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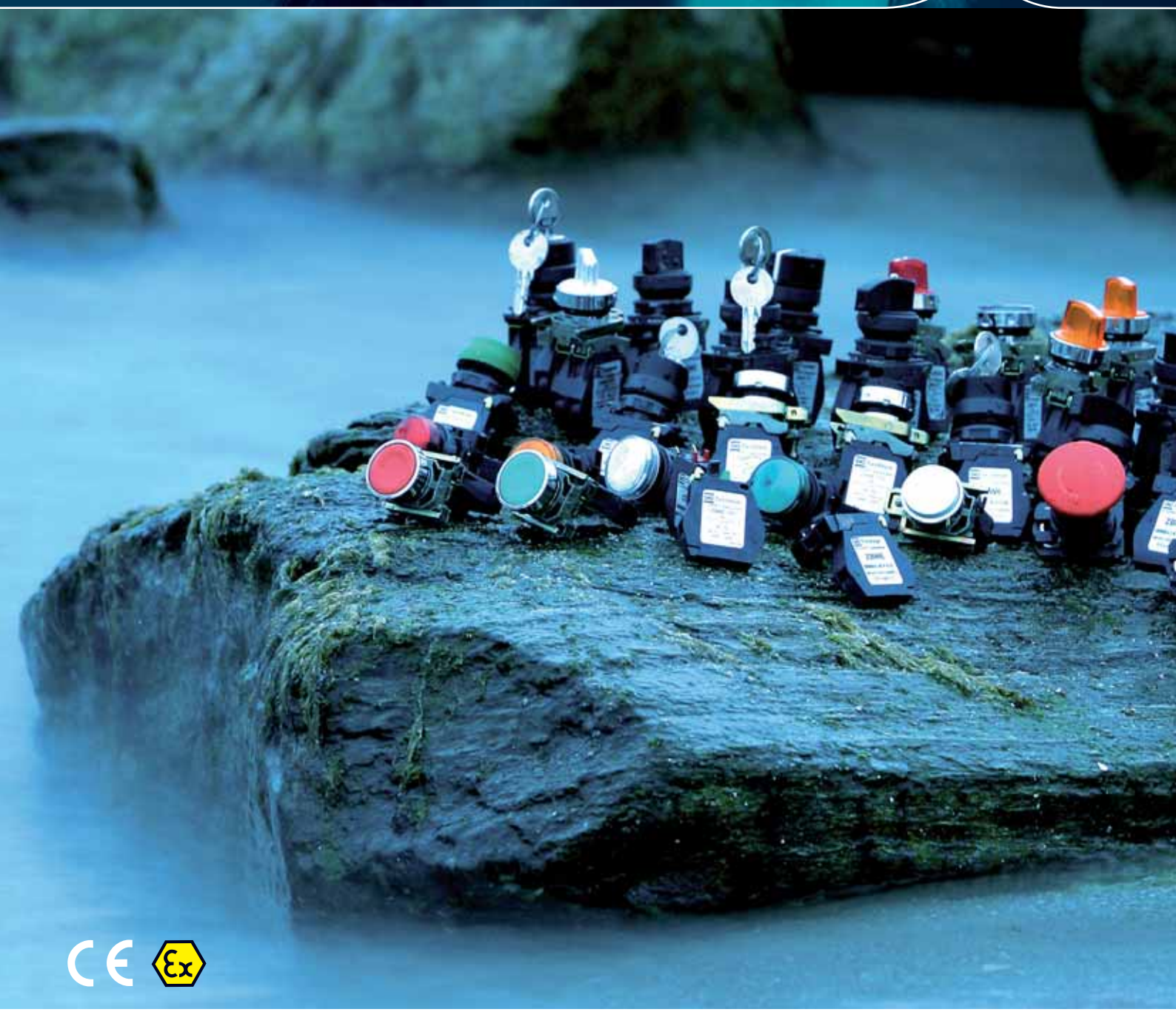

Features

The HarmAtex range consists of pushbuttons, mushroom-heads, selector switches, key switches, illuminated selector switches, pilot lights, complementary parts and spare parts. The range are improved and reinforced of previous versions.

