

# Technor

## EEx ed Limit switches

### Gas and Dust / Dust only

### XCKW... / XCKW...EX

### XCR.W... / XCR.W...EX



### Features

This limit switches range is based on Telemecanique mechanical heads and bodies limit switches, equipped with EEx ed Technor ATEX contact block. The products are well known around the world for their liability, design and possibilities of the different heads.

- IP65 and IP66 protection as standard
- Suitable for Gas and Dust or Dust only
- Wide temperature range (-20°C + 60°C)
- ATEX approved

### Applications

In zone 1 or 2, gas and dust areas for hoisting handling and conveying.

### General specifications

Material	Zinc Alloy and steel
IP Rating	IP65, for XCR, IP66 for XCKW
Temperature	-20°C to +60°C
Approvals	INERIS 04ATEX0038X/04ATEX0039X
Standards	Cenelec EN50014, EN50018, EN50019, EN50281-1-1
Ex-Code for Gas and Dust	EEx ed IIC T6 T85°C ATEX II 2 GD
EX-Code for Dust	Ex tDA21IP66/67 T85°C ATEX II 2 D
Entires	ISO M20 or M16
Mechanical durability	2 to 15 millions of operations
Thermal current contact block	6A with N/O + N/C (500v)



### The Limit Switches are available in the 2 types, Gas and Dust or Dust only based on the same body and head

Gas and Dust	Dust Only	Contact type for Dust switches
XCKWMR54D1H29	XCKWMR54D1H29EX	2N/C + 2N/C staggered, slow break contacts
XCKWMR54D2H29	XCKWMR54D2H29EX	
XCRAW111	XCRAW111EX	2N/C + 2N/O snap action contacts, both actuated in each direction
XCRAW121	XCRAW121EX	
XCRAW151	XCRAW151EX	
XCREW181	XCREW181EX	
XCRBW111	XCRBW111EX	
XCRBW121	XCRBW121EX	2N/O + 2N/C snap action contacts, one actuated in each direction
XCRBW151	XCRBW151EX	
XCRFW171	XCRFW171EX	
XCRTW115	XCRTW115EX	2 single-pole C/O snap action contacts
XCRTW215	XCRTW215EX	
XCKWD2110P16	XCKWD3910P16EX	N/C+N/C+N/O snap action
XCKWD2111P16	XCKWD3911P16EX	
XCKWD2102P16	XCKWD3902P16EX	
XCKWD2121P16	XCKWD3921P16EX	
XCKWD2127P16	XCKWD3927P16EX	
XCKWD2128P16	XCKWD3928P16EX	
XCKWD2118P16	XCKWD3918P16EX	
XCKWD2139P16	XCKWD3939P16EX	
XCKWD2145P16	XCKWD3945P16EX	
XCKWD2149P16	XCKWD3949P16EX	
XCKWD2106P16	XCKWD3906P16EX	
XCKWD21H0P16	XCKWD39H0P16EX	
XCKWD21H2P16	XCKWD39H2P16EX	
XCKWM2110H29	XCKWM3910H29EX	
XCKWM2102H29	XCKWM3902H29EX	
XCKWM2121H29	XCKWM3921H29EX	
XCKWM2115H29	XCKWM3915H29EX	
XCKWM2106H29	XCKWM3906H29EX	
XCKWJ2161H29	XCKWJ3961H29EX	N/C+N/C+N/O snap action
XCKWJ2167H29	XCKWJ3967H29EX	
XCKWJ210513H29	XCKWJ390513H29EX	
XCKWJ210511H29	XCKWJ390511H29EX	
XCKWJ210541H29	XCKWJ390541H29EX	
XCKWJ210559H29	XCKWJ390559H29EX	



### XCKWMR, For hoisting, handling, conveyor belts (fixing centres 61.5mm)

Type of actuator	Square cross levers 6mm crossed	Square cross levers 6mm crossed reversed head
Mechanical durability (millions of operating cycles)	2	
Actuation speed	1,5 m/s	
Cable entry	3 entries ISO M20 (1)	
Body dimensions WxHxD (mm)	118x59x77	
2N/C + 2N/C snap action break for make	XCKWMR54D1H29	XCKWMR54D2H29

