

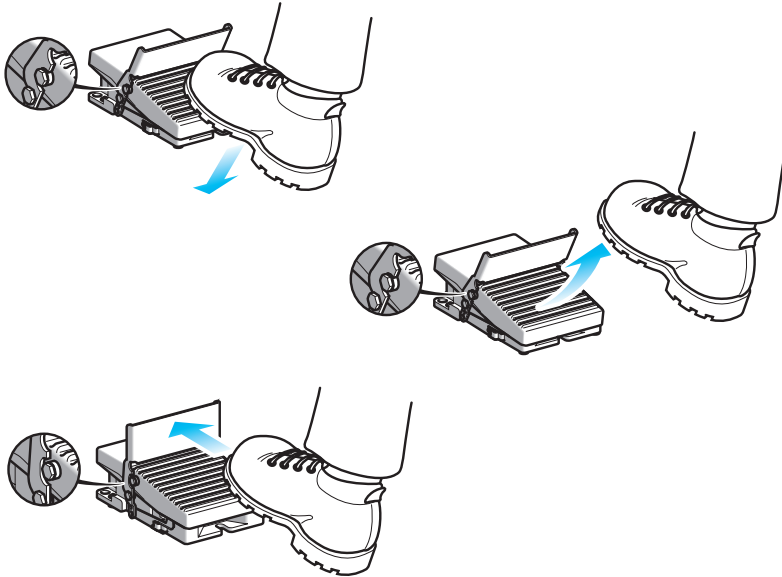
For machine stop instructions, use the N/C contact(s).

Control and signalling units for safety applications

Foot switches, Harmony type XPE

Pedal latching device when depressed

Foot switches with pedal latching device are particularly suited for the control of “hold to run” machines and also, for adjustment operations.



Pressing the pedal issues the machine start instruction and, when the pedal reaches its stop, it latches in the operated position.

Removing the foot from the pedal will not stop the “machine” cycle (**hold to run**), the pedal remains latched.

For issuing a normal stop instruction, the foot is replaced on the pedal and the toe plate operated: this returns the pedal to the rest position.

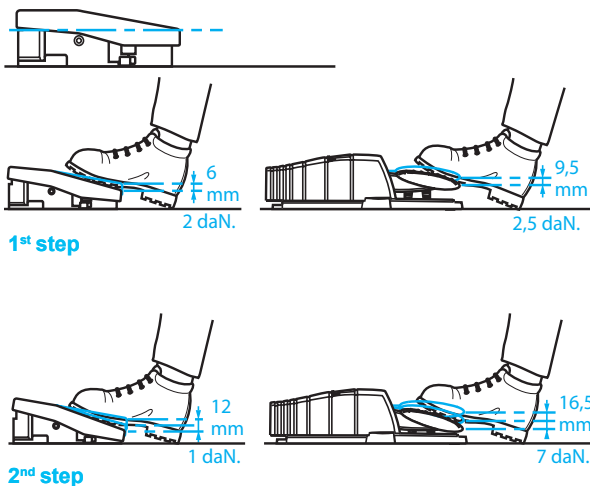
5

Switches with 2 step contact operation

Foot switches featuring 2 step contact operation are ideal for applications involving 2-speed machines.

Examples:

- First speed: low (used for setting-up, adjustment or tool maintenance).
- Second speed: fast (normal machine operating speed).



The first step, at 6 mm pedal travel and light foot pressure (2 daN), actuates a N/C + N/O contact block.

The second step, at maximum pedal travel (12 mm) and required foot pressure (9 daN), actuates a second N/C + N/O contact block.