- Flexible product range
- Ingress protection to meet harsh environment with IP66 as standard.
- Suitable for demanding environment.
- Wide usable temperature range (-20°C to +80°C/+65° for lamps).
- Up to 6 contacts/switch (max. 2 on the top of each other).
- Up to 4 contacts/illuminated switch.
- High operational reliability and cost efficiency, reduced lifetime maintenance costs.
- ATEX approved.

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Applications

The HarmAtex range is suitable for demanding environment like the North Sea environment. They are ideal for all kind of industry where an explosive atmosphere may be present. These elements of signaling and controling must be absolutely integrated into a certified enclosure ATEX II 2 G or D or GD.

Specifications

Material	Metal and Plastic
IP Rating	IP66 according to IEC 60529
Temperature	-20°C to +80°C/+65°C for lamps (T6)(T85°C)
Approvals	INERIS02ATEX9007U INERIS04ATEX9003U
Standards	Cenelec EN50014, EN50018, EN50019, 50028 EN50281-1-1
Ex-Code	EEx ed IIC/EEx em II Ⓔx II 2 GD
Mounting	Panel cut-out Ø 22,5mm (recommended 22,4) Mounting centres 30x40mm (WxH)
Depth below head	58mm (one contact layer)
Connection	Screw clamp terminals

Use of each unit must be solely limited to its intended purpose These devices must be installed, used and maintained in accordance with:

- Standard EN 60 079-14 (electrical installations and gaseous explosive atmosphere)
- Standard EN 60 079-17 (inspection and maintenance in hazardous areas)
- Standard EN 50 281-1-2 (electrical apparatus for use in the presence of combustible dust. Part 1-2: electrical apparatus protected by enclosures – Selection, installation and maintenance).
- Decrees, orders, laws, directives, circulars of applications, standards, regulations and any other document about their installation's place.

We cannot accept any responsibility for failure to observe these regulations

Important:

approved and qualified staff must carry out device installation, assembling, connection, operation, maintenance and repairing. The function of these products must be respected.

Liability for manufacturer traceability is ensured at the first known delivery destination.

Rated Operational Characteristics	Ø22 pushbutton			Lid mounting		Base mounting
	Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
AC15; A 600 Ue=400 V, Ie=1,8 A or Ue=240 V, Ie=3 A or Ue=120 V, Ie=6 A DC13; Q600 Ue=400 V, Ie=0,15 A or Ue=250 V, Ie=0,27 A or Ue=125 V, Ie=0,55 A ADD: Head Mechanical durability (millions of operating cycles): 5 Contact Mechanical durability (millions of operating cycles): 1	Pushbutton, Flush	White	N/O	XBW4BA11		
		Black	N/O	XBW4BA21		
		Green	N/O	XBW4BA31		
		Red	N/C	XBW4BA42		
		Yellow	N/O	XBW4BA51		
		Blue	N/O	XBW4BA61		
	Pushbutton, Projecting	White	N/O	XBW4BL11		
		Black	N/O	XBW4BL21		
		Green	N/O	XBW4BL31		
		Red	N/C	XBW4BL42		
		Yellow	N/O	XBW4BL51		
		Blue	N/O	XBW4BL61		

Rated
Operational Characteristics

AC15; A 600
Ue=400 V, Ie=1,8 A or
Ue=240 V, Ie=3 A or
Ue=120 V, Ie=6 A

DC13; Q600
Ue=400 V, Ie=0,15 A or
Ue=250 V, Ie=0,27 A or
Ue=125 V, Ie=0,55 A

Head Mechanical durability (millions of operating cycles): 5
Contact Mechanical durability (millions of operating cycles): 1

