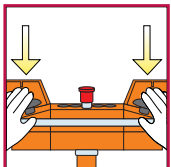


# Enabling movement

Two-hand ergonomic control stations  
**XY2SB**

Catalog

October **2015**



**Schneider**  
Electric

# General contents

## Enabling movement

### Two-hand ergonomic control stations

#### XY2SB

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# Enabling movement

## Two-hand ergonomic control stations

### With Harmony XB4 B control units

#### Presentation

The design of the control station incorporates features to significantly reduce occupational illnesses associated with repetitive movements of the hands, particularly "carpal tunnel syndrome".

The health and comfort of the machine operator is assured by:

- the numerous alternative hand positions for operating the 2 pushbutton actuators, see diagrams to left,
- a hand rail,
- simple and fast adjustments of control station position.

This two-hand control station protects machine operators against both industrial accidents and illnesses related to their occupation.

It conforms to the following European safety standards:

- EN 574/ISO 13851 (two-hand control),
- EN 999 (approach speeds of parts of the human body and positioning of safety devices).

The control station can be mounted:

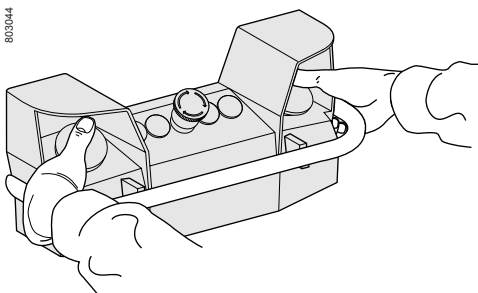
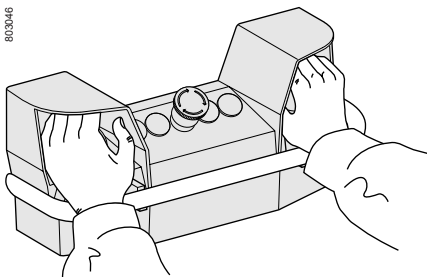
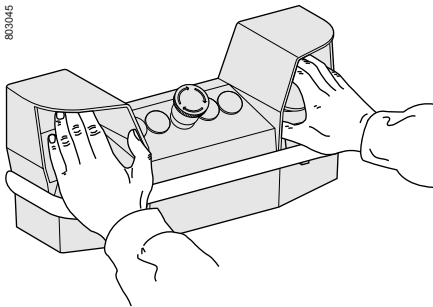
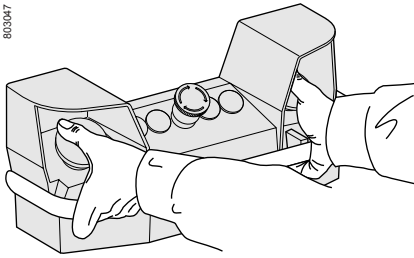
- directly on the machine housing,
- on a pedestal, enabling 3 directional adjustment:
  - height,
  - rake,
  - skew.

The use of a two-hand control station in conjunction with a safety module type XPS BCE or XPS BF provides type IIIC two-hand control conforming to EN 574/ISO 13851 and PL e / Category 4 according to EN/ISO 13859-1.

The range comprises:

- two-hand control stations with or without pre-wired terminal blocks,
- kits (control station + pedestal), with or without pre-wired terminal blocks.

The products are supplied with an installation manual, which is also available as a separate item.



