

# Limit switches

Osiswitch® Classic

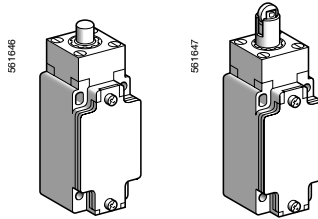
Metal, type XCK J

Conforming to CENELEC EN 50041

## ■ XCK J

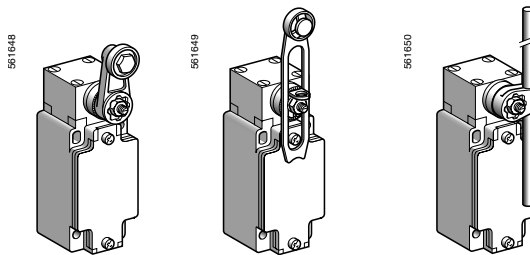
fixed body with 1 cable entry

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



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

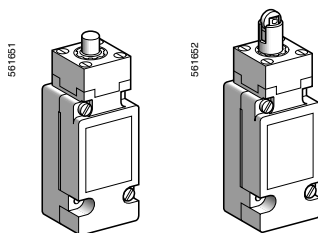


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## ■ XCK J

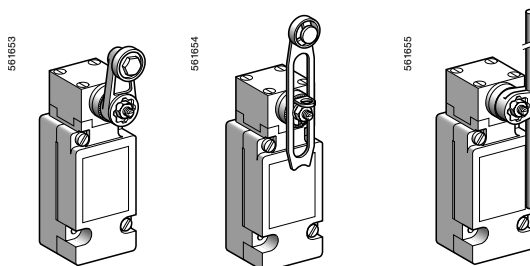
plug-in body with 1 cable entry

### □ 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, CCC
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

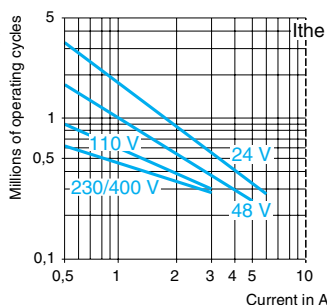
### Contact block characteristics

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 mm <sup>2</sup> , max: 2 x 1.5 mm <sup>2</sup>
	XE2N P21●1	Clamping capacity, min: 1 x 0.5 mm <sup>2</sup> , max: 2 x 2.5 mm <sup>2</sup>
	XCK J plug-in and XES P20●1	Clamping capacity, min: 1 x 0.75 mm <sup>2</sup> , max: 2 x 1.5 mm <sup>2</sup>
	XE3N P and XE3S P	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 1 x 1 mm <sup>2</sup> or 2 x 0.75 mm <sup>2</sup>
Minimum actuation speed		XE2S P21●1 and XE3S P: 0.01 m/minute
		XE2N P21●1 and XE3N P: 6 m/minute
Electrical durability		<ul style="list-style-type: none"> <li>■ Conforming to IEC 60947-5-1 Appendix C</li> <li>■ Utilisation categories AC-15 and DC-13</li> <li>■ Maximum operating rate: 3600 operating cycles/hour</li> <li>■ Load factor: 0.5</li> </ul>

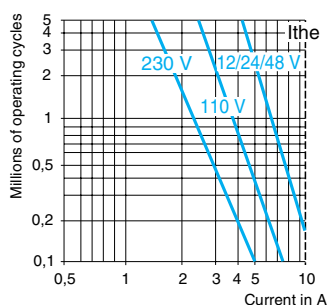
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a.c. supply  
~ 50/60 Hz  
mm inductive circuit

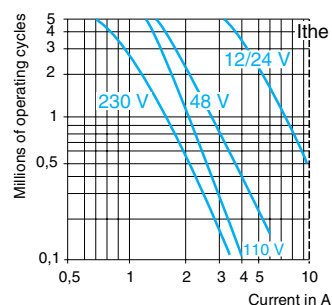
**XE2S P21●1, XE2S P2141**



**XE2N P21●1**



**XCK J plug-in, XES P20●1**



d.c. supply =

Power broken in W for 5 million operating cycles.

Voltage V	24	48	120
mm W	10	7	4

Power broken in W for 5 million operating cycles.

Voltage V	24	48	120
mm W	13	9	7

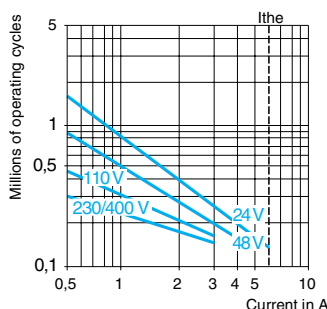
Power broken in W for 5 million operating cycles.

Voltage V	24	48	120
mm W	10	7	4

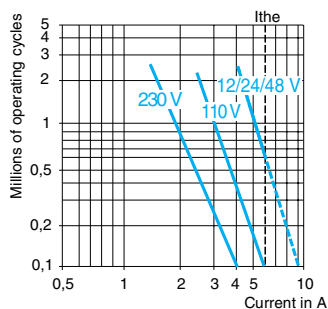
For XE2S P●151 on ~ or =, N/C and N/O contacts simultaneously loaded to the values shown with reverse polarity.

**XE3N P●●●●**

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



**XE3S P●●●●**



d.c. supply =

Power broken in W for 5 million operating cycles.

Voltage V	24	48	120
mm W	3	2	1

Power broken in W for 5 million operating cycles.

Voltage V	24	48	120
mm W	4	3	2

# Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Complete switches, fixed body

1 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			(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 (6) (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 5/185.

(2) Switches with gold contacts or eyelet type connections: please consult your Regional Sales Office.

(3) For an entry tapped for a Pg 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 or its mounting.

(5) Value taken with actuation by moving part at 100 mm from the fixing.

