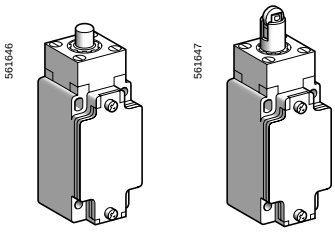
Limit switches
Osiswitch® Classic
Metal, type XCK J
Conforming to CENELEC EN 50041

■ XCK J
fixed body with 1 cable entry

□ With head for linear movement (plunger)



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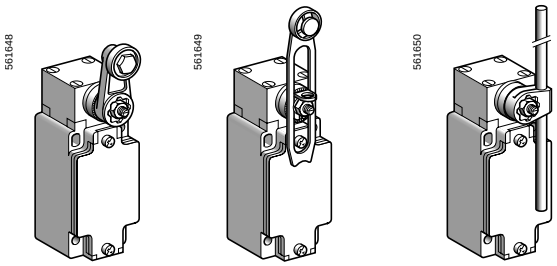
□ With head for rotary movement (lever) or multi-directional



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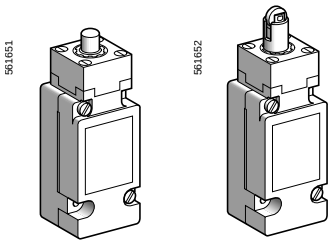
■ XCK J
plug-in body with 1 cable entry

□ With head for linear movement (plunger)



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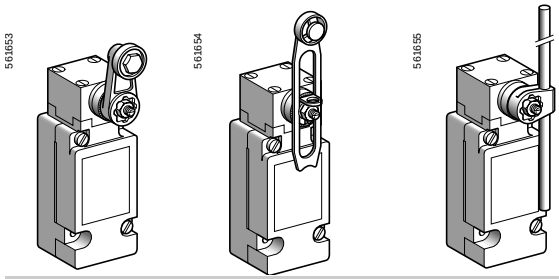
□ With head for rotary movement (lever)



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Environment characteristics

Conforming to standards	Products	IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14
	Machine assemblies	IEC 60204-1, EN 60204-1
Product certifications		UL, CSA
Protective treatment	Version	Standard “TC”, special "TH"
Ambient air temperature	Operation	- 25…+ 70 °C, special sub-assemblies available for extreme temperatures (-40 °C or +120 °C)
	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 I conforming to IEC 61140 and NF C 20-030
Degree of protection		IP 66 conforming to IEC 60529; IK 07 conforming to EN 50 102
Repeat accuracy		0.01 mm on the tripping points, with 1 million operating cycles for head with end plunger
Cable entry or integral connector	Depending on model	Tapped entry for n° 13 cable gland, or tapped ISO M20 x 1.5 or 1/2" NPT, or M12 connector
Materials		Bodies and heads in zamak

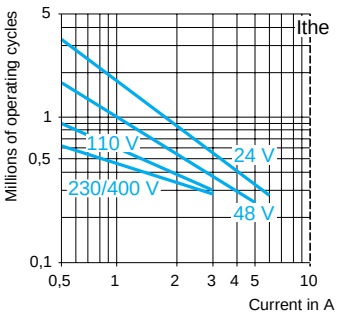
Limit switches
Osiswitch® Classic
Metal, type XCK J
Conforming to CENELEC EN 50041

Contact block characteristics

Rated operational characteristics	XE2● P	~ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 A ⎓ DC-13; Q300 (Ue = 250 V, Ie = 0.27 A), conforming to IEC 60947-5-1 appendix A, EN 60947-5-1
	XE3● P	~ AC-15; B300 (Ue = 240 V, Ie = 1.5 A); Ithe = 6 A ⎓ DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 appendix A, EN 60947-5-1
Rated insulation voltage	XE2● P	Ui = 500 V degree of pollution 3 conforming to IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
	XE3● P	Ui = 400 V degree of pollution 3 conforming to IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
Rated impulse withstand voltage	XE2● P	U imp = 6 kV conforming to IEC 60947-1, IEC 60664
	XE3● P	U imp = 4 kV conforming to IEC 60947-1, IEC 60664
Positive operation (depending on model)		N/C contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-1
Resistance across terminals		≤ 25 mΩ conforming to IEC 60255-7 category 3
Short-circuit protection	XE2● P	10 A cartridge fuse type gG (gl)
	XE3● P	6 A cartridge fuse type gG (gl)
Cabling (screw clamp terminals)	XE2S P21●1	Clamping capacity, min: 1 x 0.34 mm², max: 2 x 1.5 mm²
	XE2N P21●1	Clamping capacity, min: 1 x 0.5 mm², max: 2 x 2.5 mm²
	XCK J plug-in and XES P20●1	Clamping capacity, min: 1 x 0.75 mm², max: 2 x 1.5 mm²
	XE3N P and XE3S P	Clamping capacity, min: 1 x 0.34 mm², max: 1 x 1 mm² or 2 x 0.75 mm²
Minimum actuation speed		**XE2S P21●1** and **XE3S P**: 0.01 m/minute
		XE2N P21●1 and **XE3N P**: 6 m/minute
Electrical durability		■ Conforming to IEC 60947-5-1 Appendix C ■ Utilisation categories AC-15 and DC-13 ■ Maximum operating rate: 3600 operating cycles/hour ■ Load factor: 0.5