# Enabling movement

## Two-hand ergonomic control stations With Harmony XB4 B control units

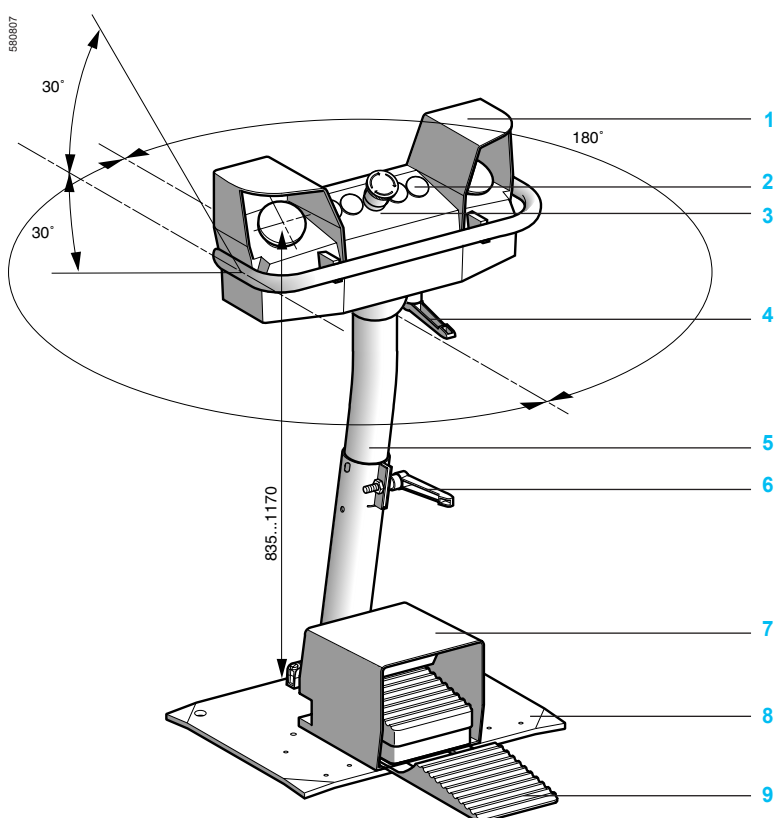
### Description

The control station **1** has five cut-outs ( $\varnothing 22$  mm) **2** as standard. Five additional cut-outs are possible **3**.

Its pedestal **5** enables the following quick and simple adjustments:

- Control station rake ( $\pm 30^\circ$ ) using handle **4**.
- Control station skew ( $\pm 180^\circ$ ) using handle **6**.
- Control station height (835 to 1170 mm) using handle **6**.

The baseplate **8** can be fitted with safety foot switches XPE R **9**, together with their protective covers **7**.



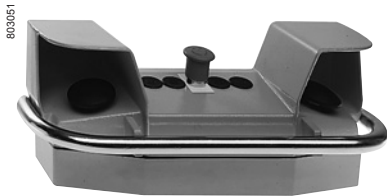
Characteristics					
<b>Environment</b>					
<b>Conformity to standards</b>		EN/IEC 60947-5-1, EN 574/ISO 13851			
<b>Maximum safety level (1)</b>		PL e, category 4 conforming to EN/ISO 13849-1 and SIL 3 conforming to EN/IEC 61508			
<b>Reliability data B10d</b>	Contact block Harmony XB4B	25,000,000 (data value for a service life of 10 years: can be limited by contact and mechanical wear)			
<b>Colour</b>		Orange RAL 2008			
<b>Protective treatment</b>	Standard version	"TC"			
<b>Ambient air temperature</b>	For operation	°C	- 25...+ 70		
	For storage	°C	- 40...+ 70		
<b>Vibration resistance</b>	Conforming to EN/IEC 60068-2-6	5 gn (2...500 Hz)			
<b>Shock resistance</b>	Conforming to EN/IEC 60068-2-27	10 gn (duration 11 ms)			
<b>Electric shock protection</b>	Conforming to EN/IEC 61140	Class I			
<b>Degree of protection</b>	Conforming to EN/IEC 60529	IP 65			
<b>Mechanical life</b>	Number of operating cycles	1 million			
<b>Cable entries</b>		See dimensions, page 9			
<b>Contact block characteristics</b>					
<b>Rated operational characteristics</b>	~ AC-15	A600 or Ue = 240 V and Ie = 3 A			
	--- DC-13	Q600 or Ue = 250 V and Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A			
<b>Rated insulation voltage</b>	Conforming to EN/IEC 60947-1	V	Ui = 600, degree of pollution 3		
	Conforming to UL 508 and CSA C22-2 n° 14	V	Ui = 600		
<b>Rated impulse withstand voltage</b>	Conforming to EN/IEC 60947-1	kV	Uimp = 6		
<b>Contact operation</b>	Slow break, with positive opening operation	N/C + N/O break before make on each black actuator pushbutton N/C + N/C simultaneous on Emergency stop pushbutton N/C + N/O break before make on Lock out pushbutton			
<b>Positive operation</b>	Conforming to EN/IEC 60947-5-1 Appendix K	N/C contact with positive opening operation			
<b>Terminal referencing</b>		Conforming to CENELEC EN 50013			
<b>Short-circuit protection</b>	Conforming to EN/IEC 269	10 A cartridge fuse type gG (gl)			
<b>Connection</b>	Screw clamp terminals	mm <sup>2</sup>	Minimum clamping capacity: 1 x 0.22 or 1 x 0.22 + 1 x 0.34 Maximum clamping capacity: 1 x 2.5 or 2 x 1.5		
<b>Electrical durability</b> Conforming to EN/IEC 60947-5-1 Appendix C Operating rate: 3600 operating cycles/hour. Load factor: 0.5	a.c. supply for 1 million operating cycles utilisation category AC-15	V	24	120	230
		A	4	3	2
	d.c. supply for 1 million operating cycles utilisation category DC-13	V	24	110	
		A	0.5	0.2	
<b>Electrical reliability</b>	Failure rate According to EN/IEC 60947-5-4		At 17 V and 5 mA, $\lambda < 10^{-8}$ At 5 V and 1 mA, $\lambda < 10^{-9}$		

(1) Using an appropriate and correctly connected control system.

