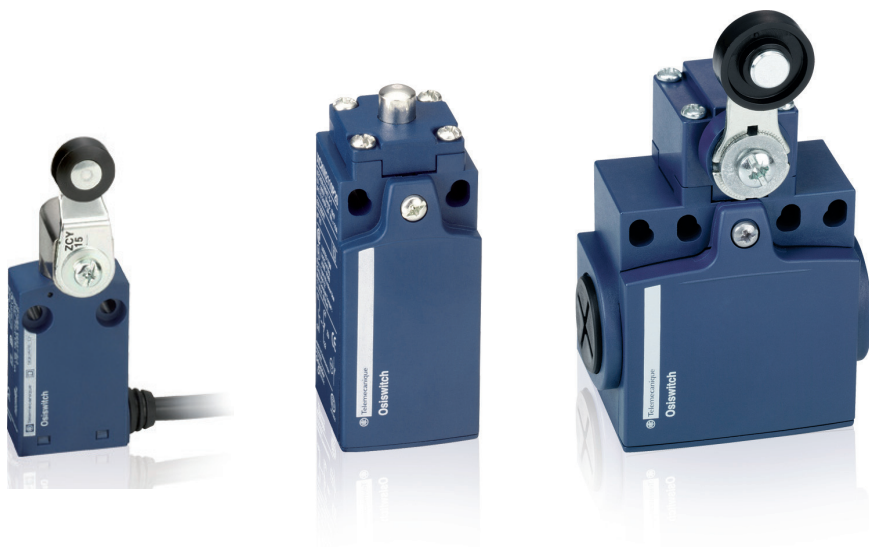


# OsiSense™

## XC Basic Limit Switches

XCMN, XCKN, XCNT





# An economic version offering first-class reliability

The new range of **OsiSense XCMN** and CENELEC EN50047-compatible **XCKN** and **XCNT** limit switches is perfectly suited to the economic and technological needs of machine manufacturers

## > Increase your profits

A particularly economical product

## > High performance

Positive-opening contacts

## > Extensive range

42 complete switches



XCMN

XCKN

XCNT

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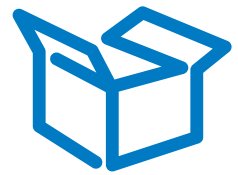
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Simply easy!™



# Increase your profits

**OsiSense XCMN, XCKN, and XCNT** limit switches are designed for machine manufacturers, constructed with first-class Schneider Electric quality. Packed in bulk quantities to suit industrial demands, these limit switches save time and reduce packaging disposal, providing considerable savings for machine manufacturers.



**75%**

less packaging for environmental friendliness and ease of use in a greener world

## > Reliable and robust

Conforming to worldwide standards, XCKN and XCNT compact design limit switches are CENELEC EN50047 compatible and 100% interchangeable with the variable composition XCKP and XCKT products.

The XCKN and XCNT are fully sealed (IP65), have a mechanical shock resistance of IK04, and are capable of up to 10 million operations.

The electrically separated contact poles and positive opening contacts help ensure reliable detection for the machine.

Capable of up to 5 million operations, the XCMN miniature limit switches have an IP65, IK04-rated enclosure design that matches the variable composition XCMD range, allowing for easy interchangeability.



up to

**10 million**

operations, depending on the application

# Extensive range

## > Choice and availability

Available throughout the world, OsiSense limit switches XCKN (1 cable entry) and XCNT (2 cable entries), and manually-reset limit switches XCNR (1 cable entry) and XCNTR (2 cable entries), comprise 30 complete switches, each with a choice of 3 contact arrangements and 2 cable entries.

The 12 additional XCMN miniature style switches are complete with 1 NO/NC snap action contact and a 1 m cable exiting from the side.

## > Extensive range, and more if necessary

Switches are sold complete; however, additional, customizable versions (such as other heads, operators, contacts, or cable entries) are available per lot and are quickly convertible.



## > A global range



# Limit switches

OsiSense™ XC Basic

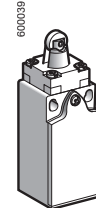
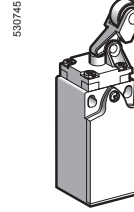
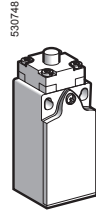
Compact design, plastic, types XCKN and XCNT

## ■ XCKN

with 1 cable entry

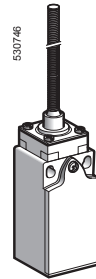
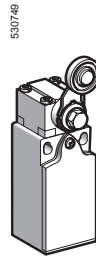
Conforming to CENELEC EN 50047

### □ With head for linear movement (plunger)



Page 8

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



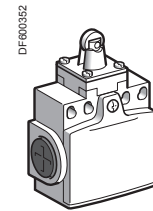
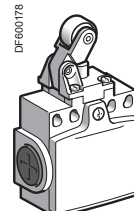
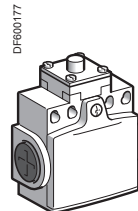
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## ■ XCNT

with 2 cable entries

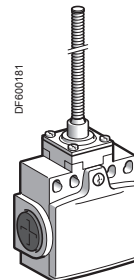
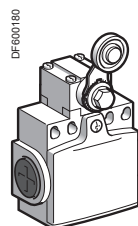
Conforming to CENELEC EN 50047

### □ With head for linear movement (plunger)



Page 11

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



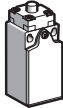
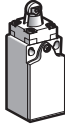
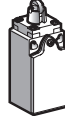

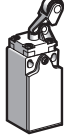

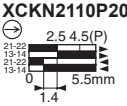
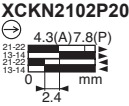
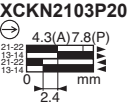
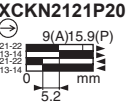
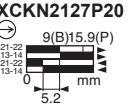

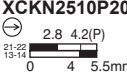
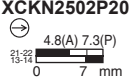
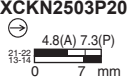
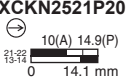
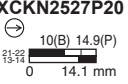


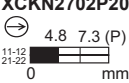

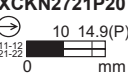
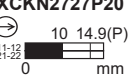

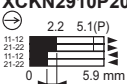
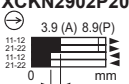
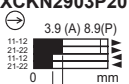