(1) 2 entries fitted with blank plugs, 1 with cable gland ISO M20 for cable Ø8 to 13mm

### XCRA/B/TW, For hoisting, handling, conveyor belts (fixing centres 85x75mm)



Type of actuator	Rotary (lever)				Conveyor belt shift monitoring switch	
	Square cross levers 6mm crossed spring return position	Large roller rod lever thermoplastic Ø 30mm	Large roller rod lever thermoplastic Ø 50mm	Square cross levers 6mm crossed stay put position	Galvanized steel operating lever	Stainless steel operating lever
Mechanical durability (millions of operating cycles)	10				0.3	
Actuation speed	1.5m/s					
Cable entry	1 entry fitted with ISO M20 for cable Ø8 to 13mm					
Body dimensions WxHxD (mm)	85x75x95					
2N/O + 2N/O snap action, actuated in each direction	XCRAW111	XCRAW121	XCRAW151	XCREW181 (2)		
N/O + N/O snap action actuated in each direction	XCRBW111	XCRBW121	XCRBW151	XCRFW171 (3)		
2N/O + 2N/C snap action					XCRTW115	XCRTW215

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

### XCKWD, Compact, fixing by body (fixing centres 20mm)



Type of actuator	Metal end plunger	Booted metal end plunger	Steel roller plunger	Thermoplastic roller lever, horizontal actuation	Thermoplastic roller lever, vertical actuation
Mechanical durability (millions of operating cycles)	15		10	15	
Actuation speed	0,5 m/s			1 m/s	
Cable entry	1 entry fitted with ISO M16 cable gland for cable Ø 5 to 8 mm				
Body dimensions WxDxH (mm)	31x30x65				
N/C + N/O snap action	XCKWD2110P16	XCKWD2111P16	XCKWD2102P16	XCKWD2121P16	XCKWD2127P16
N/O + N/O snap action	XCKWD2910P16	XCKWD2911P16	XCKWD2902P16	XCKWD2921P16	XCKWD2927P16

### XCKWM, Classic, fixing by body (fixing centres 41mm)



Type of actuator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever, horizontal actuation	Thermoplastic roller lever	"Cat's whisker"
Mechanical durability (millions of operating cycles)	20				10
Actuation speed	0,5 m/s		1,5 m/s		0,5 m/s
Cable entry	3 entries ISO M20 (1)				
Body dimensions WxDxH (mm)	63x30x64mm				
N/C + N/O snap action	XCKWM2110H29	XCKWM2102H29	XCKWM2121H29	XCKWM2115H29	XCKWM2106H29

(1) 2 entries fitted with blank plugs, 1 with cable gland ISO M20 for cable Ø 8 to 13mm

### XCKWD, Compact, fixing by body (fixing centres 20mm)



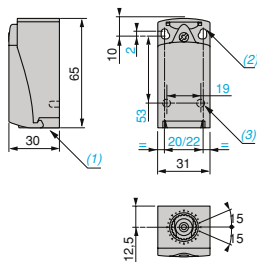
Thermoplastic roller lever, vertical or horiz. actuation	Thermoplastic roller lever	Thermoplastic roller lever Ø 50mm	Variable length thermoplastic roller lever	Variable length thermoplastic roller lever Ø 50mm	"Cat's whisker"	M18 head Metal end plunger	M18 steel roller end plunger
15	10				5	10	
1 m/s	1,5 m/s				1 m/s	0,5 m/s	
1 entry fitted with ISO M16 cable gland for cable Ø 5 to 8 mm							
31x30x65							
XCKWD2128P16	XCKWD2118P16	XCKWD2139P16	XCKWD2145P16	XCKWD2149P16	XCKWD2106P16	XCKWD21H0P16	XCKWD21H2P16
XCKWD2928P16	XCKWD2918P16	XCKWD2939P16	XCKWD2945P16	XCKWD2949P16	XCKWD2906P16	XCKWD29H0P16	XCKWD29H2P16