XE2S P21●1, XE2S P2141

a.c. supply
~ 50/60 Hz
⌒ inductive circuit

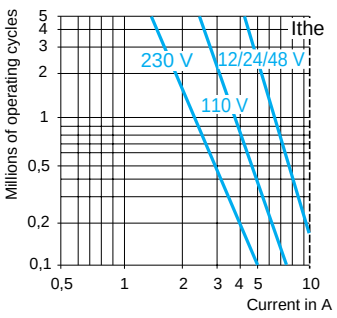


d.c. supply ⎓

Power broken in W for 5 million operating cycles.

Voltage	V	24	48	120
⌒	W	10	7	4

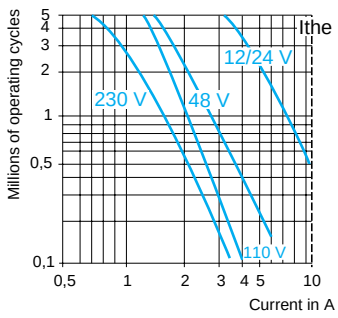
XE2N P21●1



Power broken in W for 5 million operating cycles.

Voltage	V	24	48	120
⌒	W	13	9	7

XCK J plug-in, XES P20●1



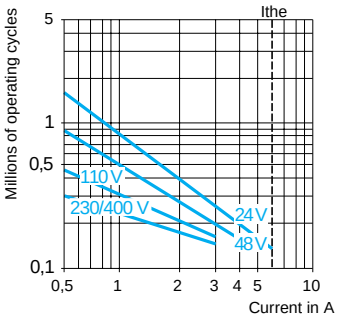
Power broken in W for 5 million operating cycles.

Voltage	V	24	48	120
⌒	W	10	7	4

For XE2S P●151 on ~ or ⎓, N/C and N/O contacts simultaneously loaded to the values shown with reverse polarity.

XE3N P●●●●

a.c. supply
~ 50/60 Hz
⌒ inductive circuit

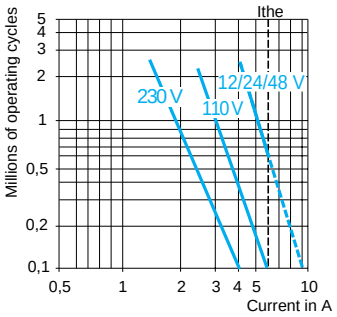


d.c. supply ⎓

Power broken in W for 5 million operating cycles.

Voltage	V	24	48	120
⌒	W	3	2	1

XE3S P●●●●



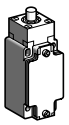
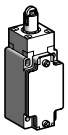
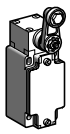
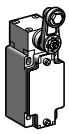
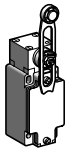
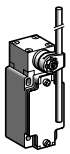
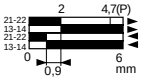
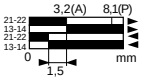
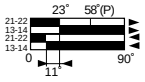
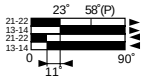
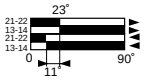
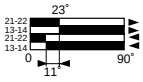
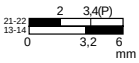
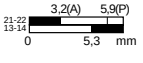
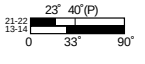
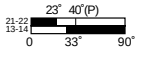
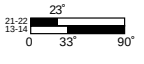
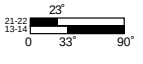
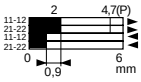
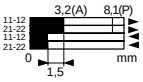
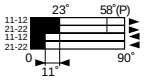
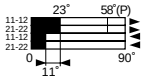
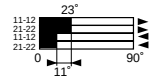
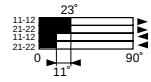
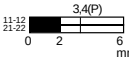
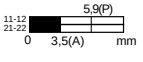
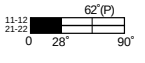
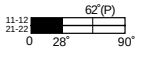
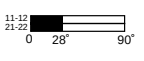
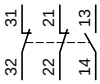
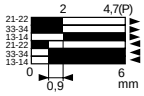
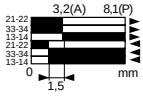
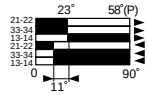
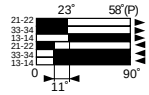
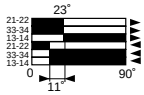
Power broken in W for 5 million operating cycles.