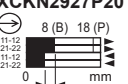



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

Environmental specifications		
<b>Conformity 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, CCC
<b>Protective treatment</b>	Version	Standard: "TC"
<b>Ambient air temperature</b>	Operation	-25° to + 70°C (-13° to + 158°F)
	Storage	-40° to + 70°C (-40° to + 158°F)
<b>Vibration resistance</b>	Conforming to IEC 60068-2-6	25 gn (10–500 Hz) except: XCKN●●08: 10 gn; XCKN●●39 and XCKN●●49: 15 gn
<b>Shock resistance</b>	Conforming to IEC 60068-2-27	50 gn (11 ms) except: XCKN2●49●● and XCKN●●39: 15 gn; XCKN2●08●●: 20 gn; and XCKN2●45●●: 35 gn
<b>Electric shock protection</b>		Class II conforming to IEC 61140 and NF C 20030
<b>Degree of protection</b>		IP 65 conforming to IEC 60529; IK 04 conforming to EN 50102
<b>Cable entry</b>		Depending on model: tapped entry for ISO M20 x 1.5 or Pg 11 cable connector, ISO M16 x 1.5 cable connector, or PF 1/2 (G 1/2).
<b>Materials</b>	Bodies	Plastic
	Heads	Plastic
Contact block specifications		
<b>Rated operational specifications</b>		~ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 A ≡ DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
<b>Rated insulation voltage</b>	2-pole contact	Ui = 500 V degree of pollution 3 conforming to IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
<b>Rated impulse withstand voltage</b>	2-pole contact	U imp = 6 kV conforming to IEC 60947-1, IEC 60664
<b>Positive operation</b>		NC 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) recommended
<b>Connection</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

## OsiSense™ XC Basic


Compact design, plastic, type XCKN  
Complete switches with 1 cable entry

Type of head	Plunger				
	Mounting by the body				
					
Type of operator	Metal end plunger	Plastic roller plunger for lateral cam approach	Plastic roller plunger for traverse cam approach	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction
Sold and packed in lots of	20	20	20	20	20
<b>Catalog numbers of complete switches with 1 ISO M20 x 1.5 cable entry</b>					
 2-pole NC + NO snap action	<b>XCKN2110P20</b> 	<b>XCKN2102P20</b> 	<b>XCKN2103P20</b> 	<b>XCKN2121P20</b> 	<b>XCKN2127P20</b> 
 2-pole NC + NO break before make, slow break	<b>XCKN2510P20</b> 	<b>XCKN2502P20</b> 	<b>XCKN2503P20</b> 	<b>XCKN2521P20</b> 	<b>XCKN2527P20</b> 
 2-pole NC + NC simultaneous, slow break	<b>XCKN2710P20</b> 	<b>XCKN2702P20</b> 	<b>XCKN2703P20</b> 	<b>XCKN2721P20</b> 	<b>XCKN2727P20</b> 
 2-pole NC + NC snap action	<b>XCKN2910P20</b> 	<b>XCKN2902P20</b> 	<b>XCKN2903P20</b> 	<b>XCKN2921P20</b> 	<b>XCKN2927P20</b> 
Weight lb (kg)	0.14 (0.065)	0.14 (0.065)	0.14 (0.065)	0.15 (0.070)	0.15 (0.070)
Contact operation	 closed  open	(A) (B) = cam displacement (P) = positive opening point		 NC contact with positive opening operation	

Specifications		
Switch actuation	On end	By 30° cam
Type of actuation		
Maximum actuation speed	0.5 ms	0.3 ms
Mechanical durability <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>	10 million operating cycles	
Minimum force or torque	For tripping: 15 N (3.4 lb) For positive opening: 30 N (6.7 lb)	12 N (2.7 lb) 20 N (4.5 lb)
Cable entry	1 entry tapped M20 x 1.5 mm for ISO cable connector, clamping capacity 7 to 13 mm	

### Catalog numbers of complete switches with 1 Pg 11 cable entry

For complete switches with 1 Pg 11 cable entry, replace P20 with G11.  
Example: XCKN2110P20 becomes **XCKN2110G11**.

1/2" NPT cable entry				
For 1/2" NPT cable entry, use adapter DE9RA1012 (compatible with XCNT●●●●G11)	<b>Description</b>	<b>Sold in lots of</b>	<b>Unit catalog no.</b>	<b>Weight lb (kg)</b>
	Adapter, Pg 11 to 1/2" NPT conduit entry	10	DE9RA1012	0.11 (0.050)

### Other cable entries

For complete switches with ISO M16 x 1.5 cable entry, consult the Customer Care Center.

### Other contacts

For complete switches with 2-pole contacts, consult the Customer Care Center.  
NO + NC make before break, slow break,  
NO + NO simultaneous, slow break.

For complete switches with 3-pole contacts, consult the Customer Care Center.  
NC + NO + NO snap action,  
NC + NC + NO snap action,  
NC + NC + NO break before make, slow break,  
NC + NO + NO break before make, slow break.



# Limit switches

## OsiSense™ XC Basic

Compact design, plastic, type XCKN  
Complete switches with 1 cable entry

Type of head	Rotary				Multi-directional	
Mounting by the body						
Type of operator	Thermoplastic roller lever	Variable length thermoplastic roller lever	Thermoplastic roller lever, Ø 50 mm	Variable length thermoplastic roller lever, Ø 50 mm	Spring rod	"Cat's whisker"
Sold and packed in lots of	20	20	20	20	20	20

Catalog numbers of complete switches with 1 ISO M20 x 1.5 cable entry							
	<b>2-pole NC + NO snap action</b>	<b>XCKN2118P20</b> 	<b>XCKN2145P20</b> 	<b>XCKN2139P20</b> 	<b>XCKN2149P20</b> 	<b>XCKN2108P20</b> 	<b>XCKN2106P20</b> 
	<b>2-pole NC + NO break before make, slow break</b>	<b>XCKN2518P20</b> 	<b>XCKN2545P20</b> 	<b>XCKN2539P20</b> 	<b>XCKN2549P20</b> 	<b>XCKN2508P20</b> 	<b>XCKN2506P20</b> 
	<b>2-pole NC + NC simultaneous, slow break</b>	<b>XCKN2718P20</b> 	<b>XCKN2745P20</b> 	<b>XCKN2739P20</b> 	<b>XCKN2749P20</b> 	<b>XCKN2708P20</b> 	<b>XCKN2706P20</b> 
	<b>2-pole NC + NC snap action</b>	<b>XCKN2918P20</b> 	<b>XCKN2945P20</b> 	<b>XCKN2939P20</b> 	<b>XCKN2949P20</b> 	<b>XCKN2908P20</b> 	<b>XCKN2906P20</b> 
<b>Weight lb (kg)</b>		0.19 (0.085)	0.20 (0.090)	0.24 (0.110)	0.25 (0.115)	0.19 (0.085)	0.17 (0.075)
<b>Contact operation</b>		closed open		(A) (B) = cam displacement (P) = positive opening point		NC contact with positive opening operation	

Specifications		
<b>Switch actuation</b>	By 30° cam	By any moving part
<b>Type of actuation</b>		
<b>Maximum actuation speed</b>	1.5 ms	1 ms (any direction)
<b>Mechanical durability</b> <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>	10 million operating cycles	5 million operating cycles
<b>Minimum force or torque</b>	For tripping: 0.1 N.m (0.89 lb-in) For positive opening: 0.15 N.m (1.33 lb-in)	0.13 N.m (1.15 lb-in) -
<b>Cable entry</b>	1 entry tapped M20 x 1.5 mm for ISO cable connector, clamping capacity 7 to 13 mm	

### Catalog numbers of complete switches with 1 Pg 11 cable entry

For complete switches with 1 Pg 11 cable entry, replace P20 with G11.  
Example: XCKN2118P20 becomes XCKN2118G11.

