

# 10 | Explosive atmospheres



## Detection

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Sensor type		3-wire DC PNP, flush mountable in metal		
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1		
Zone D (dust)		21 - 22		
EC type examination certificate number / marking		INERIS 04ATEX0022X /  D-Ex tD A21 IP68 T90°C		
Nominal sensing distance Sn		4 mm	8 mm	15 mm
Operating zone		0...3.2 mm	0...6.4 mm	0...12 mm
Temperature range		- 20...+ 60°C		
Degree of protection (conforming to IEC 60529)		IP68		
Connection		Pre-cabled, PvR, L = 10 m		
Dimensions		M12 x 50 mm	M18 x 60 mm	M30 x 60 mm
Supply voltage (including ripple)		10...58 VDC		
Maximum switching capacity		200 mA		
Overload and short-circuit protection		Yes		
LED output state indicator		Yes		
Voltage drop, closed state, at I nominal		≤ 2 V		
Switching frequency		2500 Hz	1000 Hz	500 Hz
References	NO function	<b>XS612B1PAL10EX</b>	<b>XS618B1PAL10EX</b>	<b>XS630B1PAL10EX</b>
	NC function	<b>XS612B1PBL10EX</b>	<b>XS618B1PBL10EX</b>	<b>XS630B1PBL10EX</b>

## Analog, metal case




Sensor type		Analogue, 2-wire AC/DC, flush mountable in metal		
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1		
Zone D (dust)		21 - 22		
EC type examination certificate number / marking		INERIS 04ATEX0022X /  D-Ex tD A21 IP67 T90°C		
Nominal sensing distance Sn		2 mm	5 mm	10 mm
Operating zone		0.2...2 mm	0.5...5 mm	1...10 mm
Temperature range		- 20...+ 60°C		
Degree of protection (conforming to IEC 60529)		IP67		
Connection		Pre-cabled, PvR, L = 2 m		
Dimensions		M12 x 50 mm	M18 x 60 mm	M30 x 60 mm
Supply voltage (including ripple)		10...38 VAC/DC		
Linearity error		10%		
Operating frequency		1500 Hz	500 Hz	300 Hz
References	4...20 mA output	<b>XS1M12AB120EX</b>	<b>XS1M18AB120EX</b>	<b>XS1M30AB120EX</b>

# Proximity sensors

## Rotation monitoring, metal case



M30

<b>Sensor type</b>	<b>3-wire DC PNP, flush mountable in metal</b>	
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1	
<b>Zone D (dust)</b>	21 - 22	
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0022X / 	
<b>Nominal sensing distance Sn</b>	10 mm	
<b>Operating zone</b>	0...8 mm	
<b>Temperature range</b>	- 20...+ 60°C	
<b>Degree of protection (conforming to IEC 60529)</b>	IP67	
<b>Connection</b>	Pre-cabled, PvR, L = 2 m	
<b>Dimensions</b>	M30 x 81 mm	
<b>Supply voltage (including ripple)</b>	10...58 VDC	
<b>Maximum switching capacity</b>	200 mA	
<b>Overload and short-circuit protection</b>	Yes	
<b>LED output state indicator</b>	Yes	
<b>Voltage drop, closed state, at I nominal</b>	≤ 2 V	
<b>Version</b>	Slow	Fast
<b>Maximum speed of passing object</b>	6000 impulses/minute	48,000 impulses/minute
<b>Adjustable frequency range</b>	6...150 impulses/minute	120...3000 impulses/minute
<b>References</b>	NC function	XSAV11373EX
		XSAV12373EX



Osiprox

## Namur inductive sensors Metal or plastic case



<b>Sensor type</b>	<b>2-wire DC, flush mountable in metal</b>					
<b>Case type</b>	Metal			Plastic		
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, EN 50020, EN 50284, pr IEC 61241-0, pr IEC 61241-1					
<b>Zone D (dust)</b>	20 (to be used in conjunction with intrinsically safe enclosures, see page 5)					
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0016X /  II1 D-Ex iaD 20 IP66/67 T85°C					
<b>Nominal sensing distance Sn</b>	0.8 mm	1.5 mm	2 mm	5 mm	10 mm	
<b>Operating zone</b>	0...0.6 mm	0...0.8 mm	0...1.2 mm	0...1.6 mm	0...4 mm	0...8 mm
<b>Temperature range</b>	- 20...+ 60°C					
<b>Degree of protection (conforming to IEC 60529)</b>	IP67					
<b>Connection</b>	Pre-cabled, PvR, L = 2 m					
<b>Dimensions</b>	M5 x 30 mm	M8 x 26.5 mm		M12 x 38.5 mm	M18 x 41 mm	M30 x 43.5 mm
<b>Supply voltage (including ripple)</b>	7...12 VDC					
<b>Maximum switching capacity</b>	≤ 1 mA					
<b>Overload and short-circuit protection</b>	Yes					
<b>Residual current, open state</b>	≥ 3 mA					
<b>Switching frequency</b>	1500 Hz		1000 Hz	800 Hz	500 Hz	300 Hz
<b>References</b>	NC function	XSMN08122EX	XSAN01122EX	XSPN01122EX	XSPN02122EX	XSPN05122EX
				XSPN10122EX		

## Plastic case



<b>Sensor type</b>	<b>2-wire DC, non flush mountable in metal</b>			
<b>Case type</b>	Plastic			
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, EN 50020, EN 50284, pr IEC 61241-0, pr IEC 61241-1			
<b>Zone D (dust)</b>	20			
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0016X /  II1 D-Ex iaD 20 IP66/67 T85°C			
<b>Nominal sensing distance Sn</b>	4 mm	8 mm	15 mm	40 mm
<b>Operating zone</b>	0...3.2 mm	0...6.4 mm	0...12 mm	0...32 mm
<b>Temperature range</b>	- 20...+ 60°C			
<b>Degree of protection (conforming to IEC 60529)</b>	IP67			
<b>Connection</b>	Pre-cabled, PvR, L = 2 m			
<b>Dimensions</b>	M12 x 38.5 mm	M18 x 41 mm	M30 x 43.5 mm	100 x 80 x 40 mm
<b>Supply voltage (including ripple)</b>	7...12 VDC			
<b>Maximum switching capacity</b>	≤ 1 mA			
<b>Overload and short-circuit protection</b>	Yes			
<b>LED output state indicator</b>	Yes			
<b>Residual current, open state</b>	≥ 3 mA			
<b>Switching frequency</b>	400 Hz	300 Hz	200 Hz	25 Hz
<b>References</b>	NC function	XSPN04122EX	XSPN08122EX	XSPN15122EX
				XSDN401229EX

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(1) Flush mountable in metal



# Intrinsically safe module

## Processing module



Module type		Discrete					
		Inputs		Relay inputs/outputs			
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50020, EN 50021-1&2, EN 50082-1&2					
Zone D (dust)		Mounted outside zone (to be used in conjunction with products for zone 20, 21 or 22)					
EC type examination certificate number / marking		LCIE 00ATEX6034X /  II(1) G/D-[EEx ia] IIC					
Zone 20	Number of input channels	2	4	2	2		
	Number of output channels	–	–	1	1		
	Type of output channel, load excitation	–	–	Low consumption solenoid valve, < 7 mA with hysteresis	High consumption solenoid valve, < 40 mA with hysteresis		
Outside zone	Number of recopying channels	2	4	2	2		
	Switching voltage	5...230 VAC; 5...24 VDC					
	Switching current	10 mA...0.5 A (AC); 10 mA...0.5 A, L/R 48 ms (DC)					
Temperature range		– 20...+ 60°C					
Connection		Removable screw terminal blocks					
Mounting		On 35 mm DIN rail					
Dimensions, W x D x H		29.5 x 120 x 90 mm					
Supply voltage (including ripple)		24 VDC (0.95...1.1 Un)					
Consumption		5 W					
References		NY320N2RB1	NY340N4RB1	NY321L2RB1	NY321L1RB1	NY321H2RB1	NY321H1RB1