Ø22 pushbutton			Lid mounting		Base mounting
Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
Pushbutton, "push-push" to release, Flush	White	N/O	XBW4BH011		
	Black	N/O	XBW4BH021		
	Green	N/O	XBW4BH031		
	Red	N/C	XBW4BH042		
	Yellow	N/O	XBW4BH051		
	Blue	N/O	XBW4BH061		
Pushbutton, "push-push" to release, Projecting	White	N/O	XBW4BH11		
	Black	N/O	XBW4BH21		
	Green	N/O	XBW4BH31		
	Red	N/C	XBW4BH42		
	Yellow	N/O	XBW4BH51		
	Blue	N/O	XBW4BH61		
Pushbutton, with coloured silicone boot, Flush	White	N/O	XBW4BP11S	XBW5AP11S	XBW5AP11SP
	Black	N/O	XBW4BP21S	XBW5AP21S	XBW5AP21SP
	Green	N/O	XBW4BP31S	XBW5AP31S	XBW5AP31SP
	Red	N/C	XBW4BP42S	XBW5AP42S	XBW5AP42SP
	Yellow	N/O	XBW4BP51S	XBW5AP51S	XBW5AP51SP
	Blue	N/O	XBW4BP61S	XBW5AP61S	XBW5AP61SP
Mushroom Pushbutton					
Pushbutton Ø40mm mushroom head, Spring return	White	N/O	XBW4BC11	XBW5AC11	XBW5AC11P
	Black	N/O	XBW4BC21	XBW5AC21	XBW5AC21P
	Green	N/O	XBW4BC31	XBW5AC31	XBW5AC31P
	Red	N/C	XBW4BC42	XBW5AC42	XBW5AC42P
	Yellow	N/O	XBW4BC51	XBW5AC51	XBW5AC51P
	Blue	N/O	XBW4BC61	XBW5AC61	XBW5AC61P

Rated
Operational Characteristics

AC15; A 600
Ue=400 V, Ie=1,8 A or
Ue=240 V, Ie=3 A or
Ue=120 V, Ie=6 A

DC13; Q600
Ue=400 V, Ie=0,15 A or
Ue=250 V, Ie=0,27 A or
Ue=125 V, Ie=0,55 A

Head Mechanical durability (millions of operating cycles): 5
Contact Mechanical durability (millions of operating cycles): 1

Emergency stop mushroom pushbutton					
Ø40mm latching mushroom head pushbutton, "push-pull"	Red	N/C	XBW4BT42	XBW5AT42	XBW5AT42P
			XBW4BT842 w/trigger action	XBW5AT842 w/trigger action	XBW5AT842P w/trigger action
	Black	N/O	XBW4BT21		
Ø40mm latching mushroom head pushbutton, key 455	Red	N/C	XBW4BS142	XBW5AS142 (1)	XBW5AS142P
	Black	N/O	XBW4BS121		
Ø40mm latching mushroom head pushbutton, turn to release	Red	N/C	XBW4BS542	XBW5AS542 (1)	XBW5AS542P
	Black	N/O	XBW4BS521		

(1) Provided with metallic screw

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Selector switches and key switches