Voltage	V	24	48	120
⌒	W	4	3	2

Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
ISO M20 x 1.5 cable entry

Type of head	**Plunger (fixing by the body)**		**Rotary (fixing by the body)** (switches supplied for actuation from left AND right)			
	Form B *(1)*	**Form C** *(1)*	**Form A** *(1)*			**Form D** *(1)*
						
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever *(4)*	Steel roller lever *(4)*	Variable length thermoplastic roller lever *(4)*	Round thermoplastic rod lever, Ø 6 mm *(4) (5)*
References *(2) (3)*						
 **2-pole N/C + N/O snap action (XE2S P2151)**	**XCK J161H29** 	**XCK J167H29** 	**XCK J10511H29** 	**XCK J10513H29** 	**XCK J10541H29** 	**XCK J10559H29** 
 **2-pole N/C + N/O break before make, slow break (XE2N P2151)**	**XCK J561H29** 	**XCK J567H29** 	**XCK J50511H29** 	**XCK J50513H29** 	**XCK J50541H29** 	**XCK J50559H29** 
 **2-pole N/C + N/C snap action (XE2S P2141)**	**ZCK J9H29 + ZCK E61** 	**ZCK J9H29 + ZCK E67** 	**ZCK J9H29 + ZCK E05 + ZCK Y11** 	**ZCK J9H29 + ZCK E05 + ZCK Y13** 	**ZCK J9H29 + ZCK E05 + ZCK Y41** 	**ZCK J9H29 + ZCK E05 + ZCK Y59** 
 **2-pole N/C + N/C simultaneous, slow break (XE2N P2141)**	**ZCK J7H29 + ZCK E61** 	**ZCK J7H29 + ZCK E67** 	**ZCK J7H29 + ZCK E05 + ZCK Y11** 	**ZCK J7H29 + ZCK E05 + ZCK Y13** 	**ZCK J7H29 + ZCK E05 + ZCK Y41** 	**ZCK J7H29 + ZCK E05 + ZCK Y59** 
 **3-pole N/C + N/C + N/O snap action (XE3S P2141)**	**ZCK JD39H29 + ZCK E61** 	**ZCK JD39H29 + ZCK E67** 	**ZCK JD39H29 + ZCK E05 + ZCK Y11** 	**ZCK JD39H29 + ZCK E05 + ZCK Y13** 	**ZCK JD39H29 + ZCK E05 + ZCK Y41** 	**ZCK JD39H29 + ZCK E05 + ZCK Y59**
3-pole N/C + N/C + N/O break before make, slow break (XE3N P2141)	**ZCK JD37H29 + ZCK E61**	**ZCK JD37H29 + ZCK E67**	**ZCK JD37H29 + ZCK E05 + ZCK Y11**	**ZCK JD37H29 + ZCK E05 + ZCK Y13**	**ZCK JD37H29 + ZCK E05 + ZCK Y41**	**ZCK JD37H29 + ZCK E05 + ZCK Y59**
Weight (kg)	0.430	0.455	0.480	0.490	0.485	0.485
Contact operation	■ *contact closed* □ *contact open*		*(A) = cam displacement* *(P) = positive opening point*		⊖ *N/C contact with positive opening operation*	

Characteristics

Switch actuation		On end	By 30° cam			By any moving part
Type of actuation						
Maximum actuation speed		0.5 m/s	1 m/s	1.5 m/s		
Mechanical durability in millions of operating cycles		30	25	30		
Minimum force or torque	For tripping	20 N	16 N	0.25 N.m		
	For positive opening	50 N	40 N	0.50 N.m		–
Cable entry *(3)*		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 9 to 12 mm				

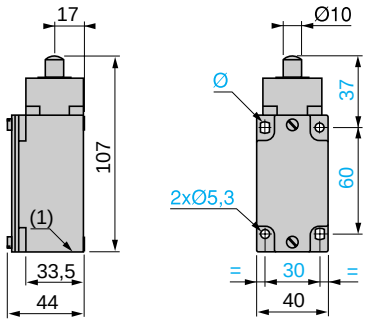
(1) Form conforming to EN 50041, see page 31900/9.
(2) Switches with gold contacts or ring type connections: please consult your Regional Sales Office.
*(3) For an entry tapped for a n° 13 cable gland, delete **H29** from the end of the reference. Example: **XCK J161H29** becomes **XCK J161**.*
*For an entry tapped for 1/2" NPT (USAS B2-1) conduit, replace **H29** at the end of the reference by **H7**. Example: **XCK J161H29** becomes **XCK J161H7**.*
(4) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting or clamp.
(5) Value taken with actuator operating at 100 mm from the fixing.

