Limit switches

OsiSense XC Standard

Compact design, plastic, with reset,
types XCPR and XCTR
Compact design, metal, with reset, type XCDR

1

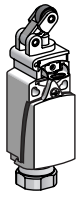
■ XCPR, XCDR
with 1 cable entry

□ With head for linear movement (plunger). Fixing by the body

XCDR

520412

520414



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XCPR

520425

520427

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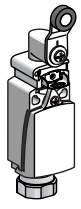
□ With head for rotary movement (lever) or multi-directional. Fixing by the body

XCDR

520416



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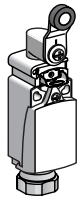
XCPR

520428



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■ XCTR
with 2 cable entries
Tripping/resetting points and fixing centres conform to CENELEC 50047

□ With head for linear movement (plunger). Fixing by the body

XCTR

520436

520437

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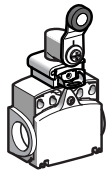
□ With head for rotary movement (lever) or multi-directional. Fixing by the body

XCTR

520438



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Limit switches
OsiSense XC Standard
Compact design, plastic, with reset,
types XCPR and XCTR
Compact design, metal, with reset, type XCDR

Environment characteristics

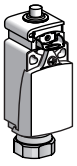
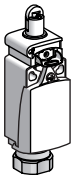
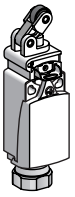
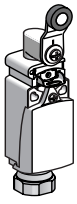
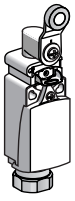
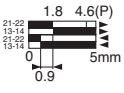
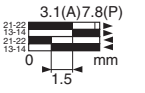
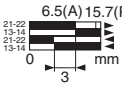
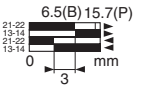
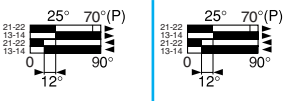
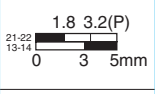
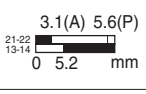
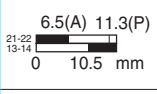
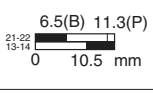
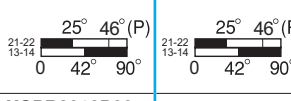
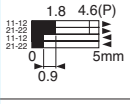
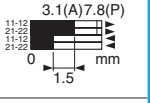
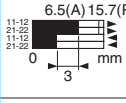
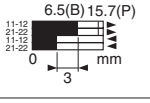
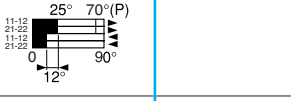
Conformity to standards	Products	EN/IEC 60947-5-1, UL 508, CSA C22-2 n° 14
	Machine assemblies	EN/IEC 60204-1
Product certifications		UL, CSA
Protective treatment	Standard version	"TC"
Ambient air temperature	For operation	- 25…+ 70 °C
	For storage	- 40…+ 70 °C
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10…500 Hz)
Shock resistance	Conforming to IEC 60068-2-27	50 gn (11 ms)
Electric shock protection		Class II conforming to IEC 61140 and NF C 20-030 for **XCPR** and **XCTR**
		Class I conforming to IEC 61140 and NF C 20-030 for **XCDR**
Degree of protection		**IP 66 and IP 67 conforming to IEC 60529; IK 04 conforming to EN 50102**
Repeat accuracy		0.1 mm on the tripping points, with 1 million operating cycles for head with end plunger
Cable entry	Depending on model	Either: tapped entry for n° 13 cable gland, tapped ISO M20 x 1.5 or tapped 1/2" NPT
Materials		**XCDR**: Zamak bodies and heads, **XCPR** and **XCTR**: plastic bodies, Zamak heads

Contact block characteristics

Rated operational characteristics		~ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 A ⎓ DC-13; Q300 (Ue = 250 V, Ie = 0.27 A), conforming to EN/IEC 60947-5-1 Appendix A
Rated insulation voltage		Ui = 500 V degree of pollution 3 conforming to IEN/IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
Rated impulse withstand voltage		U imp = 6 kV conforming to EN/IEC 60947-1, IEC 60664
Positive operation (depending on model)		NC contacts with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Resistance across terminals		≤ 25 mΩ conforming to IEC 60255-7 category 3
Short-circuit protection		10 A cartridge fuse type gG (gl)
Connection (screw clamp terminals)	XE2SP2151	Clamping capacity, min: 1 x 0.34 mm^2, max: 2 x 1.5 mm^2
	XE2NP2151	Clamping capacity, min: 1 x 0.5 mm^2, max: 2 x 2.5 mm^2
Minimum actuation speed (for head with end plunger)		**XE2SP2151**: 0.01 m/minute
		XE2NP2151: 6 m/minute