Rated Operational Characte-ristics	Selector switches and key switches			Lid mounting		Base mounting
	Type	Number and type	Contact	Reference w/ metal bezel	Reference w/ plastic bezel	Reference w/ plastic bezel
AC15; A 600 (Ue=400 V, Ie=1,8 A or Ue=240 V, Ie=3 A or Ue=120 V, Ie=6 A) DC13; Q600 (Ue=400 V, Ie=0,15 A or Ue=250 V, Ie=0,27 A or Ue=125 V, Ie= 0,55 A)	Selector switches with standard handle, black	2 stay put	N/O	XBW4BD21	XBW5AD21	XBW5AD21P
		2 spring return	N/O	XBW4BD41	XBW5AD41	XBW5AD41P
		3 stay put •	N/O + N/O	XBW4BD33	XBW5AD33	XBW5AD33P
		3 spring return to center •	N/O + N/O	XBW4BD53	XBW5AD53	XBW5AD53P
		3 spring return from left to center •	N/O + N/O	XBW4BD73	XBW5AD73	XBW5AD73P
		3 spring return from right to center •	N/O + N/O	XBW4BD83	XBW5AD83	XBW5AD83P
	Selector switches with wheel handle, black	2 stay put	N/O	XBW4BD291	XBW5AD291	XBW5AD291P
		2 spring return	N/O	XBW4BD491	XBW5AD491	XBW5AD491P
		3 stay put •	N/O + N/O	XBW4BD393	XBW5AD393	XBW5AD393P
		3 spring return to center •	N/O + N/O	XBW4BD593	XBW5AD593	XBW5AD593P
		3 spring return from left to center •	N/O + N/O	XBW4BD793	XBW5AD793	XBW5AD793P
		3 spring return from right to center •	N/O + N/O	XBW4BD893	XBW5AD893	XBW5AD893P
	Selector switches with long handle, black	2 stay put	N/O	XBW4BJ21	XBW5AJ21	XBW5AJ21P
		2 spring return	N/O	XBW4BJ41	XBW5AJ41	XBW5AJ41P
		3 stay put •	N/O + N/O	XBW4BJ33	XBW5AJ33	XBW5AJ33P
		3 spring return to center •	N/O + N/O	XBW4BJ53	XBW5AJ53	XBW5AJ53P
		3 spring return from left to center •	N/O + N/O	XBW4BJ73	XBW5AJ73	XBW5AJ73P
		3 spring return from right to center •	N/O + N/O	XBW4BJ83	XBW5AJ83	XBW5AJ83P
	Selector switches with key 455, black	2 stay put key withdrawal in left position	N/O	XBW4BG21	XBW5AG21	XBW5AG21P
		2 stay put key withdrawal in both position	N/O	XBW4BG41	XBW5AG41	XBW5AG41P
		2 spring return from right to left	N/O	XBW4BG61	XBW5AG61	XBW5AG61P
		3 stay put, key withdrawal in 3 positions •	N/O + N/O	XBW4BG03	XBW5AG03	XBW5AG03P
		3 stay put, key withdrawal in center position •	N/O + N/O	XBW4BG33	XBW5AG33	XBW5AG33P
		3 stay put, key withdrawal in left or right position •	N/O + N/O	XBW4BG53	XBW5AG53	XBW5AG53P
		3 stay put, key withdrawal in left position •	N/O + N/O	XBW4BG93	XBW5AG93	XBW5AG93P
		3 stay put, key withdrawal in right position •	N/O + N/O	XBW4BG093	XBW5AG093	XBW5AG093P
		3 spring return from left to center •	N/O + N/O	XBW4BG13	XBW5AG13	XBW5AG13P
		3 spring return to center •	N/O + N/O	XBW4BG73	XBW5AG73	XBW5AG73P
		3 spring return from right to center, key withdrawal in center position •	N/O + N/O	XBW4BG83	XBW5AG83	XBW5AG83P
		3 spring return from right to center, key withdrawal in left position •	N/O + N/O	XBW4BG083	XBW5AG083	XBW5AG083P
	Toggle switches, black lever	2 stay put	N/O	XBW4BD281	XBW5AD281	XBW5AD281P
		2 spring return	N/O	XBW4BD481	XBW5AD481	XBW5AD481P

• This selector switch can have an extra N/C contact block on the central position.
The central N/C contact Block is acting on left and right position.
Contact us for informations.

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Illuminated pushbuttons and selector switch

Rated Operational Characteristics

AC15; A 600
Ue = 400 V, Ie = 1,8 A or
Ue = 240 V, Ie = 3 A or
Ue = 120 V, Ie = 6 A

DC13; Q600
Ue = 400 V, Ie = 0,15 A or
Ue = 250 V, Ie = 0,27 A or
Ue = 125 V, Ie = 0,55 A

Integral LED – 24V to 415V AC-DC

Mechanical durability
(millions of operating cycles): 1

Service life (LED):
100,000 hours at ambient temperature

Illuminated Pushbutton		Lid mounting	
Type	Colour	Contact	Reference w/metal bezel
Illuminated Pushbutton, Fulsh	❍ White	N/O	XLW4BW3131
	● Green	N/O	XLW4BW3331
	● Red	N/C	XLW4BW3432
	● Yellow	N/O	XLW4BW3531
	● Blue	N/O	XLW4BW3631