Limit switches

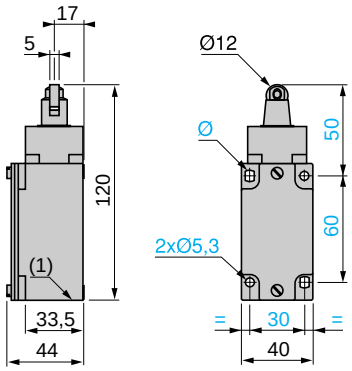
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
ISO M20 x 1.5 cable entry

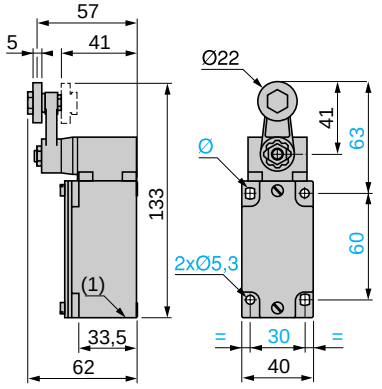
XCK J●61H29
ZCK J● + ZCK E61



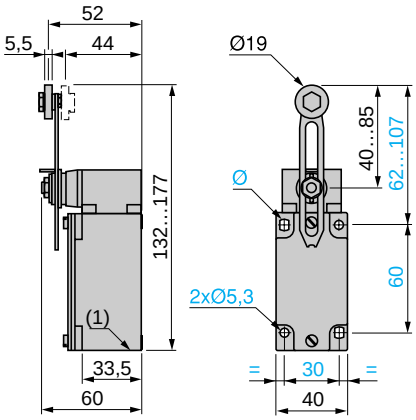
XCK J●67H29
ZCK J● + ZCK E67



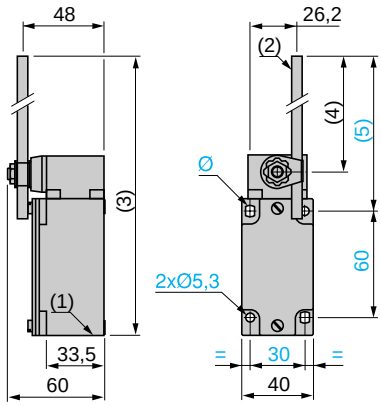
XCK J●051●H29
ZCK J● + ZCK E05 + ZCK Y11 or Y13



XCK J●0541H29
ZCK J● + ZCK E05 + ZCK Y41



XCK J●0559H29
ZCK J● + ZCK E05 + ZCK Y59

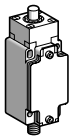
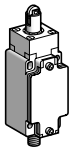
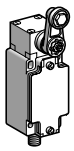
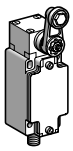
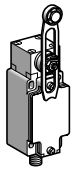
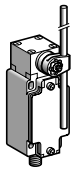
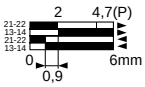
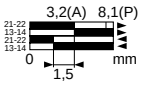
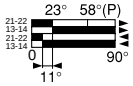
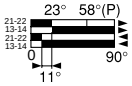
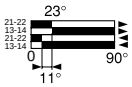
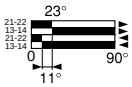


(1) Tapped entry for ISO M20 x 1.5 or Pg 13 cable gland or 1/2" NPT.
(2) Ø 6 rod, length 200 mm.
(3) 282 max.
(4) 190 max.
(5) 212 max.
Ø: 2 elongated holes Ø 5.3 x 7.3.