(6) Limited to 15 million operating cycles for switches with contacts XE3●P.

# Limit switches

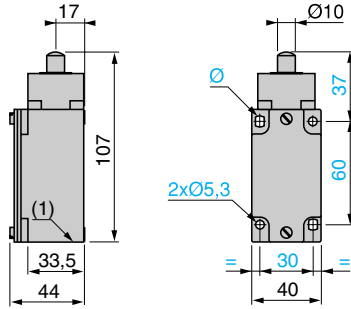
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

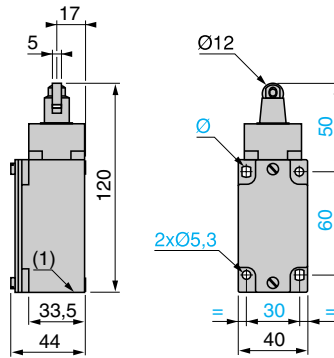
Complete switches, fixed body

1 ISO M20 x 1.5 cable entry

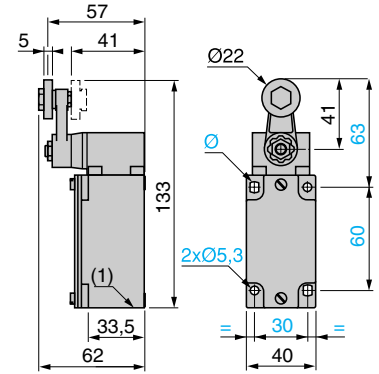
**XCK J●61H29**  
ZCK J● + ZCK E61



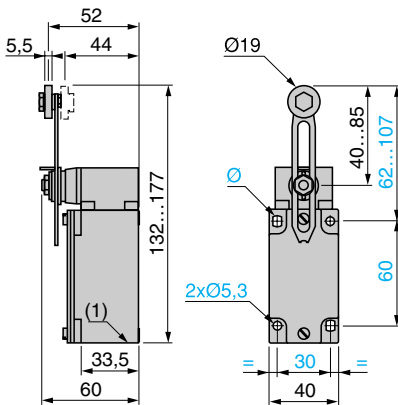
**XCK J●67H29**  
ZCK J● + ZCK E67



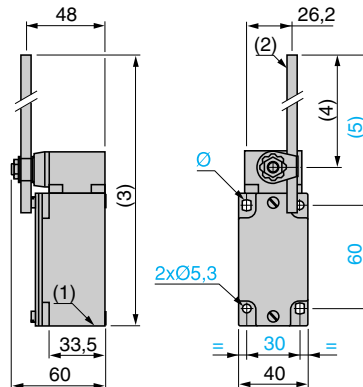
**XCK J●051●H29**  
ZCK J● + ZCK E05 + ZCK Y11 or Y13



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



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



(1) 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.


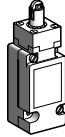
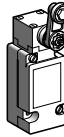

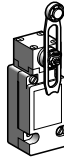


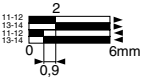
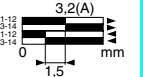
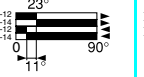
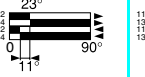
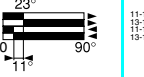
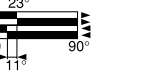







# Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Complete switches, 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 roller lever, Ø 6 mm (4) (5)		
<b>References (2) (3)</b>	<b>Single-pole C/O snap action</b>		<b>XCK J1161H29</b>	<b>XCK J1167H29</b>	<b>XCK J110511H29</b>	<b>XCK J110513H29</b>	<b>XCK J110541H29</b>	<b>XCK J110559H29</b>
								
Weight (kg)	0.430	0.455	0.480	0.490	0.485	0.485		
Contact operation	 contact closed  contact open		(A) = cam displacement					
<b>Characteristics</b>								
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 5/185.

(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

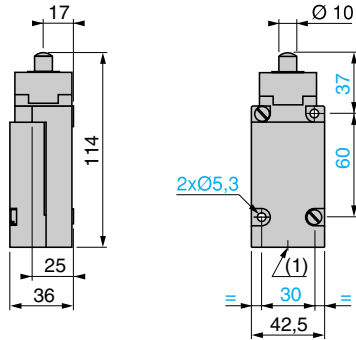
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

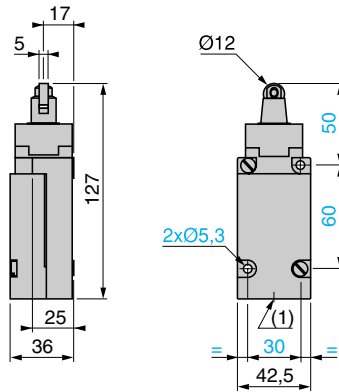
Complete switches, plug-in body

ISO M20 x 1.5 cable entry

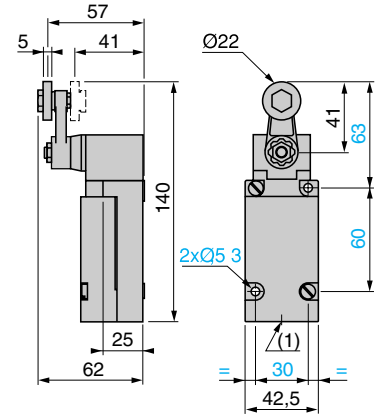
XCK J1611H29



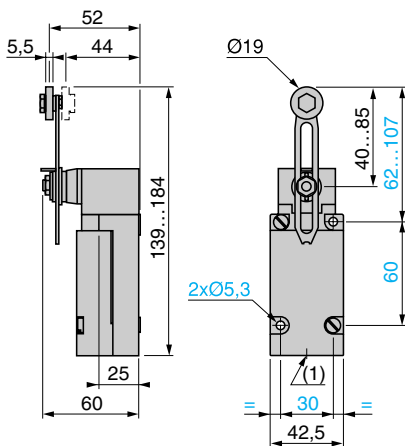
XCK J1167H29



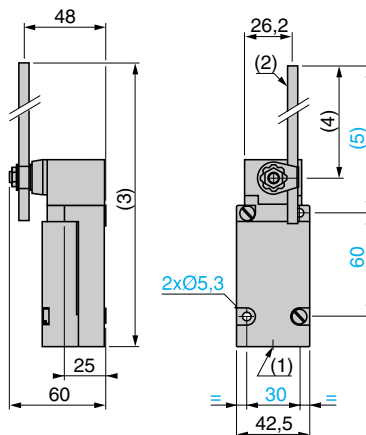
XCK J110511H29, XCK J110513H29



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.