Illuminated selector switch		Lid mounting	
Type	Colour	Contact	Reference w/ metal bezel
Illuminated Selector 2 positions stay put	❍ White	N/O	XLW4BK12131
	● Green	N/O	XLW4BK12331
	● Red	N/C	XLW4BK12432
	● Yellow	N/O	XLW4BK12531
	● Blue	N/O	XLW4BK12631
Illuminated Selector 2 positions spring return	❍ White	N/O	XLW4BK14131
	● Green	N/O	XLW4BK14331
	● Red	N/C	XLW4BK14432
	● Yellow	N/O	XLW4BK14531
	● Blue		
Illuminated Selector 3 positions stay put	❍ White	N/O+N/O	XLW4BK13133
	● Green	N/O+N/O	XLW4BK13333
	● Red	N/O+N/O	XLW4BK13433
	● Yellow	N/O+N/O	XLW4BK13533
	● Blue	N/O+N/O	XLW4BK13633
Illuminated Selector 3 positions spring return to centre	❍ White	N/O+N/O	XLW4BK15133
	● Green	N/O+N/O	
	● Red	N/O+N/O	XLW4BK15433
	● Yellow	N/O+N/O	XLW4BK15533
	● Blue	N/O+N/O	

Illuminated selector switch		Lid mounting	
Type	Colour	Contact	Reference w/ metal bezel
Illuminated Selector 3 positions spring return left to centre	❍ White	N/O+N/O	XLW4BK17133
	● Green	N/O+N/O	XLW4BK17333
	● Red	N/O+N/O	XLW4BK17433
	● Yellow	N/O+N/O	XLW4BK17533
	● Blue	N/O+N/O	XLW4BK17633
Illuminated Selector 3 positions spring return right to centre	❍ White	N/O+N/O	XLW4BK18133
	● Green	N/O+N/O	XLW4BK18333
	● Red	N/O+N/O	XLW4BK18433
	● Yellow	N/O+N/O	XLW4BK18533
	● Blue	N/O+N/O	XLW4BK18633

Pilot lights, spare parts and complementary parts

Mechanical durability
(millions of operating cycles): 5

Service life (LED):
100,000 hours
at ambient temperature

Complet Pilot light with integral LED 24V to 415V AC/DC — Lid mounting

Type	Colour	Reference w/metal bezel	Reference w/plastic bezel
Integral LED multivoltage, multi current	❍ White	XLW4BV013	XLW5AV013
	● Green	XLW4BV033	XLW5AV033
	● Red	XLW4BV043	XLW5AV043
	● Yellow	XLW4BV053	XLW5AV053
	● Blue	XLW4BV063	XLW5AV063

Integral LED – 24V to 415V AC-DC

Pilot light with integral LED 24V to 415V AC/DC for colour head

Type	Colour	Reference
Pilot light for colour head	❍ White	ZBWV1
	● Green	ZBWV3
	● Red	ZBWV1
	● Yellow	ZBWV1
	● Blue	ZBWV1

Rated Operational Characteristics

AC15; A 600
Ue= 400 V, Ie= 1,8 A or
Ue= 240 V, Ie= 3 A or
Ue= 120 V, Ie= 6 A

DC13; Q600
Ue= 400 V, Ie= 0,15 A or
Ue= 250 V, Ie= 0,27 A or
Ue= 125 V, Ie= 0,55 A

Contact Block

Type	Contact	Reference w/metal bezel	Reference w/plastic bezel
N/O Contact Block for lead mounting	N/O	ZBWE101	
N/C Contact Block for lead mounting	N/C	ZBWE102	
N/O Contact Block for base plate mounting	N/O	ZBWE1111	
N/C Contact Block for base plate mounting	N/C	ZBWE1121	
N/O Contact Block with bracket	N/O	ZBWZ101	ZBWZ1010
N/C Contact Block with bracket	N/C	ZBWZ102	ZBWZ1020

Range of metal heads


1)


2)


3)

Range of plastic heads

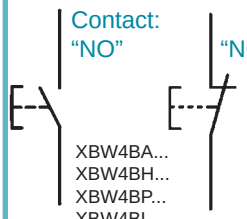

1)


2)


3)

Pushbuttons 1)

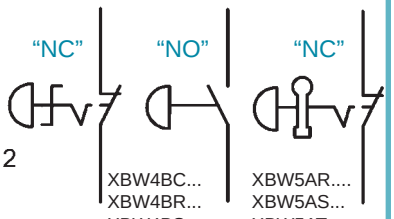
Contact:
"NO" "NC"