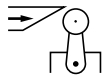
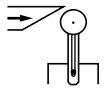
Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
Integral M12 connector

Type of head	**Plunger (fixing by the body)**		**Rotary (fixing by the body)** (switches supplied for actuation from left AND right)			
	Form B *(1)*	**Form C** *(1)*	**Form A** *(1)*			**Form D** *(1)*
						
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever *(2)*	Steel roller lever *(2)*	Variable length thermoplastic roller lever *(2)*	Round thermoplastic rod lever, Ø 6 mm *(2) (3)*
References *(4)*						
 **2-pole N/C + N/O snap action (XE2S P2151)**	**XCK J161D** 	**XCK J167D** 	**XCK J10511D** 	**XCK J10513D** 	**XCK J10541D** 	**XCK J10559D** 
Weight (kg)	0.430	0.455	0.480	0.490	0.485	0.485
Contact operation	*contact closed* / *contact open*		*(A) = cam displacement* / *(P) = positive opening point*			

Characteristics

Switch actuation		On end	By 30° cam			By any moving part
Type of actuation						
Maximum actuation speed		0.5 m/s	1 m/s	1.5 m/s		
Mechanical durability (in millions of operating cycles)		30	25	30		
Minimum force or torque	For tripping	20 N	16 N	0.25 N.m		
	For positive opening	50 N	40 N	0.50 N.m	–	–
Connection		M12 5-pin connector, Ui = 60 V, Ie = 4 A (see suitable pre-wired female connectors below).				
Positive operation		Although their design is identical to switches with cable entries, the switches incorporating an M12 5-pin connector cannot be marked with the ⊖ symbol according to the standard IEC 60947-5-1, Appendix K (the insulation voltage Ui of the connector must be greater than or equal to 250 V).				

(1) Form conforming to EN 50041, see page 31900/9.
(2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting or clamp.
(3) Value taken with actuator operating at 100 mm from the fixing.
(4) Switches with gold contacts: please consult your Regional Sales Office.

References of suitable pre-wired female connectors

Type of connector		**M12 straight, 5-pin, 4 A/24 V max.**	**M12 elbowed, 5-pin, 4 A/24 V max.**
With cable, Ø 5.8 mm (4 x 0.34 mm² + 1 x 0.5 mm²)	L = 2 m	**XZ CP1164L2**	**XZ CP1264L2**
	L = 5 m	**XZ CP1164L5**	**XZ CP1264L5**
	L = 10 m	**XZ CP1164L10**	**XZ CP1264L10**
Weight (kg)	L = 2 m	0.115	
	L = 5 m	0.270	
	L = 10 m	0.520	

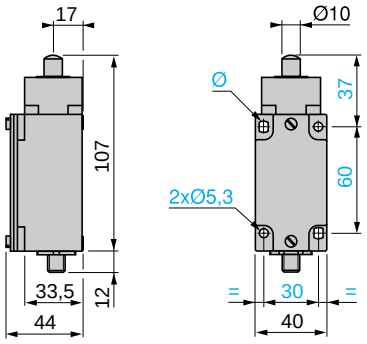
Limit switches

Osiswitch® Classic

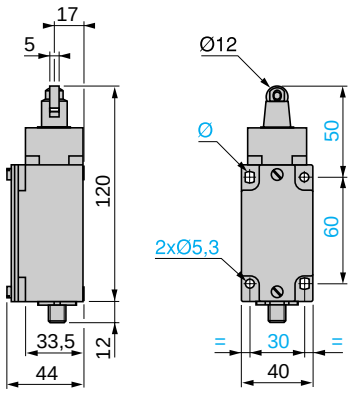
Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
Integral M12 connector