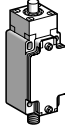
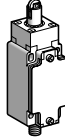
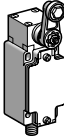
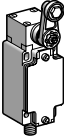



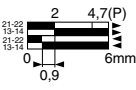
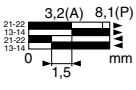
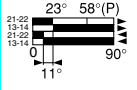
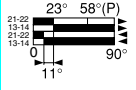
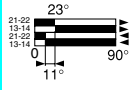
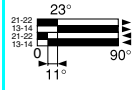







# Limit switches

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)
<b>References (4)</b>						
 2-pole N/C + N/O snap action (XE2S P2151)	<b>XCK J161D</b>	<b>XCK J167D</b>	<b>XCK J10511D</b>	<b>XCK J10513D</b>	<b>XCK J10541D</b>	<b>XCK J10559D</b>
						
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			
<b>Characteristics</b>						
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, U <sub>i</sub> = 60 V, I <sub>e</sub> = 4 A (see suitable pre-wired female connectors below).					
(1) Form conforming to EN 50041, see page 5/185. (2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever or its mounting. (3) Value taken with actuation by moving part at 100 mm from the fixing. (4) Switches with gold contacts: please consult your Regional Sales Office.						
<b>References of suitable pre-wired female connectors</b>						
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 mm <sup>2</sup> + 1 x 0.5 mm <sup>2</sup> )	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

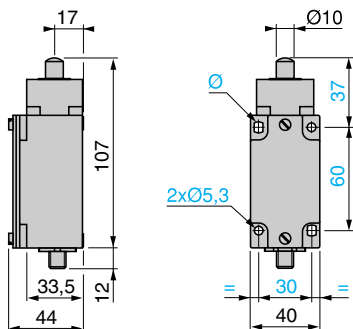
Metal, conforming to CENELEC EN 50041, type XCK J

Complete switches, fixed body

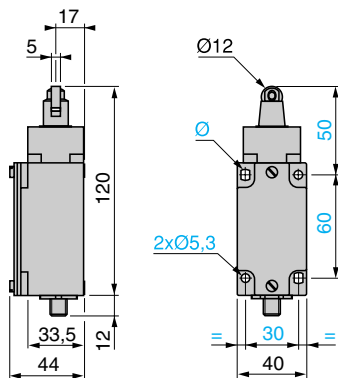
Integral M12 connector

## Dimensions

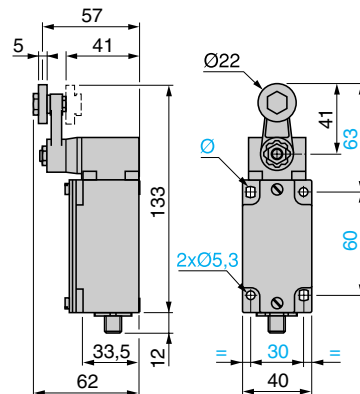
XCK J161D



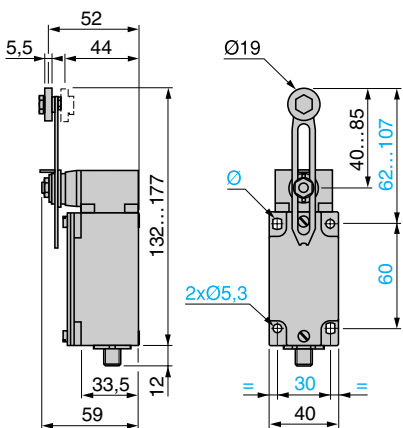
XCK J167D



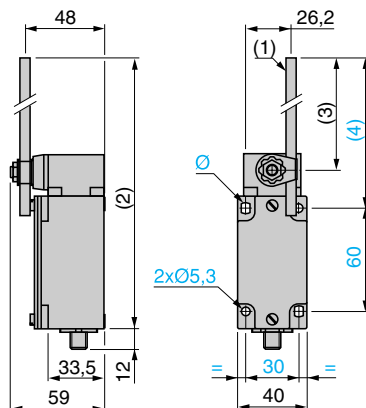
XCK J1051D



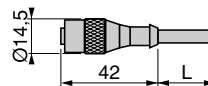
XCK J10541D



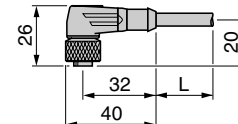
XCK J10559D



XZ CP1164L



XZ CP1264L



(1) Ø 6 rod, length 200 mm.

(2) 282 max.

(3) 190 max.

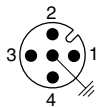
(4) 212 max.

