Control and signaling units








Ex-tech Solution
[FORMERLY TECHNOR ATEX]

Pushbuttons

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The control and signaling units HarmAtex are dedicated to industries where an explosive atmosphere is present. They are suitable for demanding applications such as saline environments. They are used in an enclosure Ex e, Ex p or Ex t.

Specifications

Material	Metal and plastic	**Rated operationnal**	Ith = 10 A; Ui = 415 V
IP rating	IP65 or IP66 according to IEC 60529	**characteristics of contact**	AC
Operating temperature	-20°C ... +65°C or +75°C		Ue = 380 V; Ie = 1,9 A ou
Approval			Ue = 240 V; Ie = 3 A ou
- Atex	INERIS02ATEX9007U		Ue = 120 V; Ie = 6 A
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31		DC
Ex-code	II 2 GD Ex d e IIC Gb		Ue = 250 V; Ie = 0,27 A ou
	Ex tb IIIC Db		Ue = 125 V; Ie = 0,55 A ou
Mounting	Panel cut-out Ø 22,5 mm		Ue = 24 V; Ie = 2,87 A
Type of terminals	Screw terminals	**Mechanical durability**	Head: 5 millions operating cycles
Number of contacts	Maximum 6 contacts blocks per actuator		Contact : 1 million operating cycles

Pushbuttons Ø 22			Lid mounting		
Type of actuator	Colour	Contact	Reference metal bezel	Operating temperature	IP rating
Pushbutton, spring return, flush actuator	○ White	NO	XBW4BA11	-20°C ... 75°C	IP66
	○ White	NC+NO	XBW4BA15	-20°C ... 75°C	IP66
	● Black	NO	XBW4BA21	-20°C ... 75°C	IP66
	● Black	NC+NO	XBW4BA25	-20°C ... 75°C	IP66
	● Green	NO	XBW4BA31	-20°C ... 75°C	IP66
	● Green	NC+NO	XBW4BA35	-20°C ... 75°C	IP66
	● Red	NC	XBW4BA42	-20°C ... 75°C	IP66
	● Red	NC+NO	XBW4BA45	-20°C ... 75°C	IP66
	● Yellow	NO	XBW4BA51	-20°C ... 75°C	IP66
	● Yellow	NC+NO	XBW4BA55	-20°C ... 75°C	IP66
	● Blue	NO	XBW4BA61	-20°C ... 75°C	IP66
	● Blue	NC+NO	XBW4BA65	-20°C ... 75°C	IP66
Pushbutton, spring return, projecting actuator	○ White	NO	XBW4BL11	-20°C ... 75°C	IP66
	○ White	NC+NO	XBW4BL15	-20°C ... 75°C	IP66
	● Black	NO	XBW4BL21	-20°C ... 75°C	IP66
	● Black	NC+NO	XBW4BL25	-20°C ... 75°C	IP66
	● Green	NO	XBW4BL31	-20°C ... 75°C	IP66
	● Green	NC+NO	XBW4BL35	-20°C ... 75°C	IP66
	● Red	NC	XBW4BL42	-20°C ... 75°C	IP66
	● Red	NC+NO	XBW4BL45	-20°C ... 75°C	IP66
	● Yellow	NO	XBW4BL51	-20°C ... 75°C	IP66
	● Yellow	NC+NO	XBW4BL55	-20°C ... 75°C	IP66
	● Blue	NO	XBW4BL61	-20°C ... 75°C	IP66
	● Blue	NC+NO	XBW4BL65	-20°C ... 75°C	IP66
Pushbutton “push-push” to release, flush actuator	○ White	NO	XBW4BH011	-20°C ... 75°C	IP66
	○ White	NC+NO	XBW4BH015	-20°C ... 75°C	IP66
	● Black	NO	XBW4BH021	-20°C ... 75°C	IP66
	● Black	NC+NO	XBW4BH025	-20°C ... 75°C	IP66
	● Green	NO	XBW4BH031	-20°C ... 75°C	IP66
	● Green	NC+NO	XBW4BH035	-20°C ... 75°C	IP66
	● Red	NC	XBW4BH042	-20°C ... 75°C	IP66
	● Red	NC+NO	XBW4BH045	-20°C ... 75°C	IP66
	● Yellow	NO	XBW4BH051	-20°C ... 75°C	IP66
	● Yellow	NC+NO	XBW4BH055	-20°C ... 75°C	IP66
	● Blue	NO	XBW4BH061	-20°C ... 75°C	IP66
	● Blue	NC+NO	XBW4BH065	-20°C ... 75°C	IP66