Dimensions

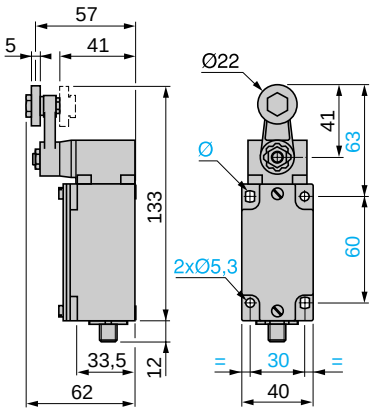
XCK J161D



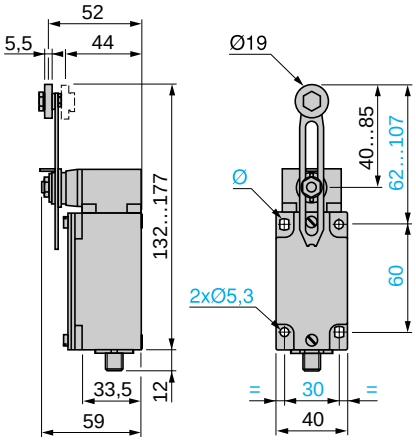
XCK J167D



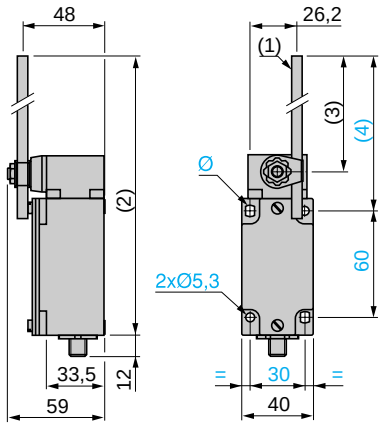
XCK J1051●D



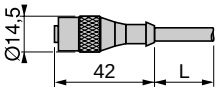
XCK J10541D



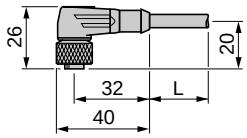
XCK J10559D



XZ CP1164L●



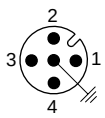
XZ CP1264L●



(1) Ø 6 rod, length 200 mm.
(2) 282 max.
(3) 190 max.
(4) 212 max.
Ø: 2 elongated holes Ø 5.3 x 7.3.
L: *cable length 2, 5 or 10 m.*

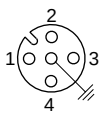
Connections

Limit switch XCK J●●●●D



1-2 = N/C
3-4 = N/O
5 = ⏚
4 A / 24 V max.

Pre-wired female connector XZ CP1●64L●

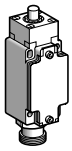
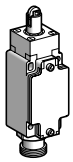
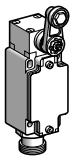
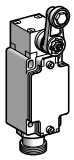
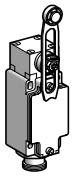
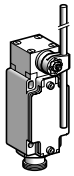
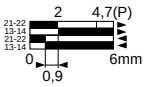
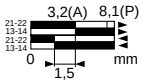
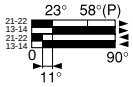
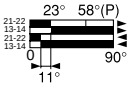
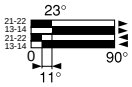
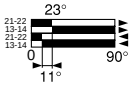


1 = brown
2 = white
3 = blue
4 = black
5 = ⏚ yellow/green

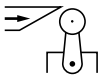
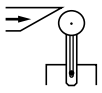
Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
Integral 7/8" 16UN connector

Type of head	**Plunger (fixing by the body)**		**Rotary (fixing by the body)** (switches supplied for actuation from left AND right)			
	Form B *(1)*	**Form C** *(1)*	**Form A** *(1)*			**Form D** *(1)*
						
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever *(2)*	Steel roller lever *(2)*	Variable length thermoplastic roller lever *(2)*	Round thermoplastic rod lever, Ø 6 mm *(2) (3)*
References *(4)*						
 **2-pole N/C + N/O snap action (XE2S P2151)**	**XCK J161A** ⊖ 	**XCK J167A** ⊖ 	**XCK J10511A** ⊖ 	**XCK J10513A** ⊖ 	**XCK J10541A** 	**XCK J10559A** 
Weight (kg)	0.430	0.455	0.480	0.490	0.485	0.485
Contact operation	*contact closed* / *contact open*		*(A) = cam displacement* / *(P) = positive opening point*		⊖ *N/C contact with positive opening operation*	

Characteristics

Switch actuation		On end	By 30° cam			By any moving part
Type of actuation						
Maximum actuation speed		0.5 m/s	1 m/s	1.5 m/s		
Mechanical durability (in millions of operating cycles)		**30**	**25**	**30**		
Minimum force or torque	For tripping	20 N	16 N	0.25 N.m		
	For positive opening	50 N	40 N	0.50 N.m	–	–
Connection		7/8" 16UN 5-pin connector, Ui = 250 V; Ie = 6 A (see suitable pre-wired female connectors below).				

(1) Form conforming to EN 50041, see page 31900/9.
(2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting or clamp.
(3) Value taken with actuator operating at 100 mm from the fixing.
(4) Switches with gold contacts: please consult your Regional Sales Office.

References of suitable pre-wired female connectors

Type of connector		**7/8" 16UN straight, 5-pin, 6 A/250 V max.**
With cable, Ø 6.7 mm (5 x 0.5 mm²)	L = 2 m	**XZ CP1771L2**
	L = 5 m	**XZ CP1771L5**
	L = 10 m	**XZ CP1771L10**
Weight (kg)	L = 2 m	0.190
	L = 5 m	0.475
	L = 10 m	0.950