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

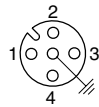
3-4 = N/O

5 = ⚬

4 A / 24 V max.



Pre-wired female connector XZ CP1●64L●



1 = brown

2 = white

3 = blue

4 = black

5 = ⚬ yellow/green



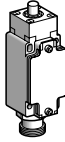

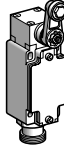
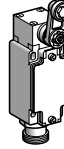
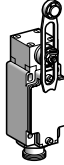

# Limit switches



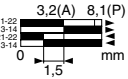
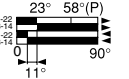
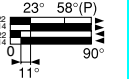
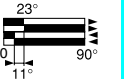
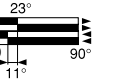



Osiswitch® Classic





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)	XCK J161A	XCK J167A	XCK J10511A	XCK J10513A	XCK J10541A	XCK J10559A
 2-pole N/C + N/O snap action (XE2S P2151)	 2 4,7(P) 0,9 6mm	 3,2(A) 8,1(P) 1,5 mm	 23° 58°(P) 11° 90°	 23° 58°(P) 11° 90°	 23° 11° 90°	 23° 11° 90°
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, U <sub>i</sub> = 250 V; I <sub>e</sub> = 6 A (see suitable pre-wired female connectors below).			

(1) Form conforming to EN 50041, see page 5/185.

(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 mm <sup>2</sup> )	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

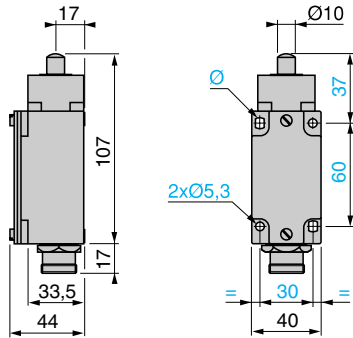
Metal, conforming to CENELEC EN 50041, type XCK J

Complete switches, fixed body

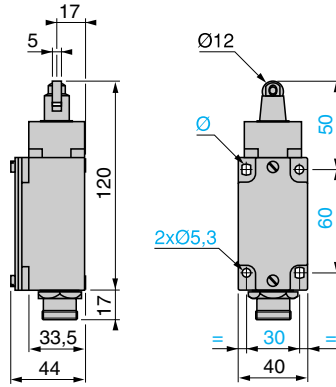
Integral 7/8" 16UN connector

## Dimensions

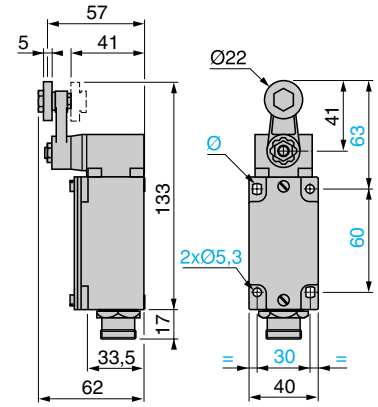
XCK J161A



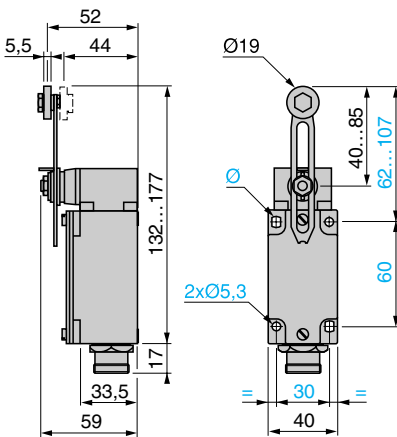
XCK J167A



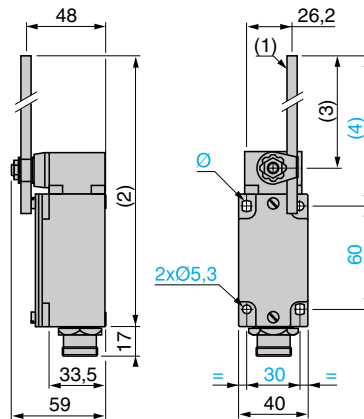
XCK J1051●A



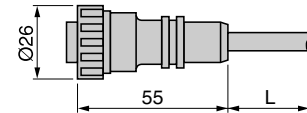
XCK J10541A



XCK J10559A



XZ CP1771L●



(1) Ø 6 rod, length 200 mm.

(2) 282 max.

(3) 190 max.

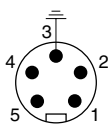
(4) 212 max.

Ø: 2 elongated holes Ø 5.3 x 7.3.

L: cable length 2, 5 or 10 m.