# Enabling movement

## Two-hand ergonomic control stations

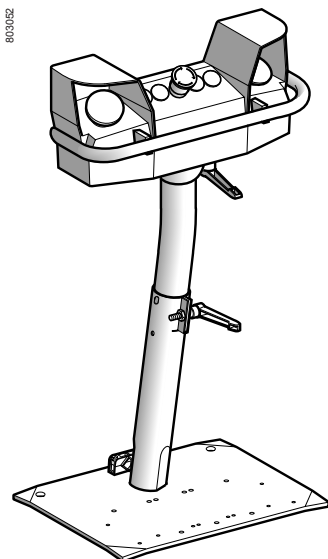
### With Harmony XB4 B control units



XY2SB7●

#### Two-hand control stations - painted

Description	Mushroom head		Reference	Weight kg
	Function and colour	Contacts		
2 control pushbuttons with N/C + N/O break before make contacts and 1 mushroom head pushbutton	Emergency stop Red	N/C + N/C slow break	XY2SB71	4.000
	Lock out (Schalt Sperre) Yellow	N/C + N/O break before make		
2 control pushbuttons with N/C + N/O break before make contacts and 1 mushroom head pushbutton, with pre-wired terminal block	Emergency stop Red	N/C + N/C slow break	XY2SB72	4.000
	Lock out (Schalt Sperre) Yellow	N/C + N/O break before make		



XY2SB7●4

#### Kits (control station + pedestal)

Description	Mushroom head		Reference	Weight kg
	Function and colour	Contacts		
2 control pushbuttons and 1 mushroom head Emergency stop pushbutton + pedestal XY2 SB90	Emergency stop Red	N/C + N/C slow break	XY2SB714	17.000
	Emergency stop Red	N/C + N/C slow break		
2 control pushbuttons and 1 mushroom head Emergency stop pushbutton, with pre-wired terminal block + pedestal XY2 SB90	Emergency stop Red	N/C + N/C slow break	XY2SB724	17.000
	Emergency stop Red	N/C + N/C slow break		

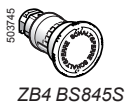
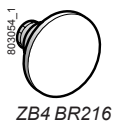
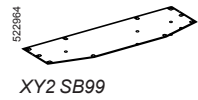
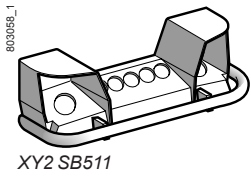
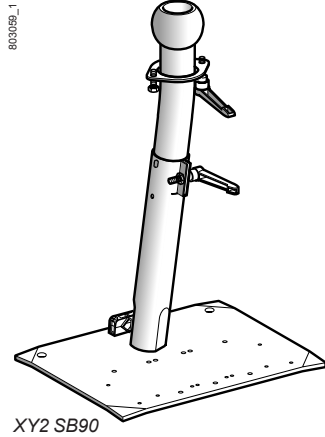
#### Documentation

Description	For use with	Reference	Weight kg
Installation manual	All control stations XY2 SB7●●	XCOM2514	0.200

# Enabling movement

## Two-hand ergonomic control stations

### With Harmony XB4 B control units



### Separate components and spare parts

#### Various accessories

Description	For use with	Colour	Unit reference	Weight kg
<b>Metal pedestal adjustable height</b>	XY2SB●●	Orange	<b>XY2SB90</b>	13.000
<b>Collar for guard rail (welded fixing)</b>	XY2SB90	Orange	<b>XY2SB98</b>	0.800
<b>Control station top without control devices</b>	–	Orange	<b>XY2SB511</b>	2.500
<b>Control station base</b>	–	Orange	<b>XY2SB531</b>	1.200
<b>Double protective metal cover</b>	Metal pedestal XY2SB90 and foot switches type XPE R	Orange	<b>XY2SB96</b>	4.370
<b>Replacement handle (sold in lots of 5)</b>	Metal pedestal XY2SB90	Black	<b>XY2SB93</b>	0.155
<b>Replacement seals</b>	–	–	<b>XY2SB99</b>	0.300
<b>Adaptor (sold in lots of 5)</b>	ISOM25	–	<b>DE9RA2125</b>	0.010
<b>Fixing nut (sold in lots of 5)</b>	Adaptor	–	<b>DE9EC21</b>	0.005