Applications

Many types of machines are fitted with foot switches

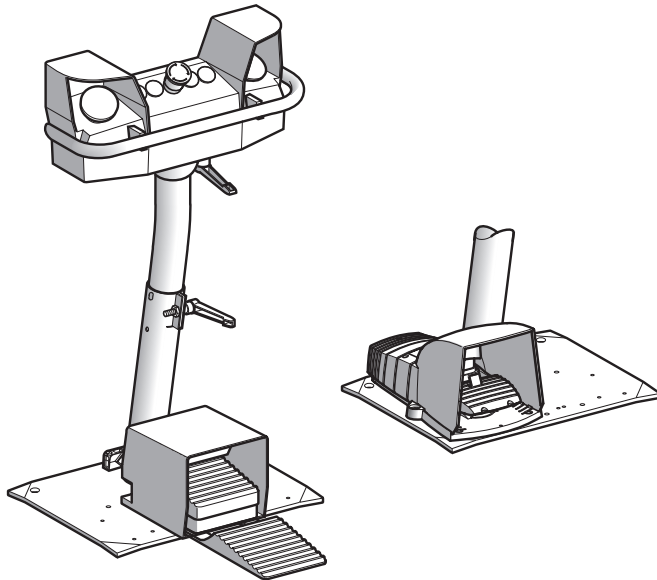
- Bending machine
- Dosing machine
- Assembly station
- Packaging machines
- Cutting presses, stamping presses
- Machine tools (numerical control, lathes, milling machines, grinders, machining centres)
- Guillotines, cutters, folders, saws
- Forging machines, rolling machines, cold metal forming machines

Control and signalling units for safety applications

Foot switches, Harmony type XPE

Foot switches used in conjunction with two-hand control stations

Foot switches XPE can be mounted directly on the baseplate (without drilling additional fixing holes) of the pedestal XY2 SB90 for two-hand control stations XY2 SB7●.

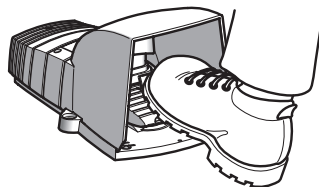


The baseplate of the two-hand control station pedestal XY2 SB90 is pre-drilled with fixing holes to suit the mounting of either:

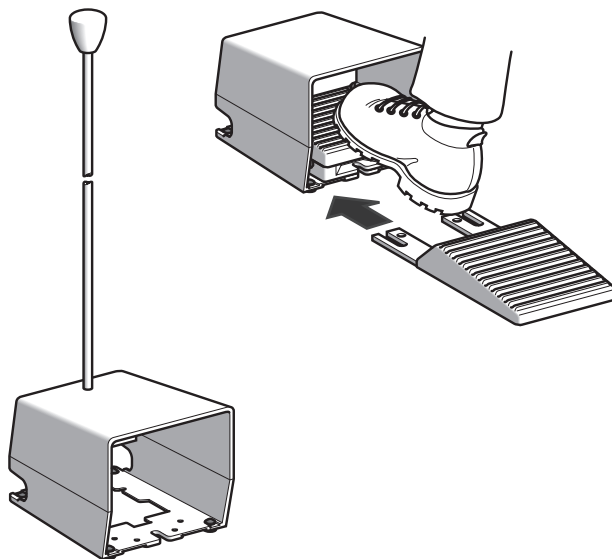
- One XPE foot switch, with or without protective cover.
- Two XPE R foot switches, each with its own protective cover or fitted with a common (double) cover.

Ergonomic

The protective cover is very strong and is sufficiently dimensioned to accommodate all types of footwear (large size, safety boots, etc.).



The foot switch is designed such that the operating pedal is close to the ground and at a comfortable angle.



Various accessories improve the working comfort for machine operators and help to avoid discomfort in the base of the spine due to unbalanced positioning of the pelvis:

- Heel rest (metal XPE).
- Hand grip for mounting on protective cover.