Limit switches
OsiSense XC Standard
Compact design, plastic, with reset,type XCPR
Complete switches with 1 cable entry

1

Type of head	Plunger (fixing by the body)				Rotary (fixing by the body)	
						
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction	Thermoplastic roller lever	Steel roller lever
References of complete switches with 1 ISO M20 x 1.5 cable entry						
 **2-pole NC + NO snap action (XE2SP2151)**	**XCPR2110P20** 	**XCPR2102P20** 	**XCPR2121P20** 	**XCPR2127P20** 	**XCPR2118P20** 	**XCPR2119P20**
 **2-pole NC + NO break before make, slow break (XE2NP2151)**	**XCPR2510P20** 	**XCPR2502P20** 	**XCPR2521P20** 	**XCPR2527P20** 	**XCPR2518P20** 	**XCPR2519P20**
 **2-pole NC + NC snap action (XE2SP2141)**	**XCPR2910P20** 	**XCPR2902P20** 	**XCPR2921P20** 	**XCPR2927P20** 	**XCPR2918P20** 	–
Weight (kg)	0.115	0.115	0.125	0.120	0.155	–

References of complete switches with 1 Pg 13.5 cable entry

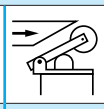
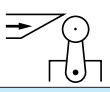
For complete switches with 1 Pg 13.5 cable entry replace P20 by **G13**.
Example: XCPR2110P20 becomes **XCPR2110G13**.

References of complete switches with 1 entry for 1/2" NPT conduit

For complete switches with 1 entry for 1/2" NPT conduit replace P20 by **N12**.
Example: XCPR2110P20 becomes **XCPR2110N12**.

Contact operation ■ *closed* □ *open* — *(A) (B) = cam displacement* *(P) = positive opening point* — ⊖ *NC contact with positive opening operation*

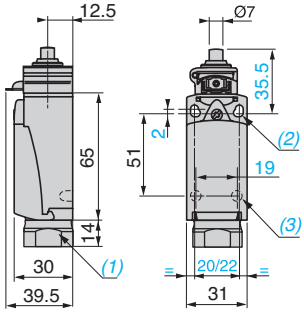
Characteristics

Switch actuation		On end	By 30° cam		
Type of actuation					 
Maximum actuation speed		0.5 m/s		1 m/s	1.5 m/s
Minimum force or torque	For tripping	15 N	12 N	6 N	0.1 N.m
	For positive opening	45 N	36 N	18 N	0.25 N.m
Cable entry		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm 1 entry tapped Pg 13.5 for cable gland, clamping capacity 9 to 12 mm 1 entry tapped for 1/2" NPT (USAS B2-1) conduit			
Other versions		Complete switches with cable entries other than those listed above. please consult our Customer Care Centre.			

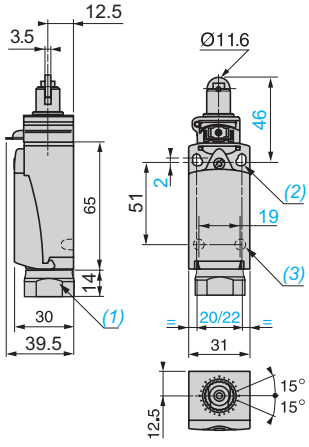
Limit switches
OsiSense XC Standard
Compact design, plastic, with reset,type XCPR
Complete switches with 1 cable entry

