

Limit switches

OsiSense XC Standard, Classic format
Metal, types XCKM, XCKL and XCKML

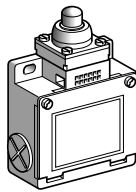
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■ **XCKM**,
with 3 cable entries

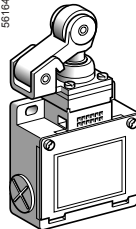
□ With head for linear movement
(plunger)

□ With head for rotary movement
(lever) or multi-directional

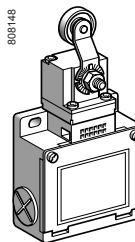
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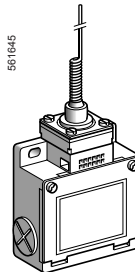
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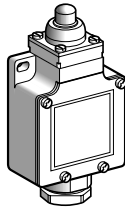
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■ **XCKL**,
with 1 cable entry

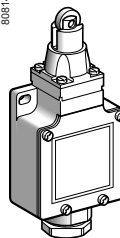
□ With head for linear movement
(plunger)

□ With head for rotary movement
(lever) or multi-directional

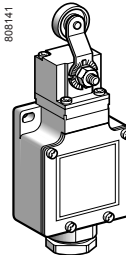
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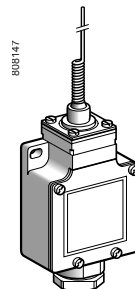
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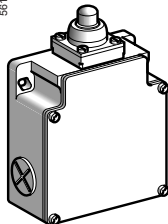
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■ **XCKML**,
with 3 cable entries and 2 x 2-pole contacts

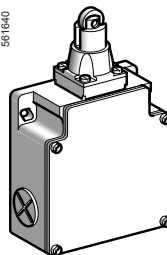
□ With head for linear movement
(plunger)

□ With head for rotary movement
(lever)

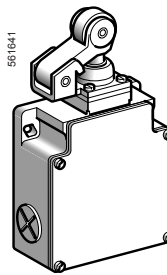
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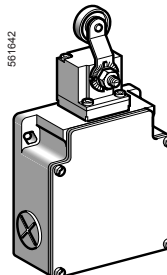
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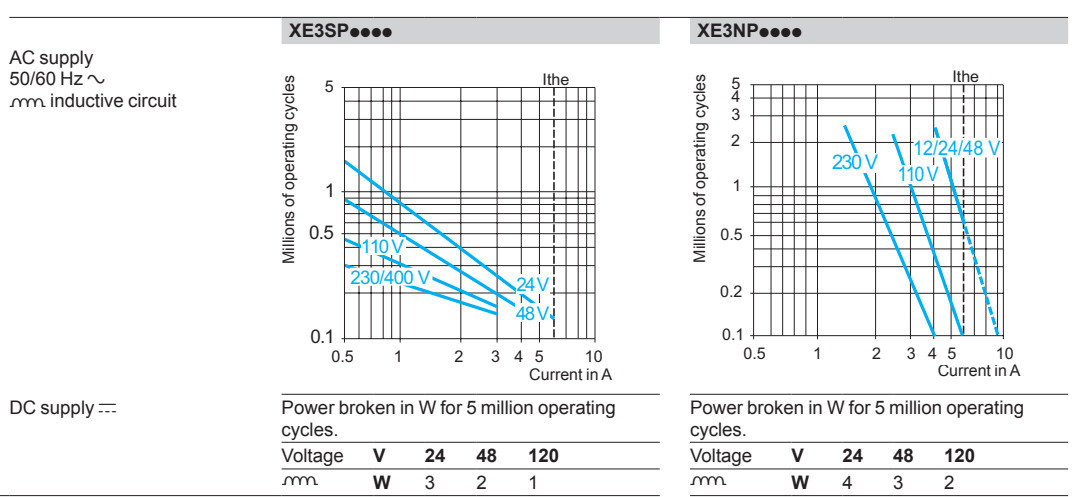
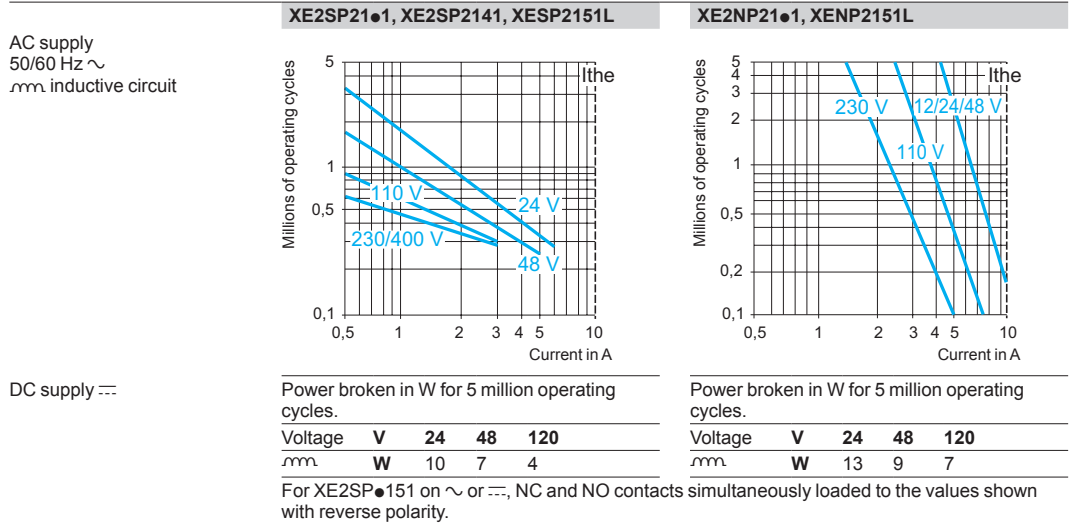
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Environment characteristics