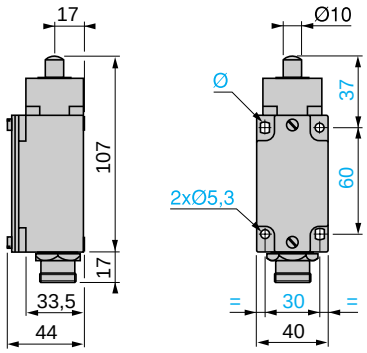
Limit switches

Osiswitch® Classic

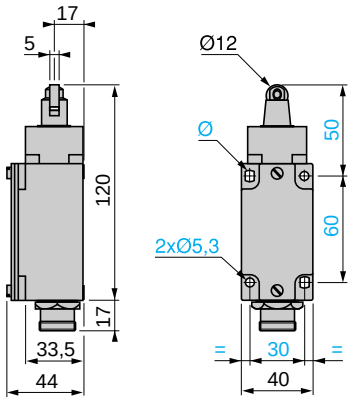
Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
Integral 7/8" 16UN connector

Dimensions

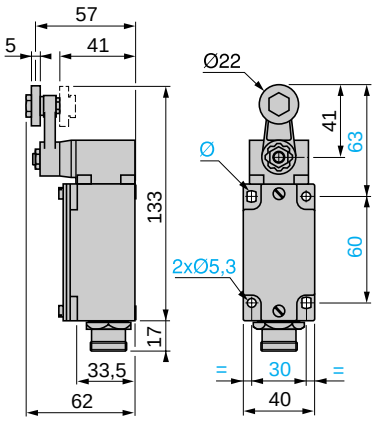
XCK J161A



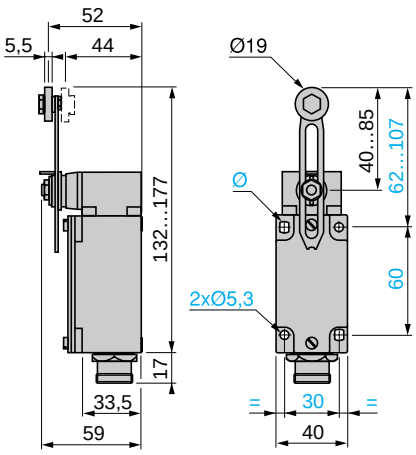
XCK J167A



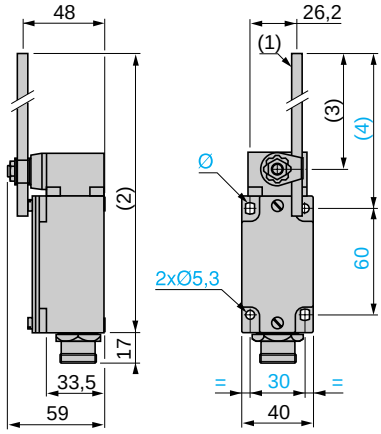
XCK J1051●A



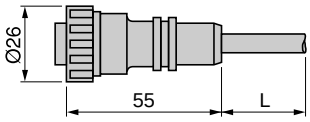
XCK J10541A



XCK J10559A



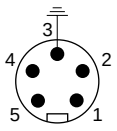
XZ CP1771L●



(1) Ø 6 rod, length 200 mm.
(2) 282 max.
(3) 190 max.
(4) 212 max.
Ø: 2 elongated holes Ø 5.3 x 7.3.
L: *cable length 2, 5 or 10 m.*

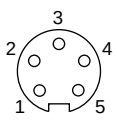
Connections

Limit switch XCK J●●●●A



1 = 21
2 = 22
3 = ⏚
4 = 14
5 = 13

Pre-wired female connector XZ CP1771L●

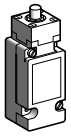
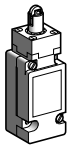
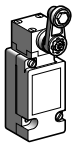
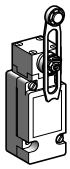
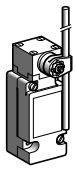
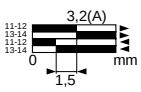
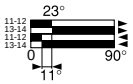
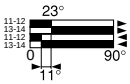
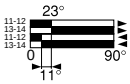
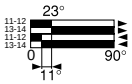


1 = black
2 = blue
3 = yellow/green ⏚
4 = brown
5 = white

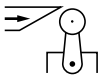
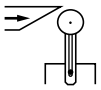
Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, plug-in body
ISO M20 x 1.5 cable entry

Type of head	**Plunger (fixing by the body)**		**Rotary (fixing by the body)** (switches supplied for actuation from left AND right)			
	Form B *(1)*	**Form C** *(1)*	**Form A** *(1)*			**Form D** *(1)*
						
