

Control and signalling units Ø 16 “monolithic” **Harmony XB6 E**

Catalogue
May

04



Control and signalling units Ø 16

Harmony XB6 E

Pushbuttons, switches and pilot light

Monolithic products "IP65"

- **Presentation** *pages 2 and 3*
- **Characteristics** *pages 4 and 5*
- **References** *pages 6 to 9*
- **Dimensions, mounting** *pages 10 and 11*

Control and signalling units Ø 16

Harmony XB6 E

Pushbuttons, switches and pilot lights

Monolithic products "IP 65"

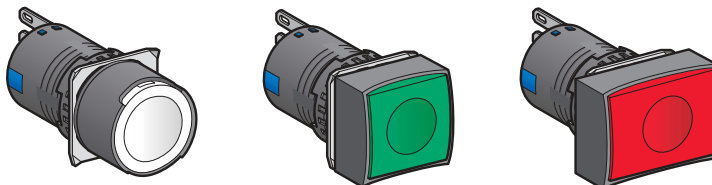
Presentation

The Ø 16 range of control and signalling units comprises complete, double insulated units.

Functions

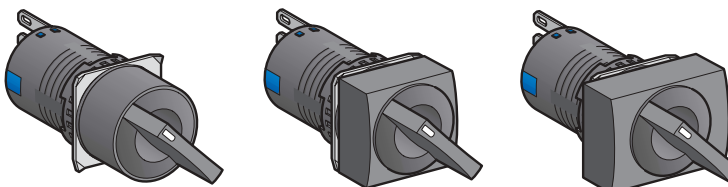
Contact functions

Pushbuttons, flush, spring return



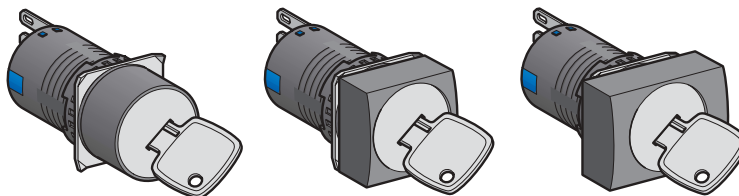
Shape of head	Circular	Square	Rectangular
Degree of protection	IP 65	IP 65	IP 65
Colour	White, black, green, red, yellow or blue.	White, black, green, red, yellow or blue.	White, black, green, red, yellow, or blue.
Reference	XB6 EAA●●P	XB6 ECA●●P	XB6 EDA●●P
Page	6	6	6

Selector switches with standard handle, 2 or 3-position



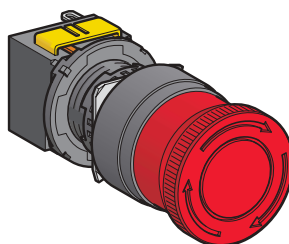
Shape of head	Circular	Square	Rectangular
Degree of protection	IP 65	IP 65	IP 65
Reference	XB6 EAD●●P	XB6 ECD●●P	XB6 EDD●●P
Page	9	9	9

Key switches, 2 or 3-position



Shape of head	Circular	Square	Rectangular
Degree of protection	IP 65	IP 65	IP 65
Reference	XB6 EAG●●P	XB6 ECG●●P	XB6 EDG●●P
Page	9	9	9

Emergency stop pushbuttons, turn to release

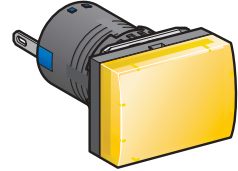
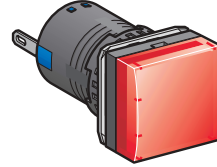
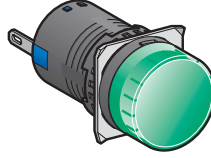


Shape of head	Circular, Ø 24 mm
Degree of protection	IP 65
Colour	Red
Reference	XB6 EAS842P
Page	9

Functions (continued)