Control and signalling units
for safety applications
Metal foot switches, Universal,
Harmony types XPE M/R

Environment

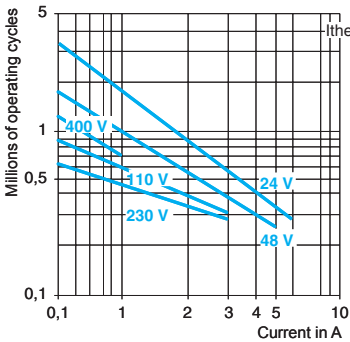
Conformity to standards	Without protective cover		EN/IEC 60947-5-1, CSA C22 2 n° 14 (if H2 specified)
	With protective cover		NF E 09-031
Product certifications	Standard version		FI, CSA A300 - Q300 with tapped entries for cable gland
	Special version		CSAA300 - Q300 with 1/2" NPT adaptor
Protective treatment	Standard version		"TC"
	Special version		"TH"
Ambient air temperature	For operation	°C	- 25...+ 70
	For storage	°C	- 40...+ 70
Vibration resistance			15 gn (10...500 Hz) conforming to IEC 60068-2-6
Shock resistance			20 gn conforming to IEC 60068-2-27 (150 gn conforming to NF E 09-031)
Electric shock protection			Class I conforming to EN/IEC 61140 and NF C 20-030
Mechanical life			15 million operating cycles
Degree of protection			IP 66 conforming to IEC 60529 and IP 669 conforming to NF C 20-010 (with protective cover)
Cable entries			See dimensions, page 5/21

Contact block characteristics

Rated operational characteristics	~ AC-15		A300 or Ue = 240 V, Ie = 3 A
	--- DC-13		Q300 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Rated insulation voltage		V	Ui = 500, degree of pollution 3 conforming to EN/IEC 60947-1, group C conforming to NF C 20-040 and VDE 0110 Ui = 300 conforming to UL 508, CSA C22-2 n° 14
Rated impulse withstand voltage		kV	Uimp = 6 conforming to EN/IEC 60947-1
Positive operation			N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Resistance across terminals		mΩ	≤ 25 conforming to NF C 93-050 method A or IEC 60255-7 category 3
Short-circuit protection			10 A cartridge fuse type gG (gl) conforming to EN/IEC 60947-5-1, VDE 0660-200
Foot switches with snap action contacts	Operational power		Conforming to EN/IEC 60947-5-1 Appendix C
	Utilisation categories		AC-15 and DC-13
	Operating rate		3600 operating cycles/hour. Load factor: 0.5

a.c. supply ~ 50-60 Hz

Inductive circuit



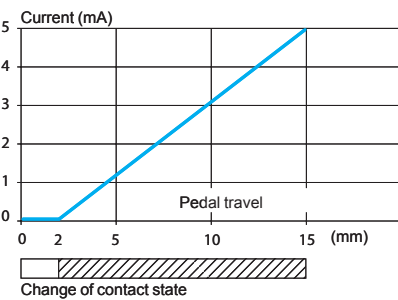
d.c. supply ---

Power broken in W for 5 million operating cycles

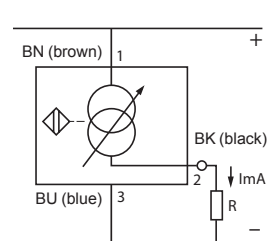
Voltage	V	24	48	120
Power	W	10	7	4

Foot switches with analogue output	Nominal supply voltage	V	--- 24...48
	Voltage limits	V	--- 19...58
	Current consumption, no-load	mA	4
	Output current drift (IS) in relation to temperature		0...+ 50 °C: + 2...- 6% - 25...+ 70 °C: + 2...- 12%

Output current curve



Wiring scheme



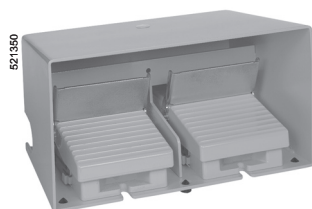
Connection	Screw clamp terminals		Maximum clamping capacity: 1 x 2.5 mm ² or 2 x 1.5 mm ² with or without cable end
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Control and signalling units for safety applications