Module type		Discrete			
		Load excitation outputs			
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50020, EN 50021-1&2, EN 50082-1&2			
Zone D (dust)		Mounted outside zone (to be used in conjunction with products for zone 20, 21 or 22)			
EC type examination certificate number / marking		LCIE 00ATEX6034X /  II(1) G/D-[EEx ia] IIC			
Zone 20	Number of load excitation channels	2	4	4	4
	Maximum current	< 7 mA	< 40 mA	< 7 mA	< 40 mA
Outside zone	Control voltage	24 VDC ± 10%			
	Control current	State 1 = 6.5 < I < 9 mA and 21.6 < U < 26.4 V; State 0 = I ≤ 0.4 mA and U ≤ 1.2 V			
Temperature range		– 20...+ 60°C			
Connection		Removable screw terminal blocks			
Mounting		On 35 mm DIN rail			
Dimensions, W x D x H		29.5 x 120 x 90 mm			
Supply voltage (including ripple)		24 VDC (0.95...1.1 Un)			
Consumption		5 W			
References		NY302L0NB1	NY302H0NB1	NY304L0NB1	NY304H0NB1



Osiswitch

## Limit switches Miniature, fixing by the body



<b>Limit switch type</b> With head for movement	<b>XCMD metal, pre-cabled</b> Linear (plunger)				
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1				
<b>Zone D (dust)</b>	21 - 22				
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0014X /  II2 D-Ex tD A21 IP66/67 T85°C				
<b>Type of operator</b>	Metal end plunger	Metal end plunger with elastomer boot	Steel roller plunger	Retractable steel roller lever plunger	
<b>Mechanical durability</b> (millions of operating cycles)	10				
<b>Actuation speed</b>	0.5 m/s				
<b>Switches conforming to standard IEC 947-5-1 section 3</b>	☞				
<b>Temperature range</b>	- 20...+ 60°C				
<b>Degree of protection</b> (conforming to IEC 60529)	IP66 and IP67				
<b>Rated operational characteristics</b>	AC15; C300 (Ue = 240 V, Ie = 0.75 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)				
<b>Short-circuit protection</b>	By 6 A cartridge fuse type gG (gl)				
<b>Cable entry</b>	Pre-cabled, adjustable direction, length = 5 m				
<b>Fixing centres</b>	20 mm				
<b>Body dimensions, W x D x H</b>	30 x 16 x 50 mm				
<b>References</b>	2 N/C + 2 N/O snap action	<b>XCMD4110L5EX</b>	<b>XCMD4111L5EX</b>	<b>XCMD4102L5EX</b>	<b>XCMD4124L5EX</b>

## Compact, fixing by the body



<b>Limit switch type</b> With head for movement	<b>XCKD metal conforming to standard EN 500047</b> Linear (plunger)				
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1				
<b>Zone D (dust)</b>	21 - 22				
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0014X  II2/D-Ex tD A21 IP66/67 T85°C				
<b>Type of operator</b>	Metal end plunger	Metal end plunger with elastomer boot	Steel roller plunger	Thermoplastic roller lever plunger, horiz. actuation in 1 direct.	Thermoplastic roller lever plunger, vert. actuation in 1 direct.
<b>Mechanical durability</b> (millions of operating cycles)	15		10	15	
<b>Actuation speed</b>	0.5 m/s			1 m/s	
<b>Switches conforming to standard IEC 947-5-1 section 3</b>	☞				
<b>Temperature range</b>	- 20...+ 60°C				
<b>Degree of protection</b> (conforming to IEC 60529)	IP66 and IP67				
<b>Rated operational characteristics</b>	AC15; B300 (Ue = 240 V, Ie = 1.5 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)				
<b>Short-circuit protection</b>	By 6 A cartridge fuse type gG (gl)				
<b>Cable entry</b>	1 entry fitted with ISO M16 cable gland				
<b>Fixing centres</b>	20 mm				
<b>Body dimensions, W x D x H</b>	31 x 30 x 65 mm				
<b>References</b>	N/C + N/C + N/O snap action	<b>XCKD3910P16EX</b>	<b>XCKD3911P16EX</b>	<b>XCKD3902P16EX</b>	<b>XCKD3921P16EX</b> <b>XCKD3927P16EX</b>

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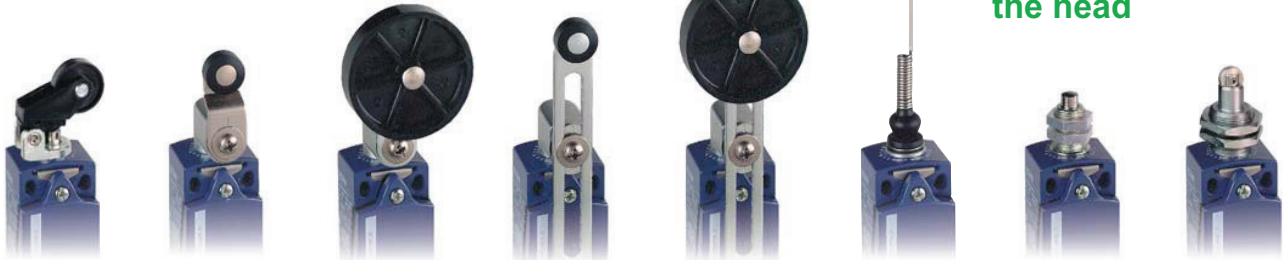
Other characteristics: please refer to the "Global Detection" catalogue

## Miniature, fixing by the head



XCMD metal, pre-cabled				Linear (plunger)		
Rotary (lever)						
Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1						
21 - 22						
INERIS 04ATEX0014X /  II2 D-Ex tD A21 IP66/67 T85°C						
Steel roller lever	Thermoplastic roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	M12 with metal end plunger	M16 with metal end plunger with elastomer boot	M12 with steel roller plunger
10				0.5 m/s		0.1 m/s
1.5 m/s						
⊙						
- 20...+ 60°C						
IP66 and IP67						
AC15; C300 (Ue = 240 V, Ie = 0.75 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)						
By 6 A cartridge fuse type gG (gl)						
Pre-cabled, adjustable direction, length = 5 mm						
20 mm				M12 x 1	M16 x 1	M12 x 1
30 x 16 x 50 mm						
XCMD4116L5EX	XCMD4115L5EX	XCMD4117L5EX	XCMD4145L5EX	XCMD41F0L5EX	XCMD41G1L5EX	XCMD41F2L5EX

## Compact, fixing by the head



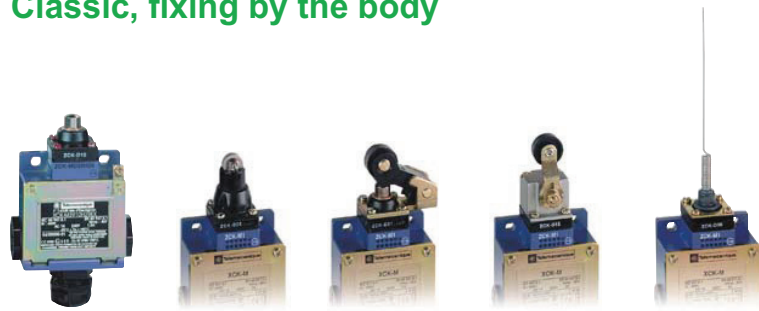
XCKD metal conforming to standard EN 500047				Multi-directional		Linear (plunger)	
Linear (plunger)		Rotary (lever)					
Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1							
21 - 22							
INERIS 04ATEX0014X /  II2 D-Ex tD A21 IP66/67 T85°C							
Thermoplastic roller lever plunger, horiz. or vert. actuation in 1 dir.	Thermoplastic roller lever	Thermoplastic roller lever, Ø 50 mm	Variable length thermoplastic roller lever	Variable length thermoplastic roller lever, Ø 50 mm	"Cat's whisker"	M18 with metal end plunger	M18 with steel roller plunger
15	10				5	10	
1 m/s	1.5 m/s				1 m/s	0.5 m/s	
⊙						⊙	
- 20...+ 60°C							
IP66 and IP67							
AC15; B300 (Ue = 240 V, Ie = 1.5 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)							
By 6 A cartridge fuse type gG (gl)							
1 entry fitted with ISO M16 cable gland							
20 mm						M18 x 1	
30 x 16 x 50 mm							
XCKD3928P16EX	XCKD3918P16EX	XCKD3939P16EX	XCKD3945P16EX	XCKD3949P16EX	XCKD3906P16EX	XCKD39H0P16EX	XCKD39H2P16EX