Signalling functions

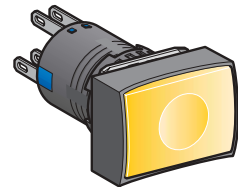
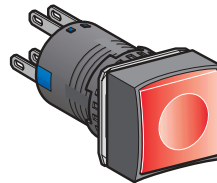
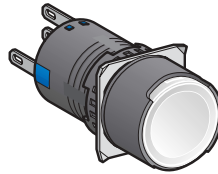
Pilot lights



Shape of head	Circular	Square	Rectangular
Degree of protection	IP 65	IP 65	IP 65
LED	12 or 24 V	12 or 24 V	12 or 24 V
Colour	White, green, red, yellow, blue or orange	White, green, red, yellow, blue or orange	White, green, red, yellow, blue or orange
Reference	XB6 EAV●●P	XB6 ECV●●P	XB6 EDV●●P
Page	6	6	6

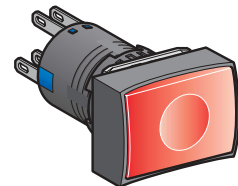
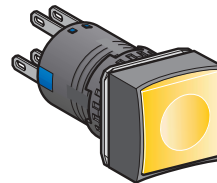
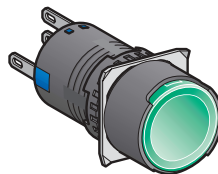
Combined functions: contact + signalling

Illuminated pushbuttons, flush, spring return



Shape of head	Circular	Square	Rectangular
Degree of protection	IP 65	IP 65	IP 65
LED	12 or 24 V	12 or 24 V	12 or 24 V
Colour	White, green, red, yellow, blue or orange	White, green, red, yellow, blue or orange	White, green, red, yellow, blue or orange
Reference	XB6 EAW●●P	XB6 ECW●●P	XB6 EDW●●P
Page	7	7	7

Illuminated pushbuttons, flush, latching



Shape of head	Circular	Square	Rectangular
Degree of protection	IP 65	IP 65	IP 65
LED	12 or 24 V	12 or 24 V	12 or 24 V
Colour	White, green, red, yellow, blue or orange	White, green, red, yellow, blue or orange	White, green, red, yellow, blue or orange
Reference	XB6 EAF●●P	XB6 ECF●●P	XB6 EDF●●P
Page	8	8	8

Environment			
Conforming to standards			IEC 60947-1, IEC 60947-5-1, IEC 60947-5-5, JIS C 4520 and 852 UL 508, CSA C22-2 n° 14
Product certifications			C€, UL, CSA
Ambient air temperature around the device	Storage	°C	- 40...+ 55
	Operation	°C	- 25...+ 55
Vibration resistance	Pushbuttons		5...55 Hz - amplitude 1 mm - 9 gn conforming to IEC 60068-2-6
	Emergency stop		5...500 Hz, 5 gn or 0.35 mm, 0- peak
Electric shock resistance	Pushbuttons		Half sine wave 11ms, 20 gn conforming to IEC 60068-2-27
	Emergency stop		Half sine wave 11ms, 30 gn conforming to IEC 60068-2-27
Electric shock protection			Class II conforming to IEC 60536
Degree of protection			IP 65 conforming to IEC 60529
Mechanical life (in operating cycles)	Pushbuttons		1 million
	Illuminated pushbuttons		1 million
	Latching illuminated pushbuttons		100 000
	Selector switches with standard handle or key switches		250 000
	Emergency stop		100 000
Mounting position			All positions
Nominal tightening torque	With anti-rotation plate	Nm	0.8
Electrical characteristics of LED pilot lights			
Supply voltage		≡ V	12 and 24, ± 10 %
Current consumption	at 12 V	mA	20
	at 24 V	mA	10
Life of LEDs		hours	50 000
Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	kV	8
Cabling			Solder lugs, 260 °C for 3 seconds