Metal foot switches, Universal,
Harmony types XPE M/R



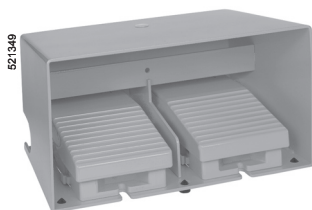
XPE M510



XPE R5100D



XPE M310



XPE R3100D

Single and double pedal foot switches with protective cover

Description	Pedal	Contact operation		Colour	Reference	Weight kg
Metal With trigger mechanism requiring positive action to allow pedal operation	Single	1 step	1 N/C + N/O	Blue	XPE M510	2.570
	Double	1 step	2 x 1 N/C + N/O	Blue	XPE M5100D	6.070
	Single	1 step	1 N/C + N/O	Orange	XPE R510	2.570
	Double	1 step	2 x 1 N/C + N/O	Orange	XPE R5100D	6.070
	Single	1 step	2 N/C + N/O	Blue	XPE M511	2.590
	Double	1 step	2 x 2 N/C + N/O	Blue	XPE M5110D	6.090
	Single	1 step	2 N/C + N/O	Orange	XPE R511	2.590
	Double	1 step	2 x 2 N/C + N/O	Orange	XPE R5110D	6.090
	Single	2 step	2 N/C + N/O	Blue	XPE M711	2.590
				Orange	XPE R711	2.590
Metal Without trigger mechanism	Single	1 step with analogue output	2 N/C + N/O	Blue	XPE M529	2.600
				Orange	XPE R529	2.600
	Single	1 step	1 N/C + N/O	Blue	XPE M310	2.400
	Double	1 step	2 x 1 N/C + N/O	Blue	XPE M3100D	5.900
	Single	1 step	1 N/C + N/O	Orange	XPE R310	2.400
	Double	1 step	2 x 1 N/C + N/O	Orange	XPE R3100D	5.900
	Single	1 step	2 N/C + N/O	Blue	XPE M311	2.420
	Double	1 step	2 x 2 N/C + N/O	Blue	XPE M3110D	5.920
	Single	1 step	2 N/C + N/O	Orange	XPE R311	2.420
	Double	1 step	2 x 2 N/C + N/O	Orange	XPE R3110D	5.920
	Single	1 step latching	1 N/C + N/O	Blue	XPE M410	2.400
				Orange	XPE R410	2.420
	Single	2 step	2 N/C + N/O	Blue	XPE M611	2.420
				Orange	XPE R611	2.420
	Single	1 step with analogue output	2 N/C + N/O	Blue	XPE M329	2.420
	Double	2 step + 1 step	2 x 1 N/C + N/O + 1 N/C + N/O	Blue	XPE M6210D	5.900

Control and signalling units for safety applications

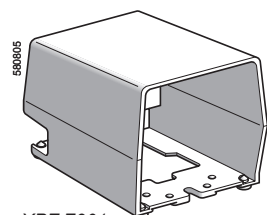
Metal foot switches, Universal,
Harmony types XPE M/R



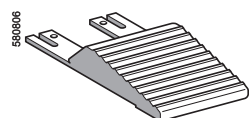
XPE R810



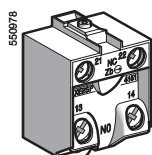
XPE M110



XPE Z901



XPE Z902



XE2S P4151●

Foot switches without protective cover

Description	Contact operation		Colour	Reference	Weight kg
Metal With trigger mechanism requiring positive action to allow pedal operation	1 step	1 N/C + N/O	Blue	XPE M810	1.200
			Orange	XPE R810	1.200
		2 N/C + N/O	Blue	XPE M811	1.220
			Orange	XPE R811	1.220
	2 step	2 N/C + N/O	Blue	XPE M911	1.220
			Orange	XPE R911	1.220
Metal Without trigger mechanism	1 step	1 N/C + N/O	Blue	XPE M110 (1)	1.200
			Orange	XPE R110 (1)	1.200
		2 N/C + N/O	Blue	XPE M111 (1)	1.220
			Orange	XPE R111 (1)	1.220
	2 step	2 N/C + N/O	Blue	XPE M211 (1)	1.220
			Orange	XPE R211 (1)	1.220
Analogue output	2 N/C + N/O		Blue	XPE M929	1.220
			Orange	XPE R929	1.220
Analogue output	2 N/C + N/O		Blue	XPE M229	1.220
			Orange	XPE R229	1.220

