

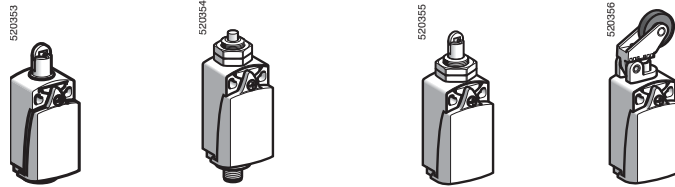
Limit Switches

Osiswitch® Compact

Universal, XCKP and XCKT Plastic / XCKD Metal

■ **XCKP, XCKD**
with 1 cable entry
Conforming to CENELEC EN 50047

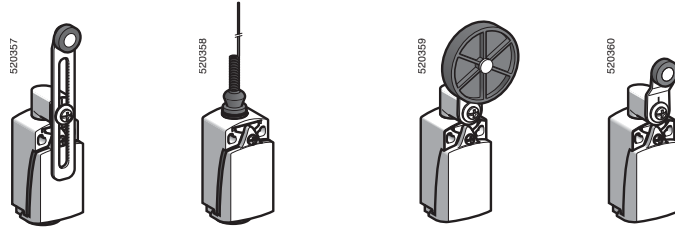
□ With head for linear movement (plunger). Mounting by the head or by the body.
XCKD **XCKP**



Pages 56 and 60

Pages 62 and 66

□ With head for rotary movement (lever) or multi-directional. Mounting by the body.
XCKD **XCKP**

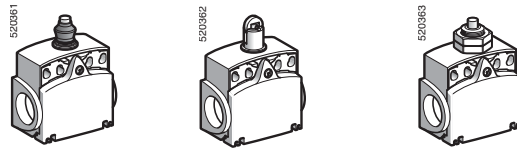


Pages 57 and 61

Pages 63 and 67

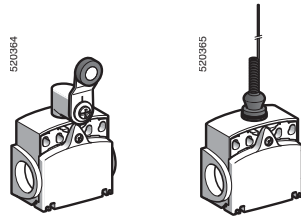
■ **XCKT**
with 2 cable entries
Tripping/resetting points and mounting centers conform to CENELEC EN 50047

□ With head for linear movement (plunger). Mounting by the head or by the body.
XCKT



Page 68

□ With head for rotary movement (lever) or multi-directional. Mounting by the body.
XCKT