Electrical characteristics of pushbuttons and illuminated pushbuttons

Operational voltage		\approx V	250
Thermal current		A	I _{th} = 3
Contact resistance		mΩ	< 50 at 50 mV and 10 mA
Electrical performance	Resistive	~	120 V - 1 A 240 V - 0.5 A
	Inductive	~	120 V - 1 A 240 V - 0.5 A
	Resistive	≡	120 V - 0.2 A 24 V - 1 A
	Inductive	≡	120 V - 0.1 A 24 V - 0.7 A
Rated insulation voltage	Conforming to IEC 60947-1	V	U _i = 250 degree of pollution 2
Dielectric strength	Conforming to IEC 60947-1	\approx V	1000 min.
Rated impulse withstand voltage	Conforming to IEC 60947-1	kV	U _{imp} = 2.5
Contact material			Gold-flashed silver
Minimum load		\approx	5 V, 1 mA
Contact operation	1 C/O		Snap action, single-pole double throw
Operating force	1 C/O contact	N	1.3
Short-circuit protection	At prospective I _{sc} = 50 A		3 A gG upstream fuse
Electrical reliability			With confidence level of 90 %: $\lambda > 1 \times 10^{-8}$, at 5 V and 1 mA
Cabling			Solder lugs
			Contact connections: solder connector or 2.8 x 0.5 mm faston connector
Electrical durability (in operating cycles) Conforming to IEC 60947-5-1, Appendix C	Spring return pushbuttons		100 000, resistive load □ AC-12: 250 V and 0.5 A; 125 V and 0.5 A □ DC-12: 30 V and 1 A; 110 V and 0.2 A
	Latching pushbuttons		50 000, resistive load □ AC-12: 250 V and 0.5 A; 125 V and 0.5 A □ DC-12: 30 V and 1 A; 110 V and 0.2 A

Electrical characteristics of Emergency stop contacts

Operational voltage		\approx V	250
Rated insulation voltage		V	250, degree of pollution 3
Thermal current		A	I _{th} = 10
Contact operation	2 NC		Slow break and positive opening operation
Contact material			Silver
Cabling			Solder lugs
Electrical durability (in operating cycles)			100 000 conforming to IEC 60947-5-1, Appendix C Utilisation category : □ AC-15 : 250 V and 1 A □ DC-13 : 125 V and 0.22 A
Short-circuit protection			10 A gG fuse
Electrical performance	Resistive		□ AC-12: 250 V and 3 A; 125 V and 5 A □ DC-12: 30 V and 2 A; 125 V and 0.4 A; 250 V and 0.2 A
	Inductive		□ AC-15: 250 V and 1.5 A; 125 V and 3 A □ DC-13: 30 V and 1 A; 125 V and 0.22 A; 250 V and 0.1 A

Control and signalling units Ø 16

Harmony XB6 E

Pushbuttons, switches and pilot lights

Monolithic products "IP 65"

Pushbuttons, flush, spring return

Sold in lots of 5






XB6 EAA●●P



XB6 ECA●●P



XB6 EDA●●P

Shape of head	Type of contact	Colour	Unit reference		Weight kg		
Circular 	1 C/O	White	XB6 EAA11P		0.006		
		Black	XB6 EAA21P		0.006		
		Green	XB6 EAA31P		0.006		
		Red	XB6 EAA41P		0.006		
		Yellow	XB6 EAA51P		0.006		
		Blue	XB6 EAA61P		0.006		
	2 C/O	White	XB6 EAA12P		0.006		
		Black	XB6 EAA22P		0.006		
		Green	XB6 EAA32P		0.006		
		Red	XB6 EAA42P		0.006		
		Yellow	XB6 EAA52P		0.006		
		Blue	XB6 EAA62P		0.006		
		Square 	1 C/O	White	XB6 ECA11P		0.006
				Black	XB6 ECA21P		0.006
Green	XB6 ECA31P				0.006		
Red	XB6 ECA41P				0.006		
Yellow	XB6 ECA51P				0.006		
Blue	XB6 ECA61P				0.006		
2 C/O	White		XB6 ECA12P		0.006		
	Black		XB6 ECA22P		0.006		
	Green		XB6 ECA32P		0.006		
	Red		XB6 ECA42P		0.006		
	Yellow		XB6 ECA52P		0.006		
	Blue		XB6 ECA62P		0.006		
Rectangular 	1 C/O	White	XB6 EDA11P		0.006		
		Black	XB6 EDA21P		0.006		
		Green	XB6 EDA31P		0.006		
		Red	XB6 EDA41P		0.006		
		Yellow	XB6 EDA51P		0.006		
		Blue	XB6 EDA61P		0.006		
	2 C/O	White	XB6 EDA12P		0.006		
		Black	XB6 EDA22P		0.006		
		Green	XB6 EDA32P		0.006		
		Red	XB6 EDA42P		0.006		
		Yellow	XB6 EDA52P		0.006		
		Blue	XB6 EDA62P		0.006		