Osiswitch

# Limit switches

## Classic, fixing by the body



<b>Limit switch type</b>	<b>XCKM metal, 3 cable entries</b>				
With head for movement	Linear (plunger)		Rotary (lever)	Multi-directional	
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1				
<b>Zone D (dust)</b>	21 - 22				
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0014X /  D-Ex tD A21 IP66/67 T85°C				
<b>Type of operator</b>	Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horiz. actuation in 1 direct.	Thermoplastic roller lever	"Cat's whisker"
<b>Mechanical durability</b> (millions of operating cycles)	20				10
<b>Actuation speed</b>	0.5 m/s		1.5 m/s		0.5 m/s
<b>Switches conforming to standard IEC 947-5-1 section 3</b>	☞				–
<b>Temperature range</b>	– 20...+ 60°C				
<b>Degree of protection</b> (conforming to IEC 60529)	IP66				
<b>Rated operational characteristics</b>	AC15; B300 (Ue = 240 V, Ie = 1.5 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)				
<b>Short-circuit protection</b>	By 6 A cartridge fuse type gG (gl)				
<b>Cable entry</b>	3 tapped entries for ISO M20 cable gland (1)				
<b>Fixing centres</b>	41 mm				
<b>Body dimensions, W x D x H</b>	63 x 30 x 64 mm				
<b>References</b>	N/C + N/C + N/O snap action	<b>XCKM3910H29EX</b>	<b>XCKM3902H29EX</b>	<b>XCKM3921H29EX</b>	<b>XCKM3915H29EX</b>   <b>XCKM3906H29EX</b>

(1) 2 entries fitted with blanking plugs, 1 entry fitted with ISO M20 cable gland

## Application - hoisting, handling, conveying

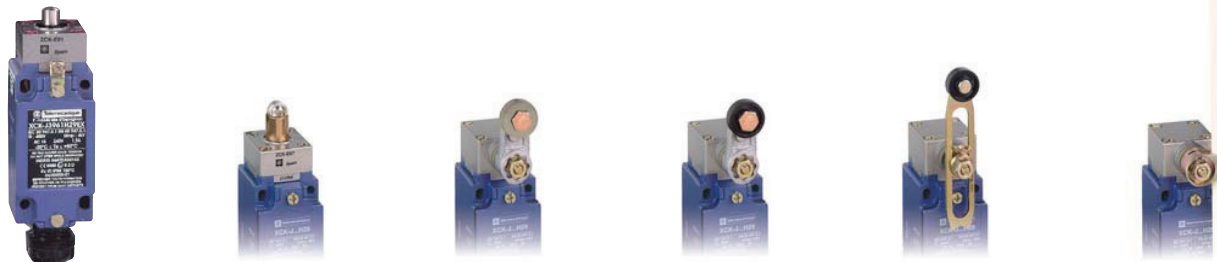


<b>Limit switch type</b>	<b>XCKMR metal, 3 cable entries</b>	
With head for movement	Rotary (lever)	
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1	
<b>Zone D (dust)</b>	21 - 22	
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0014X /  D-Ex tD A21 IP66/67 T85°C	
<b>Type of operator</b>	Metal rod levers, "crossed"	Metal rod levers, "crossed" reversed head
<b>Mechanical durability</b> (millions of operating cycles)	2	
<b>Actuation speed</b>	1.5 m/s	
<b>Switches conforming to standard IEC 947-5-1 section 3</b>	☞	
<b>Temperature range</b>	– 20...+ 60°C	
<b>Degree of protection</b> (conforming to IEC 60529)	IP66	
<b>Rated operational characteristics</b>	AC15; A300 (Ue = 240 V, Ie = 3 A)/DC13; Q300 (Ue = 125 V, Ie = 0.55 A)	
<b>Short-circuit protection</b>	By 10 A cartridge fuse type gG (gl)	
<b>Cable entry</b>	3 tapped entries for ISO M20 cable gland (1)	
<b>Fixing centres</b>	61.5 mm	
<b>Body dimensions, W x D x H</b>	118 x 59 x 77 mm	
<b>2 x N/C + N/C staggered, slow break contacts</b>	<b>XCKMR54D1H29EX</b>	<b>XCKMR54D2H29EX</b>
<b>2 x N/C + N/O snap action contacts, both actuated in each direction</b>	–	
<b>2 x N/C + N/O snap action contacts, 1 actuated in each direction</b>	–	
<b>2 x single-pole C/O snap action contacts</b>	–	

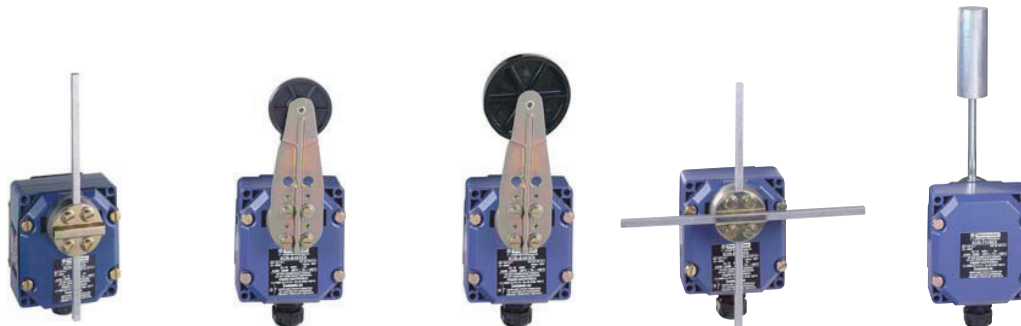
(1) 2 entries fitted with blanking plugs, 1 entry fitted with ISO M20 cable gland

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Other characteristics: please refer to the "Global Detection" catalogue



XCKJ metal, fixed body, conforming to standard EN 50041					
Linear (plunger)			Rotary (lever)		
Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1					
21 - 22					
INERIS 04ATEX0014X /  II2 D-Ex tD A21 IP66/67 T85°C					
Metal end plunger	Steel roller plunger	Steel roller lever	Thermoplastic roller lever	Variable length thermoplastic roller lever	Polyamide rod lever, Ø 6 x 200 mm
30	25	30		20	
0.5 m/s	1 m/s	1.5 m/s			
⊖				-	
- 20...+ 60°C					
IP66					
AC15; B300 (Ue = 240 V, Ie = 1.5 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)					
By 6 A cartridge fuse type gG (gl)					
1 entry fitted with ISO M20 cable gland					
30 x 60 mm					
40 x 44 x 77 mm					
XCKJ3961H29EX	XCKJ3967H29EX	XCKJ390513H29EX	XCKJ390511H29EX	XCKJ390541H29EX	XCKJ390559H29EX