Page 68

Environmental characteristics

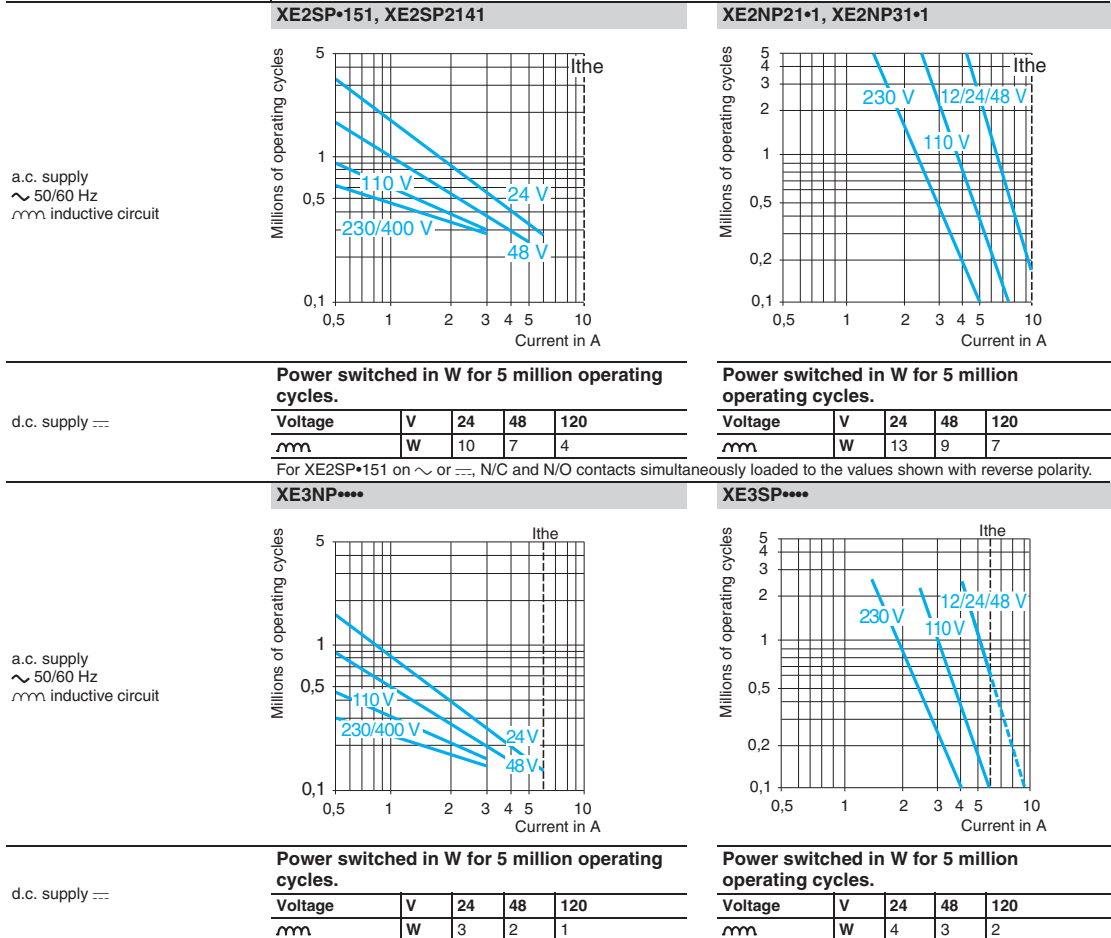
Conforming to standards	Products	IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14
	Machine assemblies	IEC 60204-1, EN 60204-1
Product certifications		UL, CSA, CCC
Protective treatment	Standard version	"TC"
Ambient air temperature	Operation	- 25...+70 °C (-13...+158 °F)
	Storage	- 40...+70 °C (-40...+158 °F)
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10...500 Hz) except switch with head ZCE 24: 20 gn
Shock resistance	Conforming to IEC 60068-2-27	50 gn (11 ms) except heads ZCE08: 15 gn (11 ms) and ZCE24: 30 gn (18 ms)
Electric shock protection		Class II conforming to IEC 61140 and NF C 20-030 for XCKP and XCKT
		Class I conforming to IEC 61140 and NF C 20-030 for XCKD
Degree of protection		IP 66 and IP 67 conforming to IEC 60529; IK 04 conforming to EN 50102 for XCKP and XCKT, IK 06 conforming to EN 50102 for XCKD
Repeat accuracy		0.1 mm on the tripping points, with 1 million operating cycles for head with end plunger
Cable entry or integral connector	Depending on model	Either: tapped entry for PG 11 or PG 13 conduit thread, tapped ISO M16 x 1.5 or ISO M20 x 1.5, tapped 1/2" NPT, tapped PF 1/2 (G1/2) or integral M12 connector
Materials		XCKD : Zamak® bodies and heads, XCKP and XCKT : plastic bodies, Zamak heads

Limit Switches

Osiswitch® Compact

Universal, XCKP and XCKT Plastic / XCKD Metal

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)	N/C contacts with positive opening operation conforming to IEC 60 947-5-1 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)
Cabling (screw clamp terminals)	XE2SP•151 and XE2SP2141 Clamping capacity, min: 1 x 0.34 mm ² , max: 2 x 1.5 mm ²
	XE2NP21•1 and XE2NP31•1 Clamping capacity, min: 1 x 0.5 mm ² , max: 2 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 (for head with end plunger)	XE2SP•151, XE2SP2141 and XE3SP: 0.01 m/minute (0.03 ft/minute)
	XE2NP21•1, XE2NP31•1 and XE3NP: 6 m/minute (19.68 ft/minute)
Electrical durability	<ul style="list-style-type: none"> Conforming to IEC 60947-5-1 Appendix C Utilization categories AC-15 and DC-13 Maximum operating rate: 3600 operating cycles/hour Load factor: 0.5