Pushbuttons Ø 22			Lid mounting		
Type of actuator	Colour	Contact	Reference metal bezel	Operating temperature	IP rating
Pushbutton “push-push” to release, projecting actuator	○ White	NO	XBW4BH11	-20°C ... 75°C	IP66
	○ White	NC+NO	XBW4BH15	-20°C ... 75°C	IP66
	● Black	NO	XBW4BH21	-20°C ... 75°C	IP66
	● Black	NC+NO	XBW4BH25	-20°C ... 75°C	IP66
	● Green	NO	XBW4BH31	-20°C ... 75°C	IP66
	● Green	NC+NO	XBW4BH35	-20°C ... 75°C	IP66
	● Red	NC	XBW4BH42	-20°C ... 75°C	IP66
	● Red	NC+NO	XBW4BH45	-20°C ... 75°C	IP66
	● Yellow	NO	XBW4BH51	-20°C ... 75°C	IP66
	● Yellow	NC+NO	XBW4BH55	-20°C ... 75°C	IP66
	● Blue	NO	XBW4BH61	-20°C ... 75°C	IP66
	● Blue	NC+NO	XBW4BH65	-20°C ... 75°C	IP66

Pushbuttons			Lid mounting		Base mounting
Operating temperature			-20°C ... 75°C	-20°C ... 65°C	-20°C ... 65°C
IP rating			IP66	IP65	IP65
Type of actuator	Colour	Contact	Reference metal bezel	Reference plastic bezel	Reference plastic bezel
Pushbutton with coloured silicone boot, flush actuator	○ White	NO	XBW4BP11S	XBW5AP11S	XBW5AP11SP
	○ White	NC+NO	XBW4BP15S	XBW5AP15S	XBW5AP15SP
	● Black	NO	XBW4BP21S	XBW5AP21S	XBW5AP21SP
	● Black	NC+NO	XBW4BP25S	XBW5AP25S	XBW5AP25SP
	● Green	NO	XBW4BP31S	XBW5AP31S	XBW5AP31SP
	● Green	NC+NO	XBW4BP35S	XBW5AP35S	XBW5AP35SP
	● Red	NC	XBW4BP42S	XBW5AP42S	XBW5AP42SP
	● Red	NC+NO	XBW4BP45S	XBW5AP45S	XBW5AP45SP
	● Yellow	NO	XBW4BP51S	XBW5AP51S	XBW5AP51SP
	● Yellow	NC+NO	XBW4BP55S	XBW5AP55S	XBW5AP55SP
	● Blue	NO	XBW4BP61S	XBW5AP61S	XBW5AP61SP
	● Blue	NC+NO	XBW4BP65S	XBW5AP65S	XBW5AP65SP

Pushbuttons with mushroom head			Lid mounting		Base mounting
Operating temperature			-20°C ... 75°C	-20°C ...+65°C	-20°C ... +65°C
IP rating			IP65	IP65	IP65
Type of actuator	Colour	Contact	Reference metal bezel	Reference plastic bezel	Reference plastic bezel
Pushbutton Ø 40 mm mushroom head, spring return actuator	○ White	NO	XBW4BC11	XBW5AC11	XBW5AC11P
	● Black	NO	XBW4BC21	XBW5AC21	XBW5AC21P
	● Vert	NO	XBW4BC31	XBW5AC31	XBW5AC31P
	● Rouge	NC	XBW4BC42	XBW5AC42	XBW5AC42P
	● Jaune	NO	XBW4BC51	XBW5AC51	XBW5AC51P
	● Bleu	NO	XBW4BC61	XBW5AC61	XBW5AC61P