XBW4BA...
XBW4BH...
XBW4BP...
XBW4BL...
XBW5AP

Mushroom heads 3)

"NC" "NO" "NC"

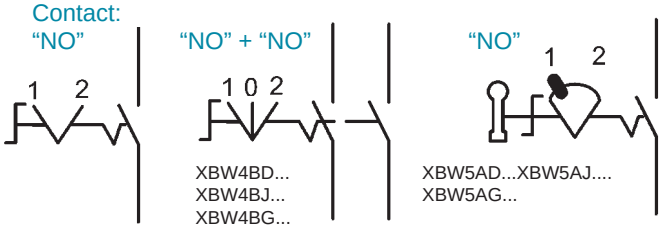


XBW4BC...
XBW4BR...
XBW4BS...
XBW4BT...
XBW5AC...

XBW5AR....
XBW5AS...
XBW5AT...

Commutators 2)

Contact:
"NO" "NO" + "NO" "NO"



XBW4BD...
XBW4BJ...
XBW4BG...

XBW5AD...XBW5AJ....
XBW5AG...

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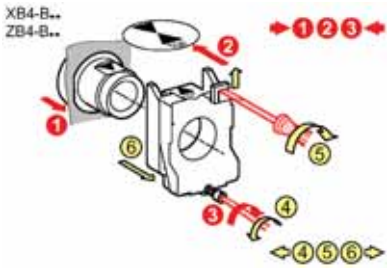
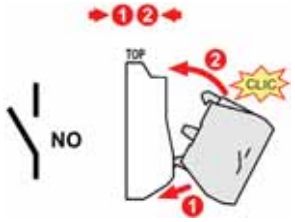
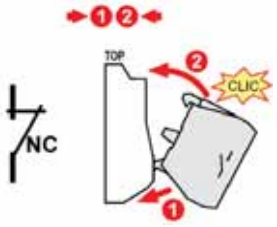
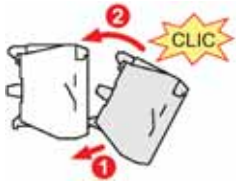
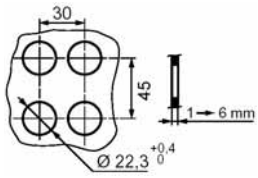
Assembly's precaution