Limit Switches

Osiswitch® Compact, Metal

Universal, XCKD—Complete Units with 1/2" NPT Cable Entry

Type of head	Plunger (mounting by the body)					
	Form B (1)		Form C (1)		Form E (1)	
Type of operator	Metal end plunger	Metal end plunger with elastomer boot	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction	Thermoplastic roller lever plunger, horiz. or vert. actuation in 1 direction
Catalog Numbers (2) (3)						
	2-pole N/C + N/O snap action (XE2S P2151)	XCKD2110N12 	XCKD2111N12 	XCKD2102N12 	XCKD2121N12 	XCKD2127N12
	2-pole N/C + N/O break before make, slow break (XE2N P2151)	XCKD2510N12 	XCKD2511N12 	XCKD2502N12 	XCKD2521N12 	XCKD2527N12
	2-pole N/C + N/C snap action (XE2S P2141)	ZCD29 + ZCDEN12 + ZCE10 	ZCD29 + ZCDEN12 + ZCE11 	ZCD29 + ZCDEN12 + ZCE02 	ZCD29 + ZCDEN12 + ZCE21 	ZCD29 + ZCDEN12 + ZCE27
	2-pole N/C + N/C simultaneous, slow break (XE2N P2141)	ZCD27 + ZCDEN12 + ZCE10 	ZCD27 + ZCDEN12 + ZCE11 	ZCD27 + ZCDEN12 + ZCE02 	ZCD27 + ZCDEN12 + ZCE21 	ZCD27 + ZCDEN12 + ZCE27
	3-pole N/C + N/C + N/O snap action (XE3SP2141)	ZCD39 + ZCDEN12 + ZCE10 	ZCD39 + ZCDEN12 + ZCE11 	ZCD39 + ZCDEN12 + ZCE02 	ZCD39 + ZCDEN12 + ZCE21 	ZCD39 + ZCDEN12 + ZCE27
	3-pole N/C + N/C + N/O break before make, slow break (XE3N P2141)	ZCD37 + ZCDEN12 + ZCE10 	ZCD37 + ZCDEN12 + ZCE11 	ZCD37 + ZCDEN12 + ZCE02 	ZCD37 + ZCDEN12 + ZCE21 	ZCD37 + ZCDEN12 + ZCE27
Weight, kg (lb)	0.180 (0.397)	0.180 (0.397)	0.185 (0.408)	0.195 (0.430)	0.190 (0.419)	0.195 (0.430)
Contact operation	contact closed contact open		(A)(B) = cam displacement (P) = positive opening point		N/C contact with positive opening operation, when properly mounted and using a conforming operator	
Characteristics						
Switch actuation	On end			By 30° cam		
Type of actuation						
Maximum actuation speed	0.5 m/s (1.64 ft/s)			1 m/s (3.28 ft/s)		
Minimum force or torque	For tripping	15 N (3.37 lb)		12 N (2.70 lb)	6 N (1.35 lb)	
	For positive opening	45 N (10.12 lb)		36 N (8.09 lb)	18 N (4.05 lb)	
Cable entry (3)	1 entry tapped M16 x 1.5 mm for ISO cable entry, clamping capacity 4 to 8 mm (0.16 to 0.31 in.)					

- Form conforming to EN 50047. See page 22.
- Switches with gold contacts or ring type connections; please consult your local sales office.
- For an entry tapped for a PG 11 conduit thread, replace N12 in the catalog number with **G11**. Examples: XCKD2110N12 becomes **XCKD2110G11**, ZCDEN12 becomes **ZCDEG11**.