XCR metal					
Rotary (lever)			Conveyor belt shift monitoring switches		
Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1					
21 - 22					
INERIS 04ATEX0024X /  II2 D-Ex tD A21 IP65 T85°C					
Square (6 mm) rod lever, spring return to off position	Thermoplastic roller (Ø 30 mm) lever, spring return to off position	Large thermoplastic roller (Ø 50 mm) lever, spring return to off position	Metal rod levers, "crossed", stay put	Galvanised steel operating lever	Stainless steel operating lever
10				0.3	
1.5 m/s					
⊖				-	
- 20...+ 60°C					
IP65					
AC15; A300 (Ue = 240 V, Ie = 3 A)/DC13; Q300 (Ue = 250 V, Ie = 0.27 A)					
By 10 A cartridge fuse type gG (gl)					
1 entry fitted with n° 13 cable gland					
85 x 75 mm					
85 x 75 x 95 mm					
-					
XCRA111EX	XCRA121EX	XCRA151EX	XCRE181EX (2)	-	
XCRB111EX	XCRB121EX	XCRB151EX	XCRF171EX (3)	-	
-				XCRT115EX	XCRT215EX

(2) "Crossed" rods (3) "T" rods



Nautilus

# Electromechanical pressure & vacuum switches

## Adjustable differential, regulation between 2 thresholds



Type	Vacuum switches and vacu-pressure switches with setting scale		
Size	- 1 bar	- 0.2 bar	5 bar
Conformity	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1		
Zone D (dust)	21 - 22		
EC type examination certificate number / marking	INERIS 04ATEX0058 /  II2 D-Ex tD A21 IP66 T85°C		
Fluid connection	1/4" BSP female		
Electrical connection	Screw terminals, 1 entry fitted with ISO M20 cable gland		
Temperature range	- 20...+ 60°C		
Degree of protection	IP66		
Rated operational characteristics	AC15; B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)		
Short-circuit protection	By 10 A cartridge fuse type gG (gl)		
Setting range of upper limit (PH)	-0.14...-1 bar	-0.02...-0.2 bar	-0.5...5 bar
Body dimensions, W x D x H	55 x 77.5 x 158 mm	150 x 155.5 x 145 mm	113 x 35 x 75 mm
Fluids controlled	Oil, water, air, up to +70°C		
Possible differential	Oil, water, air, up to +70°C	Oil, air, up to +160°C	Oil, water, air, up to +70°C
(subtract from PH to give PB) (1)	Min. at low setting 0.13 bar Min. at high setting 0.13 bar Max. at high setting 0.8 bar	0.018 bar 0.018 bar 0.18 bar	0.5 bar 0.5 bar 6 bar
Single-pole snap action contact	<b>XMLBM02V2S12EX</b>	<b>XMLBM03R2S12EX</b>	<b>XMLBM05A2S12EX</b>

(1) For **XMLBM02V2S12EX** and **XMLBM03R2S12EX** vacuum switches add to PB to give PH



Type	Pressure switches with setting scale		
Size	10 bar	20 bar	35 bar
Conformity	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1		
Zone D (dust)	21 - 22		
EC type examination certificate number / marking	INERIS 04ATEX0058 /  II2 D-Ex tD A21 IP66 T85°C		
Fluid connection	1/4" BSP female		
Electrical connection	Screw terminals, 1 entry fitted with ISO M20 cable gland		
Temperature range	- 20...+ 60°C		
Degree of protection	IP66		
Rated operational characteristics	AC15; B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)		
Short-circuit protection	By 10 A cartridge fuse type gG (gl)		
Setting range of upper limit (PH)	0.7...10 bar	1.3...20 bar	3.5...35 bar
Body dimensions, W x D x H	35 x 75 x 113 mm		
Fluids controlled	Oil, water, air, up to +70°C		
Possible differential	0.57 bar	1 bar	1.7 bar
(subtract from PH to give PB)	Min. at low setting 0.85 bar Min. at high setting 0.85 bar Max. at high setting 7.5 bar	1.6 bar 11 bar	2.55 bar 20 bar
Single-pole snap action contact	<b>XMLB010A2S12EX</b>	<b>XMLB020A2S12EX</b>	<b>XMLB035A2S12EX</b>

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Other characteristics: please refer to the "Global Detection" catalogue



Pressure switches with setting scale				
0.05 bar	0.35 bar	1 bar	2.5 bar	4 bar
Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1				
21 - 22				
INERIS 04ATEX0058 /  II2 D-Ex tD A21 IP66 T85°C				
1/4" BSP female				
Screw terminals, 1 entry fitted with ISO M20 cable gland				
- 20...+ 60°C				
IP66				
AC15; B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)				
By 10 A cartridge fuse type gG (gl)				
0.026...0.05 bar	0.045...0.35 bar	0.05...1 bar	0.3...2.5 bar	0.25...4 bar
200 x 204 x 145 mm	110 x 110 x 162 mm		55 x 77.5 x 158 mm	55 x 77.5 x 158 mm
Oil, air, up to +160°C			Oil, water, air, up to +70°C	
0.0014 bar	0.042 bar	0.04 bar	0.16 bar	0.2 bar
0.004 bar	0.05 bar	0.06 bar	0.21 bar	0.25 bar
0.04 bar	0.3 bar	0.75 bar	1.75 bar	2.4 bar
<b>XMLBL05R2S12EX</b>	<b>XMLBL35R2S12EX</b>	<b>XMLB001R2S12EX</b>	<b>XMLB002A2S12EX</b>	<b>XMLB004A2S12EX</b>



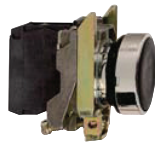
Pressure switches with setting scale			
70 bar	160 bar	300 bar	500 bar
Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1			
21 - 22			
INERIS 04ATEX0058 /  II2 D-Ex tD A21 IP66 T85°C			
1/4" BSP female			
Screw terminals, 1 entry fitted with ISO M20 cable gland			
- 20...+ 60°C			
IP66			
AC15; B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A)/DC13; R300 (Ue = 250 V, Ie = 0.1 A)			
By 10 A cartridge fuse type gG (gl)			
7...70 bar	10...160 bar	22...300 bar	30...500 bar
35 x 75 x 113 mm			
Oil, up to +160°C			
4.7 bar	9.3 bar	19.4 bar	23 bar
8.8 bar	20.8 bar	37 bar	52.6 bar
50 bar	100 bar	200 bar	300 bar
<b>XMLB070D2S12EX</b>	<b>XMLB160D2S12EX</b>	<b>XMLB300D2S12EX</b>	<b>XMLB500D2S12EX</b>



Harmony

# Pushbuttons and mushroom heads

## Contact functions



Type		Ø 22 pushbuttons with metal bezel					
Conformity		Directive ATEX D 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1					
Zone D (dust)		21 - 22					
EC type examination certificate number / marking		INERIS 04ATEX9004U /  II 2 D-Ex tD A21 IP65/66					
Mechanical durability (millions of operating cycles)		5					
Temperature range		- 20...+ 60°C					
Degree of protection		IP65 and IP66					
Mounting	Panel cut-out	Ø 22.5 mm (22.4 <sup>+0.4</sup> recommended)					
	Mounting centres	30 x 40 mm					
Depth below head		43 mm					
Connection		Screw clamp terminals					
Rated operational characteristics		AC15; A600 (Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A or Ue = 120 V, Ie = 6 A) DC13; Q600 (Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A)					
Short-circuit protection		By 10 A cartridge fuse type gG (gl)					
Pushbutton type		Flush with transparent silicone boot					
Contact		N/O		N/C		N/O	
Colour of push		● white	● black	● green	● red	● yellow	● blue
References	Insertion of legend not possible	–	<b>XB4BP21EX</b>	<b>XB4BP31EX</b>	<b>XB4BP42EX</b>	<b>XB4BP51EX</b>	<b>XB4BP61EX</b>
	Insertion of legend possible	<b>XB4BP181EX</b>	–	<b>XB4BP381EX</b>	<b>XB4BP482EX</b>	<b>XB4BP581EX</b>	<b>XB4BP681EX</b>
Pushbutton type		Flush with coloured silicone boot					
Contact		N/O		N/C		N/O	
Colour of silicone boot		● white	● black	● green	● red	● yellow	● blue
References		<b>XB4BPS11EX</b>	<b>XB4BPS21EX</b>	<b>XB4BPS31EX</b>	<b>XB4BPS42EX</b>	<b>XB4BPS51EX</b>	<b>XB4BS61EX</b>
Ø 40 mushroom head pushbutton type		Spring return					
Contact		N/O		N/C		N/O	
Colour of push		● black	● green	● red	● yellow	● blue	
References		<b>XB4BC21EX</b>	<b>XB4BC31EX</b>	<b>XB4BC42EX</b>	<b>XB4BC51EX</b>	<b>XB4BC61EX</b>	