Accessories

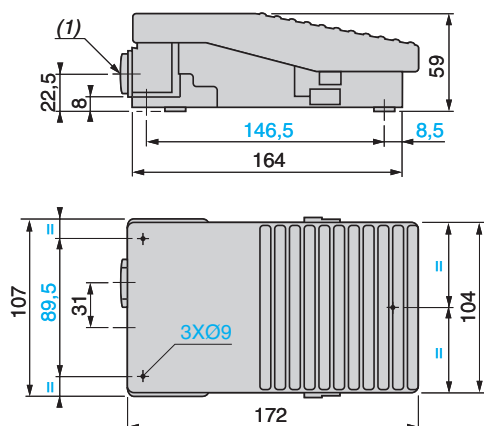
Description	For use with	Unit reference	Weight kg
Single protective cover	XPE M	XPE Z901	1.200
	XPE R	XPE Z911	1.200
Double protective cover	XPE M	XPE Z921	1.200
	XPE R	XPE Z931	1.200
Hand grip for protective cover	XPE Z901 or XPE Z911	XPE Z913	0.450
Heel rest	XPE M	XPE Z902	0.240
	XPE R	XPE Z912	0.240
Trigger mechanism	XPE M or XPE R	XPE Z903	0.170
Latching device (replacement for foot switches with this feature)	XPE M or XPE R	XPE Z904	0.170
Cable clamp	XPE M or XPE R	XPE Z905	0.010
Contact blocks Snap action	1 step switches: 1 st or 2 nd N/C + N/O	XE2S P4151	0.020
	2 step switches: 1 st N/C + N/O		
	2 step switches: 2 nd N/C + N/O	XE2S P4151B	0.020
ISO M20 adaptor (Sold in lots of 5)	XPE M or XPE R	DE9 RA1620	0.050

(1) To order an ATEX D version of the product (protection against dust), add **EX** to the end of the reference. Example: **XPE M110EX**.

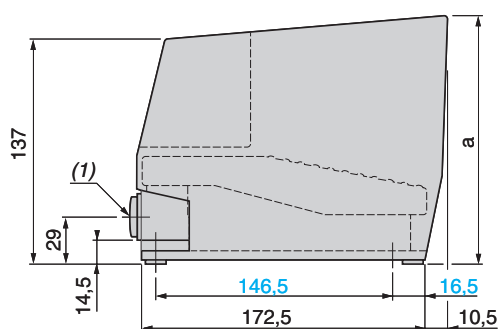
Control and signalling units for safety applications