### XCKWJ, Compact, fixing by body (fixing centres 30x60mm)



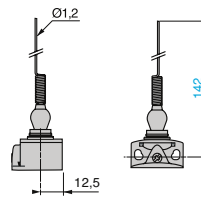
Metal end plunger	Steel roller plunger	Steel roller lever	Thermoplastic roller lever	Variable length thermoplastic roller lever	Roynd rod lever Ø 6mm polyamide L= 200mm
30	25	30		20	
0,5 m/s	1 m/s	1,5 m/s			
1 entry fitted ISO M20 equipped with cable gland for cable Ø 8 to 13 mm					
40x44x77					
XCKWJ2161H29	XCKWJ2167H29	XCKWJ210513H29	XCKWJ210511H29	XCKWJ210541H29	XCKWJ210559H29

### Limit switch, Compact, XCKWD (metal) - body + head

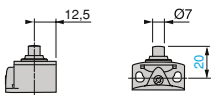


- (1) ISO M16 x 1,5 for cable gland.
- (2) 2 oblong holes  $\phi 4,3 \times 6,3$  mm pitch 22 mm or 2 holes  $\phi 4,3$  pitch 20 mm.
- (3) 2 holes for mounting  $\phi 3$  depth 4 mm.

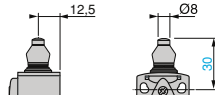
ZCE06



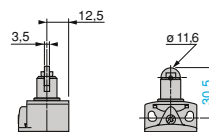
ZCE10



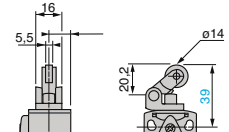
ZCE11



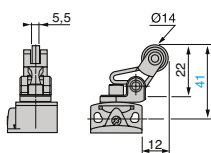
ZCE02



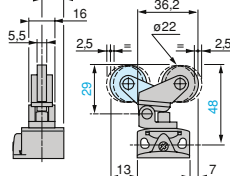
ZCE21



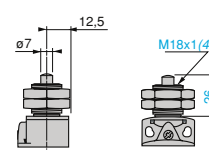
ZCE27



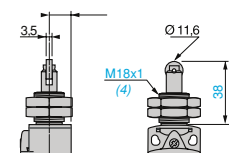
ZCE28



ZCEH0

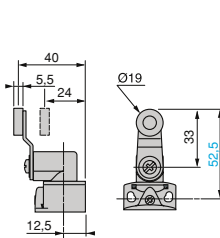


ZCEH2

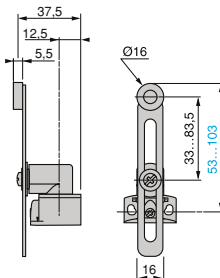


- (4) Screw thickness 3,5 mm.