Dimensions

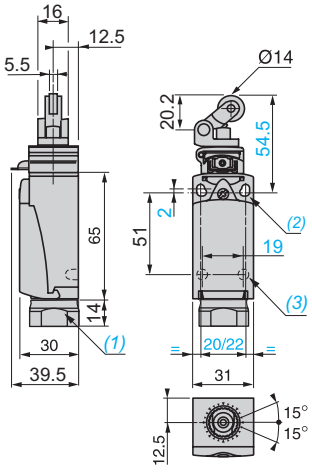
XCPR2●10●●●



XCPR2●02●●●



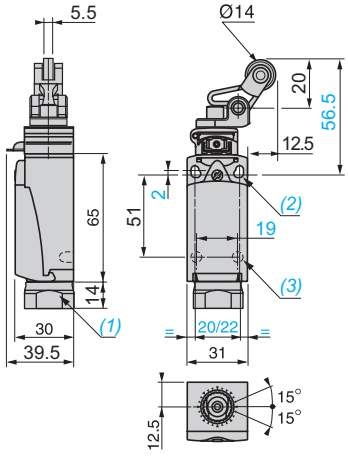
XCPR2●21●●●



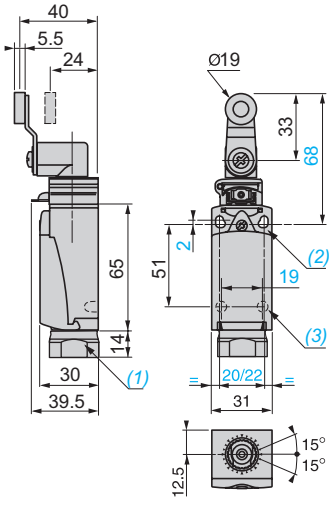
(1) Tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland or tapped 1/2" NPT.
(2) 2 elongated holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.
(3) 2 x Ø 3 holes for support studs, depth 4 mm.

Dimensions

XCPR2●27●●●



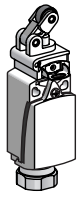
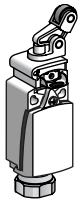
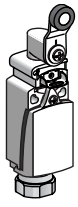
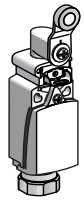
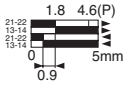
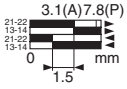
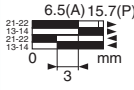
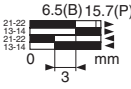
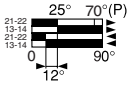
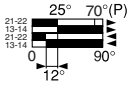
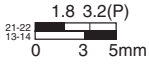
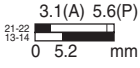
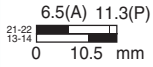
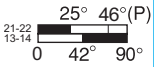
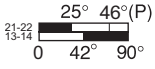
XCPR2●18●●●, XCPR2●19●●●



(1) Tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland or tapped 1/2" NPT.
(2) 2 elongated holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.
(3) 2 x Ø 3 holes for support studs, depth 4 mm.

Limit switches
OsiSense XC Standard
Compact design, metal, with reset, type XCDR
Complete switches with 1 cable entry

1

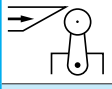
Type of head	Plunger (fixing by the body)				Rotary (fixing by the body)	
						
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction	Thermoplastic roller lever	Steel roller lever
References of complete switches with 1 ISO M20 x 1.5 cable entry						
 **2-pole NC + NO snap action (XE2SP2151)**	**XCDR2110P20** 	**XCDR2102P20** 	**XCDR2121P20** 	**XCDR2127P20** 	**XCDR2118P20** 	**XCDR2119P20** 
 **2-pole NC + NO break before make, slow break (XE2NP2151)**	**XCDR2510P20** 	**XCDR2502P20** 	**XCDR2521P20** 	**XCDR2527P20** 	**XCDR2518P20** 	**XCDR2519P20** 
Weight (kg)	0.215	0.220	0.225	0.225	0.255	0.255

References of complete switches with 1 Pg 13.5 cable entry
For complete switches with 1 Pg 13.5 cable entry replace P20 by **G13**.
Example: XCDR2110P20 becomes **XCDR2110G13**.

References of complete switches with 1 entry for 1/2" NPT conduit
For complete switches with 1 entry for 1/2" NPT conduit replace P20 by **N12**.
Example: XCDR2110P20 becomes **XCDR2110N12**.

Contact operation ■ *closed* □ *open* — *(A) (B) = cam displacement (P) = positive opening point* — ⊖ *NC contact with positive opening operation*

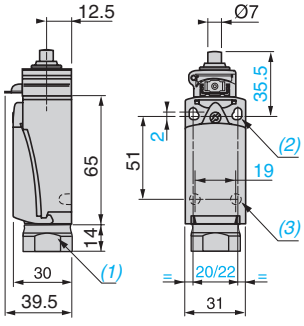
Characteristics

Switch actuation		On end	By 30° cam			
Type of actuation						
Maximum actuation speed		0.5 m/s		1 m/s		1.5 m/s
Minimum force or torque	For tripping	15 N	12 N	6 N		0.1 N.m
	For positive opening	45 N	36 N	18 N		0.25 N.m
Cable entry		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm 1 entry tapped Pg 13.5 for cable gland, clamping capacity 9 to 12 mm 1 entry tapped for 1/2" NPT (USAS B2-1) conduit				

