

Instruction Bulletin

Telemecanique XCK-ML Limit Switch General Purpose

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 dated 8/99

INTRODUCTION & SPECIFICATIONS

XCK-ML limit switches contain **two** direct-opening contact blocks. The contact blocks can be accessed from the front when the cover plate is removed, and can be wired in the field without removing the enclosure from its mounting. All contacts have captive saddle-clamp terminals. The XCK-ML switch is available in direct-opening snap action (ML1) and direct opening, slow-make slow-break (ML5) versions. The heads can be indexed to any of four positions.

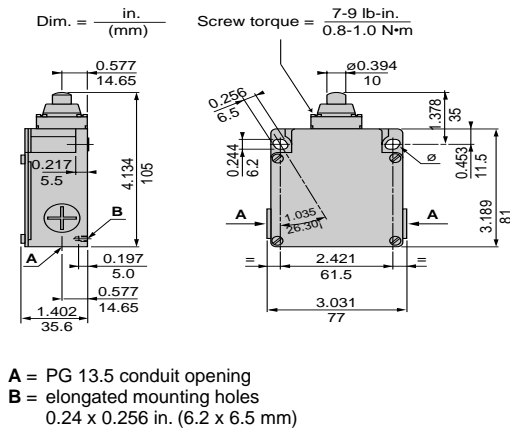


Figure 1: XCK-ML1/XCK-ML5 Dimensions

Table 1: General Specifications

Operating Temperature range	-13 to 158 °F (-25 to +70 °C) The minimum temperatures listed are based on the absence of freezing moisture or water.
Enclosure rating	NEMA Type 1, 2, 3, 4, 12 CENELEC Type IP66
Housing	Diecast zinc alloy
Vibration resistance	25 G (10–500 Hz), conforming to IEC 68-2-6
Shock resistance	50 G, conforming to IEC 68-2-27
Repeatability	0.002 in. (0.05 mm)
Cable entry	PG13.5 standard; for 1/2 in. NPT use DE9RA1212 adapter
Approvals	UL File E164353, CSA File LR44087 Class 3211.03, CE, VDE, CENELEC, ASA, DEMCO, NEMCO, and other international approvals

Table 2: Contact Characteristics

Rated thermal current	10 A
Rated insulation voltage	300 VAC and DC (A300 and Q300)
Contact resistance (max.)	25 mW
Cable (max.)	XESP contact: 2 x #16 AWG (1.5 mm ²) per terminal XENP contact: 2 x #14 AWG (2.5 mm ²) per terminal
Short circuit protection	XCK-ML limit switches comply with IEC 947.5.1 when protected with a 10 A fuse type SC, gl or N.

Table 3: Electrical Ratings: A300 (AC), Q300 (DC)

Thermal Continuous Test Current: A300 (AC) – 10 Amps; Q300 (DC) – 2.5 Amps

Contact Rating Designation	120 V		125 V		240 V		250 V		480 V		≤ 600 V		Maximum Volt Amp	
	M	B	M	B	M	B	M	B	M	B	M	B	M	B
A300 (AC)	60	6.00	—	—	30	3.00	—	—	—	—	—	—	7200	720
Q300 (DC)	—	—	0.55	0.55	—	—	0.27	0.27	—	—	—	—	—	—

M = Make, B = Break

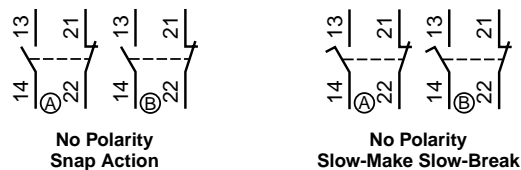


Figure 2: Wiring Diagrams

INSTALLATION AND APPLICATION

⚠ DANGER

HAZARDOUS VOLTAGE
Disconnect all power before working on equipment.
Electric shock will result in death or serious injury.

Dwelling Requirements

For applications requiring fast motions, select a cam that operates the limit switch long enough to actuate the relays, valves, etc.