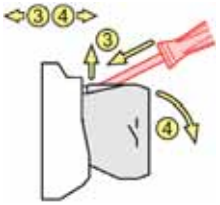


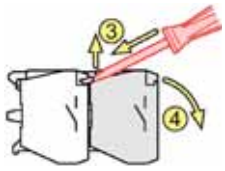




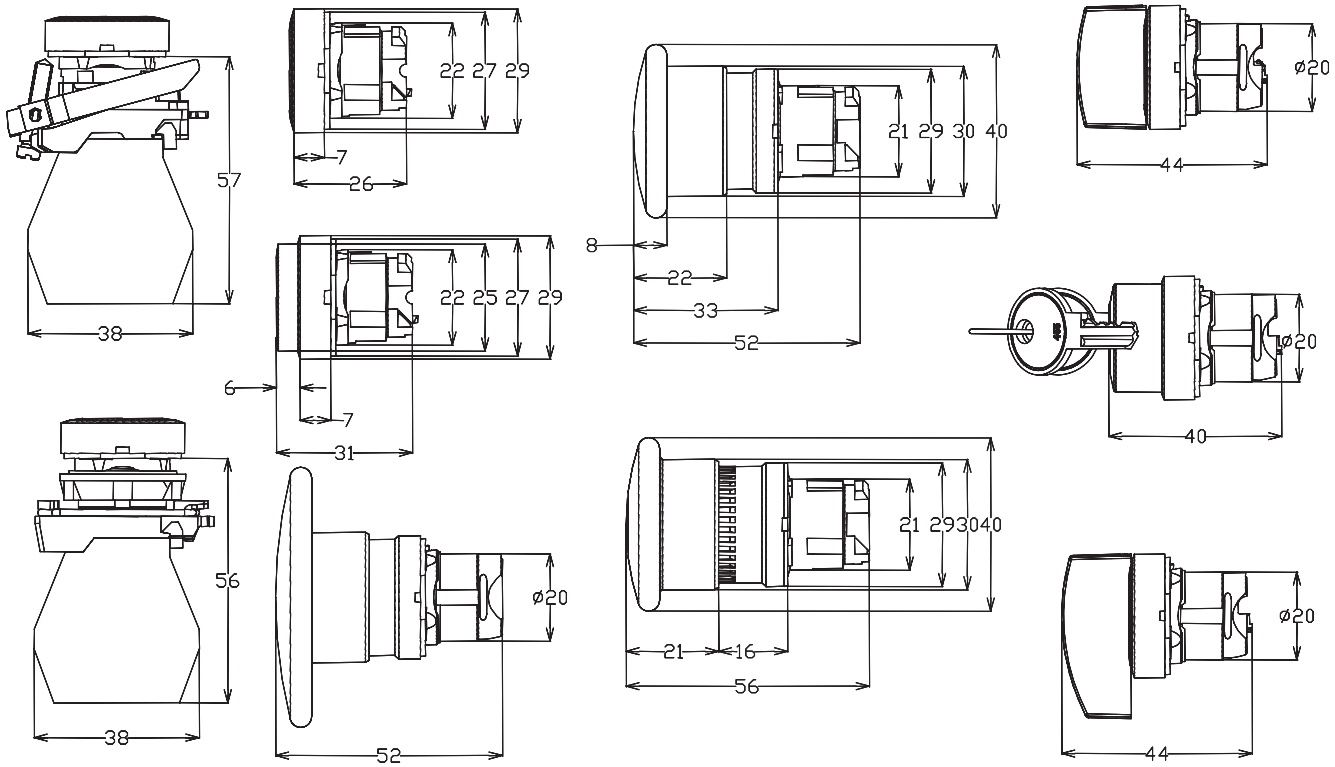








Dimensions



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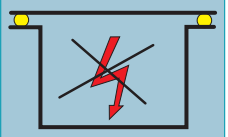
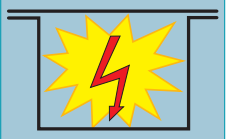
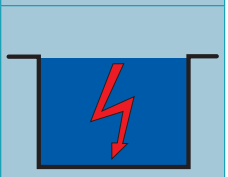
Hazardous area information & terminology

ATEX Directive

The ATEX Directive, derived from the French “ATmosphères EXplosibles” and formally known as 94/9/EC, contains the ESR (Essential Safety Requirements) to which electrical equipment and protective systems used within potentially explosive atmospheres must conform.

The new ATEX Directive currently in place within the European Union was made mandatory on 1st July 2003. Primarily intended for manufacturers of hazardous area equipment for use in the presence of flammable gases, vapours, fumes or dusts, the new directive requires a quality management system to be implemented.

Procedures for the design, manufacture and verification of products are to be approved by a notified body (INERIS) and all equipment conforming to the new directive will feature CE and Ex Marking.

Applicable EX protection	
EEx e Protection for electrical components that do not spark under normal working conditions but where measures are applied to prevent high temperatures and the occurence of arcs and sparks internally.	
EEx d Protection Parts, which can ignite a potentially explosive atmosphere, are surrounded by an enclosure, which are designed to withstand the pressure of an internal explosion and to prevent the propagation of the explosion to the atmosphere surrounding the enclosure.	
EEx m Protection Parts that could ignite a potentially explosive atmosphere by means of heat or sparks are embedded in a sealing compound such that the potentially explosive atmosphere cannot be ignited. The compound is resistant to physical, electrical, thermal and chemical influences.	

Zone Classification with the presence of DUST	
Zone 21	An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation of the plant.
Zone 22	A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation, if it does occur, will persist for a short period only.

Zone Classification with the presence of GAS	
Zone 1 (Category 2)	An area in which explosive gas is likely to be present during normal operation of the plant.
Zone 2 (Category 3)	An area in which explosive gas is not continuously present, but may exist for a short period of time.

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