

# Limit switches

Osiswitch® Optimum

Compact design, plastic, type XCK N

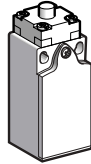
## ■ XCK N

with 1 cable entry

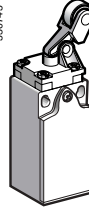
Conforming to CENELEC EN 50047

## □ With head for linear movement (plunger)

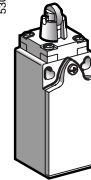
530748



530745



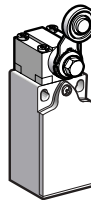
530747



Page 37611/2

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

530749



530746



Page 37611/2

#### Environment characteristics

<b>Conforming to standards</b>	Products	IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14
	Machine assemblies	IEC 60204-1, EN 60204-1
<b>Product certifications</b>		UL, CSA
<b>Protective treatment</b>	Version	Standard "TC", special "TH"
<b>Ambient air temperature</b>	Operation	- 25...+ 70 °C
	Storage	- 40...+ 70 °C
<b>Vibration resistance</b>	Conforming to IEC 60068-2-6	25 gn (10...500 Hz)
<b>Shock resistance</b>	Conforming to IEC 60068-2-27	50 gn (11 ms) except XCK N2149●●: 15 gn and XCK N2108●●: 20 gn
<b>Electric shock protection</b>		Class II conforming to IEC 61140 and NF C 20030
<b>Degree of protection</b>		<b>IP 65 conforming to IEC 60529; IK 04 conforming to EN 50102</b>
<b>Cable entry</b>		Depending on model: tapped entry for ISO M20 x 1.5 cable gland or n° 11 cable gland
<b>Materials</b>	Bodies	Plastic
	Heads	Plastic

#### Contact block characteristics

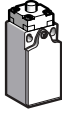
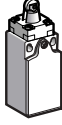
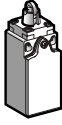


<b>Rated operational characteristics</b>		$\sim$ AC-15; B300 (U <sub>e</sub> = 240 V, I <sub>e</sub> = 3 A); I <sub>the</sub> = 10 A $\equiv$ DC-13; R300 (U <sub>e</sub> = 250 V, I <sub>e</sub> = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
<b>Rated insulation voltage</b>		U <sub>i</sub> = 500 V degree of pollution 3 conforming to IEC 60947-1 U <sub>i</sub> = 300 V conforming to UL 508, CSA C22-2 n° 14
<b>Rated impulse withstand voltage</b>		U <sub>imp</sub> = 6 kV conforming to IEC 60947-1, IEC 60664
<b>Positive operation</b>		N/C contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-1
<b>Short-circuit protection</b>		10 A cartridge fuse type gG (gl)
<b>Cabling</b>	Screw clamp terminals	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 2 x 1.5 mm <sup>2</sup>


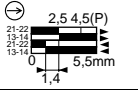


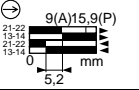
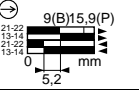

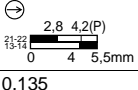
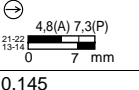
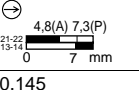
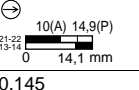
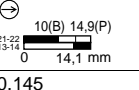



# Limit switches



Osiswitch® Optimum

Compact design, plastic, type XCK N

Complete units with 1 ISO M20 x 1.5 cable entry

Type of head	Plunger (fixing by the body)				
					
Type of operator	Metal end plunger	Steel roller plunger for lateral cam approach	Steel roller plunger for traverse cam approach	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction

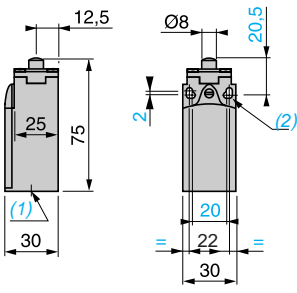
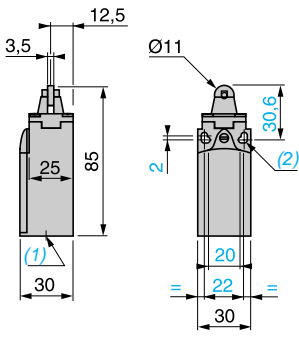
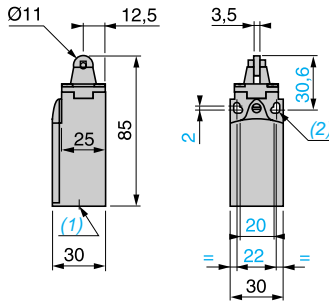
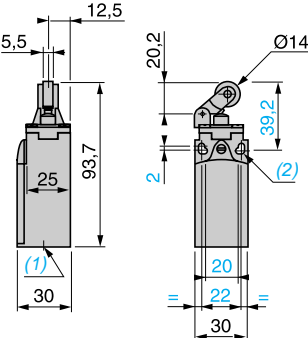
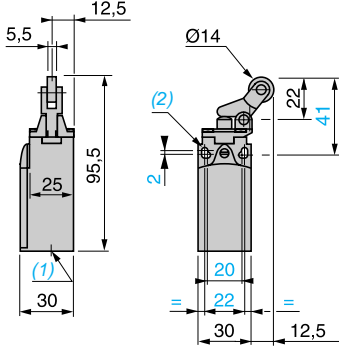
References (1) (2)	Plunger (fixing by the body)				
 2-pole N/C + N/O snap action	<b>XCK N2110P20</b> 	<b>XCK N2102P20</b> 	<b>XCK N2103P20</b> 	<b>XCK N2121P20</b> 	<b>XCK N2127P20</b> 
 2-pole N/C + N/O break before make, slow break	<b>XCK N2510P20</b> 	<b>XCK N2502P20</b> 	<b>XCK N2503P20</b> 	<b>XCK N2521P20</b> 	<b>XCK N2527P20</b> 
Weight (kg)	0.135	0.145	0.145	0.145	0.145
Contact operation	 contact closed (A) (B) = cam displacement  contact open (P) = positive opening point			 N/C contact with positive opening operation	