#### Control units (1)

Description	Component part	Colour	Reference	Weight kg
<b>Pushbutton actuator</b>	Ø 60 mm mushroom head	Black	<b>ZB4BR216</b>	0.095
	N/C + N/O body/contact assembly	–	<b>ZB4BZ105</b>	0.055
<b>Emergency stop pushbutton</b>	Ø 40 mm mushroom head	Red	<b>ZB4BS844</b>	0.060
	N/C + N/C body/contact assembly	–	<b>ZB4BZ104</b>	0.055
<b>Lock out pushbutton</b>	Ø 40 mm mushroom head	Yellow, marked "Schaltsperr"	<b>ZB4BS845S</b>	0.060
	N/C + N/O body/contact assembly	–	<b>ZB4BZ105</b>	0.055

(1) Other XB4B control and signalling units are suitable for use on the control stations. Please refer to our "Human Machine Interface catalogue".

## Enabling movement

### Two-hand ergonomic control stations

#### With Harmony XB4 B control units

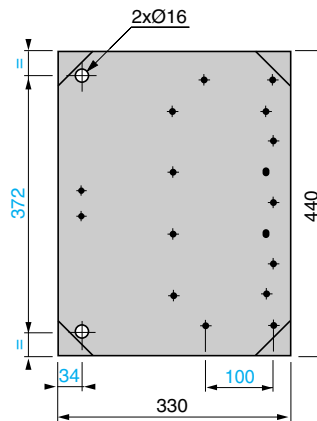
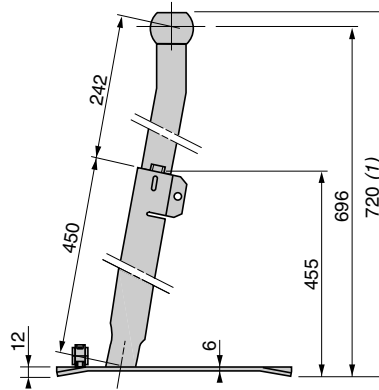
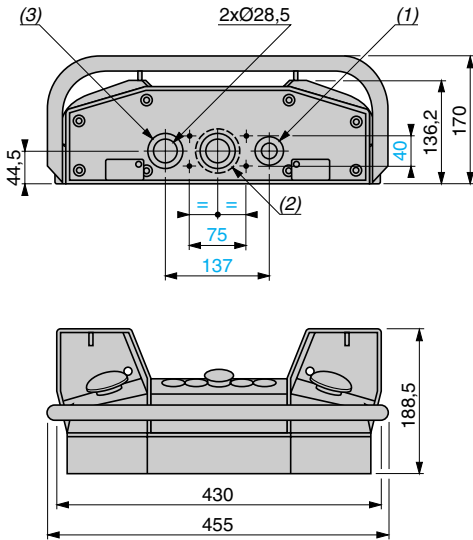
### Dimensions

Control station

XY2 SB7●

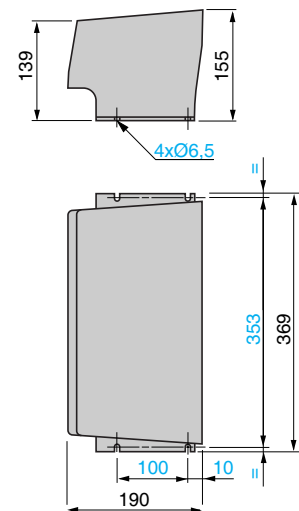
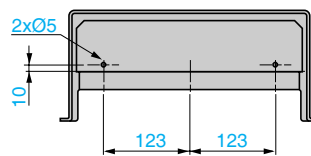
Pedestal

XY2 SB90



### Double protective cover

XY2 SB96



(1) 2 plain holes for n° 13 (PG13.5) or ISO M20 cable gland.  
 (2) Ø 56 mm knock-out specifically for mounting on pedestal.  
 (3) 1 plain hole for n° 21 (PG21) cable gland. For ISO M25, use adaptator DE9 RA2125 and fixing nut DE9 EC21.

(1) Adjustable height of pedestal 720 to 1060 mm.



D	
DE9EC21	8
DE9RA2125	8

X	
XCOM2514	7
XY2SB511	8
XY2SB531	8
XY2SB71	7
XY2SB714	7
XY2SB72	7
XY2SB724	7
XY2SB75	7
XY2SB76	7
XY2SB90	8
XY2SB93	8
XY2SB96	8
XY2SB98	8
XY2SB99	8

Z	
ZB4BR216	8
ZB4BS844	8
ZB4BS845S	8
ZB4BZ104	8
ZB4BZ105	8
ZB4BZ105	8