## Connections

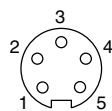
Limit switch XCK J●●●●A



- 1 = 21
- 2 = 22
- 3 = 1
- 4 = 14
- 5 = 13



Pre-wired female connector XZ CP1771L●



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

# Limit switches

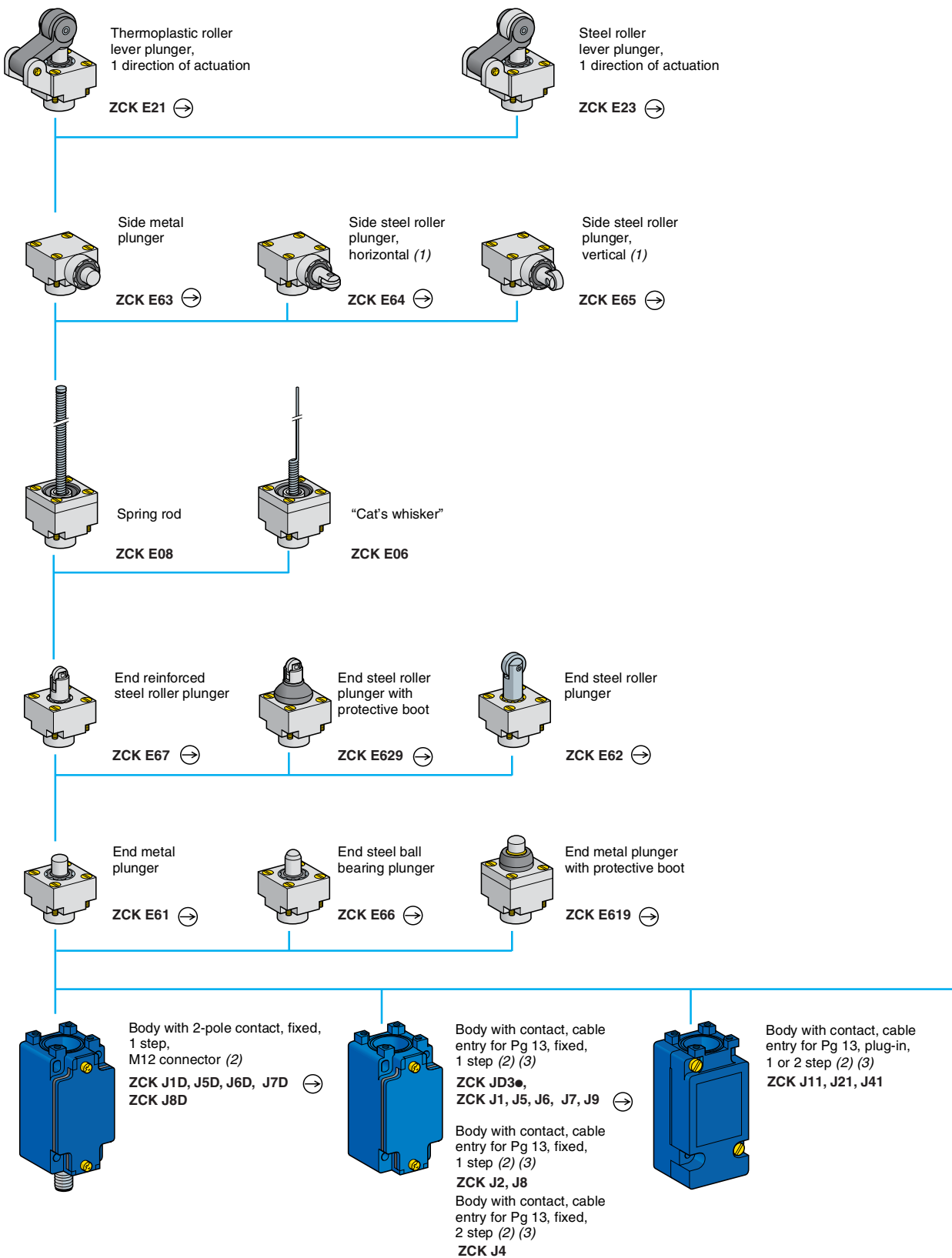
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Variable composition: standard bodies

5



(1) Cannot be used with bodies ZCK J4 and ZCK J41.

(2) For further details, see page 5/90.

(3) For a cable entry tapped ISO M20 x 1.5, add **H29** to the reference. Example: ZCK J1 becomes **ZCK J1H29**.  
For a cable entry tapped 1/2" NPT, add **H7** to the reference. Example: ZCK J1 becomes **ZCK J1H7**.

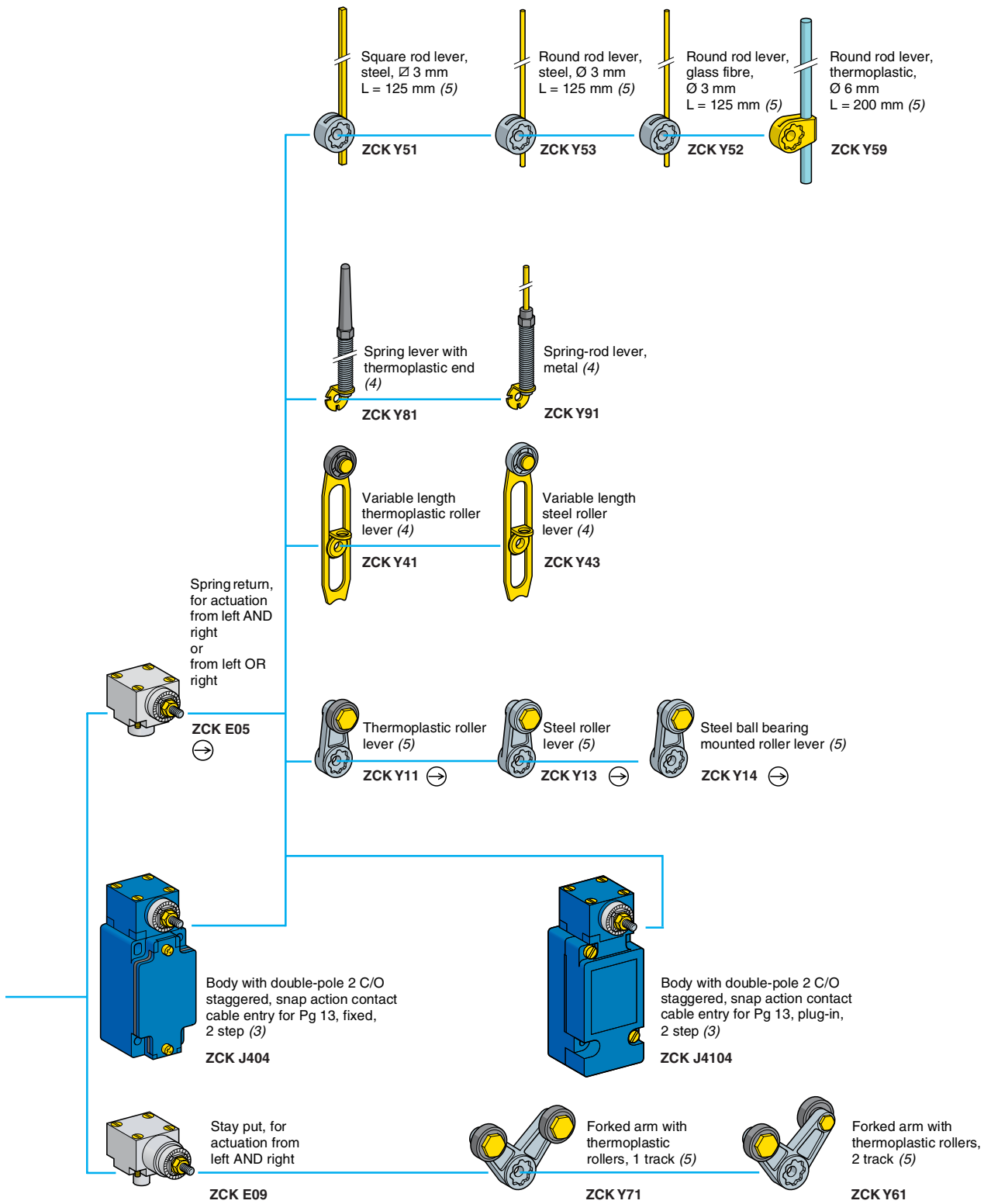
# Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Variable composition: standard bodies