1/2" NPT cable entry		Description	Sold in lots of	Unit catalog no.	Weight lb (kg)
For 1/2" NPT cable entry, use adapter DE9RA1012 (compatible with XCNT●●●●G11)		Adapter, Pg 11 to 1/2" NPT conduit entry	10	DE9RA1012	0.11 (0.050)



### Other cable entries

For complete switches with ISO M16 x 1.5 cable entry, consult the Customer Care Center.

### Other contacts


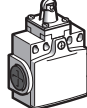
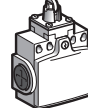
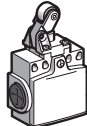
For complete switches with 2-pole contacts, consult the Customer Care Center.  
NO + NC make before break, slow break,  
NO + NO simultaneous, slow break.


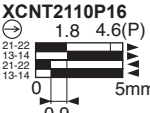
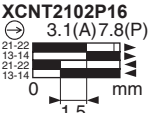
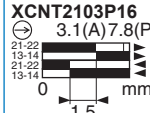


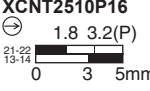
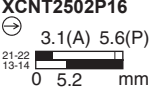
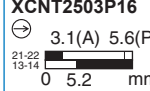
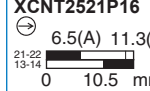

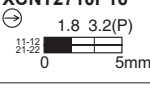
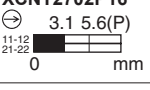
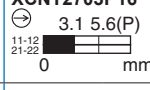




For complete switches with 3-pole contacts, consult the Customer Care Center.  
NC + NO + NO snap action,  
NC + NC + NO snap action,  
NC + NC + NO break before make, slow break,  
NC + NO + NO break before make, slow break.




# Limit switches

## OsiSense™ XC Basic

Compact design, plastic, type XCNT  
Complete switches with 2 cable entries


Type of head	Plunger			
	Mounting by the body			
				
Type of operator	Metal end plunger	Plastic roller plunger for lateral cam approach	Plastic roller plunger for traverse cam approach	Thermoplastic roller lever plunger, horizontal actuation in 1 direction
Sold and packed in lots of	10	10	10	10

Catalog numbers of complete switches with 2 ISO M16 x 1.5 cable entries					
	<b>2-pole NC + NO snap action</b>	<b>XCNT2110P16</b> 1.8 4.6(P) 	<b>XCNT2102P16</b> 3.1(A) 7.8(P) 	<b>XCNT2103P16</b> 3.1(A) 7.8(P) 	<b>XCNT2121P16</b> 6.5(A) 15.7(P) 
	<b>2-pole NC + NO break before make, slow break</b>	<b>XCNT2510P16</b> 1.8 3.2(P) 	<b>XCNT2502P16</b> 3.1(A) 5.6(P) 	<b>XCNT2503P16</b> 3.1(A) 5.6(P) 	<b>XCNT2521P16</b> 6.5(A) 11.3(P) 
	<b>2-pole NC + NC simultaneous, slow break</b>	<b>XCNT2710P16</b> 1.8 3.2(P) 	<b>XCNT2702P16</b> 3.1 5.6(P) 	<b>XCNT2703P16</b> 3.1 5.6(P) 	<b>XCNT2721P16</b> 6.5 11.3(P) 
Weight kg (lb)		0.085 (0.19)	0.085 (0.19)	0.085 (0.19)	0.090 (0.20)
Contact operation		 closed  open	(A) (B) = cam displacement (P) = positive opening point	 NC contact with positive opening operation	

Specifications				
Switch actuation		On end	By 30° cam	
Type of actuation				
Maximum actuation speed		0.5 ms	0.3 ms	1 ms
Mechanical durability <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>		10 million operating cycles		
Minimum force or torque	For tripping	15 N (3.4 lb)	12 N (2.7 lb)	6 N (1.3 lb)
	For positive opening	30 N (6.7 lb)	20 N (4.5 lb)	10 N (2.2 lb)
Cable entry	2 entries tapped M16 x 1.5 mm for ISO cable connector, clamping capacity 4 to 8 mm			

**Catalog numbers of complete switches with 2 Pg 11 cable entries**

For complete switches with 2 Pg 11 cable entries, replace P16 with G11.  
Example: XCNT2110P16 becomes **XCNT2110G11**.

1/2" NPT cable entry				
For 1/2" NPT cable entry, use adapter DE9RA1012 (compatible with XCNT●●●●G11).	<b>Description</b>	<b>Sold in lots of</b>	<b>Unit catalog number</b>	<b>Weight kg (lb)</b>
	Adapter, Pg 11 to 1/2" NPT conduit entry	10	DE9RA1012	0.050 (0.11)
DE9RA1012				

**Other cable entries**

For complete switches with ISO M16 x 1.5 cable entry, consult the Customer Care Center.

**Other contacts**

For complete switches with 2-pole contacts, consult the Customer Care Center.  
NO + NC make before break, slow break,  
NO + NO simultaneous, slow break.

# Limit switches

## OsiSense™ XC Basic

Compact design, plastic, type XCNT  
Complete switches with 2 cable entries

Type of head	Rotary				Multi-directional	
Mounting by the body						
Type of operator	Thermoplastic roller lever	Variable length thermoplastic roller lever	Thermoplastic roller lever, Ø50 mm	Variable length thermoplastic roller lever, Ø50 mm	Spring rod	"Cat's whisker"
Sold and packed in lots of	10	10	10	10	8	8

### Catalog numbers of complete switches with 2 ISO M16 x 1.5 cable entries

	<b>2-pole NC + NO snap action</b>	<b>XCNT2118P16</b> 	<b>XCNT2145P16</b> 	<b>XCNT2139P16</b> 	<b>XCNT2149P16</b> 	<b>XCNT2108P16</b> 	<b>XCNT2106P16</b> 
	<b>2-pole NC + NO break before make, slow break</b>	<b>XCNT2518P16</b> 	<b>XCNT2545P16</b> 	<b>XCNT2539P16</b> 	<b>XCNT2549P16</b> 	<b>XCNT2508P16</b> 	<b>XCNT2506P16</b> 
	<b>2-pole NC + NC simultaneous, slow break</b>	<b>XCNT2718P16</b> 	<b>XCNT2745P16</b> 	<b>XCNT2739P16</b> 	<b>XCNT2749P16</b> 	<b>XCNT2708P16</b> 	<b>XCNT2706P16</b> 
<b>Weight kg (lb)</b>		0.105 (0.23)	0.120 (0.26)	0.120 (0.26)	0.120 (0.26)	0.100 (0.22)	0.090 (0.20)
<b>Contact operation</b>			(A) (B) = cam displacement (P) = positive opening point				

### Specifications

<b>Switch actuation</b>	By 30° cam	By any moving part
<b>Type of actuation</b>		
<b>Maximum actuation speed</b>	1.5 ms	1 ms (any direction)
<b>Mechanical durability</b> <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>	10 million operating cycles	5 million operating cycles
<b>Minimum force or torque</b>	For tripping: 0.1 N.m (0.89 lb-in) For positive opening: 0.15 N.m (1.33 lb-in)	0.13 N.m (1.15 lb-in) -
<b>Cable entry</b>	2 entries tapped M16 x 1.5 mm for ISO cable connector, clamping capacity 4 to 8 mm	

### Catalog numbers of complete switches with 2 Pg 11 cable entries

For complete switches with 2 Pg 11 cable entries, replace P16 with G11.  
Example: XCNT2118P16 becomes **XCNT2118G11**.

