





Limit Switches

Selection Guide

Osiswitch® Universal

Design	Miniature		Compact			
						
Catalog number	XCMD		XCKD	XCKP	XCKT	
Enclosure	Metal			Plastic, double insulated		
Features	Mounting by the body or by the head					
Modularity	Head, body and connection modularity				Head and body modularity	
CENELEC conformity	—		EN 50047		EN 50047 compatible	
Body dimensions (w x h x d), mm (in.)	30 x 50 x 16 (1.18 x 1.97 x 0.63)		31 x 65 x 30 (1.22 x 2.56 x 1.18)		58 x 51 x 30 (2.28 x 2.01 x 1.18)	
Head	Linear movement (plunger) Rotary movement (lever) Rotary movement, multi-directional Same heads for ranges XCMD, XCKD, XCKP and XCKT					
Contact blocks	2 snap action contacts with positive opening operation		N/C + N/O; N/C + N/C		N/C + N/O	
	3 snap action contacts with positive opening operation		N/C + N/C + N/O	N/C + N/C + N/O; N/C + N/O + N/O		—
	4 snap action contacts with positive opening operation		N/C + N/C + N/O + N/O		—	
	2 slow break contacts with positive opening operation		N/C + N/O break before make	N/C + N/O break before make; N/O + N/C make before break; N/C + N/C simultaneous		
	2 slow break contacts		—	N/O + N/O simultaneous		
	3 slow break contacts with positive opening operation		N/C + N/C + N/O break before make	N/C + N/C + N/O break before make; N/C + N/O + N/O break before make		—
Insulation voltage (Ui) / thermal current (Ithe)	Pre-cabled 2 contacts: 400 V/6 A 3 contacts: 400 V/4 A 4 contacts: 400 V/3 A		Screw terminal 2 contacts: 500 V/10 A 3 contacts: 400 V/6 A		Screw terminal 2 contacts: 500 V/10 A	
Connector	Integral M12, 4-pin: 250 V/3 A Integral M12, 5-pin: 60 V/4 A Remote 7/8" 16UN: 250 V/6 A		Integral M12, 5-pin: 60 V/4 A	Integral M12, 4-pin: 250 V/3 A	—	
Degree of protection	NEMA Types 1, 2, 4X, 6, 12 IP 66, IP 67, IP 68, IK 06		NEMA Types 1, 2, 4, 6, 12, 13 IP 66, IP 67, IK 06	NEMA Types 1, 2, 4, 6, 6P, 12, 13 IP 66, IP 67, IK 04	NEMA Types 1, 2, 4, 6, 12, 13 IP 66, IP 67, IK 04	
Connection	Screw terminals		—		2 entries for ISO M16 or PG 11 conduit thread or 1/2" NPT (using adapter)	
	Pre-cabled		Integral: No Remote: Yes		—	
	Connector		Integral or remote M12 or remote 7/8" 16UN		Integral M12	
Page	44		56 and 60		62 and 66	
Page	44		56 and 60		68	

Limit Switches

Osiswitch® Compact

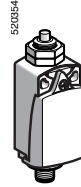
Universal, XCKP and XCKT Plastic / XCKD Metal

■ **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**



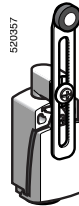
Pages 56 and 60



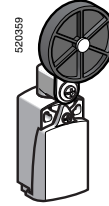
Pages 62 and 66



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



Pages 57 and 61

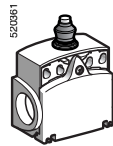


Pages 63 and 67

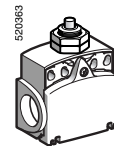
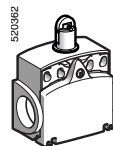


■ **XCKT**
with 2 cable entries
Tripping/resetting points and mounting centers conform to CENELEC EN 50047

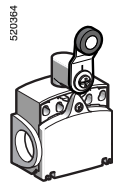
□ With head for linear movement (plunger). Mounting by the head or by the body.
XCKT