Type		Ø 40 mushroom head Emergency stop pushbuttons		
Conformity		Directive ATEX D 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1, IEC/EN 60947-5-5		
Zone D (dust)		21 - 22		
EC type examination certificate number / marking		INERIS 04ATEX9004U /  II 2 D-Ex tD A21 IP65/66		
Mechanical durability (millions of operating cycles)		0.3		
Temperature range		- 20...+ 60°C		
Degree of protection		IP65		
Mounting	Panel cut-out	Ø 22.5 mm (22.4 <sup>+0.4</sup> recommended)		
	Mounting centres	30 x 40 mm		
Depth below head		43 mm		
Connection		Screw clamp terminals		
Rated operational characteristics		AC15; A600 (Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A or Ue = 120 V, Ie = 6 A) DC13; Q600 (Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A)		
Short-circuit protection		By 10 A cartridge fuse type gG (gl)		
Ø 40 latching mushroom head pushbutton type		Push-pull with trigger action	Key release ( n° 455)	Turn to release
Contact(s)		N/C + N/O	N/C	N/C
Colour of push		● red	● red	● red
References		<b>XB4BT845EX</b>	<b>XB4BS142EX</b>	<b>XB4BS542EX</b>


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Other characteristics: please refer to the "Human-Machine Interface components" catalogue

# Selector switches and key switches

## Contact functions



Type		Ø 22 selector switches and key switches with metal bezel	
Conformity		Directive ATEX D 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1	
Zone D (dust)		21 - 22	
EC type examination certificate number / marking		INERIS 04ATEX9004U /  II 2 D-Ex tD A21 IP65/66	
Mechanical durability (millions of operating cycles)		3	
Temperature range		- 20...+ 60°C	
Degree of protection		IP65	
Mounting	Panel cut-out	Ø 22.5 mm (22.4 <sup>+0.4</sup> <sub>0</sub> recommended)	
	Mounting centres	30 x 40 mm	
Depth below head		43 mm	
Connection		Screw clamp terminals	
Rated operational characteristics		AC15; A600 (Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A or Ue = 120 V, Ie = 6 A) DC13; Q600 (Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A)	
Short-circuit protection		By 10 A cartridge fuse type gG (gl)	
Selector switch type		Standard handle	
Contacts		N/C + N/O	N/O + N/O
Colour		● black	● black
References	2 position stay put	<b>XB4BD25EX</b>	–
	3 position stay put	–	<b>XB4BD33EX</b>
	3 position spring return to centre	–	<b>XB4BD53EX</b>
Selector switch type		Long handle	
Contact(s)		N/O	N/O + N/O
Colour		● black	● black
References	2 position stay put	<b>XB4BJ21EX</b>	–
	3 position stay put	–	<b>XB4BJ33EX</b>
	3 position spring return to centre	–	<b>XB4BJ53EX</b>
Key switch type		Key n° 455	
Contact(s)		N/O	N/O + N/O
Colour		● black	● black
References	2 position stay put, key withdrawal in LH position	<b>XB4BG21EX</b>	–
	2 position stay put, key withdrawal in both positions	<b>XB4BG41EX</b>	–
	2 position spring return, key withdrawal in LH position	<b>XB4BG61EX</b>	–
	3 position stay put, key withdrawal in centre position	–	<b>XB4BG33EX</b>
	3 position stay put, key withdrawal in all 3 positions	–	<b>XB4BG03EX</b>

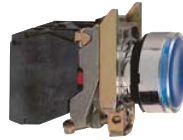
Other characteristics: please refer to the "Human-Machine Interface components" catalogue



Harmony

# Illuminated pushbuttons and pilot lights

## Contact and light functions (integral LED)



Type		Ø 22 illuminated pushbuttons with metal bezel					
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1					
Zone D (dust)		21 - 22					
EC type examination certificate number / marking		INERIS 04ATEX9004U /  II 2 D-Ex tD A21 IP65/66					
Mechanical durability (millions of operating cycles)		5					
Service life		100,000 hours at ambient temperature					
Temperature range		- 20...+ 60°C					
Degree of protection		IP65					
Mounting	Panel cut-out	Ø 22.5 mm (22.4 <sup>+0.4</sup> <sub>0</sub> recommended)					
	Mounting centres	30 x 40 mm					
Depth below head		43 mm					
Connection		Screw clamp terminals					
Rated operational characteristics		AC15; A600 (Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A or Ue = 120 V, Ie = 6 A DC13; Q600 (Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A)					
Short-circuit protection		By 10 A cartridge fuse type gG (gl)					
Light source		Integral LED					
Illuminated pushbutton type, with integral LED		Flush with transparent silicone boot					
Contact		N/O		N/C		N/O	
Colour of push		● white	● green	● red	● yellow	● blue	
References	LED voltage	24 VAC/DC	<b>XB4BP183B5EX</b>	<b>XB4BP383B5EX</b>	<b>XB4BP483B5EX</b>	<b>XB4BP583B5EX</b>	<b>XB4BP683B5EX</b>
		110...120 VAC	<b>XB4BP183G5EX</b>	<b>XB4BP383G5EX</b>	<b>XB4BP483G5EX</b>	<b>XB4BP583G5EX</b>	<b>XB4BP683G5EX</b>
		240 VAC	<b>XB4BP183M5EX</b>	<b>XB4BP383M5EX</b>	<b>XB4BP483M5EX</b>	<b>XB4BP583M5EX</b>	<b>XB4BP683M5EX</b>
		24...120 VAC/DC	<b>XB4BP183BG5EX</b>	<b>XB4BP383BG5EX</b>	<b>XB4BP483BG5EX</b>	<b>XB4BP583BG5EX</b>	<b>XB4BP683BG5EX</b>



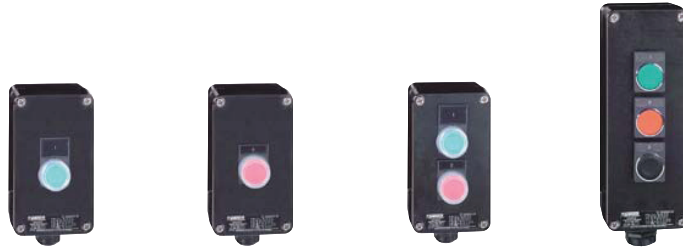
Type		Ø 22 pilot lights with metal bezel					
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1					
Zone D (dust)		21 - 22					
EC type examination certificate number / marking		INERIS 04ATEX9004U /  II 2 D-Ex tD A21 IP65/66					
Service life		100,000 hours at ambient temperature					
Temperature range		- 20...+ 60°C					
Degree of protection		IP65					
Mounting	Panel cut-out	Ø 22.5 mm (22.4 <sup>+0.4</sup> <sub>0</sub> recommended)					
	Mounting centres	30 x 40 mm					
Depth below head		43 mm					
Connection		Screw clamp terminals					
Rated operational characteristics		AC15; A600 (Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A or Ue = 120 V, Ie = 6 A DC13; Q600 (Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A)					
Short-circuit protection		By 10 A cartridge fuse type gG (gl)					
Light source		Integral LED					
Pilot light type		Pilot lights with integral LED, plain lens					
Colour of LED		● white	● green	● red	● yellow	● blue	
References	LED voltage	24 VAC/DC	<b>XB4BVB1EX</b>	<b>XB4BVB3EX</b>	<b>XB4BVB4EX</b>	<b>XB4BVB5EX</b>	<b>XB4BVB6EX</b>
		110...120 VAC	<b>XB4BVG1EX</b>	<b>XB4BVG3EX</b>	<b>XB4BVG4EX</b>	<b>XB4BVG5EX</b>	<b>XB4BVG6EX</b>
		240 VAC	<b>XB4BVM1EX</b>	<b>XB4BVM3EX</b>	<b>XB4BVM4EX</b>	<b>XB4BVM5EX</b>	<b>XB4BVM6EX</b>
		24...120 VAC/DC	<b>XB4BVBG1EX</b>	<b>XB4BVBG3EX</b>	<b>XB4BVBG4EX</b>	<b>XB4BVBG5EX</b>	<b>XB4BVBG6EX</b>