Limit Switches

Osiswitch® Compact, Metal

Universal, XCKD—Complete Units with 1/2" NPT Cable Entry

Type of head	Plunger (mounting by the head)		Rotary (mounting by the body) Form A (1)				Multi-directional
Type of operator	M18 with metal end plunger	M18 with steel roller plunger	Thermoplastic roller lever	Variable length thermoplastic roller lever	Thermoplastic roller lever, Ø 50 mm (1.97 in.)	Variable length thermoplastic roller lever, Ø 50 mm (1.97 in.)	Cat's whisker (3)
Catalog Numbers (2) (4)							
	XCKD21H0N12 2-pole N/C + N/O snap action (XE2S P2151) 	XCKD21H2N12 	XCKD2118N12 	XCKD2145N12 	XCKD2139N12 	XCKD2149N12 	XCKD2106N12
	XCKD25H0N12 2-pole N/C + N/O break before make, slow break (XE2N P2151) 	XCKD25H2N12 	XCKD2518N12 	XCKD2545N12 	XCKD2539N12 	XCKD2549N12 	XCKD2506N12
	ZCD29 + ZCDEN12 + ZCEH0 2-pole N/C + N/C snap action (XE2S P2141) 	ZCD29 + ZCDEN12 + ZCEH2 	ZCD29 + ZCDEN12 + ZCE01 + ZCY18 	ZCD29 + ZCDEN12 + ZCE01 + ZCY45 	ZCD29 + ZCDEN12 + ZCE01 + ZCY39 	ZCD29 + ZCDEN12 + ZCE01 + ZCY49 	ZCD29 + ZCDEN12 + ZCE06
	ZCD27 + ZCDEN12 + ZCEH0 2-pole N/C + N/C simultaneous, slow break (XE2N P2141) 	ZCD27 + ZCDEN12 + ZCEH2 	ZCD27 + ZCDEN12 + ZCE01 + ZCY18 	ZCD27 + ZCDEN12 + ZCE01 + ZCY45 	ZCD27 + ZCDEN12 + ZCE01 + ZCY39 	ZCD27 + ZCDEN12 + ZCE01 + ZCY49 	ZCD27 + ZCDEN12 + ZCE06
	ZCD39 + ZCDEN12 + ZCEH0 3-pole N/C + N/C + N/O snap action (XE3S P2141) 	ZCD39 + ZCDEN12 + ZCEH2 	ZCD39 + ZCDEN12 + ZCE01 + ZCY18 	ZCD39 + ZCDEN12 + ZCE01 + ZCY45 	ZCD39 + ZCDEN12 + ZCE01 + ZCY39 	ZCD39 + ZCDEN12 + ZCE01 + ZCY49 	ZCD39 + ZCDEN12 + ZCE06
	ZCD37 + ZCDEN12 + ZCEH0 3-pole N/C + N/C + N/O break before make, slow break (XE3N P2141) 	ZCD37 + ZCDEN12 + ZCEH2 	ZCD37 + ZCDEN12 + ZCE01 + ZCY18 	ZCD37 + ZCDEN12 + ZCE01 + ZCY45 	ZCD37 + ZCDEN12 + ZCE01 + ZCY39 	ZCD37 + ZCDEN12 + ZCE01 + ZCY49 	ZCD37 + ZCDEN12 + ZCE06
Weight, kg (lb)	0.220 (0.485)	0.220 (0.485)	0.225 (0.496)	0.235 (0.518)	0.235 (0.518)	0.245 (0.540)	0.175 (0.386)
Contact operation	contact closed contact open		(A) = cam displacement (P) = positive opening point		N/C contact with positive opening operation, when properly mounted and using a conforming operator		
Characteristics							
Switch actuation	On end		By 30° cam				By any moving part
Type of actuation							
Maximum actuation speed	0.5 m/s (1.64 ft/s)		1.5 m/s (4.92 ft/s)				1 m/s (3.28 ft/s), any direction
Minimum force or torque	For tripping	15 N (3.37 lb)	10 N (2.25 lb)	0.1 N•m (0.89 lb-in)			0.13 N•m (1.15 lb-in)
	For positive opening	45 N (10.12 lb)	36 N (8.09 lb)	0.25 N•m (2.21 lb-in)			—
Cable entry (4)	1 entry tapped M16 x 1.5 mm for ISO cable entry, clamping capacity 4 to 8 mm (0.16 to 0.31 in.)						

- Form conforming to EN 50047. See page 22.
- Switches with gold contacts or ring type connections: please consult your local sales office.
- Value taken with actuation by moving part at 100 mm (3.94 in.) from the mountings.
- For an entry tapped for a PG 11 conduit thread, replace N12 in the catalog number with **G11**. Examples: XCKD21H0N12 becomes **XCKD21H0G11**, ZCDEN12 becomes **ZCDEG11**.

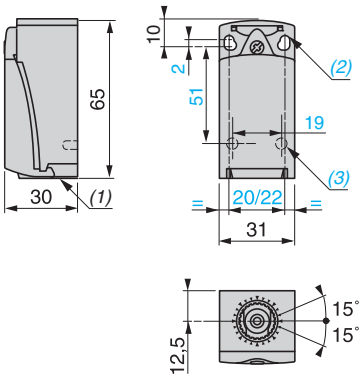
Note: For more information, consult pages 63, 70–71.