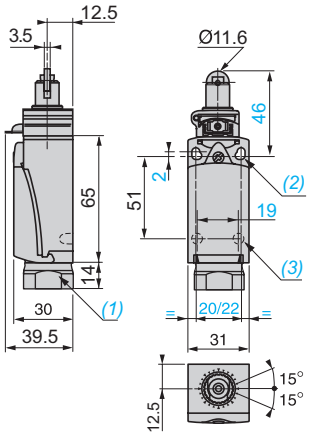
Limit switches
OsiSense XC Standard
Compact design, metal, with reset, type XCDR
Complete switches with 1 cable entry

Dimensions

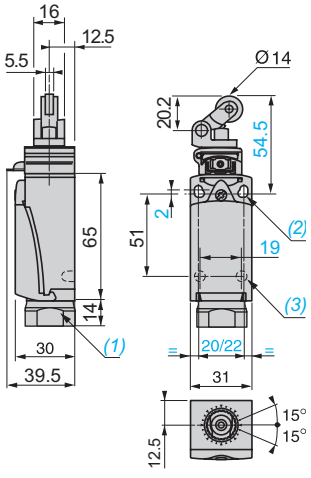
XCDR2●10●●●



XCDR2●02●●●



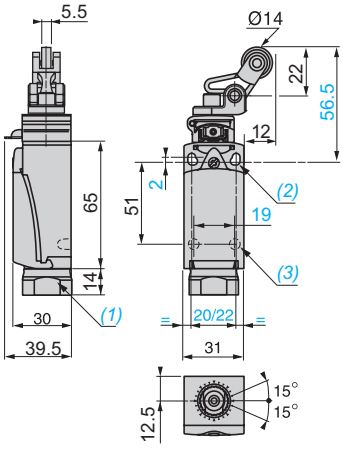
XCDR2●21●●●



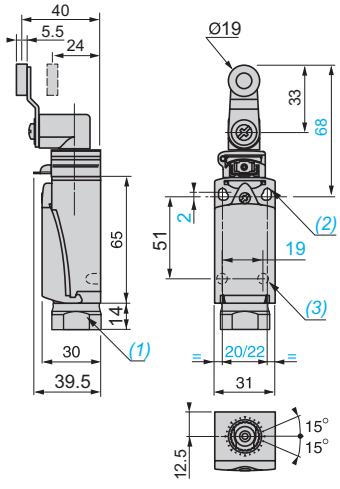
(1) Tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland or tapped 1/2" NPT.
(2) 2 elongated holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.
(3) 2 x Ø 3 holes for support studs, depth 4 mm.

Dimensions

XCDR2●27●●●



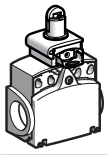
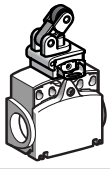
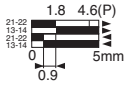
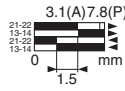
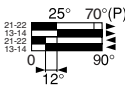
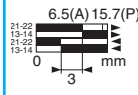
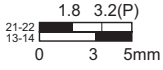
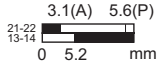
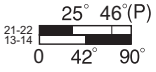
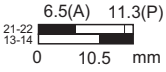
XCDR2●18●●●, XCDR2●19●●●



(1) Tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland or tapped 1/2" NPT.
(2) 2 elongated holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.
(3) 2 x Ø 3 holes for support studs, depth 4 mm.

Limit switches
OsiSense XC Standard
Compact design, plastic, with reset, type XCTR
Complete switches with 2 cable entries

1

Type of head	Plunger (fixing by the body)			
				
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction
References of complete switches with 2 ISO M16 x 1.5 cable entries				
 **2-pole NC + NO snap action (XE2SP3151)**	**XCTR2110P16** ⊖ 	**XCTR2102P16** ⊖ 	**XCTR2118P16** ⊖ 	**XCTR2121P16** ⊖ 
 **2-pole NC + NO break before make, slow break (XE2NP3151)**	**XCTR2510P16** ⊖ 	**XCTR2502P16** ⊖ 	**XCTR2518P16** ⊖ 	**XCTR2521P16** ⊖ 
Weight (kg)	0.120	0.125	0.165	0.135

References of complete switches with 2 Pg 11 cable entries

For complete switches with 2 Pg 11 cable entries replace P16 by **G11**.
Example: XCTR2110P16 becomes **XCTR2110G11**.