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Other characteristics: please refer to the "Human-Machine Interface components" catalogue

# Control stations

## Complete stations, metal or plastic



Type		Complete control stations			
Type of operators		Ø 22 flush pushbuttons			
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1			
Zone D (dust)		21 - 22			
EC type examination certificate number / marking		INERIS 04ATEX0023/  II2 D-Ex tD A21 IP65 T85°C			
Temperature range		- 20...+ 60°C			
Degree of protection		IP65			
Connection		1 entry fitted with ISO M20 cable gland			
Rated operational characteristics of contact blocks		AC15; A600 (Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A or Ue = 120 V, Ie = 6 A) DC13; Q600 (Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A)			
Short-circuit protection		By 10 A cartridge fuse type gG (gl)			
Function		1 function, Start or Stop		2 functions, Start - Stop	
Composition		1 spring return pushbutton		2 spring ret. pushbuttons	
Contact(s)		N/O		N/O + N/C	
Colour of pushbutton(s)		● green		● green + ● red	
Metal control stations		Dimensions, W x D x H		80 x 77 x 80 mm	
		Fixings: 4 x Ø 5.6 mm, centres		50 x 65 mm	
References		XAWF100EX		XAWF110EX	
Plastic control stations		Dimensions, W x D x H		80 x 77 x 130 mm	
		Fixings: 4 x Ø 5.6 mm, centres		50 x 115 mm	
References		XAWG100EX		XAWG110EX	
				XAWF210EX	
				XAWF310EX	
				80 x 77 x 175 mm	
				50 x 160 mm	
				85 x 70 x 226 mm	
				70 x 108 mm	
References		XAWG100EX		XAWG210EX	
				XAWG310EX	




Type		Complete control stations				
Type of operator		Ø 22 selector switch or key switch with metal bezel		Ø 40 mushroom head Emergency stop		
Conformity		Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1				
Zone D (dust)		21 - 22				
EC type examination certificate number / marking		INERIS 04ATEX0023 /  II2 D-Ex tD A21 IP65 T85°C				
Temperature range		- 20...+ 60°C				
Degree of protection		IP65				
Connection		1 entry fitted with ISO M20 cable gland				
Rated operational characteristics of contact blocks		AC15; A600 (Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A or Ue = 120 V, Ie = 6 A) DC13; Q600 (Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A)				
Short-circuit protection		By 10 A cartridge fuse type gG (gl)				
Function		1 function, Start/Stop		Emergency stop		
Composition		1 selector switch (1) standard black handle	1 key switch (1) key n° 455	1 Ø 40 mushroom head turn to release	1 Ø 40 mushroom head key release	1 push/pull Ø 40 with trigger action
Contact		N/O + N/C	N/O + N/C	N/C + N/C	N/C + N/C	N/C + N/C
Colour of operator		● black	● black	● red	● red	● red
Metal control stations		Dimensions, W x D x H		80 x 77 x 80 mm		
		Fixings: 4 x Ø 5.6 mm, centres		50 x 65 mm		
References		XAWF130EX	XAWF140EX	XAWF174EX	XAWF184EX	XAWF198EX
Plastic control stations		Dimensions, W x D x H		80 x 70 x 146 mm		
		Fixings: 4 x Ø 5.6 mm, centres		70 x 105 mm		
References		XAWG130EX	XAWG140EX	XAWG174EX	XAWG184EX	XAWG198EX

(1) 2 position stay put

Other characteristics: please refer to the "Human-Machine Interface components" catalogue



Type	Characteristics				
<b>Conformity</b>	Directive ATEX 94/9/CE, EN 60079-15, EN 50281-1-1 + A1, IEC 61241-0, EN 61241-1				
<b>Zone D (dust)</b>	22				
<b>EC type examination certificate number / marking</b>	INERIS 05ATEX3016X /  II 3 G D EEx nA nC IIC T5 - Ex tD A22 IP65 T100°C				
Display	Capacity	2 lines, 20 characters   1 to 4 lines, 5 to 20 characters			
	Type	Back-lit LCD green	Back-lit LCD 3 colours green, orange, red	Back-lit LCD green	
<b>Data entry</b>	Via keypad with 8 keys (4 customizable keys)				
<b>Function</b>	Representation of variables	Alphanumeric			
	Alarm log	No	Yes	Yes	Yes
<b>Communication</b>	Serial link	1 RJ45 (RS 232 - RS 485)		1 Sub-D25 (RS 232 - RS 485)	
<b>Downloadable protocols</b>	Uni-TE, Modbus Master		Uni-TE, Modbus Master, Siemens, Rockwell, Omron, Mitsubishi		Modbus
<b>Development software</b>	Vijeo Designer Lite (on Windows 2000 and XP)				
<b>Dimensions W x D x H</b>	132 x 37 x 74 mm				
<b>Compatibility with PLCs</b>	Twido, Modicon TSX Micro, Modicon Premium, Modicon M340		Twido, Modicon TSX Micro, Modicon Premium, Modicon Quantum, Modicon Momentum, Modicon M340		Motor starter Tesys Model U
<b>Supply voltages</b>	5 VDC or PLC power supply		24 VDC		
<b>References</b>	<b>XBTN200</b>	<b>XBTN400</b>	<b>XBTN410</b>	<b>XBTN401</b>	<b>XBTNU400</b>

(1) Except XBTN200: alphanumeric screen.

# Small Panel Magelis XBT R with matrix screen



Type	Characteristics		
Conformity	Directive ATEX 94/9/CE, EN 60079-15, EN 50281-1-1 + A1, IEC 61241-0, EN 61241-1		
Zone D (dust)	22		
EC type examination certificate number / marking	INERIS 05ATEX3016X /  EEx nA nC IIC T5 - Ex tD A22 IP65 T100°C		
Display	Capacity	4 lines, 20 characters	
	Type	Back-lit LCD green	Back-lit LCD, 3 colours green, orange, red
Data entry	Via keypad with 20 keys (12 customizable keys)		
Function	Representation of variables	Alphanumeric	
	Alarm log	Yes	Yes
Communication	Serial link	1 RJ45 (RS 232 - RS 485)	1 Sub-D25 (RS 232 - RS 485)
Downloadable protocols	Uni-TE, Modbus Master		Uni-TE, Modbus Master/Slave (1), Siemens, Rockwell, Omron, Mitsubishi
Development software	Vijeo Designer Lite (on Windows 2000 and XP)		
Dimensions W x D x H	137 x 37 x 118 mm		
Compatibility with PLCs	Twido, Modicon TSX Micro, Modicon Premium, Modicon M340	Twido, Modicon TSX Micro, Modicon Premium, Modicon Quantum, Modicon Momentum, Modicon M340	
Supply voltages	5 VDC or PLC power supply	24 VDC	
References	<b>XBTR400</b>	<b>XBTR410</b>	<b>XBTR411</b>