Emergency stop mushroom			Lid mounting		Base mounting
Operating temperature			-20°C ...+65°C	-20°C ...+65°C	-20°C ...+65°C
IP rating			IP65	IP65	IP65
Type of actuator	Colour	Contact	Reference metal bezel	Reference plastic bezel	Reference plastic bezel
Ø 40 mm, latching mushroom head, “push-pull” actuator	● Red	NC	XBW4BT42	On request	On request
			XBW4BT842 snap action	On request	On request
	● Black	NO	XBW4BT21	On request	On request
Ø 40 mm latching mushroom head, key 455	● Red	NC	XBW4BS142	XBW5AS142 (1)	XBW5AS142P
	● Black	NO	XBW4BS121	On request	On request
Ø 40 mm latching mushroom head, turn to release actuator	● Red	NC	XBW4BS542	XBW5AS542 (1)	XBW5AS542P
	● Black	NO	XBW4BS521	(1) Provided with screw	

Selector switches

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The HarmAtex selector switches allow to make and visualize the control/command of equipments. They meet the highest quality standards, are simple and quick to implement. 3 contact blocks can be used per selector switch.

Specifications

Material	Metal and plastic	**Rated operationnal**	Ith = 10 A; Ui = 415 V
IP rating	IP65 or IP66 according to IEC 60529	**characteristics of contact**	AC
Operating temperature	-20°C ... +75°C		Ue = 380 V; Ie = 1,9 A ou
Approval			Ue = 240 V; Ie = 3 A ou
- Atex	INERIS02ATEX9007U		Ue = 120 V; Ie = 6 A
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31		DC
Ex-code	II 2 GD Ex d e IIC Gb		Ue = 250 V; Ie = 0,27 A ou
	Ex tb IIIC Db		Ue = 125 V; Ie = 0,55 A ou
Mounting	Panel cut-out Ø 22,5 mm		Ue = 24 V; Ie = 2,87 A
Type of terminals	Screw terminals	**Mechanical durability**	Actuator: 5 millions operating cycles
Number of contacts	Maximum 6 contacts per actuator		Contact : 1 million operating cycles