Characteristics	Plunger (fixing by the body)	
Switch actuation	By 30° cam	By any moving part
Type of actuation		
Maximum actuation speed	0.5 m/s	0.3 m/s
Mechanical durability (in millions of operating cycles)	10	
Minimum force or torque	For tripping: 15 N	12 N
	For positive opening: 30 N	20 N
Cable entry (2)	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	

(1) Sold and packaged in lots of 20.

(2) For an entry tapped for a n° 11 cable gland, replace P20 in the reference by G11. Example: XCK N2110P20 becomes XCK N2110G11.

## Dimensions

XCK N2●10P20	XCK N2●02P20	XCK N2●03P20
		
XCK N2●21P20	XCK N2●27P20	
		

(1) Tapped entry for ISO M20 x 1.5 or Pg 11 cable gland.  
 (2) Ø: 2 elongated holes Ø 4.3 x 6.3 on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.

# Limit switches

Osiswitch® Optimum

Compact design, plastic, type XCK N

Complete units with 1 ISO M20 x 1.5 cable entry

Type of head	Rotary (fixing by the body)			Multi-directional	
Type of operator	Thermoplastic roller lever	Variable length thermoplastic roller lever	Variable length thermoplastic roller lever, Ø 50 mm	Spring lever	"Cat's whisker"

References (1) (2)	XCK N2118P20	XCK N2145P20	XCK N2149P20	XCK N2108P20	XCK N2106P20
<p>2-pole N/C + N/O snap action</p>	<p>25° 50°(P)</p>	<p>25° 50°(P)</p>	<p>25° 50°(P)</p>	<p>25°</p>	<p>25°</p>
<p>2-pole N/C + N/O break before make, slow break</p>	<p>28° 47°(P)</p>	<p>28° 47°(P)</p>	<p>28° 47°(P)</p>	<p>28°</p>	<p>28°</p>
Weight (kg)	0.175	0.180	0.200	0.140	0.135
Contact operation	<p>contact closed (A) (B) = cam displacement contact open (P) = positive opening point</p>			<p>N/C contact with positive opening operation</p>	

Characteristics	By 30° cam		By any moving part
Switch actuation	By 30° cam		By any moving part
Type of actuation			
Maximum actuation speed	1.5 m/s		1 m/s (any direction)
Mechanical durability (in millions of operating cycles)	10		5
Minimum force or torque.	For tripping	0.1 N.m	0.13 N.m
	For positive opening	0.15 N.m	-
Cable entry (2)	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm		

(1) and (2) see opposite page.

## Dimensions

XCK N2●18P20	XCK N2●45P20	XCK N2●49P20
<p>Dimensions: 39.8, 24, 5.5, 108.1, 25, 44.5, 20, 22, 30, Ø19, 35.5, 53.6, 2, (1), (2)</p>	<p>Dimensions: 42.3, 38.1, 5.5, 108...157, 25, 30, 39.7, Ø19, 35.5...84.5, 53.6...102.6, 2, (1), (2), 20, 22, 30</p>	<p>Dimensions: 47.9, 40.4, 10, 132.6...172.6, 25, 30, 39.7, Ø50, 60...100, 78...118, 2, (1), (2), 20, 22, 30</p>
XCK N2●08P20	XCK N2●06P20	
<p>Dimensions: 12.5, 182.6, 25, 30, Ø6.4, 128, 2, (1), (2), 20, 22, 30</p>	<p>Dimensions: 12.5, 196.5, 25, 30, Ø1.2, 142, 2, (1), (2), 20, 22, 30</p>	

(1) Tapped entry for ISO M20 x 1.5 or Pg 11 cable gland.  
(2) Ø: 2 elongated holes Ø 4.3 x 6.3 on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.