References of complete switches with 2 entries tapped for 1/2" NPT conduit

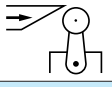
For complete switches with 2 entries for 1/2" NPT conduit replace P16 by **N12**.
Example: XCTR2110P16 becomes **XCTR2110N12**.

Contact operation

closed
open

(A) = cam displacement
(P) = positive opening point
⊖ *NC contact with positive opening operation*

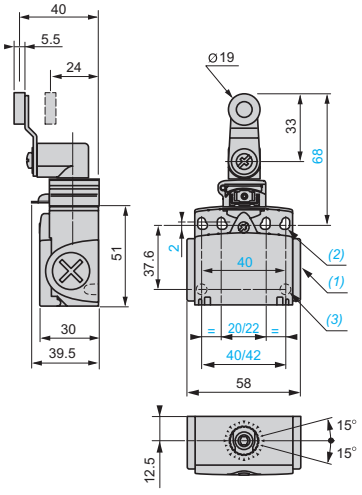
Characteristics

Switch actuation		On end	By 30° cam		
Type of actuation					
Maximum actuation speed		0.5 m/s		1.5 m/s	1 m/s
Minimum force or torque	For tripping	15 N	12 N	0.1 N.m	6 N
	For positive opening	45 N	36 N	0.25 N.m	18 N
Cable entry (1 entry fitted with blanking plug)		2 entries tapped M16 x 1.5 mm for ISO cable gland, clamping capacity 4 to 8 mm 2 entries tapped Pg 11 for cable gland, clamping capacity 7 to 10 mm 2 entries tapped for 1/2" NPT (USAS B2-1) conduit using Pg 11 - 1/2" NPT adaptor **DE9RA1012**			

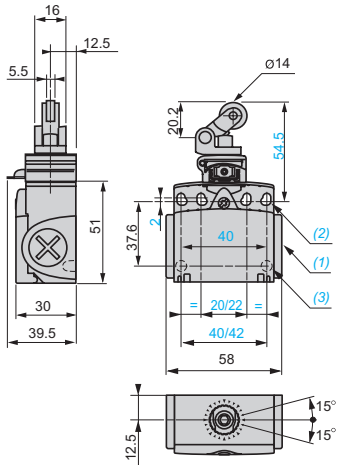
Limit switches
OsiSense XC Standard
Compact design, plastic, with reset, type XCTR
Complete switches with 2 cable entries

Dimensions

XCTR2●18●●●



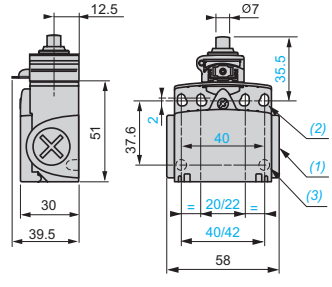
XCTR2●21●●●



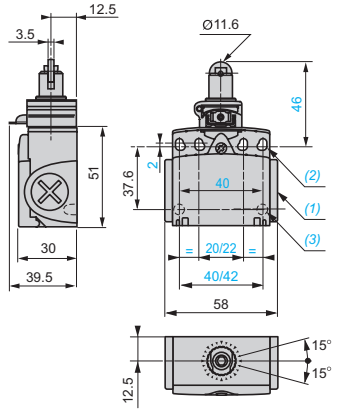
(1) Tapped entry for ISO M16 x 1.5 or Pg 11 cable gland or 1/2" NPT conduit.
(2) 4 elongated holes Ø 4.3 x 6.3 mm on 22/42 mm centres, 4 holes Ø 4.3 on 20/40 mm centres.
(3) 2 x Ø 3 holes for support studs, depth 4 mm.

Dimensions

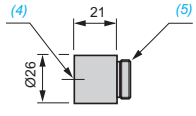
XCTR2●10●●●



XCTR2●02●●●



DE9RA1012



(1) Tapped entry for ISO M16 x 1.5 or Pg 11 cable gland or tapped 1/2" NPT.
(2) 4 elongated holes Ø 4.3 x 6.3 mm on 22/42 mm centres, 4 holes Ø 4.3 on 20/40 mm centres.
(3) 2 x Ø 3 holes for support studs, depth 4 mm.
(4) Tapped entry for 1/2" NPT conduit.
(5) Pg 11 threaded sleeve.