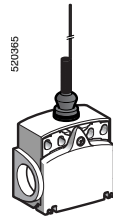
Page 68



□ 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

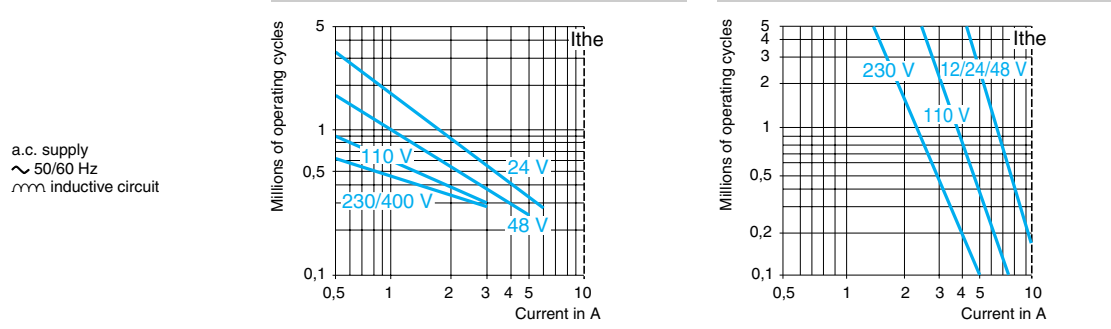
Limit Switches

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

XE2SP•151, XE2SP2141	XE2NP21•1, XE2NP31•1
----------------------	----------------------

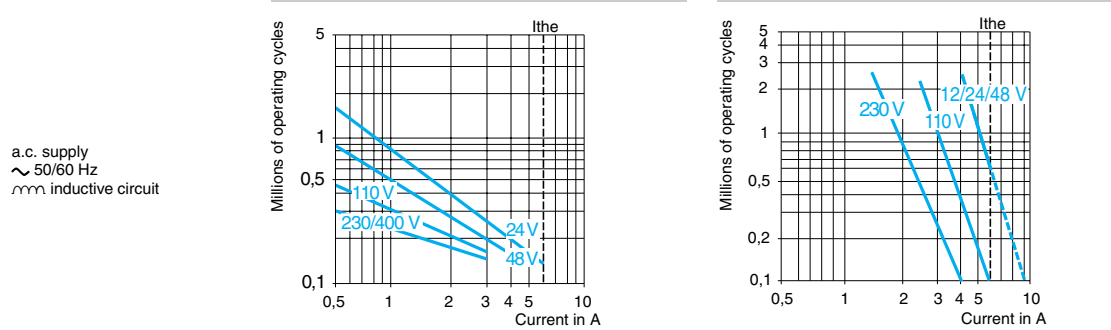


Power switched in W for 5 million operating cycles.				
Voltage	V	24	48	120
~	W	10	7	4

Power switched in W for 5 million operating cycles.				
Voltage	V	24	48	120
~	W	13	9	7

For XE2SP•151 on ~ or ≡, N/C and N/O contacts simultaneously loaded to the values shown with reverse polarity.

XE3NP••••	XE3SP••••
-----------	-----------



Power switched in W for 5 million operating cycles.				
Voltage	V	24	48	120
~	W	3	2	1

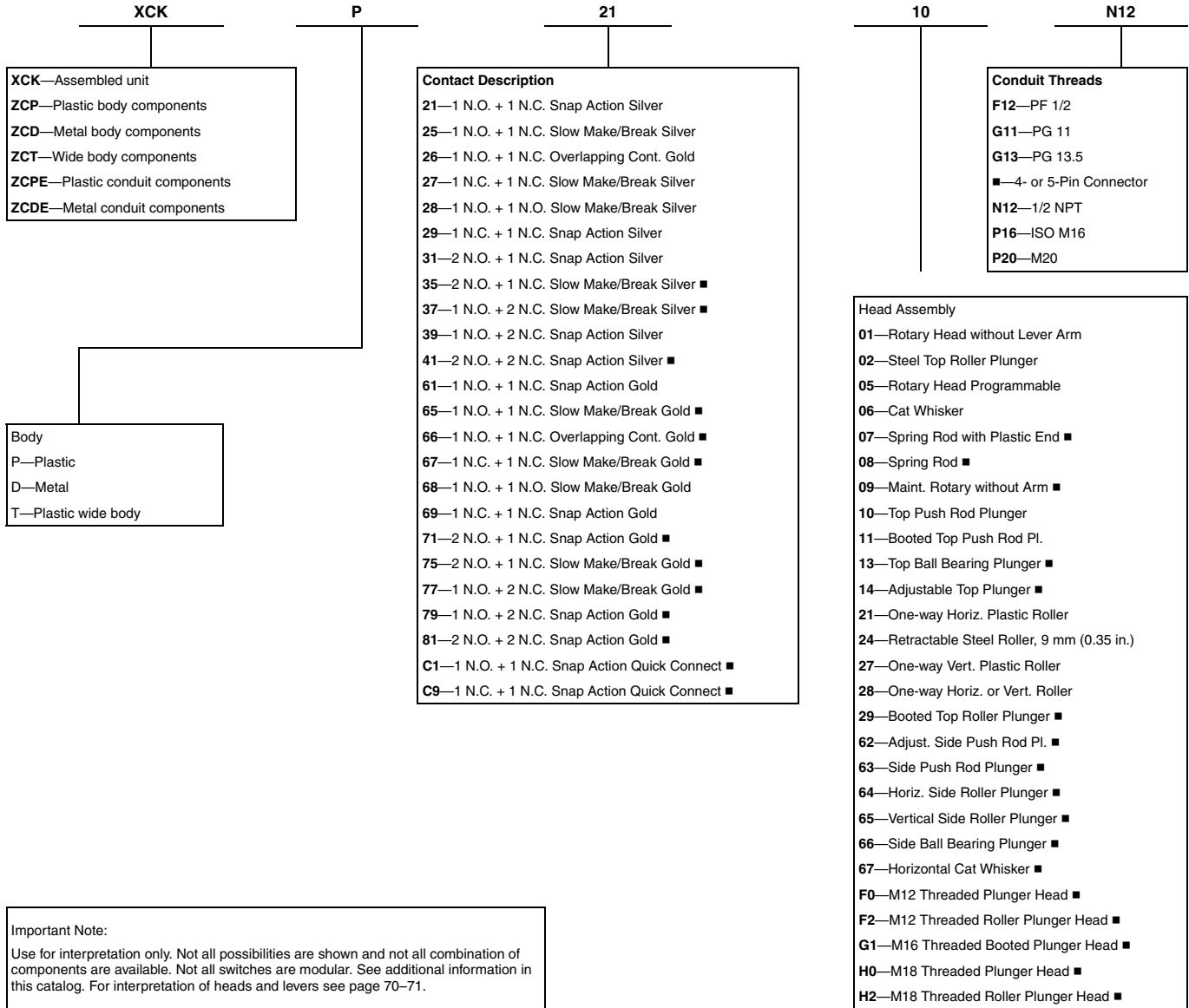
Power switched in W for 5 million operating cycles.				
Voltage	V	24	48	120
~	W	4	3	2