(1) for XBTR411 only

# Magelis XBT RT with semi-graphic and touchscreen



Type	Characteristics		
Conformity	Directive ATEX 94/9/CE, EN 60079-0, EN 60079-15, EN 61241-0, EN 61241-1		
Zone D (dust)	22		
EC type examination certificate number / marking	INERIS 07ATEX3019X /  Ex nA nC IIC T6 - Ex tD A22 IP64 T85°C		
Display	Capacity	10 lines, 33 characters	
	Type	Back-lit LCD green	Back-lit LCD green, orange, red
Data entry	Via keypad with 12 keys (10 customizable keys)		Via keypad with 12 customizable keys
Functions	Representation of variables	Alphanumeric, bargraph, curves, button and light	
	Alarm log	Yes	Yes
Communication	Serial link	1 RJ45 (RS 232 - RS 485)	1 RJ45 (RS 232 - RS 485)
Downloadable protocols	Uni-TE, Modbus Master, Siemens, Rockwell, Omron, Mitsubishi		
Development software	Vijeo Designer Lite (on Windows 2000 and XP)		
Dimensions W x D x H	137 x 37 x 118 mm		
Compatibility with PLCs	Twido, Modicon TSX Micro, Modicon Premium, Modicon M340, Modicon Quantum		
Supply voltages	5 VDC or PLC power supply	24 VDC	
References	<b>XBTRT500</b>	<b>XBTRT511</b>	




Type		Characteristics				
<b>Conformity</b>		Directive ATEX 94/9/CE, EN 60079-15, EN 61241-0, EN 61241-1, EN 60079-0 (1)				
<b>Zone D (dust)</b>		22				
<b>EC type examination certificate number / marking</b>		INERIS 06ATEX3024X / INERIS 08ATEX3024X / INERIS 06ATEX3024X / INERIS 08ATEX3024X / INERIS 08ATEX3024X /  II 3 G D EEx nA nC IIC T4 - Ex tD A22 IP64 T135°C				
<b>Display</b>	LCD screen size	3.8"				
	Type	STN monochrome, amber or red			TFT colour	
<b>Functions</b>	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, button, light, clock, flashing light, keypad				
	Curves / Alarm logs	Yes, with log / Yes, incorporated				
<b>Communication</b>	Serial link	1 RJ45 (RS 232 - RS 485)				
	Networks	-		Ethernet, IEEE 802.3 10 BASE-T, RJ45	Ethernet, IEEE 802.3 10/100 BASE-T, RJ45	
<b>Downloadable protocols</b>		Mitsubishi (Melsec), Omron (Sysmac), Rockwell Automation (Allen Bradley), Siemens (Sematic) Uni-TE, Modbus, Modbus TCP				
<b>Development software</b>		Vijeo Designer VJD●●●TG●V●●M (on Windows Vista, XP and 2000)				
<b>Dimensions W x D x H</b>		130x41x104mm				
<b>Compatibility with PLCs</b>		Twido, Modicon TSX Micro, Modicon Premium, Modicon Quantum, Modicon M340				
<b>«Compact Flash» card slot</b>		No				
<b>USB port</b>		-	1	-	1	1
<b>Built-in Ethernet TCP/IP</b>		No		Yes		
<b>Supply voltage</b>		24 VDC				
<b>References</b>		<b>XBTGT1100</b>	<b>XBTGT1105</b>	<b>XBTGT1130</b>	<b>XBTGT1135</b>	<b>XBTGT1335</b>

(1) Does not take effect for XBTGT1100 and XBTGT1130

## Magelis XBT GT with 5.7" touchscreen



Type		Characteristics				
<b>Conformity</b>		Directive ATEX 94/9/CE, EN 60079-15, EN 61241-0, EN 61241-1				
<b>Zone D (dust)</b>		22				
<b>EC type examination certificate number / marking</b>		INERIS 06ATEX3024X /  II 3 G D EEx nA nC IIB T3 - Ex tD A22 IP64 T200°C				
<b>Display</b>	LCD screen size	5.7"				
	Type	Back-lit STN, monochrome blue      black and white		STN, colour 4096 colours	TFT, colour 65536 colours	
<b>Functions</b>	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, button, light, clock, flashing light, keypad				
	Curves / Alarm logs	Yes, with log / Yes, incorporated				
<b>Communication</b>	Serial link	1 Sub-D9 (RS 232/RS 422 - RS 485) + 1 RJ45 (RS 485)				
	Networks	-		Ethernet, IEEE 802.3 10/100 BASE-T, RJ45	-	Ethernet, IEEE 802.3 10/100 BASE-T, RJ45
<b>Downloadable protocols</b>		Mitsubishi (Melsec), Omron (Sysmac), Rockwell Automation (Allen Bradley), Siemens (Sematic) Uni-TE, Modbus, Modbus TCP/IP				
<b>Development software</b>		Vijeo Designer VJD●●●TG●V●●M (on Windows Vista, XP and 2000)				
<b>Dimensions W x D x H</b>		167.5x60x135mm				
<b>Compatibility with PLCs</b>		Twido, Modicon TSX Micro, Modicon Premium, Modicon Quantum, Modicon M340, Modicon Momentum				
<b>«Compact Flash» card slot</b>		No	Yes			
<b>USB port</b>		1				
<b>Video in</b>		No				
<b>Built-in Ethernet TCP/IP</b>		No	No	Yes	No	Yes
<b>Supply voltage</b>		24 VDC				
<b>References</b>		<b>XBTGT2110</b>	<b>XBTGT2120</b>	<b>XBTGT2130</b>	<b>XBTGT2220</b>	<b>XBTGT2330</b>

# Advanced Panel

## Magelis XBT GT

### with 7.5", 10.4", 12.1", 15" touchscreen



Type		Characteristics										
<b>Conformity</b>		Directive ATEX 94/9/CE, EN 60079-15, EN 61241-0, EN 61241-1										
<b>Zone D (dust)</b>		22										
<b>EC type examination certificate number / marking</b>		INERIS 06ATEX3024X /  II 3G D EEx nA nC IIB T4 - Ex tD A22 IP64 T135°C					INERIS 06ATEX3024X /  II 3D Ex tD A22 IP64 T135°C					
<b>Display</b>	LCD screen size	7.5"					10.4"			12.1"		15"
	Type (colour)	STN	TFT	TFT	STN	TFT	TFT	TFT	TFT	TFT	TFT	
	Number of colours	4096	65536	65536	4096	65536	65536	65536	65536	65536	65536	
<b>Functions</b>	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, button, light, clock, flashing light, keypad										
	Curves / Alarm logs	Yes, with log / Yes, incorporated										
<b>Communication</b>	Serial link	1 Sub-D9 (RS 232/RS 422 - RS 485) + 1 RJ45 (RS 485)										
	Networks	Ethernet, IEEE 802.3 10/100 BASE-T, RJ 45										
<b>Downloadable protocols</b>		Mitsubishi (Melsec), Omron (Sysmac), Rockwell Automation (Allen Bradley), Siemens (Simatic) Uni-TE, Modbus, Modbus TCP/IP										
<b>Development software</b>		Vijeo Designer VJD●●●TG●V●●M (on Windows Vista, XP and 2000)										
<b>Dimensions W x D x H (mm)</b>		215x60x170			313x56x239			271x57x213		313x56x239		395x60x294
<b>Compatibility with PLCs</b>		Twido, Modicon TSX Micro, Modicon Premium, Modicon Quantum, Modicon M340										
<b>«Compact Flash» card slot</b>		Yes										
<b>USB port</b>		1	1	1	2	2	2	2	2	2	2	
<b>Video in</b>		No	No	Yes	No	No	Yes	No	Yes	Yes		
<b>Built-in Ethernet TCP/IP</b>		Yes										
<b>Supply voltage</b>		24 VDC										
<b>References</b>		XBTGT4230	XBTGT4330	XBTGT4340	XBTGT5230	XBTGT5330	XBTGT5340	XBTGT6330	XBTGT6340	XBTGT7340		