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever *(4)*	Steel roller lever *(4)*	Variable length thermoplastic roller lever *(4)*	Round thermoplastic rod lever, Ø 6 mm *(4) (5)*
References *(2) (3)*						
 **Single-pole C/O snap action**	**XCK J1161H29** 	**XCK J1167H29** 	**XCK J110511H29** 	**XCK J110513H29** 	**XCK J110541H29** 	**XCK J110559H29** 
Weight (kg)	0.430	0.455	0.480	0.490	0.485	0.485
Contact operation	*contact closed*	*contact open*		*(A) = cam displacement*		

Characteristics

Switch actuation	On end	By 30° cam				By any moving part
Type of actuation						
Maximum actuation speed	0.5 m/s	1 m/s	1.5 m/s			
Mechanical durability (in millions of operating cycles)	30	25	30			
Minimum force or torque for tripping	20 N	16 N	0.25 N.m			
Cable entry *(3)*	1 entry tapped M20 x 1.5 for ISO cable gland. Clamping capacity 7 to 13 mm					

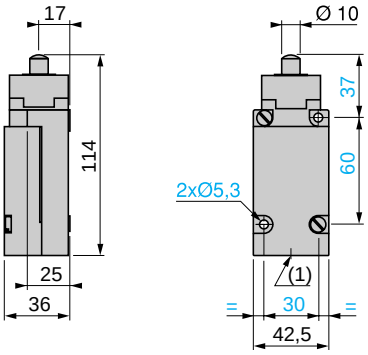
(1) Form conforming to EN 50041, see page 31900/9.
(2) Switches with gold contacts: please consult your Regional Sales Office.
*(3) For an entry tapped for a n° 13 cable gland, delete **H29** from the end of the reference. Example: **XCK J1161H29** becomes **XCK J1161**.*
*For an entry tapped for 1/2" NPT (USAS B2-1) conduit, replace **H29** at the end of the reference by **H7**. Example: **XCK J1161H29** becomes **XCK J1161H7**.*
(4) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting or clamp.
(5) Value taken with actuator operating at 100 mm from the fixing.

Limit switches

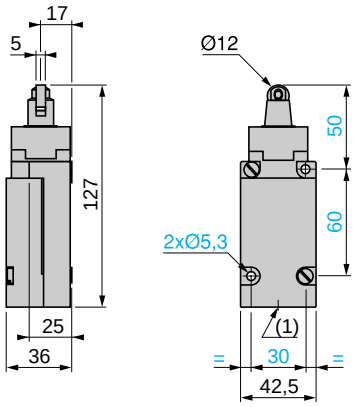
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, plug-in body
ISO M20 x 1.5 cable entry

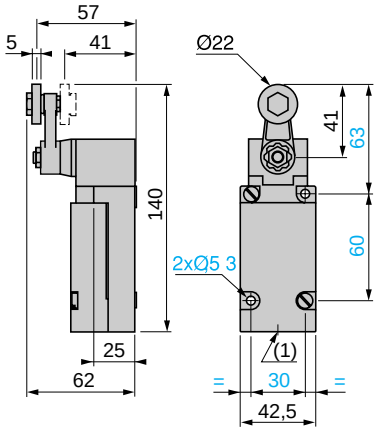
XCK J1611H29



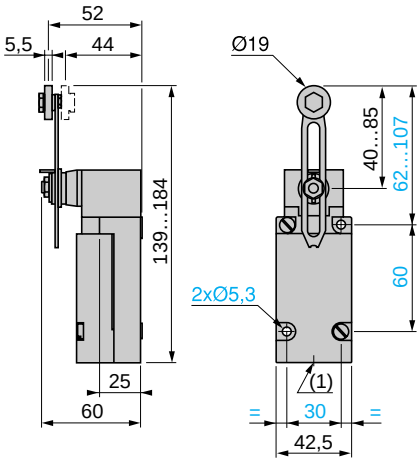
XCK J1167H29



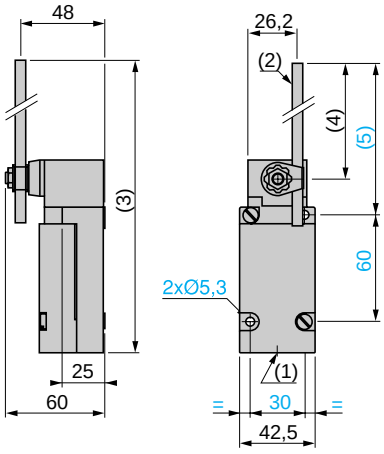
XCK J110511H29, XCK J110513H29



XCK J110541H29



XCK J110559H29



(1) Tapped entry for ISO M20 x 1.5 or Pg 13 cable gland or 1/2" NPT conduit.
(2) Ø 6 rod, length 200 mm.
(3) 289 max.
(4) 190 max.
(5) 212 max.