Pilots lights with 12 or 24 V LED

Sold in lots of 5





XB6 EAV●●P



XB6 ECV●●P



XB6 EDV●●P

Shape of head	Colour	Unit reference		Weight kg	
		With 12 V LED	With 24 V LED		
Circular 	White	XB6 EAV1JP	XB6 EAV1BP	0.006	
	Green	XB6 EAV3JP	XB6 EAV3BP	0.006	
	Red	XB6 EAV4JP	XB6 EAV4BP	0.006	
	Yellow	XB6 EAV5JP	XB6 EAV5BP	0.006	
	Blue	XB6 EAV6JP	XB6 EAV6BP	0.006	
	Orange	XB6 EAV8JP	XB6 EAV8BP	0.006	
	Square 	White	XB6 ECV1JP	XB6 ECV1BP	0.006
		Green	XB6 ECV3JP	XB6 ECV3BP	0.006
Red		XB6 ECV4JP	XB6 ECV4BP	0.006	
Yellow		XB6 ECV5JP	XB6 ECV5BP	0.006	
Blue		XB6 ECV6JP	XB6 ECV6BP	0.006	
Orange		XB6 ECV8JP	XB6 ECV8BP	0.006	
Rectangular 		White	XB6 EDV1JP	XB6 EDV1BP	0.006
		Green	XB6 EDV3JP	XB6 EDV3BP	0.006
	Red	XB6 EDV4JP	XB6 EDV4BP	0.006	
	Yellow	XB6 EDV5JP	XB6 EDV5BP	0.006	
	Blue	XB6 EDV6JP	XB6 EDV6BP	0.006	
	Orange	XB6 EDV8JP	XB6 EDV8BP	0.006	

Control and signalling units Ø 16

Harmony XB6 E

Pushbuttons, switches and pilot lights

Monolithic products "IP 65"