Preventa

## Emergency stops and foot switches Cable (tripwire) operated Emergency stops



For operating cable up to 50 m long		Latching, without indicator light			
Conformity	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1				
Zone D (dust)	21 - 22				
EC type examination certificate number / marking	INERIS 04ATEX0015 /  II2 D-Ex tD A21 IP65 T85°C				
Mechanical durability (millions of operating cycles)	0.01				
Temperature range	- 20...+ 60°C				
Degree of protection	IP65				
Connection	3 entries for ISO M20 cable gland				
Rated operational characteristics	AC15; A300 (Ue = 240 V, Ie = 3A)/DC13; Q300 (Ue = 250 V, Ie = 0.27 A)				
Short-circuit protection	By 10 A cartridge fuse type gG (gl)				
Dimensions, W x D x H	229 x 82 x 142 mm		229 x 105 x 142 mm		
Reset	By booted pushbutton		By key release pushbutton (key n° 421)		
Operating cable length	≤ 50 m		≤ 50 m		
Operating cable anchoring point	To left		To right		To right
References	N/C + N/O slow break	XY2CE2A250EX	XY2CE1A250EX	XY2CE2A450EX	XY2CE1A450EX
	N/C + N/C slow break	XY2CE2A270EX	XY2CE1A270EX	XY2CE2A470EX	XY2CE1A470EX

## Foot switches, metal



Type	Single pedal switches			
Conformity	Directive ATEX 94/9/EC, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1			
Zone D (dust)	21 - 22			
EC type examination certificate number / marking	INERIS 04ATEX0025 /  II2 D-Ex tD A21 IP65 T85°C			
Mechanical durability (millions of operating cycles)	5			
Temperature range	- 20...+ 60°C			
Degree of protection	IP66			
Connection	2 entries for n° 16 (Pg 16) cable gland (1)			
Rated operational characteristics	AC15; A300 (Ue = 240 V, Ie = 3 A)/DC13; Q300 (Ue = 250 V, Ie = 0.27 A)			
Short-circuit protection	By 10 A cartridge fuse type gG (gl)			
Dimensions, W x D x H	104 x 172 x 59 mm			
Colour	Blue		Orange	
Contact operation	1 step	2 step	1 step	2 step
References	1 N/C + N/O	XPEM110EX	-	XPER110EX
	2 N/C + N/O	XPEM111EX	XPEM211EX	XPER111EX

(1) 1 entry fitted with blanking plug, 1 entry fitted with n° 16 (Pg 16) cable gland

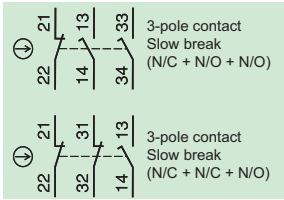
10

Other characteristics: please refer to the "Machine safety" catalogue



Preventa

# Safety switches and actuators

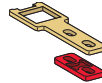


ISO entry (to EN 50262)



<b>Metal switches type</b>	<b>XCSA/B/C, 1 x ISO M20 cable entry</b>			
With head	Without locking	Interlocking, unlocking by button	Interlocking, unlocking by key lock	
<b>Conformity</b>	Directive ATEX 94/9/CE, EN 50014, EN 50281-1-1, pr IEC 61241-0, pr IEC 61241-1			
<b>Zone D (dust)</b>	21 - 22			
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0014X /  D-Ex tD A21 IP67 T85°C			
<b>Actuation speed (min → max)</b>	0,1 m/s → 0,5 m/s			
<b>Degree of protection</b>	IP 67			
<b>Rated operational characteristics (conforming to EN IEC 60947-5-1)</b>	AC 15, A 300 / DC 13, Q 300			
<b>Temperature range</b>	-20...+60°C			
<b>Dimensions (body + head) W x D x H</b>	40 x 44 x 113.5 mm	52 x 44 x 113.5 mm	52 x 44 x 113.5 mm	
<b>Short-circuit protection</b>	By 10 A cartridge fuse type gG (gl)			
<b>Complete switch</b>	N/C + N/O + N/O	<b>XCSA502EX</b>	<b>XCSB502EX</b>	<b>XCSC502EX</b>
	N/C + N/C + N/O	<b>XCSA702EX</b>	<b>XCSB702EX</b>	<b>XCSC702EX</b>

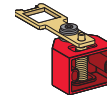
## Accessories



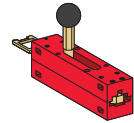
Straight actuator



Wide actuator



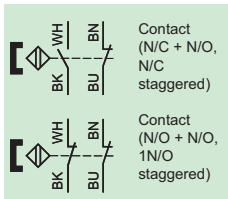
Pivoting actuator



Door lock

<b>For safety switches XCSA/B/C/E</b>	<b>Actuators</b>			<b>Door lock</b>
References	XCSZ01	XCSZ02	XCSZ03	XCSZ05

## Coded magnetic



<b>Plastic switches type</b>	<b>XCSDM coded magnetic, Pre-cabled, L = 2 m</b>			
	Rectangular without LED			
<b>Conformity</b>	Directive ATEX 94/9/CE, EN 50281-1.1 & 1.2, EN/IEC 61241-0, EN/IEC 61241-1, EN/IEC 60304, EN 1088, EN954-1			
<b>Zone D (dust)</b>	0-1-2/20-21-22*(according to protection mode, mD or ia).			
<b>EC type examination certificate number / marking</b>	INERIS 04ATEX0036 /  GD-Ex tD A21 IP67 T135°C			
<b>Switches for actuation</b>	Face to face, face to side, side to side			
<b>Degree of protection</b>	IP 66 + IP 67			
<b>Type of contact</b>	REED			
<b>Rated operational characteristics</b>	Ue = 24 VDC, Ie = 100 mA			
<b>Temperature range</b>	-20...+60°C			
<b>Dimensions W x D x H</b>	16 x 7 x 51 mm			
<b>Operating zone (4)</b>	Sao = 5 / Sar = 15			
<b>Short-circuit protection</b>	By 10 A cartridge fuse type gG (gl)			
<b>Switch with coded magnet</b>	N/C + N/O, N/C staggered	<b>XCSDMC5902EX</b>		
	N/O + N/O, 1N/O staggered	<b>XCSDMC7902EX</b>		



## Automation platform Weighing system for Modicon Premium



<b>Module type</b>	<b>ISP Plus</b> Supplied calibrated
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50020, EN 50039, EN 50284, EN 50281-1-1
<b>Zone D (dust)</b>	Mounted outside zone (to be used in conjunction with products for zone 21 or 22)
<b>EC type examination certificate number / marking</b>	LCIE 03ATEX6399X /  II 2/(2) SYST GD-EEEx ib IIC T6 or IIB T6
<b>Connection</b>	By connectors: Sub-D 15-way male for sensors and Sub-D 9-way male for transfer of weights
<b>Load cell inputs</b>	50 measurements (for 1 to 8 load cells)
<b>Outputs</b>	2 discrete and 1 RS 485 for display
<b>References</b>	Without display With display TSXXBTH100
	<b>TSXISPY101</b> <b>TSXISPY111</b>

## Intrinsically safe I/O modules for Modicon Quantum



Module type	Inputs/outputs		Analogue		
	Discrete				
<b>Conformity</b>	Directive ATEX 94/9/EC, EN 50014, EN 50020, EN 50284, EN 50281-1-1				
<b>Zone D (dust)</b>	Mounted outside zone (to be used in conjunction with products for zone 20, 21 or 22)				
<b>EC type examination certificate number / marking</b>	SIRA 02ATEX2345X /  I(1) GD-[EEEx ia] IIC; Ta = - 20...+ 60 °C				
<b>Connection</b>	By screw terminal block 140XTS33200 (to be ordered separately)				
<b>Number of inputs</b>	8	–	8	–	–
<b>Number of outputs</b>	–	8	–	–	8
<b>Signal inputs</b>	–	–	Thermal probes	0...25/20 mA	
			Thermocouple (1)	4...25 mA	
<b>Resolution</b>			12 bits + sign	0...25,000 points	15 bits
<b>References</b>	<b>140DII33000</b>	<b>140DIO33000</b>	<b>140AII33000</b>	<b>140AII33010</b>	<b>140AIO33000</b>

(1) Type J, K, E, T, S, R, B, mV