Conformity to standards	Products	IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14
	Machine assemblies	IEC 60204-1, EN 60204-1
Product certifications		UL, CSA CCC (only for XCKM) BV (only for XCKM and XCKL)
Protective treatment	Version	Standard: "TC". Special: "TH"
Ambient air temperature	For operation	-25...+70°C
	For storage	-40...+70°C
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10...500 Hz)
Shock resistance	Conforming to IEC 60068-2-27	50 gn (11 ms)
Electric shock protection		Class I conforming to IEC 61140 and NF C 20-030
Degree of protection		IP 66 conforming to IEC 60529; IK 05 conforming to EN 50102
Repeat accuracy		XCKML 0.1 mm; XCKM and XCKL 0.05 mm on the tripping points, with 1 million operating cycles for head with end plunger
Cable entry or connector	Depending on model	XCKM : 3 tapped entries for Pg 11 cable gland or tapped ISO M20, or with 1/2" NPT adaptor XCKL : 1 tapped entry incorporating Pg 13.5 cable gland or 1 entry tapped 1/2" NPT XCKML : 3 tapped entries for Pg 13.5 cable gland or tapped ISO M20
Materials		Bodies: Zamak. Rotary heads: Zamak or plastic, depending on product reference. Other heads: plastic

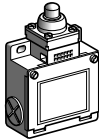
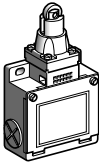
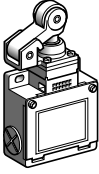
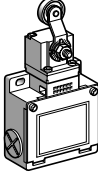
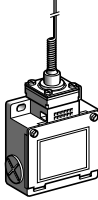
Contact block characteristics		
Rated operational characteristics	XE2●P	~ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 A --- DC-13; Q300 (Ue = 250 V, Ie = 0.27 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
	XE3●P	~ AC-15; B300 (Ue = 240 V, Ie = 1.5 A); Ithe = 6 A --- DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
Rated insulation voltage	XE2●P	Ui = 500 V degree of pollution 3 conforming to IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
	XE3●P	Ui = 400 V degree of pollution 3 conforming to IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
Rated impulse withstand voltage	XE2●P	U imp = 6 kV conforming to IEC 60947-1, IEC 60664
	XE3●P	U imp = 4 kV conforming to IEC 60947-1, IEC 60664
Positive operation (depending on model)		NC contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-1
Resistance across terminals		≤ 25 mΩ conforming to IEC 60255-7 category 3
Short-circuit protection	XE2●P	10 A cartridge fuse type gG (gl)
	XE3●P	6 A cartridge fuse type gG (gl)
Connection (screw clamp terminals)	XE2SP21●1	Clamping capacity, min: 1 x 0.34 mm ² , max: 2 x 1.5 mm ²
	XE2NP21●1	Clamping capacity, min: 1 x 0.5 mm ² , max: 2 x 2.5 mm ²
	XESP2151L and XENP2151L	Clamping capacity, min: 1 x 0.34 mm ² , max: 2 x 1.5 mm ² or 1 x 2.5 mm ²
	XE3NP and XE3SP	Clamping capacity, min: 1 x 0.34 mm ² , max: 1 x 1 mm ² or 2 x 0.75 mm ²
Minimum actuation speed		XE2SP21●1, XESP2151L and XE3SP: 0.01 m/minute XE2NP21●1, XENP2151L and XE3NP: 6 m/minute

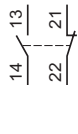
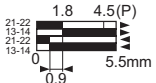