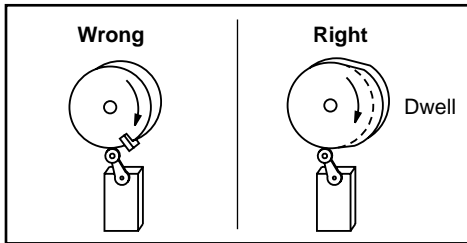


Figure 4: Using Dwell to Sustain Switch Operation

Lever Actuators

For limit switches with lever actuators, apply the actuating force as perpendicular to the lever as practical and perpendicular to the shaft axis (about which the lever rotates).

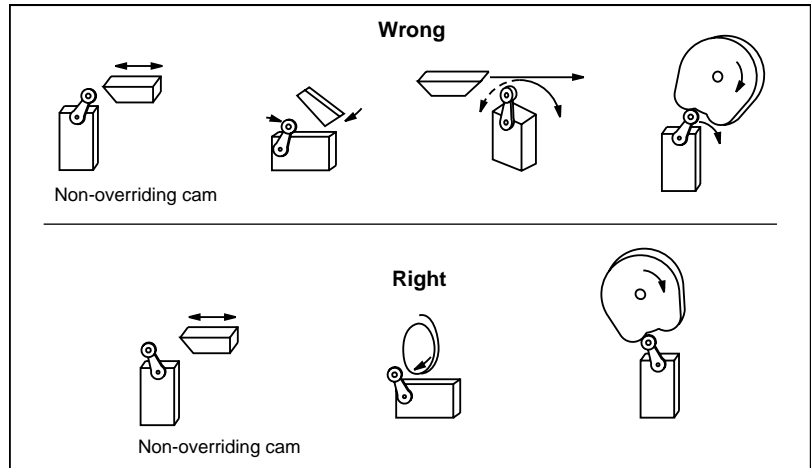


Figure 5: Examples of Actuating Force

Overtravel Limitations

Do not operate the limit switch beyond its overtravel limit position. Select an operating mechanism that ensures the limit switch operates within its range under all normal and emergency conditions. **Do not use a limit switch as a mechanical stop.**

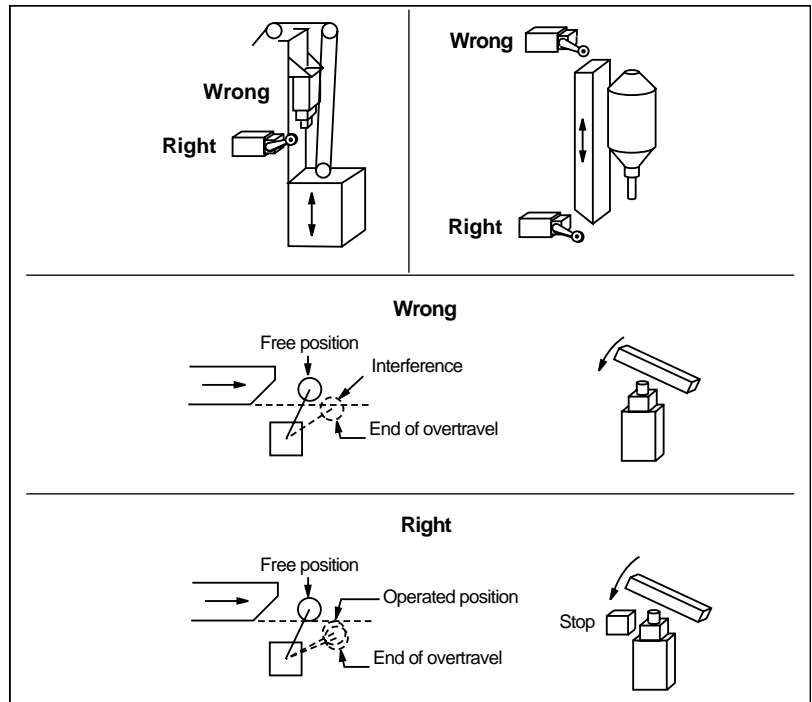


Figure 6: Preventing Overtravel