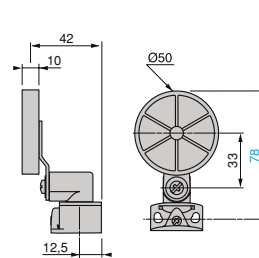
ZCE01 + ZCY18



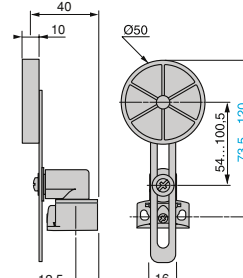
ZCE01 + ZCY45



ZCE01 + ZCY39

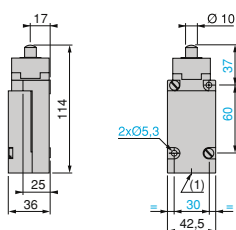


ZCE01 + ZCY49

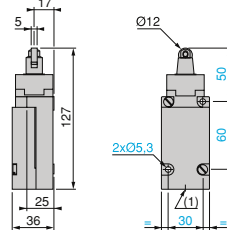


### Limit switch, Classic, XCKWJ (metal)

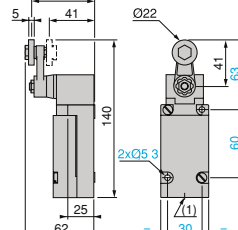
XCKWJ2161H29



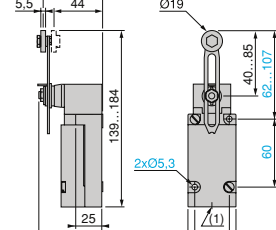
XCKWJ2167H29



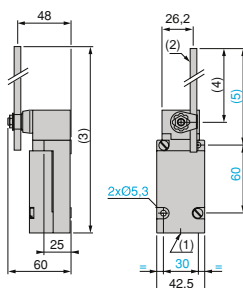
XCKWJ210513H29



XCKWJ210541H29



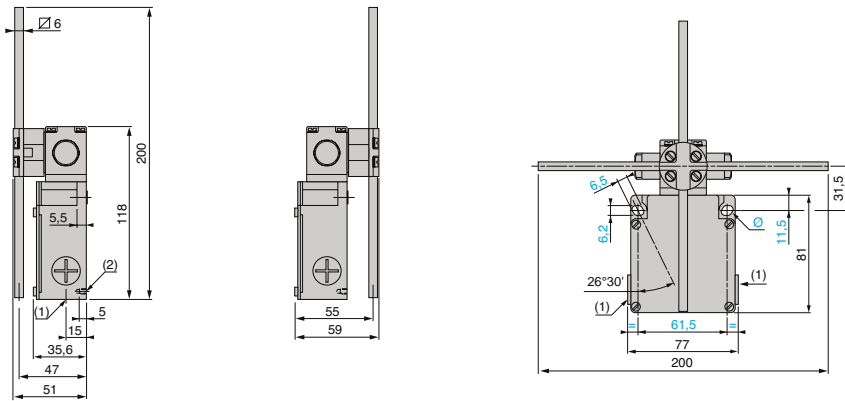
XCKWJ210559H29



- (1) 1 ISO M20 x 1,5 for cable gland.
- (2) lever  $\phi 6$ , length 200 mm.
- (3) 282 maxi.
- (4) 190 maxi.
- (5) 212 maxi.
- $\phi$ : 2 oblong holes  $\phi 5,3 \times 7,3$ .

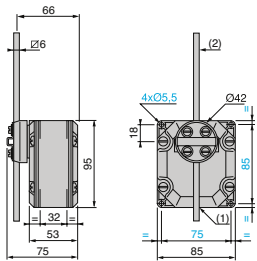
### Limit switch, XCKWMR, XCRA/B/TW

XCKWMR54D1H29 / XCKWMR54D2H29

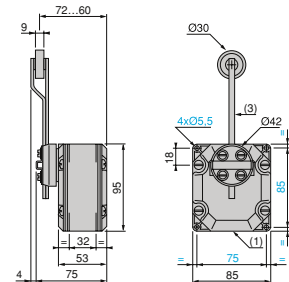


- (1) 3 ISO M20 x 1,5 for cable gland.
- (2) 2 centring holes  $\phi$  3,9.
- $\phi$  : 2 oblongs holes 6,2 x 6,5.