Limit Switches

Osiswitch® Compact, Metal and Plastic Universal, XCKD, XCKP, and XCKT

Catalog Number Interpretation

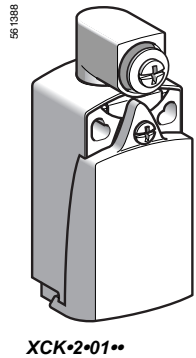
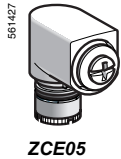
For Interpretation of the Catalog Number Only



■ Call your local field sales office for availability.

Limit Switches

Osiswitch® Compact, Metal and Plastic Universal, XCKD, XCKP, and XCKT—Modular



Accessories			
Description	Suitable levers for use with head	Unit catalog number	Weight kg (oz)
Rotary head, without lever, spring return, for actuation from left AND right or left OR right (1)	ZCY12, ZCY15, ZCY16, ZCY17, ZCY18, ZCY19, ZCY22, ZCY23, ZCY25, ZCY26, ZCY39, ZCY53, ZCY54, ZCY55, ZCY81	ZCE05	0.045 (1.59)
Tap-off terminal (for XCKT)	Sold in lots of 10	XALZ09	0.010 (0.35)
Spacer for angular positioning of heads with adjustable levers, for values other than -90°, 0° and 90°	—	XCMZ07	0.002 (0.07)
Adapter for 1/2" NPT conduit Converts PG 11 conduit entries to 1/2" NPT	Sold in lots of 10	DE9RA1012	0.050 (1.76)

Bodies with contacts, type XCKP plastic, with rotary head (without operating lever)					
Type of contact	Function diagram	Positive operation (2)	Cable entry	Catalog Number	Weight kg (lb)
2-pole					
N/C + N/O snap action (XE2SP2151)		⊖	1/2" NPT	XCKP2101N12	0.115 (0.254)
		⊖	PG 11	XCKP2101G11	0.115 (0.254)
		⊖	M12 connector	XCKP2101M12	0.125 (0.276)
N/C + N/O break before make, slow break (XE2NP2151)		⊖	1/2" NPT	XCKP2501N12	0.115 (0.254)
		⊖	PG 11	XCKP2501G11	0.115 (0.254)

Bodies with contacts, type XCKD metal, with rotary head (without operating lever)					
Type of contact	Function diagram	Positive operation (2)	Cable entry	Catalog Number	Weight kg (lb)
2-pole					
N/C + N/O snap action (XE2SP2151)		⊖	1/2" NPT	XCKD2101N12	0.185 (0.408)
		⊖	PG 11	XCKD2101G11	0.185 (0.408)
		⊖	M12 connector	XCKD2101M12	0.195 (0.430)
N/C + N/O break before make, slow break (XE2NP2151)		⊖	1/2" NPT	XCKD2501N12	0.185 (0.408)
		⊖	PG 11	XCKD2501G11	0.185 (0.408)