Limit Switches

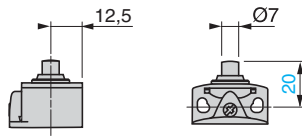
Osiswitch® Compact, Metal

Universal, XCKD—Complete Units with 1/2" NPT Cable Entry

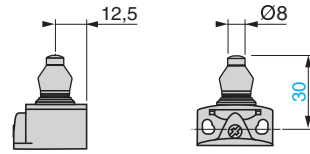
ZCD2• + ZCDEN12 / ZCD3• + ZCDEN12



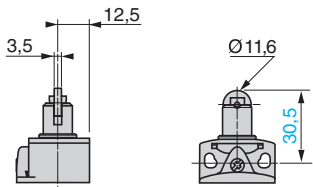
ZCE10



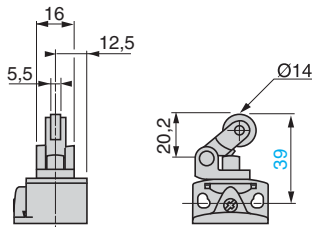
ZCE11



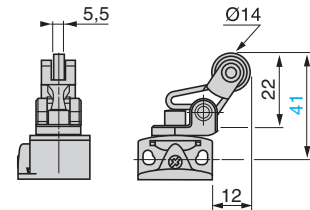
ZCE02



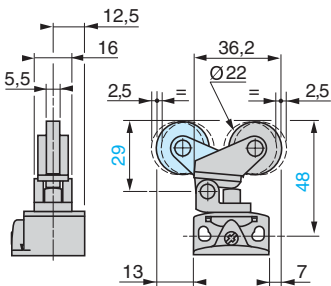
ZCE21



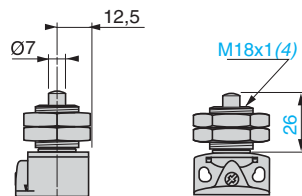
ZCE27



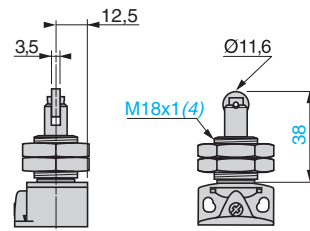
ZCE28



ZCEH0



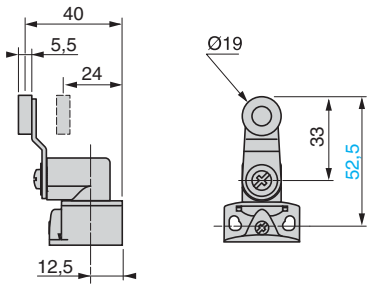
ZCEH2



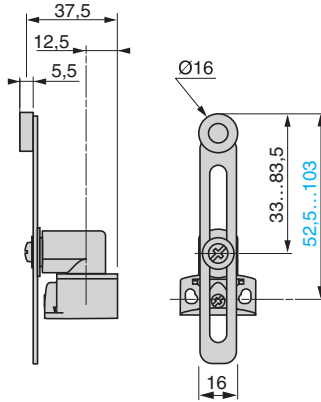
1. Tapped entry for ISO M16 x 1.5 or PG 11 conduit thread.
2. 2 elongated holes $\text{Ø} 4.3 \times 6.3 \text{ mm}$ (0.17 x 0.25 in.) on 22 mm (0.87 in.) centers, 2 holes $\text{Ø} 4.3 \text{ mm}$ (0.17 in.) on 20 mm (0.79 in.) centers.
3. 2 x $\text{Ø} 3$ holes for support studs, depth 4 mm (0.16 in.).
4. Mounting nut thickness 3.5 mm (0.14 in.).

Limit Switches
Osiswitch® Compact, Metal
Universal, XCKD—Complete Units with 1/2" NPT Cable Entry

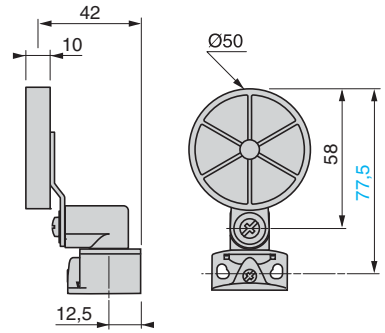
ZCE01 + ZCY18



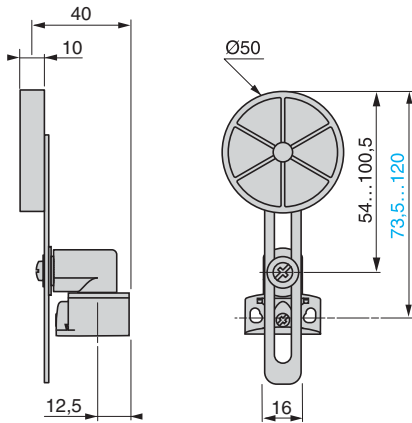
ZCE01 + ZCY45



ZCE01 + ZCY39



ZCE01 + ZCY49



ZCE06