Selector swtiches and key switches			Lid mounting		Base mounting
Operting temperture			-20°C...+75°C	-20°C...75+°C	-20°C...75+°C
IP rting			IP66	IP66 / (1) IP65	IP66 / (1) IP65
Type	Number of positions	Contact	Ref.metal bezel	Ref. plastic bezel	Ref. plastic bezel
Selector switches with standard handle, black	2 stay put	NO	XBW4BD21	XBW5AD21	XBW5AD21P
	2 spring return right and left	NO	XBW4BD41	XBW5AD41	XBW5AD41P
	3 stay put	• NO + NO	XBW4BD33	XBW5AD33	XBW5AD33P
	3 spring return to center	• NO + NO	XBW4BD53	XBW5AD53	XBW5AD53P
	3 spring return from left to center	• NO + NO	XBW4BD73	XBW5AD73	XBW5AD73P
	3 spring return from right to center	• NO + NO	XBW4BD83	XBW5AD83	XBW5AD83P
Selector switches with wheel handle, black	2 stay put	NO	XBW4BD291	XBW5AD291	XBW5AD291P
	2 spring return right and left	NO	XBW4BD491	XBW5AD491	XBW5AD491P
	3 stay put	• NO + NO	XBW4BD393	XBW5AD393	XBW5AD393P
	3 spring return to center	• NO + NO	XBW4BD593	XBW5AD593	XBW5AD593P
	3 spring return from left to center	• NO + NO	XBW4BD793	XBW5AD793	XBW5AD793P
	3 spring return from right to center	• NO + NO	XBW4BD893	XBW5AD893	XBW5AD893P
Selector switches with long handle, black	2 stay put	NO	XBW4BJ21	XBW5AJ21	XBW5AJ21P
	2 spring return right and left	NO	XBW4BJ41	XBW5AJ41	XBW5AJ41P
	3 stay put	• NO + NO	XBW4BJ33	XBW5AJ33	XBW5AJ33P
	3 spring return to center	• NO + NO	XBW4BJ53	XBW5AJ53	XBW5AJ53P
	3 spring return from left to center	• NO + NO	XBW4BJ73	XBW5AJ73	XBW5AJ73P
	3 spring return from right to center	• NO + NO	XBW4BJ83	XBW5AJ83	XBW5AJ83P
Selector switches with key 455, black	2 stay put key withdrawal in left position	NO	XBW4BG21	XBW5AG21 (1)	XBW5AG21P (1)
	2 stay put key withdrawal in both position	NO	XBW4BG41	XBW5AG41 (1)	XBW5AG41P (1)
	2 spring return from right to left	NO	XBW4BG61	XBW5AG61 (1)	XBW5AG61P (1)
	3 stay put, key withdrawal in 3 positions	• NO + NO	XBW4BG03	XBW5AG03 (1)	XBW5AG03P (1)
	3 stay put, key withdrawal in center position	• NO + NO	XBW4BG33	XBW5AG33 (1)	XBW5AG33P (1)
	3 stay put, key withdrawal in left or right position	• NO + NO	XBW4BG53	XBW5AG53 (1)	XBW5AG53P (1)
	3 stay put, key withdrawal in left position	• NO + NO	XBW4BG93	XBW5AG93 (1)	XBW5AG93P (1)
	3 stay put, key withdrawal in right position	• NO + NO	XBW4BG093	XBW5AG093 (1)	XBW5AG093P (1)
	3 spring return from left to center	• NO + NO	XBW4BG13	XBW5AG13 (1)	XBW5AG13P (1)
	3 spring return to center	• NO + NO	XBW4BG73	XBW5AG73 (1)	XBW5AG73P (1)
	3 spring return from right to center, key withdrawal in center position	• NO + NO	XBW4BG83	XBW5AG83 (1)	XBW5AG83P (1)
	3 spring return from right to center, key withdrawal in left position	• NO + NO	XBW4BG083	XBW5AG083 (1)	XBW5AG083P (1)
Toggle switches, black lever	2 stay put	NO	XBW4BD281	XBW5AD281	XBW5AD281P
	2 spring return	NO	XBW4BD481	XBW5AD481	XBW5AD481P

• This selector switch can have an extra NC contact element on the central position. This contact is actuated on left and right posiiton.

Illuminated pushbuttons

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The illuminated pushbuttons with high luminosity are available in 5 colours and equipped with a metal bezel. They offer high performances and have a low energy consumption. Two contact blocks can be used per illuminated pushbuttons.

Specifications

Material	Metal	**Rated operationnal characteristics of contact**	Ith = 10 A; Ui = 415 V
IP rating	IP66 selon IEC 60529		AC
Operating temperature	-20°C ... +75°C		Ue = 380 V; Ie = 1,9 A ou
Approval			Ue = 240 V; Ie = 3 A ou
- Atex	INERIS04ATEX9003U, INERIS02ATEX9007U		Ue = 120 V; Ie = 6 A
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31		DC
Ex-code	II 2 GD Ex d e IIC Gb		Ue = 250 V; Ie = 0,27 A ou
	Ex d e mb IIC Gb		Ue = 125 V; Ie = 0,55 A ou
Mounting	Panel cut-out Ø 22,5 mm		Ue = 24 V; Ie = 2,87 A
Type of terminals	Screw terminals	**Mechanical durability**	Actuator : 5 millions operating cycles
LED pilot light	24 to 254 V AC/DC or 6 to 24 V AC/DC		Contact : 1 million operating cycles