XB6 EAW●●●P






XB6 ECW●●●P



XB6 EDW●●●P

Illuminated pushbuttons, flush, spring return, with 12 or 24 V LED

Sold in lots of 5

Shape of head	Type of contact	Colour	Unit reference		Weight kg	
			With 12 V LED	With 24 V LED		
Circular 	1 C/O	White	XB6 EAW1J1P	XB6 EAW1B1P	0.006	
		Green	XB6 EAW3J1P	XB6 EAW3B1P	0.006	
		Red	XB6 EAW4J1P	XB6 EAW4B1P	0.006	
		Yellow	XB6 EAW5J1P	XB6 EAW5B1P	0.006	
		Blue	XB6 EAW6J1P	XB6 EAW6B1P	0.006	
		Orange	XB6 EAW8J1P	XB6 EAW8B1P	0.006	
	2 C/O	White	XB6 EAW1J2P	XB6 EAW1B2P	0.006	
		Green	XB6 EAW3J2P	XB6 EAW3B2P	0.006	
		Red	XB6 EAW4J2P	XB6 EAW4B2P	0.006	
		Yellow	XB6 EAW5J2P	XB6 EAW5B2P	0.006	
		Blue	XB6 EAW6J2P	XB6 EAW6B2P	0.006	
		Orange	XB6 EAW8J2P	XB6 EAW8B2P	0.006	
	Square 	1 C/O	White	XB6 ECW1J1P	XB6 ECW1B1P	0.006
			Green	XB6 ECW3J1P	XB6 ECW3B1P	0.006
			Red	XB6 ECW4J1P	XB6 ECW4B1P	0.006
			Yellow	XB6 ECW5J1P	XB6 ECW5B1P	0.006
			Blue	XB6 ECW6J1P	XB6 ECW6B1P	0.006
			Orange	XB6 ECW8J1P	XB6 ECW8B1P	0.006
2 C/O		White	XB6 ECW1J2P	XB6 ECW1B2P	0.006	
		Green	XB6 ECW3J2P	XB6 ECW3B2P	0.006	
		Red	XB6 ECW4J2P	XB6 ECW4B2P	0.006	
		Yellow	XB6 ECW5J2P	XB6 ECW5B2P	0.006	
		Blue	XB6 ECW6J2P	XB6 ECW6B2P	0.006	
		Orange	XB6 ECW8J2P	XB6 ECW8B2P	0.006	
Rectangular 		1 C/O	White	XB6 EDW1J1P	XB6 EDW1B1P	0.006
			Green	XB6 EDW3J1P	XB6 EDW3B1P	0.006
			Red	XB6 EDW4J1P	XB6 EDW4B1P	0.006
			Yellow	XB6 EDW5J1P	XB6 EDW5B1P	0.006
			Blue	XB6 EDW6J1P	XB6 EDW6B1P	0.006
			Orange	XB6 EDW8J1P	XB6 EDW8B1P	0.006
	2 C/O	White	XB6 EDW1J2P	XB6 EDW1B2P	0.006	
		Green	XB6 EDW3J2P	XB6 EDW3B2P	0.006	
		Red	XB6 EDW4J2P	XB6 EDW4B2P	0.006	
		Yellow	XB6 EDW5J2P	XB6 EDW5B2P	0.006	
		Blue	XB6 EDW6J2P	XB6 EDW6B2P	0.006	
		Orange	XB6 EDW8J2P	XB6 EDW8B2P	0.006	

Control and signalling units Ø 16

Harmony XB6 E

Pushbuttons, switches and pilot lights

Monolithic products "IP 65"



XB6 EAF●●●P





XB6 ECF●●●P



XB6 EDF●●●P

Illuminated pushbuttons, flush, latching, with 12 or 24 V LED

Sold in lots of 5

Shape of head	Type of contact	Colour	Unit reference		Weight kg	
			With 12 V LED	With 24 V LED		
Circular 	1 C/O	White	XB6 EAF1J1P	XB6 EAF1B1P	0.006	
		Green	XB6 EAF3J1P	XB6 EAF3B1P	0.006	
		Red	XB6 EAF4J1P	XB6 EAF4B1P	0.006	
		Yellow	XB6 EAF5J1P	XB6 EAF5B1P	0.006	
		Blue	XB6 EAF6J1P	XB6 EAF6B1P	0.006	
		Orange	XB6 EAF8J1P	XB6 EAF8B1P	0.006	
	2 C/O	White	XB6 EAF1J2P	XB6 EAF1B2P	0.006	
		Green	XB6 EAF3J2P	XB6 EAF3B2P	0.006	
		Red	XB6 EAF4J2P	XB6 EAF4B2P	0.006	
		Yellow	XB6 EAF5J2P	XB6 EAF5B2P	0.006	
		Blue	XB6 EAF6J2P	XB6 EAF6B2P	0.006	
		Orange	XB6 EAF8J2P	XB6 EAF8B2P	0.006	
	Square 	1 C/O	White	XB6 ECF1J1P	XB6 ECF1B1P	0.006
			Green	XB6 ECF3J1P	XB6 ECF3B1P	0.006
Red			XB6 ECF4J1P	XB6 ECF4B1P	0.006	
Yellow			XB6 ECF5J1P	XB6 ECF5B1P	0.006	
Blue			XB6 ECF6J1P	XB6 ECF6B1P	0.006	
Orange			XB6 ECF8J1P	XB6 ECF8B1P	0.006	
2 C/O		White	XB6 ECF1J2P	XB6 ECF1B2P	0.006	
		Green	XB6 ECF3J2P	XB6 ECF3B2P	0.006	
		Red	XB6 ECF4J2P	XB6 ECF4B2P	0.006	
		Yellow	XB6 ECF5J2P	XB6 ECF5B2P	0.006	
		Blue	XB6 ECF6J2P	XB6 ECF6B2P	0.006	
		Orange	XB6 ECF8J2P	XB6 ECF8B2P	0.006	
Rectangular 		1 C/O	White	XB6 EDF1J1P	XB6 EDF1B1P	0.006
			Green	XB6 EDF3J1P	XB6 EDF3B1P	0.006
	Red		XB6 EDF4J1P	XB6 EDF4B1P	0.006	
	Yellow		XB6 EDF5J1P	XB6 EDF5B1P	0.006	
	Blue		XB6 EDF6J1P	XB6 EDF6B1P	0.006	
	Orange		XB6 EDF8J1P	XB6 EDF8B1P	0.006	
	2 C/O	White	XB6 EDF1J2P	XB6 EDF1B2P	0.006	
		Green	XB6 EDF3J2P	XB6 EDF3B2P	0.006	
		Red	XB6 EDF4J2P	XB6 EDF4B2P	0.006	
		Yellow	XB6 EDF5J2P	XB6 EDF5B2P	0.006	
		Blue	XB6 EDF6J2P	XB6 EDF6B2P	0.006	
		Orange	XB6 EDF8J2P	XB6 EDF8B2P	0.006	