⊖: head assuring positive opening operation.

(4) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.

(5) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting.

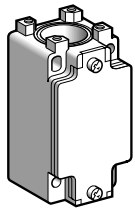
# Limit switches

## Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Adaptable sub-assemblies: standard bodies



ZCK J●

### Fixed bodies with 2-pole contact

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg	
1 step	N/C + N/O snap action (XE2S P2151)		⊖	Pg 13	<b>ZCK J1</b>	0.310	
				ISO M20 x 1.5	<b>ZCK J1H29</b>	0.310	
				1/2" NPT	<b>ZCK J1H7</b>	0.310	
	2 C/O simultaneous, snap action (XES P2021)		-	Pg 13	<b>ZCK J2</b>	0.310	
				ISO M20 x 1.5	<b>ZCK J2H29</b>	0.310	
					1/2" NPT	<b>ZCK J2H7</b>	0.310
	N/C + N/O break before make, slow break (XE2N P2151)		⊖	Pg 13	<b>ZCK J5</b>	0.310	
ISO M20 x 1.5				<b>ZCK J5H29</b>	0.310		
				1/2" NPT	<b>ZCK J5H7</b>	0.310	
N/C + N/O make before make, slow break (XE2N P2161)		⊖	Pg 13	<b>ZCK J6</b>	0.310		
			ISO M20 x 1.5	<b>ZCK J6H29</b>	0.310		
				1/2" NPT	<b>ZCK J6H7</b>	0.310	
N/C + N/C simultaneous, slow break (XE2N P2141)		⊖	Pg 13	<b>ZCK J7</b>	0.310		
			ISO M20 x 1.5	<b>ZCK J7H29</b>	0.310		
				1/2" NPT	<b>ZCK J7H7</b>	0.310	
N/O + N/O simultaneous, slow break (XE2N P2131)		-	Pg 13	<b>ZCK J8</b>	0.310		
			ISO M20 x 1.5	<b>ZCK J8H29</b>	0.310		
				1/2" NPT	<b>ZCK J8H7</b>	0.310	
N/C + N/C snap action (XE2S P2141)		⊖	Pg 13	<b>ZCK J9</b>	0.310		
			ISO M20 x 1.5	<b>ZCK J9H29</b>	0.310		
				1/2" NPT	<b>ZCK J9H7</b>	0.310	
2 step	2 C/O staggered, snap action (XES P2031)		-	Pg 13	<b>ZCK J4</b>	0.310	
				ISO M20 x 1.5	<b>ZCK J4H29</b>	0.310	
				1/2" NPT	<b>ZCK J4H7</b>	0.310	

### Fixed bodies with 3-pole contact

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
-	N/C + N/O + N/O snap action (XE3S P2151)		⊖	Pg 13	<b>ZCK JD31</b>	0.310
				ISO M20 x 1.5	<b>ZCK JD31H29</b>	0.310
				1/2" NPT	<b>ZCK JD31H7</b>	0.310
-	N/C + N/C + N/O snap action (XE3S P2141)		⊖	Pg 13	<b>ZCK JD39</b>	0.310
				ISO M20 x 1.5	<b>ZCK JD39H29</b>	0.310
				1/2" NPT	<b>ZCK JD39H7</b>	0.310
-	N/C + N/C + N/O break before make, slow break (XE3N P2141)		⊖	Pg 13	<b>ZCK JD37</b>	0.310
				ISO M20 x 1.5	<b>ZCK JD37H29</b>	0.310
				1/2" NPT	<b>ZCK JD37H7</b>	0.310
-	N/C + N/O + N/O break before make, slow break (XE3N P2151)		⊖	Pg 13	<b>ZCK JD35</b>	0.310
				ISO M20 x 1.5	<b>ZCK JD35H29</b>	0.310
				1/2" NPT	<b>ZCK JD35H7</b>	0.310

(1) ⊖: N/C contact with positive opening operation.

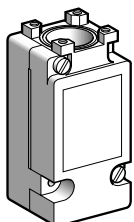
# Limit switches

## Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Adaptable sub-assemblies: standard bodies



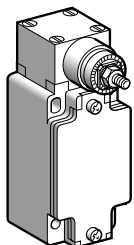
ZCK J01

### Plug-in bodies with contact

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
1 step	Single-pole C/O snap action		-	Pg 13	<b>ZCK J11</b>	0.300
				ISO M20 x 1.5	<b>ZCK J11H29</b>	0.300
				1/2" NPT	<b>ZCK J11H7</b>	0.300
2 step	Double-pole 2 C/O simultaneous, snap action		-	Pg 13	<b>ZCK J21</b>	0.300
				ISO M20 x 1.5	<b>ZCK J21H29</b>	0.300
				1/2" NPT	<b>ZCK J21H7</b>	0.300
2 step	Double-pole 2 C/O staggered, snap action		-	Pg 13	<b>ZCK J41</b>	0.300
				ISO M20 x 1.5	<b>ZCK J41H29</b>	0.300
				1/2" NPT	<b>ZCK J41H7</b>	0.300