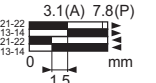

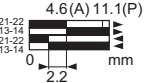

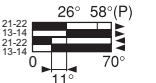
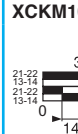
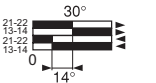
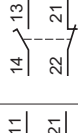
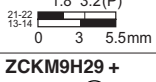
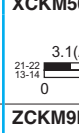
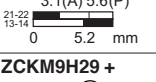
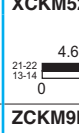
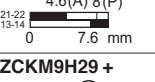
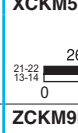

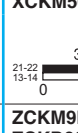
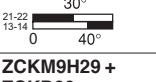
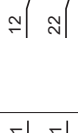

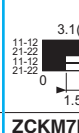

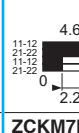

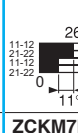
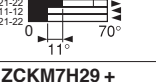
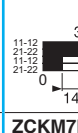

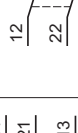

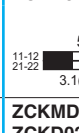

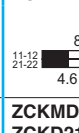
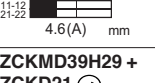
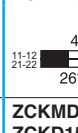

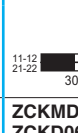

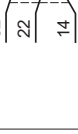

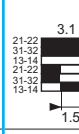
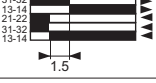
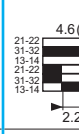

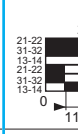
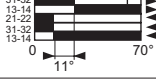
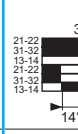
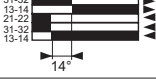
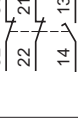
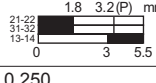
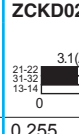
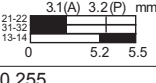
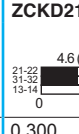
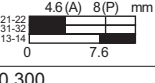

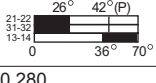
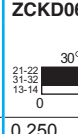
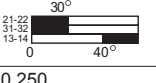


- Electrical durability**
- Conforming to IEC 60947-5-1 Appendix C
 - Utilisation categories AC-15 and DC-13
 - Maximum operating rate: 3600 operating cycles/hour
 - Load factor: 0.5



Limit switches






OsiSense XC Standard, Classic format
Metal, type XCKM
Complete switches with 3 cable entries

Type of head	Plunger (fixing by the body)			Rotary (fixing by the body)	Multi-directional, (fixing by the body)
					
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever (1)	"Cat's whisker" (2)

References of complete switches with 3 ISO M20 x 1.5 cable entries (3)					
2-pole NC + NO snap action (XE2SP2151)	 XCKM110H29 ⊕ 	 XCKM102H29 ⊕ 	 XCKM121H29 ⊕ 	 XCKM115H29 ⊕ 	 XCKM106H29 
2-pole NC + NO break before make, slow break (XE2NP2151)	 XCKM510H29 ⊕ 	 XCKM502H29 ⊕ 	 XCKM521H29 ⊕ 	 XCKM515H29 ⊕ 	 XCKM506H29 
2-pole NC + NC snap action (XE2SP2141)	 ZCKM9H29 + ZCKD10 ⊕ 	 ZCKM9H29 + ZCKD02 ⊕ 	 ZCKM9H29 + ZCKD21 ⊕ 	 ZCKM9H29 + ZCKD15 ⊕ 	 ZCKM9H29 + ZCKD06 
2-pole NC + NC simultaneous, slow break (XE2NP2141)	 ZCKM7H29 + ZCKD10 ⊕ 	 ZCKM7H29 + ZCKD02 ⊕ 	 ZCKM7H29 + ZCKD21 ⊕ 	 ZCKM7H29 + ZCKD15 ⊕ 	 ZCKM7H29 + ZCKD06 
3-pole NC + NC + NO snap action (XE3SP2141)	 ZCKMD39H29 + ZCKD10 ⊕ 	 ZCKMD39H29 + ZCKD02 ⊕ 	 ZCKMD39H29 + ZCKD21 ⊕ 	 ZCKMD39H29 + ZCKD15 ⊕ 	 ZCKMD39H29 + ZCKD06 
3-pole NC + NC + NO break before make, slow break (XE3NP2141)	 ZCKMD37H29 + ZCKD10 ⊕ 	 ZCKMD37H29 + ZCKD02 ⊕ 	 ZCKMD37H29 + ZCKD21 ⊕ 	 ZCKMD37H29 + ZCKD15 ⊕ 	 ZCKMD37H29 + ZCKD06 
Weight (kg)	0.250	0.255	0.300	0.280	0.250
Contact operation	 closed  open	(A) = cam displacement (P) = positive opening point			⊕ NC contact with positive opening operation

References of complete switches with 3 Pg 11 cable entries

For complete switches with 3 Pg 11 cable entries, delete H29 from the end of the reference. Example: XCKM110H29 becomes XCKM110.