Metal foot switches, Universal,
Harmony types XPE M/R

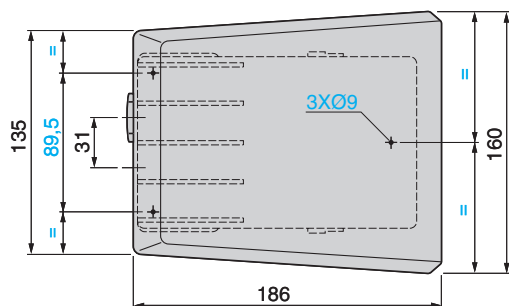
XPE M, XPE R without protective cover



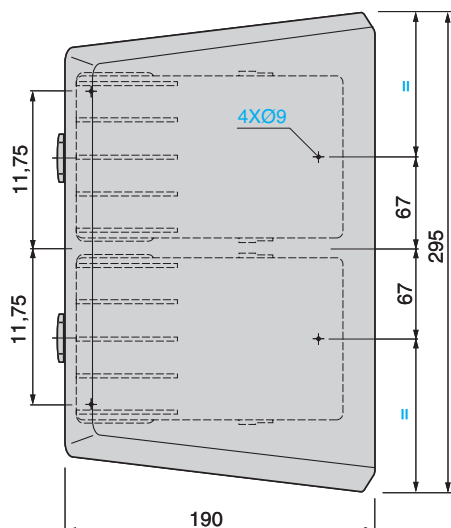
XPE M, XPE R with protective cover



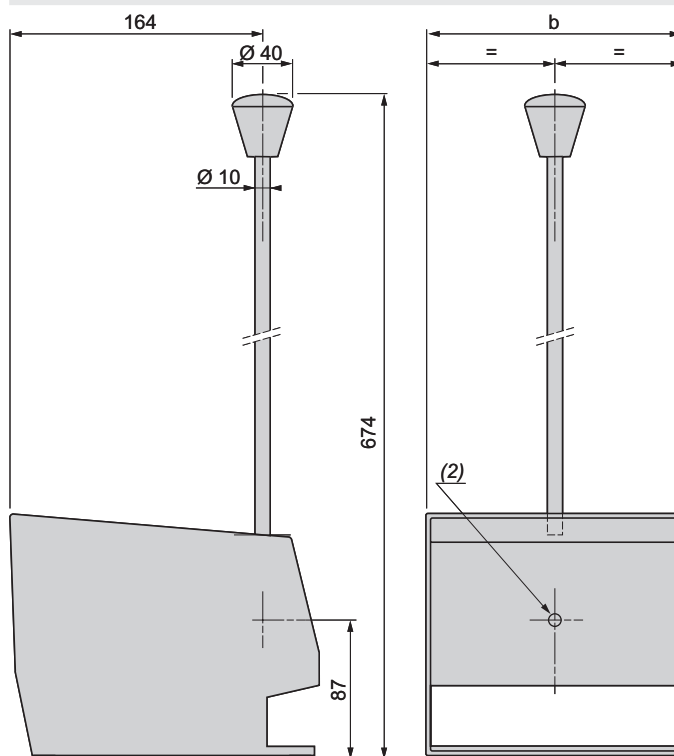
Single



Double



XPE Z913



	a	b
Single pedal	152	160
Double pedal	155	295

(1) 2 tapped entries for n° 16 (Pg 16) cable gland. For ISO M20, use adaptor DE9 RA1620.

(2) 1 Ø 6 plain hole.

Control and signalling units for safety applications

Plastic foot switches,
Harmony types XPE A/B/G/Y

Environment

Conformity to standards			XPE A, XPE B, XPE G, XPE Y without protective cover: IEC/EN 60947-5-1 XPE B, XPE G: UL 508, CSA C22-2 n° 14 XPE B, XPE G with protective cover: NF E 09-031
Product certifications	Standard version		XPE B, XPE G: UL, CSAA300 - Q300 with knock-out entries for ISO M20 cable gland
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	°C	XPE B, XPE G: - 25...+ 70 XPE A, XPE Y: - 25...+ 55
	For storage	°C	- 40...+ 70
Vibration resistance	Conforming to IEC 60068-2-6		5 gn (10...500 Hz)
Shock resistance	Conforming to IEC 60068-2-27		XPE A: 25 gn, XPE B, XPE G, XPE Y: 30 gn
Electric shock protection	Conforming to IEC/EN 61140 and NF C 20-030		Class II
Mechanical life			XPE A: 2 million operating cycles XPE Y: 5 million operating cycles XPE B, XPE G: 10 million operating cycles
Degree of protection			XPE A: IP 43 conforming to IEC 60529
			XPE Y: IP 55 conforming to IEC 60529
			XPE B, XPE G: IP 66 conforming to IEC 60529
Cable entries			See dimensions, pages 5/24 and 5/25