### 1/2" NPT cable entry

For 1/2" NPT cable entry, use adapter DE9RA1012 (compatible with XCNT●●●●G11).



DE9RA1012

Description	Sold in lots of	Unit catalog number	Weight kg (lb)
Adapter, Pg 11 to 1/2" NPT conduit entry	10	DE9RA1012	0.050 (0.11)

### Other cable entries

For complete switches with ISO M16 x 1.5 cable entry, consult the Customer Care Center.

### Other contacts

For complete switches with 2-pole contacts, consult the Customer Care Center.  
NO + NC make before break, slow break,  
NO + NO simultaneous, slow break.

# Limit switches

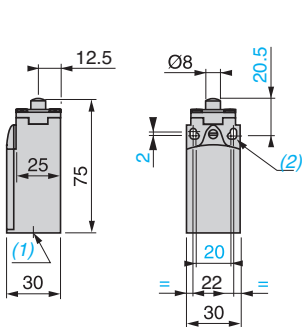
OsiSense™ XC Basic

Compact design, plastic, type XCKN

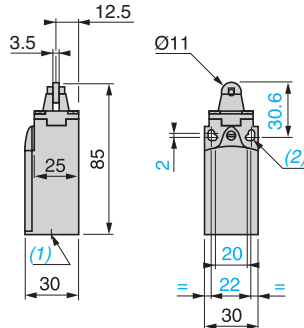
Complete switches with 1 cable entry

## Dimensions (mm)

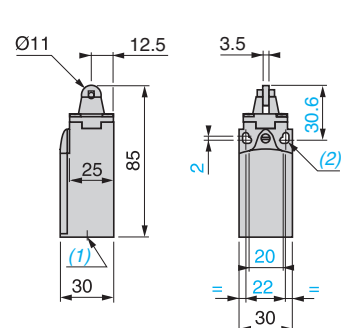
XCKN2•10P20



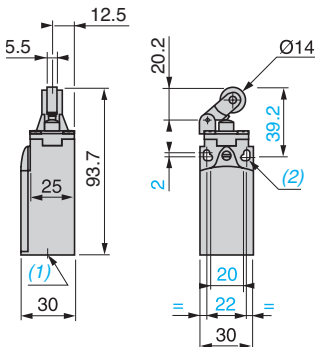
XCKN2•02P20



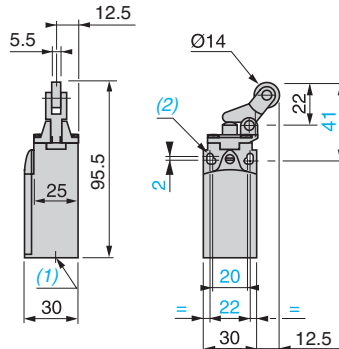
XCKN2•03P20



XCKN2•21P20

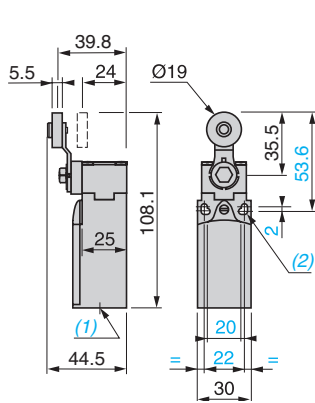


XCKN2•27P20

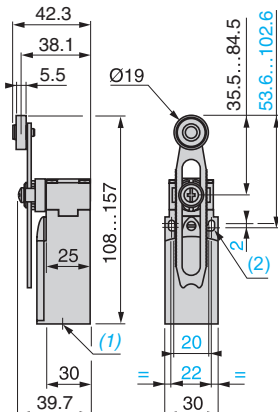


(1) 1 tapped entry for ISO M20 x 1.5 or Pg 11 cable connector.  
 (2) Ø: 2 elongated holes Ø 4.3 x 6.3 on 22 mm centers, 2 holes Ø 4.3 on 20 mm centers.

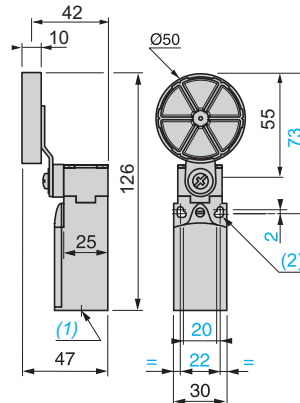
XCKN2•18P20



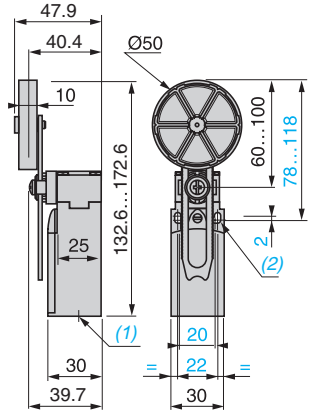
XCKN2•45P20



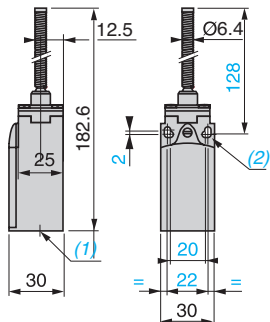
XCKN2•39P20



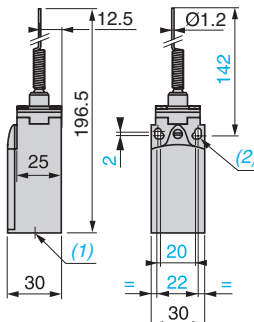
XCKN2•49P20



XCKN2•08P20

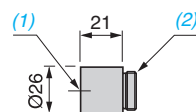


XCKN2•06P20



DE9RA1012

(Adapter, Pg 11 to 1/2" NPT conduit entry)