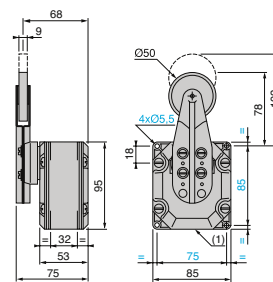
XCRAW111  
XCRBW111



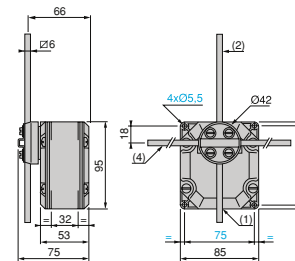
XCRAW121  
XCRBW121



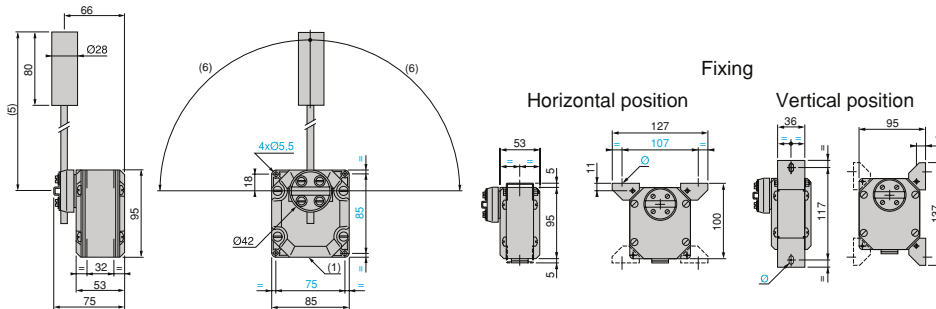
XCRAW151  
XCRBW151



XCREW181  
XCRFW171



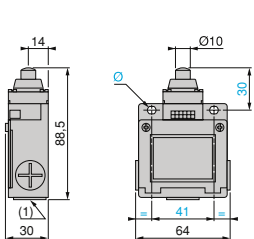
XCRTW115 / XCRTW215



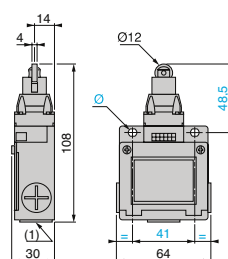
- (1) ISO M20 x 1,5 for cable gland.
- (2) Lever length: 200mm.
- (3) Lever length + roller: 160mm.
- (4) Lever length 300mm for XCRFW, 200mm for XCREW
- (5) 200 maxi - 83 mini
- (6) 90° maxi
- $\phi$ : 2 oblongs holes 6,2 x 6,5.

### Limit switch, Classic, XCKWM (metal)

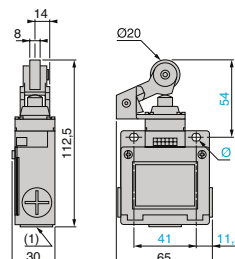
XCKWM2110H29



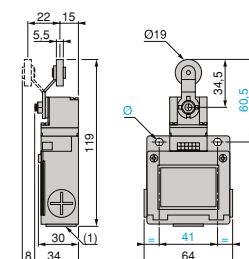
XCKWM2102H29



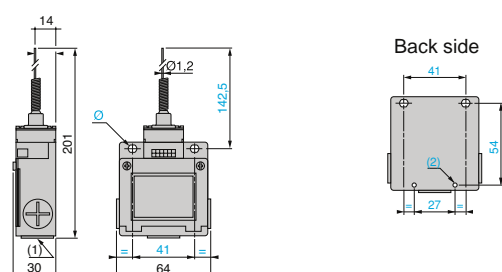
XCKWM2121H29



XCKWM2115H29



XCKWM2106H29



- (1) 3 ISO M20 x 1,5 for cable gland.
- (2) 2 x  $\phi$  4.
- $\phi$ : 2 oblongs holes 5,2 x 6,2.

### 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.

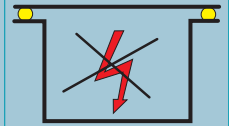
Procedures for design, manufacture and verification of products are to be approved by a notified body (i.e. INERIS, etc...) and all equipment conforming to the new directive will feature CE and epsilon Ex.

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

#### Applicable EX protection

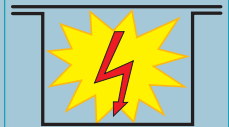
##### EEx e Protection

for electrical components that do not spark under normal working conditions but where measures are applied to prevent high temperatures and the occurrence 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.



#### Zone Classification with the presence of DUST

<b>Zone 21</b>	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.
<b>Zone 22</b>	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.

