

# Limit Switches

## XCKML—General Specifications and Complete Devices

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**2 N.O. and 2 N.C. Direct Opening Snap Action Contacts**  
**Rated Power**  
**Conforms to IEC 947-5-1**  
**Duty Categories AC15 and DC13.**

XCKML is a general duty limit switch, larger than the XCKL, for applications such as machine tools, material handling, and other applications where electrical redundancy and contact state signaling are required.

Key features include:

- 2 normally closed direct opening and two normally open snap action contacts available in 4 head styles
- Direct opening contacts standard: snap action 2-pole (isolated N.O. + N.C.) or slow-make-slow-break 2-pole (isolated N.O. + N.C.)
- 4 position indexing rotary head (field convertible)
- Captive screws and gaskets
- Captive saddle clamp terminals
- Feature FINGERSAFE® contact block
- Lever operated—positive lever to shaft positioning to ensure the direct opening feature. Direct opening contacts meet IEC 947-5-1 requirements for positive opening contacts.
- Plunger operated: top rod, top roller
- Metal type, IP66
- Complete switches with 3 cable entries
- Tapped for 13 mm cable gland, DE9RA1212 adapter to 1/2" NPT included

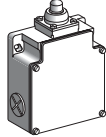
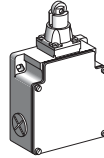
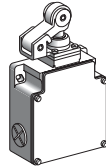
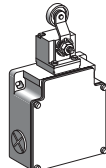
**UL Listed CSA Certified, IEC, VDE, CENELEC and other international approvals, CE**

### Characteristics

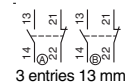
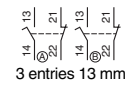
Conforming to standards	Products	IEC 947-5-1, EN 60 947-5-1			
	Machine assemblies	IEC 204-1, EN 60 204-1, NF C 79-130			
Protective treatment		Standard version: "TC"			
Ambient air temperature		Operation: -25 to +70° C			
Resistance	to vibration	25 gn (10 to 500 Hz) conforming to IEC 68-2-6			
	to shocks	50 gn conforming to IEC 68-2-27			
Electric shock protection		Class I conforming to IEC 536 and NF C 20-030			
Degree of protection		IP66 conforming to IEC 529; IP65 conforming to NF C 20-010			
Minimum force of torque	for tripping	15 N	12 N	8 N	0.2 N.m
	for positive opening	60 N	50 N	50 N	0.5 N.m
Maximum actuation speed		0.5 m/s	0.5 m/s	1.5 m/s	1.5 m/s
Switch actuation		On end	By 30° cam		
Repeat accuracy		± 0.1 mm on the tripping points			
Rated operational characteristics		~ AC-15; A300 or Ue = 240 V, Ie = 3 A (for make and break ratings see XCKL page 19-20) DC-13; Q300 or Ue = 250 V, Ie = 0.27 A conforming to IEC 947-5-1 Appendix A, EN 60 947-5-1			
Rated insulation voltage		Ui = 500 V degree of pollution 3 conforming to IEC 947-1			
Rated impulse withstand voltage		U imp = 6 kV conforming to IEC 947-1, IEC 664			
Positive operation		N.C. contacts with direct opening operation conforming to IEC 947-5-1 Appendix K, EN 60 947-5-1			
Short-circuit protection		10 A cartridge fuse gG (gl)			
Cable entry		3 tapped entries for 13 mm cable glands conforming to NFC 68-300 (DIN Pg 13.5). Clamping capacity 9 to 12 mm.			
Cabling		Screw and captive cable clamp terminals. Clamp capacity: minimum 1 x 0.34 mm <sup>2</sup> , maximum: 2 x 1.5 mm <sup>2</sup> or 1 x 2.5 mm <sup>2</sup> depending on contact. Tightening torque: minimum 0.8 Nm, maximum 1.2 Nm			

**Note:** Heads use the same lever as those used on the XCKL line. For direct opening operation use rigid operators. For characteristics of XESP\*\*\* and XENP\*\*\* contact blocks, please refer to our Limit Switch catalog 9007CT9701. (Only the heads shown below are UL Listed.)

### Selection Table

Type of Operating Head	Plunger			Rotary
Type of operator	 Metal end plunger	 Steel roller plunger	 Thermoplastic roller lever plunger. Horizontal actuation in 1 direction	 Thermoplastic roller lever ▲

References ( ⊖ N.C. contact with direct opening operation)

Two contact blocks, 2-pole 1 N.C. + 1 N.O. snap action		⊖ XCKML110 \$88.	⊖ XCKML102 \$108.	⊖ XCKML121 \$108.	⊖ XCKML115 \$91.
Two contact blocks, 2-pole 1 N.C. + 1 N.O. break before make, slow break		⊖ XCKML510 \$88.	⊖ XCKML502 \$108.	⊖ XCKML521 \$108.	⊖ XCKML515 \$91.
Weight (kg)		0.400	0.405	0.450	0.430

- ▲ Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
- Do not replace head. Order complete unit.

For additional information, reference Catalog #9006CT0101.