### Bodies with contact, with rotary head (without operating lever)

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
<b>Fixed body</b>						
2 step 1 from the left AND 1 from the right	Double-pole 2 C/O staggered, snap action		-	Pg 13	<b>ZCK J404</b>	0.455
				ISO M20 x 1.5	<b>ZCK J404H29</b>	0.455
				1/2" NPT	<b>ZCK J404H7</b>	0.455
<b>Plug-in body</b>						
2 step 1 from the left AND 1 from the right	Double-pole 2 C/O staggered, snap action		-	Pg 13	<b>ZCK J4104</b>	0.465
				ISO M20 x 1.5	<b>ZCK J4104H29</b>	0.465
				1/2" NPT	<b>ZCK J4104H7</b>	0.465

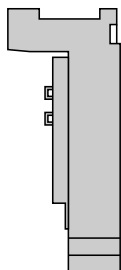


ZCK J404

### Plug-in housing only

Description	For use with	Contacts	Reference	Weight kg
<b>Single-pole 1 C/O</b> with positive opening operation	ZCK J11	Silver	<b>ZCK J01</b>	0.150
<b>Double-pole 2 C/O simultaneous</b> with positive opening operation	ZCK J21	Silver	<b>ZCK J02</b>	0.160
<b>Double-pole 1 C/O + 1 C/O staggered</b>	ZCK J41	Silver	<b>ZCK J04</b>	0.160

(1) ⊕ : N/C contact with positive opening operation.



ZCK J01

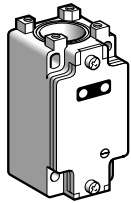
# Limit switches

## Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Adaptable sub-assemblies: bodies with indicator light module



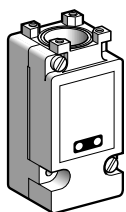
ZCK J ●●●

### Fixed bodies with 2-pole contact

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
<b>With module comprising 1 LED, ≐ 24 V</b>						
1 step	N/C + N/O snap action (XE2S P2151)		⊖	Pg 13	ZCK J120	0.320
	N/C + N/O break before make, slow break (XE2N P2151)		⊖	Pg 13	ZCK J520	0.320
<b>With module comprising 2 LEDs, ≐ 24 V</b>						
1 step	N/C + N/O snap action (XE2S P2151)		⊖	Pg 13 ISO M20 x 1.5	ZCK J121 ZCK J121H29	0.320 0.320
	N/C + N/O break before make, slow break (XE2N P2151)		⊖	Pg 13 ISO M20 x 1.5	ZCK J521 ZCK J521H29	0.320 0.320
<b>With module comprising 2 neon indicator lights, ~ 110/120 V</b>						
1 step	N/C + N/O snap action (XE2S P2151)		⊖	Pg 13 ISO M20 x 1.5	ZCK J133 ZCK J133H29	0.320 0.320
	N/C + N/O break before make, slow break (XE2N P2151)		⊖	Pg 13 ISO M20 x 1.5	ZCK J533 ZCK J533H29	0.320 0.320
<b>With module comprising 2 neon indicator lights, ~ 220/240 V</b>						
1 step	N/C + N/O snap action (XE2S P2151)		⊖	Pg 13 ISO M20 x 1.5	ZCK J134 ZCK J134H29	0.320 0.320
	N/C + N/O break before make, slow break (XE2N P2151)		⊖	Pg 13 ISO M20 x 1.5	ZCK J534 ZCK J534H29	0.320 0.320

### Plug-in bodies with single-pole contact

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
<b>With module comprising 2 LEDs, ≐ 24 V</b>						
1 step	C/O snap action		-	Pg 13 ISO M20 x 1.5	ZCK J1121 ZCK J1121H29	0.340 0.340
<b>With module comprising 2 neon indicator lights, ~ 110/120 V</b>						
1 step	C/O snap action		-	Pg 13 ISO M20 x 1.5	ZCK J1133 ZCK J1133H29	0.340 0.340
<b>With module comprising 2 neon indicator lights, ~ 220/240 V</b>						
1 step	C/O snap action		-	Pg 13 ISO M20 x 1.5	ZCK J1134 ZCK J1134H29	0.340 0.340



ZCK J1 ●●●

(1) ⊖ : N/C contact with positive opening operation.

### Indicator light module characteristics

Type of indicator	1 LED or 2 LEDs	2 neon lights	
Rated insulation voltage	≐ 50 V, conforming to IEC 60947-1	~ 250 V, conforming to IEC 60947-1	
Current consumption	7 mA per LED	2.5 mA per neon	5 mA per neon
Rated operational voltage	≐ 24 V	~ 110/120 V	~ 220/240 V
Voltage limits	≐ 20...30 V (including ripple)	~ 95...130 V	~ 190...260 V
Service life	100 000 hours	20 000 hours	20 000 hours
Reverse polarity protection	Yes	-	

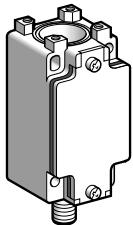
# Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Adaptable sub-assemblies: bodies with M12 connector



ZCK J0D

## Fixed bodies with 2-pole contact

Type	With contact block	Scheme	Positive operation (1)	Reference	Weight kg
1 step	N/C + N/O snap action (XE2S P2151)		⊕	ZCK J1D	0.320
	N/C + N/O break before make, slow break (XE2N P2151)		⊕	ZCK J5D	0.320
	N/O + N/C make before make, slow break (XE2N P2161)		⊕	ZCK J6D	0.320
	N/C + N/C simultaneous, slow break (XE2N P2141)		⊕	ZCK J7D	0.320
	N/O + N/O simultaneous, slow break (XE2N P2131)		-	ZCK J8D	0.320

(1) N/C contact with positive opening operation.