(1) Tapped entry for 1/2" NPT conduit.  
 (2) Threaded sleeve, Pg 11

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

# Limit switches

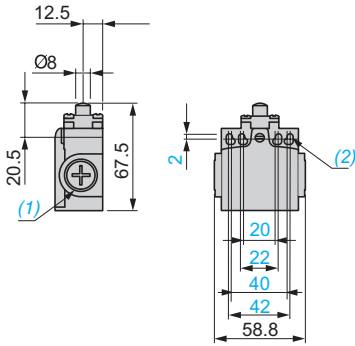
OsiSense™ XC Basic

Compact design, plastic, type XCNT

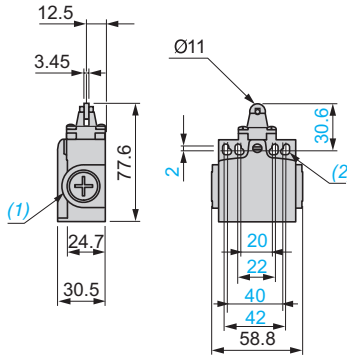
Complete switches with 2 cable entries

## Dimensions (mm)

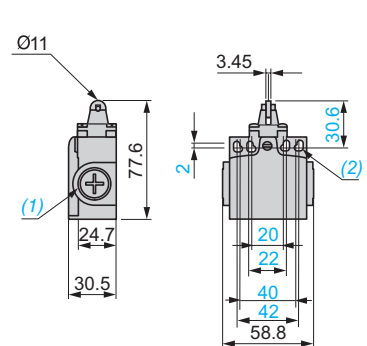
**XCNT2●10P20**



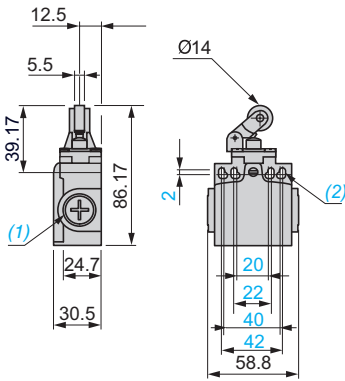
**XCNT2●02P20**



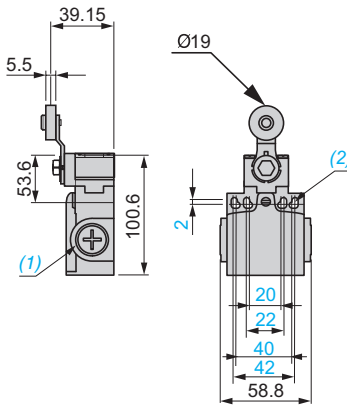
**XCNT2●03P20**



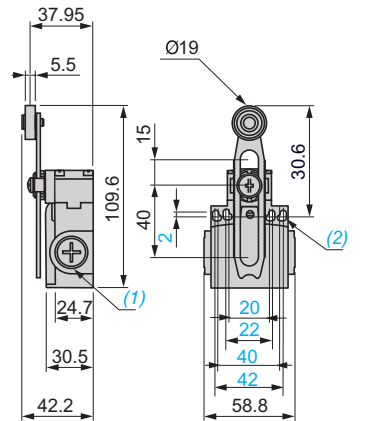
**XCNT2●21P20**



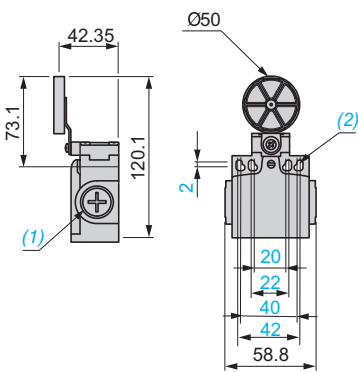
**XCNT2●18P16**



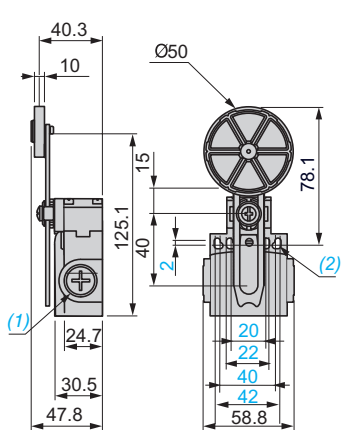
**XCNT2●45P16**



**XCNT2●39P16**

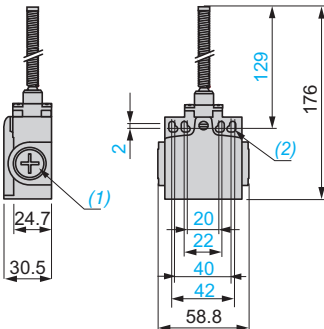


**XCNT2●49P16**

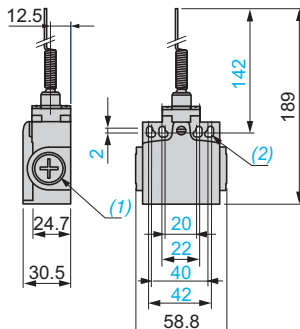


(1) 2 tapped entries for ISO M16 x 1.5 or Pg 11 cable connector.  
 (2) Ø: 4 elongated holes Ø 4.3 x 6.3

**XCNT2●08P16**



**XCNT2●06P16**



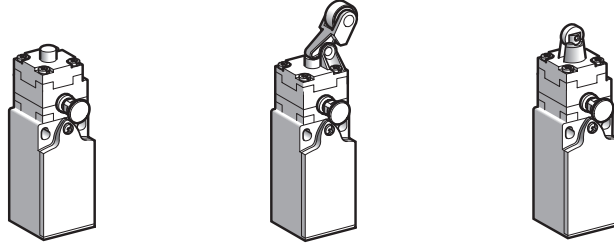
# Limit switches

OsiSense™ XC Basic

Compact design, plastic, with reset knob,  
types XCNR and XCNTR

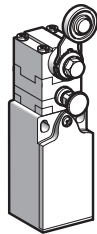
■ XCNR  
with 1 cable entry

□ With head for linear movement (plunger)



Page 16

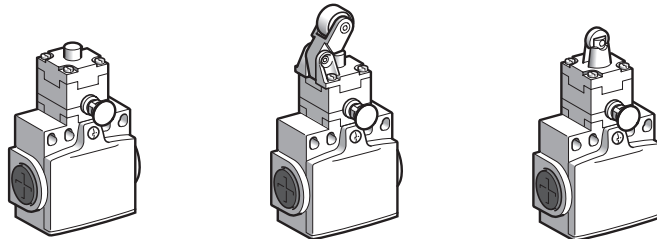
□ With head for rotary movement (lever)



Page 16

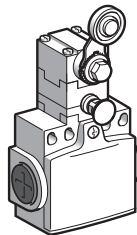
■ XCNTR  
with 2 cable entries

□ With head for linear movement (plunger)



Page 17

□ With head for rotary movement (lever)



Page 17

# Limit switches

## OsiSense™ XC Basic

Compact design, plastic, with reset knob, types XCNR and XCNTR

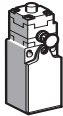
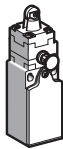
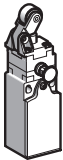