Control and signalling units Ø 16

Harmony XB6 E

Pushbuttons, switches and pilot lights

Monolithic products "IP 65"



XB6 EAD●●●P



XB6 EAG●●●P



XB6 ECD●●●P



XB6 ECG●●●P



XB6 EDD●●●P



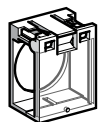
XB6 EDG●●●P



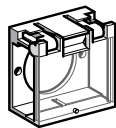
XB6 EAS842P



ZB6 Y905



ZB6 YA001



ZB6 YD001



























ZB6 Y005



ZB6 EY7330

Selector switches with standard handle or key switches

Sold in lots of 5

Shape of head	Type of push	Type of contact	Number and type of positions	Unit reference	Weight kg	
Circular	Standard black handle 	1 C/O	2 - stay put 	XB6 EAD221P	0.010	
		2 C/O	2 - stay put 	XB6 EAD222P	0.010	
		2 C/O	3 - stay put 	XB6 EAD232P	0.010	
	Key (1) 	1 C/O	2 - stay put 	XB6 EAG221P	0.020	
		2 C/O	2 - stay put 	XB6 EAG222P	0.020	
		2 C/O	3 - stay put 	XB6 EAG232P	0.020	
	Square	Standard black handle 	1 C/O	2 - stay put 	XB6 ECD221P	0.010
			2 C/O	2 - stay put 	XB6 ECD222P	0.010
			2 C/O	3 - stay put 	XB6 ECD232P	0.010
Key (1) 		1 C/O	2 - stay put 	XB6 ECG221P	0.020	
		2 C/O	2 - stay put 	XB6 ECG222P	0.020	
		2 C/O	3 - stay put 	XB6 ECG232P	0.020	
Rectangular		Standard black handle 	1 C/O	2 - stay put 	XB6 EDD221P	0.010
			2 C/O	2 - stay put 	XB6 EDD222P	0.010
			2 C/O	3 - stay put 	XB6 EDD232P	0.010
	Key (1) 	1 C/O	2 - stay put 	XB6 EDG221P	0.020	
		2 C/O	2 - stay put 	XB6 EDG222P	0.020	
		2 C/O	3 - stay put 	XB6 EDG232P	0.020	

Emergency stop mushroom head pushbutton

Sold in lots of 5

Shape of head	Type of push	Type of contact	Unit reference	Weight kg
Circular, Ø 24 mm	Trigger action, turn to release	2 NC	XB6 EAS842P	0.018

Accessories

Accessories for pushbuttons

Description	For use with	Sold in lots of	Unit reference	Weight kg
Bezel tightening tool + bulb extractor	Tightening and slacking the bezel Changing bulbs	2	ZB6 Y905	0.006
Protective shutters	Circular or square pushbuttons	1	ZB6 YA001	0.003
	Rectangular pushbuttons	1	ZB6 YD001	0.003
Blanking plug	–	10	ZB6 Y005	0.001

Circular legends for Emergency stop mushroom head pushbutton

Diameter mm	Colour	Marking on yellow background	Sold in lots of	Unit reference	Weight kg
44	Yellow	EMERGENCY STOP	5	ZB6 EY7330	0.001

(1) Key n° 132, withdrawal from all positions. 2 keys supplied with product.