Illuminated pushbuttons			Lid mounting		Base mounting
Operating temperature			-20°C ... +75°C	-20°C ... +75°C	
IP rating			IP66	IP66	
Type	Couleur	Contact	Reference metal bezel 24 to 254 V AC/DC	Reference metal bezel 6 to 24V AC/DC	
Illuminated pushbutton, spring return	○ White	NO	XLW4BP1831	XLW4BP1831B	On request
	● Green	NO	XLW4BP3831	XLW4BP3831B	On request
	● Red	NC	XLW4BP4832	XLW4BP4832B	On request
	● Yellow	NO	XLW4BP5831	XLW4BP5831B	On request
	● Blue	NO	XLW4BP6831	XLW4BP6831B	On request

Additional contact block

Contact block 10 A				
Approvals	INERIS02ATEX9007U	IECEx INE 13.0063U		
Ex-code	Ex d e IIC Gb	Ex d e IIC Gb		
Operating temperature	- 50° ... + 75°C	- 50° ... + 75°C		
Rated operating characteristics	Mounting type	Contact	Reference metal bezel	Reference plastic bezel
th = 10 A; Ui = 415 V AC Ue = 380 V; Ie = 1,9 A or Ue = 240 V; Ie = 3 A or Ue = 120 V; Ie = 6 A DC Ue = 250 V; Ie = 0,27 A or Ue = 125 V; Ie = 0,55 A or Ue = 24 V; Ie = 2,87 A	Lid mounting	NO	ZBWE101	
	Lid mounting	NC	ZBWE102	
	Base mounting	NO	ZBWE1111	
	Base mounting	NC	ZBWE1121	
	Lid mounting with fixing device	NO	ZBWZ101	ZBWZ1010
	Lid mounting with fixing device	NC	ZBWZ102	ZBWZ1020

Pilot lights

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The multi-voltage and multi-current HarmAtex LED pilot lights, high brightness, can clearly inform the user about the staus of the process. Highly robust, very easy to implement, they meet your diverse applications.