Environmental specifications		
<b>Conformity to standards</b>	Products	IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14
	Machine assemblies	IEC 60204-1, EN 60204-1
<b>Product certifications</b>		UL, CSA, CCC (pending)
<b>Protective treatment</b>	Version	Standard: "TC"
<b>Ambient air temperature</b>	Operation	-13° to + 158°F (-25° to + 70°C)
	Storage	-40° to + 158°F (-40° to + 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)
<b>Electric shock protection</b>		Class II conforming to IEC 61140 and NF C 20030
<b>Degree of protection</b>		IP 65 conforming to IEC 60529; IK 04 conforming to EN 50102
<b>Cable entry</b>		Depending on model: tapped entry, for ISO M20 x 1.5 or Pg 11 cable connector, ISO M16 x 1.5 cable connector or PF 1/2 (G 1/2)
<b>Materials</b>	Bodies	Plastic
	Heads	Plastic
Contact block specifications		
<b>Rated operational specifications</b>		~ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 A ≡ DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
<b>Rated insulation voltage</b>	2-pole contact	Ui = 500 V degree of pollution 3 conforming to IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 no. 14
<b>Rated impulse withstand voltage</b>	2-pole contact	U imp = 6 kV conforming to IEC 60947-1, IEC 60664
<b>Positive operation</b>		NC 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) recommended
<b>Connection</b>	Screw clamp terminals	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 2 x 1.5 mm <sup>2</sup>



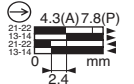
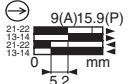
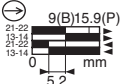
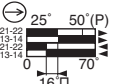

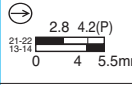
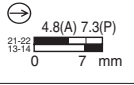
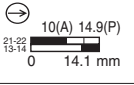
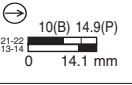
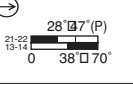

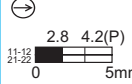
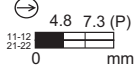
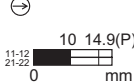
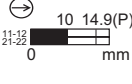
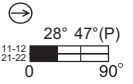


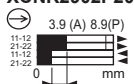
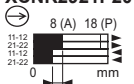
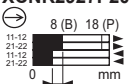
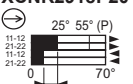



# Limit switches






OsiSense™ XC Basic

Compact design, plastic, with reset knob, type XCNR

Complete switches with 1 cable entry

Type of head	Plunger					Rotary
						
Mounting by the body						
Type of operator	Metal end plunger	Plastic roller plunger for lateral cam approach	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction	Thermoplastic roller lever	
Sold and packed in lots of	10	10	10	10	10	

Catalog numbers of complete switches with 1 ISO M20 x 1.5 cable entry						
	<b>2-pole NC + NO snap action</b>	<b>XCNR2110P20</b> 	<b>XCNR2102P20</b> 	<b>XCNR2121P20</b> 	<b>XCNR2127P20</b> 	<b>XCNR2118P20</b> 
	<b>2-pole NC + NO break before make, slow break</b>	<b>XCNR2510P20</b> 	<b>XCNR2502P20</b> 	<b>XCNR2521P20</b> 	<b>XCNR2527P20</b> 	<b>XCNR2518P20</b> 
	<b>2-pole NC + NC simultaneous, slow break</b>	<b>XCNR2710P20</b> 	<b>XCNR2702P20</b> 	<b>XCNR2721P20</b> 	<b>XCNR2727P20</b> 	<b>XCNR2718P20</b> 
	<b>2-pole NC + NC snap action</b>	<b>XCNR2910P20</b> 	<b>XCNR2902P20</b> 	<b>XCNR2921P20</b> 	<b>XCNR2927P20</b> 	<b>XCNR2918P20</b> 
<b>Weight lb (kg)</b>	0.18 (0.080)	0.18 (0.080)	0.19 (0.085)	0.20 (0.090)	0.22 (0.100)	
<b>Contact operation</b>	 closed  open	(A) (B) = cam displacement (P) = positive opening point		 NC contact with positive opening operation		

Specifications					
<b>Switch actuation</b>	On end	By 30° cam			
<b>Type of actuation</b>					
<b>Maximum actuation speed</b>	0.5 ms	0.3 ms	1 ms	1.5 ms	
<b>Mechanical durability</b> <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>	100,000 operating cycles				
<b>Minimum force or torque</b>	For tripping	3.4 lb (15 N)	2.7 lb (12 N)	1.3 lb (6 N)	0.89 lb-in (0.1 N.m)
	For positive opening	6.7 lb (30 N)	4.5 lb (20 N)	2.2 lb (10 N)	1.33 lb-in (0.15 N.m)
<b>Cable entry</b>	1 entry tapped M20 x 1.5 mm for ISO cable connector, clamping capacity 7 to 13 mm				

**Catalog numbers of complete switches with 1 Pg 11 cable entry**  
For complete switches with 1 Pg 11 cable entry, replace P20 with **G11**. Example: XCNR2110P20 becomes **XCNR2110G11**.

1/2" NPT cable entry	Description	Sold in lots of	Unit catalog number	Weight lb (kg)
For 1/2" NPT cable entry, use adapter DE9RA1012 (compatible with XCNR●●●●G11).	Adapter, Pg 11 to 1/2" NPT conduit entry	10	DE9RA1012	0.11 (0.050)



**Other cable entries**  
For complete switches with ISO M16 x 1.5 cable entry, consult the Customer Care Center.

**Other contacts**  
For complete switches with 2-pole contacts, consult the Customer Care Center.  
NC + NO make before break, slow break,  
NO + NO simultaneous, slow break.  
For complete switches with 3-pole contacts, consult the Customer Care Center.  
NC + NO + NO snap action,  
NC + NC + NO snap action,  
NC + NC + NO break before make, slow break,  
NC + NO + NO break before make, slow break.

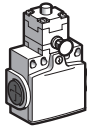
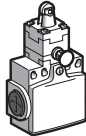
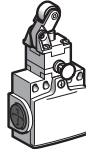
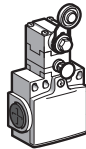


# Limit switches


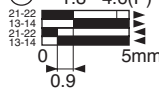
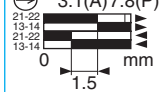
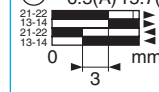
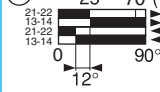


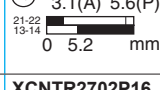

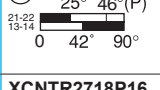

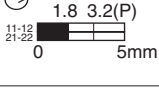
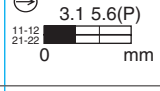
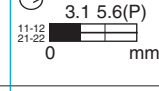
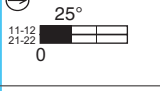

OsiSense™ XC Basic

Compact design, plastic, with reset knob, type XCNTR





Complete switches with 2 cable entries

Type of head	Plunger			Rotary
				
Mounting by the body				
Type of operator	Metal end plunger	Plastic roller plunger for lateral cam approach	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever
Sold and packed in lots of	10	10	10	10