Contact block characteristics

Rated operational characteristics		~ AC-15; A 300 or Ue = 240 V, Ie = 3 A --- DC-13; Q 300 or Ue = 250 V, Ie = 0.27 A conforming to IEC/EN 60947-5-1 Appendix A
Rated insulation voltage		Ui = 500 V degree of pollution 3 conforming to IEC/EN 60947-1, group C conforming to NF C 20-040 and VDE 0110 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
Rated impulse withstand voltage		Uimp = 6 kV conforming to IEC/EN 60947-1
Positive operation		N/C contact with positive opening operation conforming to IEC/EN 60947-5-1 Appendix K
Resistance across terminals		≤ 25 mΩ conforming to NF C 93-050 method A or IEC 60255-7 category 3
Short-circuit protection		10 A cartridge fuse type gG (gl) conforming to IEC/EN 60947-5-1, VDE 0660-200

Operational power

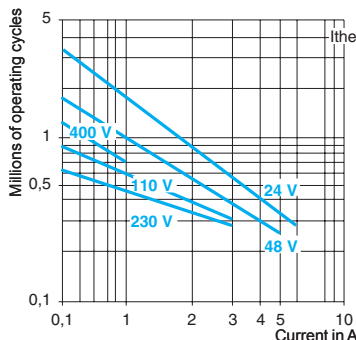
conforming to IEC/EN 60947-5-1 Appendix C

Foot switches with snap action contacts

Utilisation categories AC-15 and DC-13
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

a.c. supply ~ 50-60 Hz

m Inductive circuit



d.c. supply ---

Power broken in W for 5 million operating cycles

Voltage V	24	48	120
m W	10	7	4

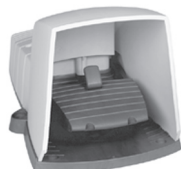
Connection

Screw clamp terminals

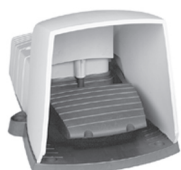
Maximum clamping capacity: 1 x 2.5 mm² or 2 x 1.5 mm² with or without cable end

Control and signalling units for safety applications

Plastic foot switches,
Harmony types XPE A/B/G/Y



XPE 510



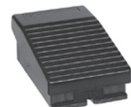
XPE 310



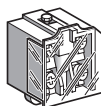
XPE G810



XPE 110



XPE A110



XE2S P4151

Single pedal foot switches with protective cover

Description	Contact operation		Housing colour	Reference	Weight kg
With trigger mechanism requiring positive action to allow pedal operation	1 step	1 N/C + N/O	Yellow	XPE Y510 (1)	0.700
			Blue	XPE B510	0.700
			Grey	XPE G510	0.700
		2 N/C + N/O	Yellow	XPE Y511 (1)	0.700
			Blue	XPE B511	0.700
			Grey	XPE G511	0.700
	2 step	2 N/C + N/O	Yellow	XPE Y711 (1)	0.700
			Blue	XPE B711	0.700
			Grey	XPE G711	0.700
Without trigger mechanism	1 step	1 N/C + N/O	Yellow	XPE Y310	0.690
			Blue	XPE B310	0.690
			Grey	XPE G310	0.690
		2 N/C + N/O	Yellow	XPE Y311 (1)	0.690
			Blue	XPE B311	0.690
			Grey	XPE G311	0.690
	2 step	2 N/C + N/O	Yellow	XPE Y611 (1)	0.690
			Blue	XPE B611	0.690
			Grey	XPE G611	0.690

Foot switches without protective cover

Description	Contact operation		Housing colour	Reference	Weight kg
With trigger mechanism requiring positive action to allow pedal operation	1 step	1 N/C + N/O	Grey	XPE G810	0.580
	2 step	2 N/C + N/O	Grey	XPE G911	0.580
Without trigger mechanism	1 step	1 N/C + N/O	Yellow	XPE Y110 (1)	0.570
			Blue	XPE B110	0.570
			Grey	XPE G110	0.570
			Black	XPE A110	0.275
	2 N/C + N/O	Blue	XPE B111	0.570	
		Grey	XPE G111	0.570	
		Black	XPE A111	0.295	
	2 step	2 N/C + N/O	Yellow	XPE Y211 (1)	0.570
			Blue	XPE B211	0.570
			Grey	XPE G211	0.570