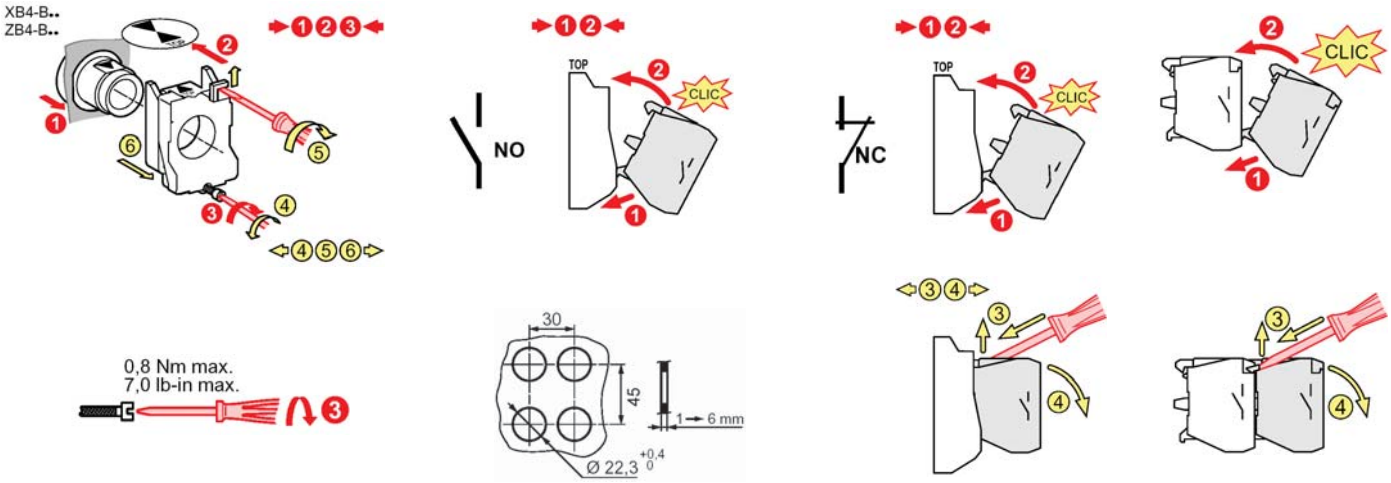
Specifications

Material	Metal and plastic	**Rated operationnal characteristics**	Pilot light 24 to 254 V AC/DC 2 to 10 mA Pilot light 6 to 24 V AC/DC 14 to 21 mA
IP rating	IP65 according to IEC 60529		
Operating temperature	-20°C ... +75°C		
Approvals - ATEX	INERIS04ATEX9003U		
Standards	EN/IEC: 60079-0, 60079-7, 60079-18 60079-31	**Durability**	100 000 hours at ambiente temperature
		Mounting	Panel cut-out Ø 22,5 mm
Ex-code	II 2 GD Ex e mb IIC Gb Ex tb IIIC Db	**Type of terminals**	Screw terminals

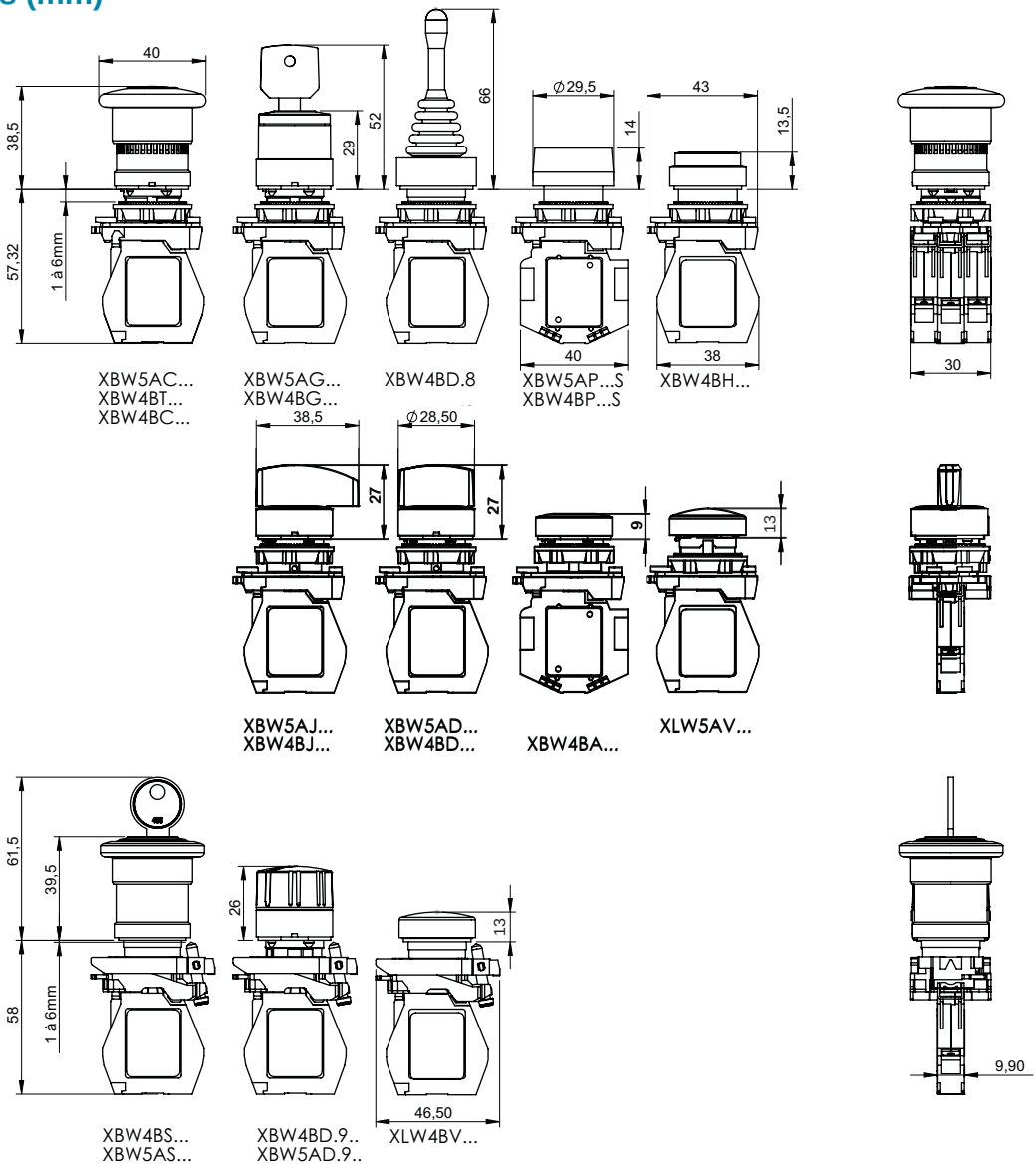
Complete LED Pilot light - 24 to 254 V AC/DC			Lid mounting
Type	Colour	Reference metal bezel	Reference plastic bezel
LED Pilot light, multi-voltage and multi-current	○ White	XLW4BV013	XLW5AV013P
	● Green	XLW4BV033	XLW5AV033P
	● Red	XLW4BV043	XLW5AV043P
	● Yellow	XLW4BV053	XLW5AV053P
	● Blue	XLW4BV063	XLW5AV063P
LED Signaling element - 24 to 254 V AC/DC for head colour			
Type	Colour	Reference lid mounting	Reference base mounting
LED Signaling element for head colour	○ White	ZBWV1	ZBWL1
	● Green	ZBWV3	ZBWL3
	● Red	ZBWV1	ZBWL1
	● Yellow	ZBWV1	ZBWL1
	● Blue	ZBWV1	ZBWL1