### Catalog numbers of complete switches with 2 ISO M16 x 1.5 cable entries

	<b>2-pole NC + NO snap action</b>	<b>XCNTR2110P16</b> 1.8 4.6(P) 	<b>XCNTR2102P16</b> 3.1(A) 7.8(P) 	<b>XCNTR2121P16</b> 6.5(A) 15.7(P) 	<b>XCNTR2118P16</b> 25° 70°(P) 
	<b>2-pole NC + NO break before make, slow break</b>	<b>XCNTR2510P16</b> 1.8 3.2(P) 	<b>XCNTR2502P16</b> 3.1(A) 5.6(P) 	<b>XCNTR2521P16</b> 3.1(A) 5.6(P) 	<b>XCNTR2518P16</b> 25° 46°(P) 
	<b>2-pole NC + NC simultaneous, slow break</b>	<b>XCNTR2710P16</b> 1.8 3.2(P) 	<b>XCNTR2702P16</b> 3.1 5.6(P) 	<b>XCNTR2721P16</b> 3.1 5.6(P) 	<b>XCNTR2718P16</b> 25° 
Weight lb (kg)	0.23 (0.105)	0.24 (0.110)	0.30 (0.135)	0.21 (0.095)	
Contact operation		(A) (B) = cam displacement (P) = positive opening point		⊖ NC contact with positive opening operation	

### Specifications

Switch actuation	On end	By 30° cam		
Type of actuation				
Maximum actuation speed	0.5 ms	0.3 ms	1 ms	1.5 ms
Mechanical durability <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>	100,000 operating cycles			
Minimum force or torque	For tripping 3.4 lb (15 N)	2.7 lb (12 N)	1.3 lb (6 N)	0.89 lb-in (0.1 N.m)
	For positive opening 6.7 lb (30 N)	4.5 lb (20 N)	2.2 lb (10 N)	1.33 lb-in (0.15 N.m)
Cable entry	2 entries tapped M16 x 1.5 mm for ISO cable connector, clamping capacity 4 to 8 mm			

### Catalog numbers of complete switches with 2 Pg 11 cable entries

For complete switches with 2 Pg 11 cable entries, replace P16 with G11.

Example: XCNTR2110P16 becomes XCNTR2110G11.

### 1/2" NPT cable entry

For 1/2" NPT cable entry, use adapter DE9RA1012 (compatible with XCNTR●●●●G11).



DE9RA1012

Description	Sold in lots of	Unit catalog number	Weight lb (kg)
Adapter, Pg 11 to 1/2" NPT conduit entry	10	DE9RA1012	0.11 (0.050)

### Other cable entries

For complete switches with ISO M16 x 1.5 cable entry, consult the Customer Care Center.

### Other contacts

For complete switches with 2-pole contacts, consult the Customer Care Center.

NO + NC make before break, slow break,

NO + NO simultaneous, slow break.

# Limit switches

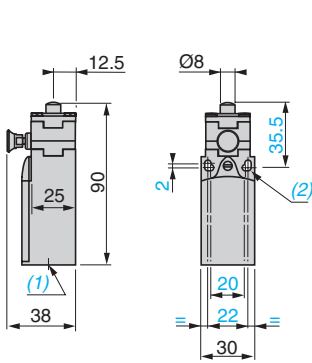
## OsiSense™ XC Basic

Compact design, plastic, with reset knob, type XCNR

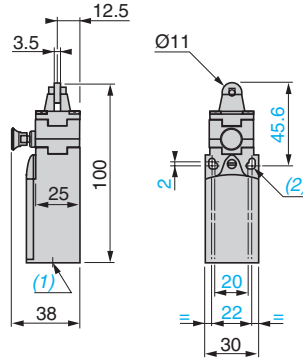
Complete switches with 1 cable entry

### Dimensions (mm)

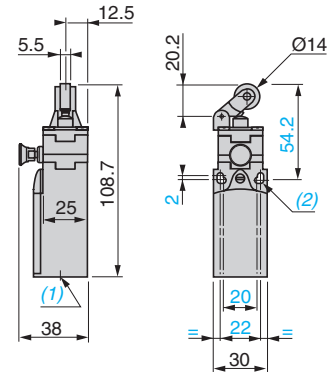
**XCNR2•10P20**



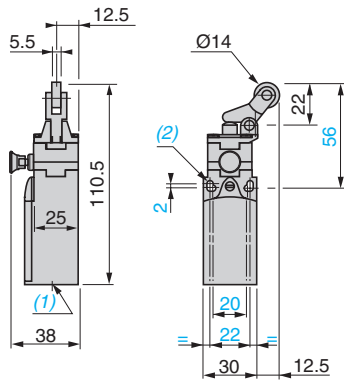
**XCNR2•02P20**



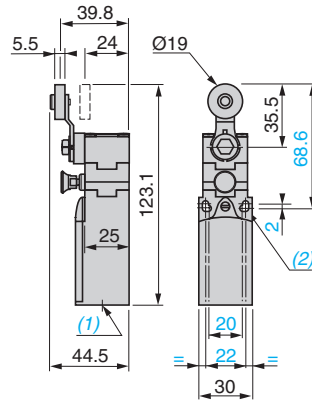
**XCNR2•21P20**



**XCNR2•27P20**

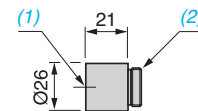


**XCNR2•18P20**



**DE9RA1012**

(Adapter, Pg 11 to 1/2" NPT conduit entry)



(1) Tapped entry for 1/2" NPT conduit.  
(2) Threaded sleeve, Pg 11

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

# Limit switches

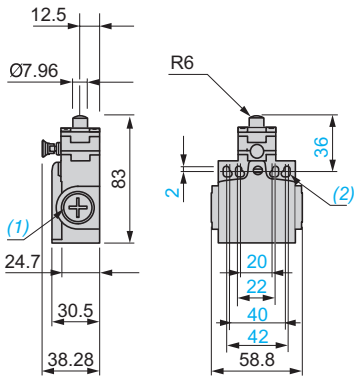
OsiSense™ XC Basic

Compact design, plastic, with reset knob, type XCNTR

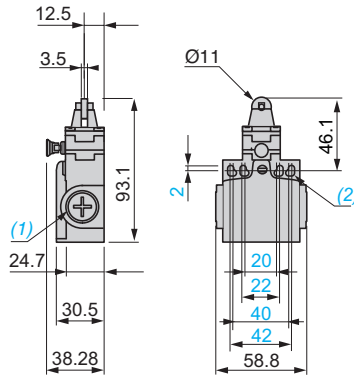
Complete switches with 2 cable entries

## Dimensions (mm)

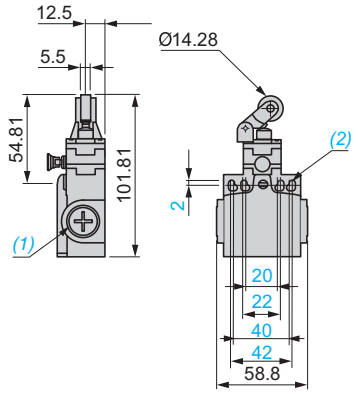
**XCNTR2•10P16**



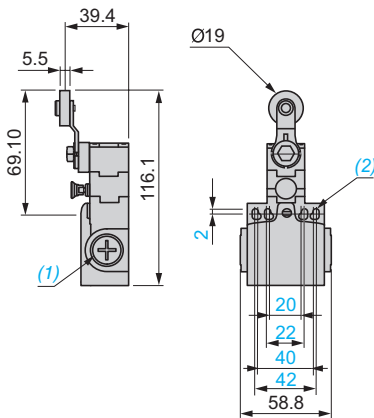
**XCNTR2•02P16**



**XCNTR2•21P16**



**XCNTR2•18P16**



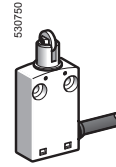
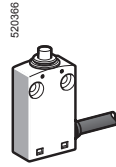
(1) 2 tapped entries for ISO M16 x 1.5 or Pg 11 cable connector.  
 (2)  $\varnothing$ : 4 elongated holes  $\varnothing 4.3 \times 6.3$ .