Pushbuttons and illuminated pushbuttons

Circular head

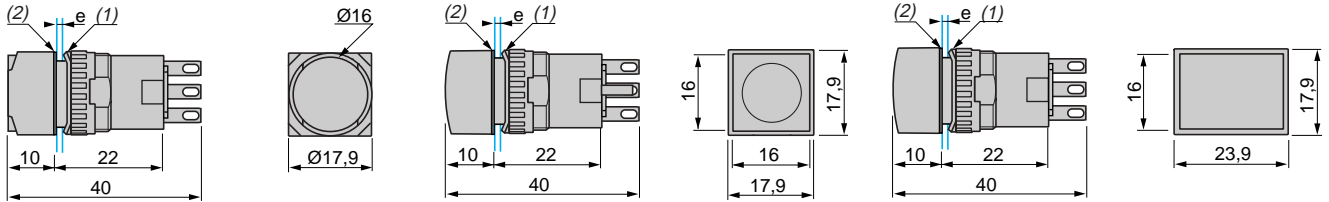
XB6 EAA●●P, XB6 EAW●●●P, XB6 EAF●●●P

Square head

XB6 ECA●●P, XB6 ECW●●●P, XB6 ECF●●●P

Rectangular head

XB6 EDA●●P, XB6 EDW●●●P, XB6 EDF●●●P



(1) Anti-rotation plate (thickness 0.6 mm).
 (2) Seal (thickness 0.5 mm).
 e, panel thickness: $0.5 \leq e \leq 6$ mm.

Pilot lights

Circular head

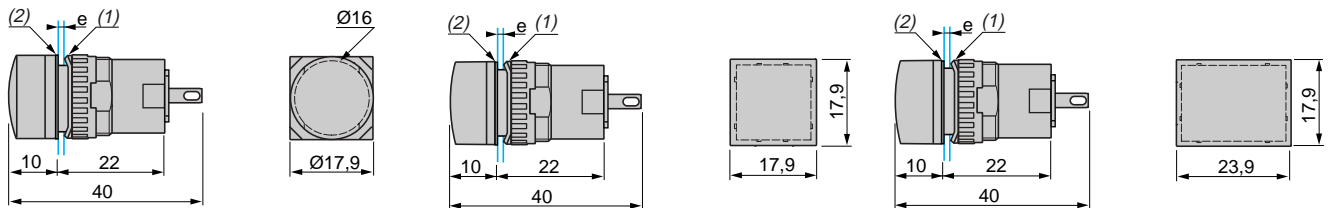
XB6 EAV●●P

Square head

XB6 ECV●●P

Rectangular head

XB6 EDV●●P



(1) Anti-rotation plate (thickness 0.6 mm).
 (2) Seal (thickness 0.5 mm).
 e, panel thickness: $0.5 \leq e \leq 6$ mm.