Characteristics	On end	By 30° cam			By any moving part
Switch actuation					
Type of actuation					
Maximum actuation speed	0.5 m/s	1.5 m/s			1 m/s (any direction)
Mechanical durability (4) (in millions of operating cycles)	20	15			10
Minimum force or torque	15 N For tripping 45 N For positive opening	12 N 36 N	8 N 24 N	0.1 N.m 0.25 N.m	0.13 N.m -
Cable entry	3 entries tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm				

(1) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
 (2) Value taken with actuation by moving part at 100 mm from the fixing.
 (3) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.
 (4) Limited to 15 million operating cycles for switches with contacts XE3•P.

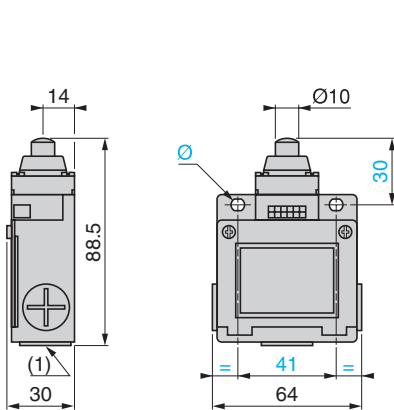
Limit switches

OsiSense XC Standard, Classic format

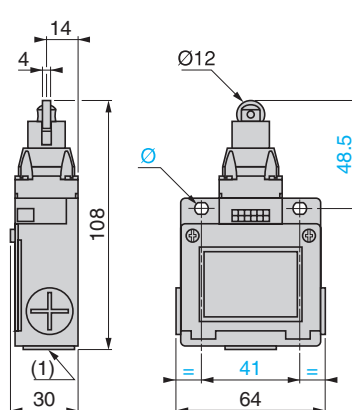
Metal, type XCKM

Complete switches with 3 cable entries

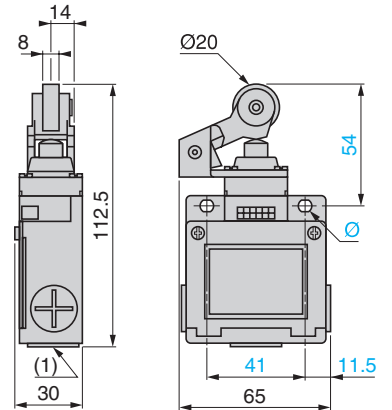
XCKM●10
ZCKMD3● + ZCKD10



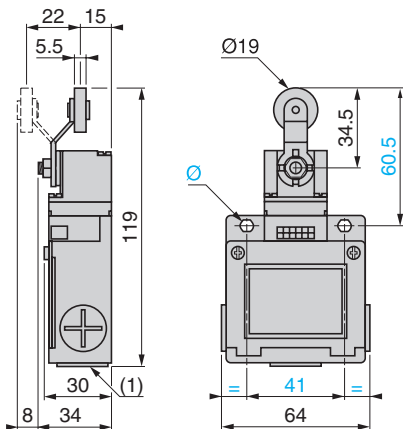
XCKM●02
ZCKMD3● + ZCKD02



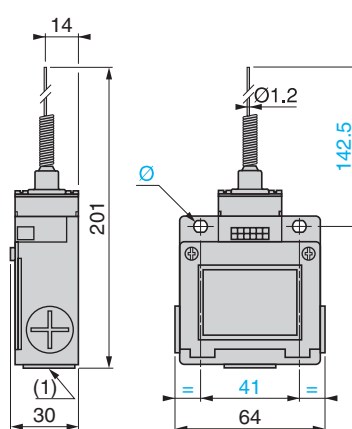
XCKM●21
ZCKMD3● + ZCKD21



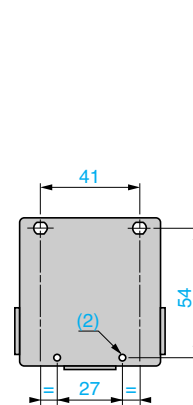
XCKM●15
ZCKMD3● + ZCKD15



XCKM●06
ZCKMD3● + ZCKD06



Rear view XCKM●●●, ZCKM●, ZCKMD3●



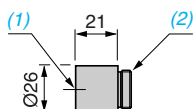
(1) 3 tapped entries for ISO M20 x 1.5 or Pg 11 cable gland or with 1/2" NPT conduit adaptor DE9RA1012.

(2) 2 x Ø 4 H 11, depth 10.

Ø: 2 elongated holes Ø 5.2 x 6.2

Adaptor for 1/2" NPT conduit

DE9RA1012



(1) Tapped entry for 1/2" NPT conduit.

(2) Pg 11 threaded sleeve.