# Limit switches

OsiSense™ XC Basic  
Miniature design, plastic, type XCMN

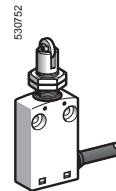
■ XCMN  
precabled

□ With head for linear movement (plunger), mounting by the body



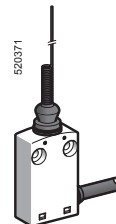
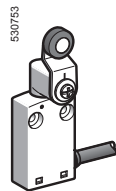
Page 22

□ With head for linear movement (plunger), bushing mount



Page 22

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



Page 22

# Limit switches

## OsiSense™ XC Basic

Miniature design, plastic, type XCMN

Environmental specifications		
<b>Conformity 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, CCC
<b>Protective treatment</b>	Standard version	“TC”
<b>Ambient air temperature</b>	Operation	-13° to + 158°F (-25° to + 70°C)
	Storage	-40° to + 158°F (-40° to + 70°C)
<b>Vibration resistance</b>	Conforming to IEC 60068-2-6	5 gn (10–500 Hz)
<b>Shock resistance</b>	Conforming to IEC 60068-2-27	25 gn (18 ms)
<b>Electric shock protection</b>		Class II conforming to IEC 61140 and NF C 20030
<b>Degree of protection</b>		IP 65 conforming to IEC 60529; IK 04 conforming to EN 50102
<b>Materials</b>	Bodies	Plastic
	Heads	Zamak
Contact block specifications		
<b>Rated operational specifications</b>		~ 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
<b>Rated insulation voltage</b>		Ui = 400 V degree of pollution 3 conforming to IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 no. 14
<b>Rated impulse withstand voltage</b>		U imp = 4 kV conforming to IEC 60947-1, IEC 60664
<b>Short-circuit protection</b>		6 A cartridge fuse type gG (gl)

# Limit switches

## OsiSense™ XC Basic

Miniature design, plastic, type XCMN  
Precabled

Type of head	Plunger (mounting by the body)				Plunger (bushing mount)		
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	M12 with metal end plunger	M12 with steel roller plunger for lateral cam approach	M12 with steel roller plunger for traverse cam approach

Catalog numbers							
<p>2-pole NC + NO snap action</p>	<b>XCMN2110L1</b>	<b>XCMN2102L1</b>	<b>XCMN2103L1</b>	<b>XCMN2121L1</b>	<b>XCMN21F0L1</b>	<b>XCMN21F2L1</b>	<b>XCMN21F3L1</b>
	<p>1.8 4.2(P) 0 5mm 0.8</p>	<p>3.1(A) 7(P) 0 1.4 mm</p>	<p>3.1(A) 7(P) 0 1.4 mm</p>	<p>65(A) 14(P) 0 2.8 mm</p>	<p>1.8 4.2(P) 0 5mm 0.8</p>	<p>3.1(A) 7(P) 0 1.4 mm</p>	<p>3.1(A) 7(P) 0 1.4 mm</p>
Weight lb (kg)	0.18 (0.080)	0.18 (0.080)	0.18 (0.080)	0.20 (0.090)	0.14 (0.065)	0.21 (0.095)	0.21 (0.095)
Contact operation	closed open		(A) = cam displacement (P) = positive opening point		NC contact with positive opening operation		

Specifications						
Switch actuation	On end	By 30° cam			On end	By 30° cam
Type of actuation						
Maximum actuation speed	0.5 ms	0.1 ms		0.5 ms		0.1 ms
Mechanical durability <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>	5 million operating cycles					
Minimum force or torque	For tripping	1.9 lb (8.5 N)	1.6 lb (7 N)	0.6 lb (2.5 N)	1.9 lb (8.5 N)	1.6 lb (7 N)
	For positive opening	9.6 lb (42.5 N)	7.9 lb (35 N)	2.8 lb (12.5 N)	9.6 lb (42.5 N)	7.9 lb (35 N)
Cabling	PvR cable, 4 x 0.75 mm <sup>2</sup> , length 1 meter					

### Dimensions (mm)

XCMN2110L1	XCMN2102L1, XCMN2103L1	XCMN21F2L1, XCMN21F3L1
<b>XCMN2121L1</b>	<b>XCMN21F0L1</b>	

(1) 2 mounting holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.  
 (2) External diameter 7.5 mm.  
 e: 8 mm max, panel cut-out Ø 12.5 mm.  
 Mounting nut thickness 3.5 mm.

# Limit switches

## OsiSense™ XC Basic

Miniature design, plastic, type XCMN  
Precabled

Type of head	Rotary (mounting by the body)			Multi-directional	
Type of operator	Thermoplastic roller lever	Variable length thermoplastic roller lever	Round thermoplastic rod lever, Ø 6 mm (1)	Spring lever with thermoplastic end (1)	"Cat's whisker" (1)

Catalog numbers	XCMN2115L1	XCMN2145L1	XCMN2159L1	XCMN2107L1	XCMN2106L1
2-pole NC + NO snap action					
Weight lb (kg)	0.22 (0.100)	0.23 (0.105)	0.18 (0.080)	0.19 (0.085)	0.18 (0.080)
Contact operation	closed (A) = cam displacement open (P) = positive opening point		NC contact with positive opening operation		
(1) Value taken with actuation by moving part at 100 mm from the mounting.					

Specifications	By 30° cam		By any moving part		
Switch actuation	By 30° cam		By any moving part		
Type of actuation					
Maximum actuation speed	1.5 ms		1 ms	1 ms (any direction)	
Mechanical durability <i>(Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.)</i>	5 million operating cycles				
Minimum force or torque	For tripping	0.9 lb-in (0.1 N.m)			
	For positive opening	4.4 lb-in (0.5 N.m)	-	-	-
Cabling	PvR cable, 4 x 0.75 mm <sup>2</sup> , length 1 meter				

### Dimensions (mm)

XCMN2115L1	XCMN2159L1	XCMN2107L1
XCMN2145L1	XCMN2106L1	

(1) 2 mounting holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.  
(2) External diameter 7.5 mm.

## Telemecanique Sensors

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