Complete LED Pilot light - 6 to 24 V AC/DC			Lid mounting
Type	Colour	Reference metal bezel	Reference plastic bezel
LED Pilot light, multi-voltage and multi-current	○ White	XLW4BV013B	XLW5AV013PB
	● Green	XLW4BV033B	XLW5AV033PB
	● Red	XLW4BV043B	XLW5AV043PB
	● Yellow	XLW4BV053B	XLW5AV053PB
	● Blue	XLW4BV063B	XLW5AV063PB
LED Signaling element - 6 to 24 V AC/DC for head colour			
Type	Colour	Reference lid mounting	Reference base mounting
LED Signaling element for head colour	○ White	ZBWV1B	ZBWL1B
	● Green	ZBWV3B	ZBWL3B
	● Red	ZBWV1B	ZBWL1B
	● Yellow	ZBWV1B	ZBWL1B
	● Blue	ZBWV1B	ZBWL1B

Assembly's precaution



Dimensions (mm)



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Hazardous area - Information & Terminology

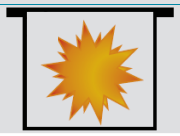
The ATEX Directive, derived from the French “ATmosphères EXplosibles” and formally known as 94/9/EC, contains the ESR (Essential Safety Requirements) to which electrical equipment and protective systems used within potentially explosive atmospheres must conform.

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 and all equipment conforming to the new directive will feature CE and Ex Marking.

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

Applicable Ex protection	
Ex 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.	
Ex 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.	
Ex 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.	
Protection Ex t The enclosure is enough seal so that no flammable dust can penetrate inside. The external surface temperature of the housing is limited.	

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Ex-tech Solution 22 impasse de la Volute, BP 20708 -16430 Champniers, France
Tel: +33 5 45 93 01 10, Fax: +33 5 45 93 01 15, E-mail: sales.solution@ex-tech.no www.ex-tech.no