Accessories for foot switches, with or without protective cover

Description	For use with	Sold in lots of	Unit reference	Weight kg
M20 x 1.5 cable gland	Cable Ø 5...10 mm	5	DE9RA200612	0.014
	Cable Ø 7...13 mm	5	DE9RA201014	0.014
Contact blocks, snap action	1 or 2 step switches	1	XE2S P4151	0.020

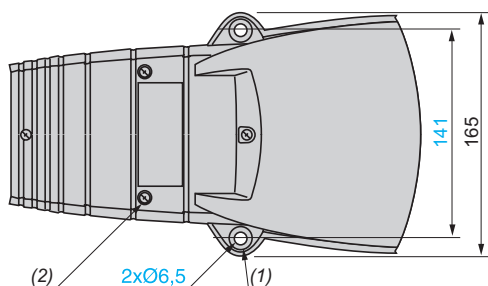
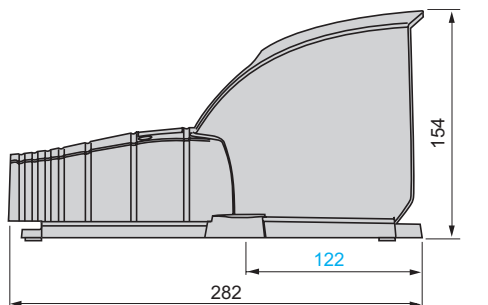
(1) IP 55, not UL, CSA approved.

Control and signalling units for safety applications

Plastic foot switches,
Harmony types XPE B/G/Y

XPE B, XPE G, XPE Y

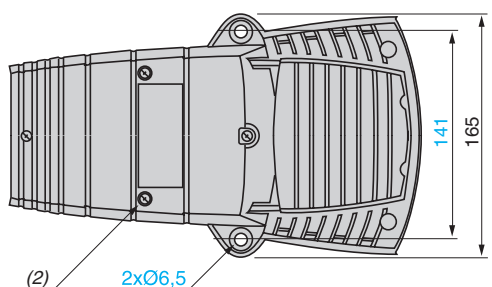
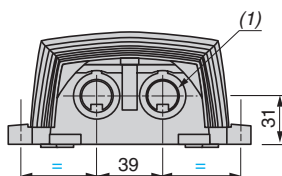
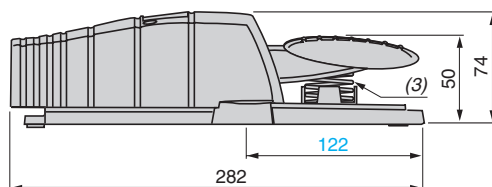
With protective cover



(1) Ø 16 x 4 counterbored hole.

(2) 4 cover fixing screws: stainless steel. Tightening torque: 1 N.m.

Without protective cover

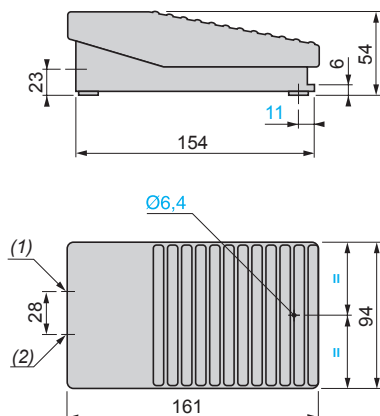


(1) 2 plain holes for ISO M20 or n° 13 (Pg 13.5) cable gland.

(2) 4 cover fixing screws: stainless steel. Tightening torque: 1 N.m.

(3) Return spring: stainless steel.

XPE A



- (1) 1 plain hole for ISO M20 or n° 13 (Pg 13.5) cable gland.
(2) 1 plain hole for ISO M20 or n° 9 (Pg 11) cable gland.