Selector switches with standard handle

Circular head

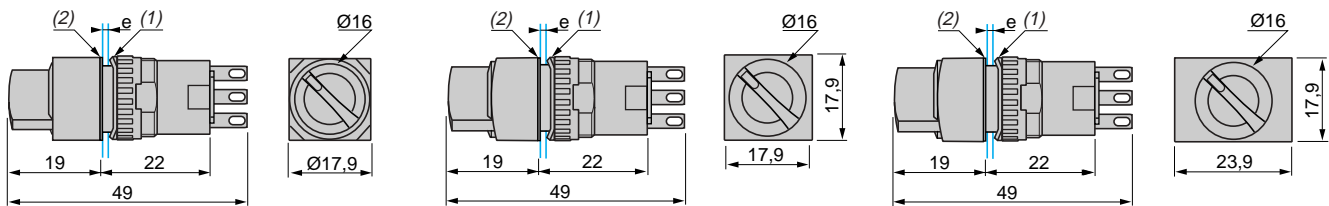
XB6 EAD●●●P

Square head

XB6 ECD●●●P

Rectangular head

XB6 EDD●●●P

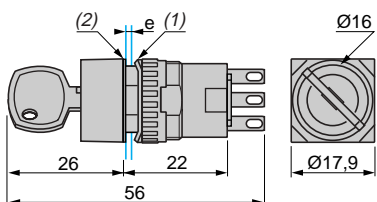


(1) Anti-rotation plate (thickness 0.6 mm).
 (2) Seal (thickness 0.5 mm).
 e, panel thickness: $0.5 \leq e \leq 6$ mm.

Key switches

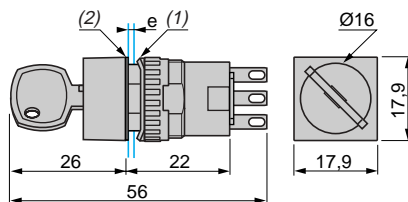
Circular head

XB6 EAG●●●P



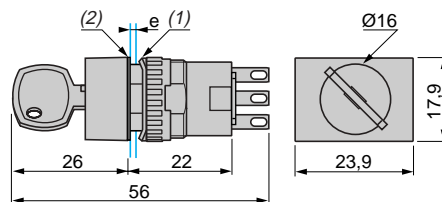
Square head

XB6 ECG●●●P



Rectangular head

XB6 EDG●●●P



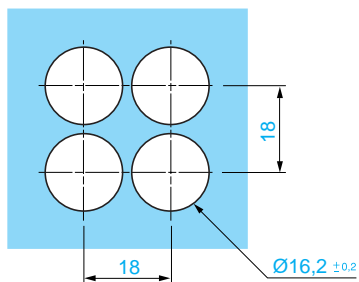
(1) Anti-rotation plate (thickness 0.6 mm).

(2) Seal (thickness 0.5 mm).

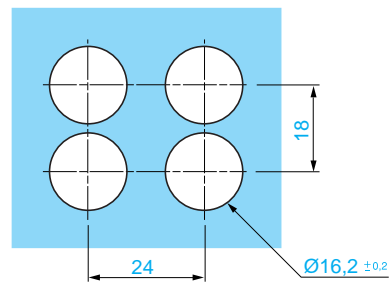
e, panel thickness: $0.5 \leq e \leq 6$ mm.

Panel cut-out and mounting

Circular or square head



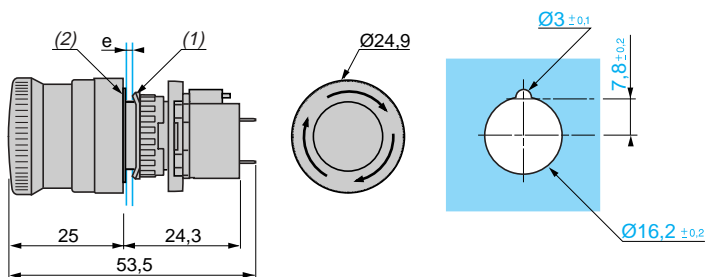
Rectangular head



Emergency stop mushroom head pushbutton

XB6 EAS842P

Panel cut-out



(1) Anti-rotation plate (thickness 0.6 mm).

(2) Seal (thickness 0.5 mm).

e, panel thickness: $0.5 \leq e \leq 3.2$ mm.

Schneider Electric Industries SAS

Headquarters

89, bd Franklin Roosevelt
F - 92506 Rueil Malmaison Cedex

<http://www.schneider-electric.com>

Owing to changes in standards and equipment, the characteristics given in the text and images in this document are not binding until they have been confirmed with us.

Production : Schneider Electric Industries
Photos : Schneider Electric Industries
Printed by :