# Limit switches

## Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Adaptable sub-assemblies: contact blocks

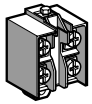
### Contact blocks

Type of contact	Scheme	For bodies	Positive operation (1)	Reference	Weight kg
<b>2-pole contact</b>					
N/C + N/O snap action		ZCK J1 ZCK J1D	⊕	XE2S P2151	0.020
N/C + N/O break before make, slow break		ZCK J5 ZCK J5D	⊕	XE2N P2151	0.020
2 C/O simultaneous, snap action		ZCK J2	-	XES P2021	0.045
2 C/O staggered, snap action		ZCK J4	-	XES P2031	0.045
N/O + N/C make before break, slow break		ZCK J6 ZCK J6D	⊕	XE2N P2161	0.020
N/C + N/C simultaneous, slow break		ZCK J7 ZCK J7D	⊕	XE2N P2141	0.020
N/O + N/O simultaneous, slow break		ZCK J8 ZCK J8D	-	XE2N P2131	0.020
N/C + N/C snap action		ZCK J9	⊕	XE2S P2141	0.020
<b>3-pole contact</b>					
N/C + N/O + N/O snap action		ZCK JD31	⊕	XE3S P2151	0.035
N/C + N/C + N/O snap action		ZCK JD39	⊕	XE3S P2141	0.035
N/C + N/C + N/O break before make, slow break		ZCK JD37	⊕	XE3N P2141	0.035
N/C + N/O + N/O break before make, slow break		ZCK JD35	⊕	XE3N P2151	0.035

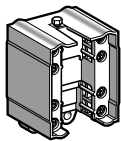
(1) ⊕ : N/C contact with positive opening operation.



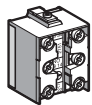
XE2S P21●1



XE2N P21●1



XES P20●1



XE3● P21●1

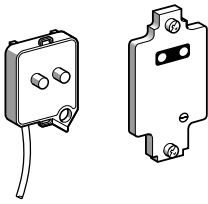
# Limit switches

Osiswitch® Classic

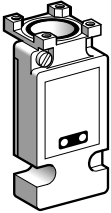
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

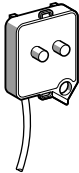
Adaptable sub-assemblies: add-ons



ZCK Z0



ZCK J01



ZCK J90



ZCK J82A

## Covers + indicator light module

For use with	Number and type of indicators	Voltage	Reference	Weight kg
Fixed body	1 LED	— 24 V	ZCK Z020	0.060
	2 LEDs	— 24 V	ZCK Z021	0.060
	2 neon lights	~ 110/120 V	ZCK Z033	0.060
		~ 220/240 V	ZCK Z034	0.060
Plug-in body	2 LEDs	— 24 V	ZCK J0121	0.200
	2 neon lights	~ 110/120 V	ZCK J0133	0.200
		~ 220/240 V	ZCK J0134	0.200

## Indicator light modules

For use with	Number and type of indicators	Voltage	Reference	Weight kg
Fixed body	1 LED	— 24 V	ZCK J902	0.030
	2 LEDs	— 24 V	ZCK J906	0.030
	2 neon lights	~ 110/120 V	ZCK J903	0.030
		~ 220/240 V	ZCK J904	0.030

## Module with resistor for machine diagnostics

For use with	Resistor value	Reference	Weight kg
Fixed body (ZCK J1 only)	15 kΩ, 1/4 W	ZCK J82A	0.030

## Other versions

Covers + indicator light module for other supply voltages.  
Please consult your Regional Sales Office.

# Limit switches

Osiswitch® Classic

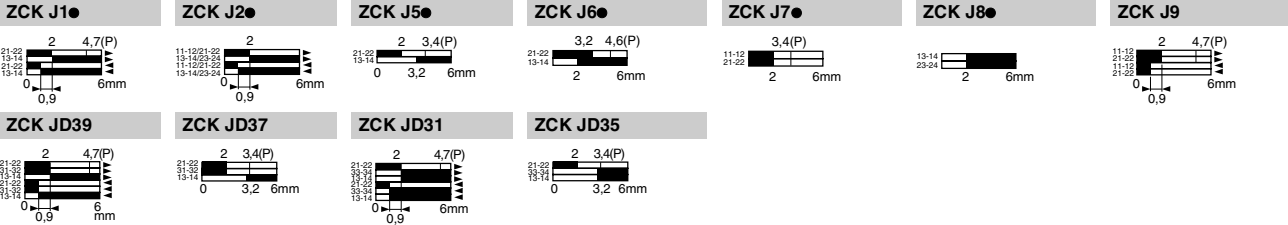
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

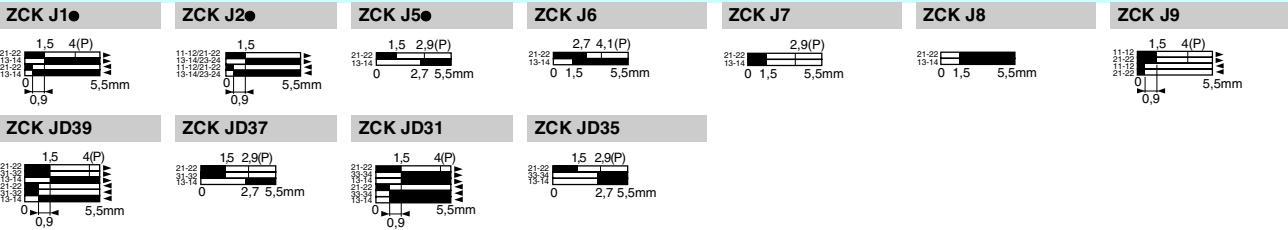
Adaptable sub-assemblies

Function diagrams (positive operation assured only if the associated sub-assemblies are ☞)

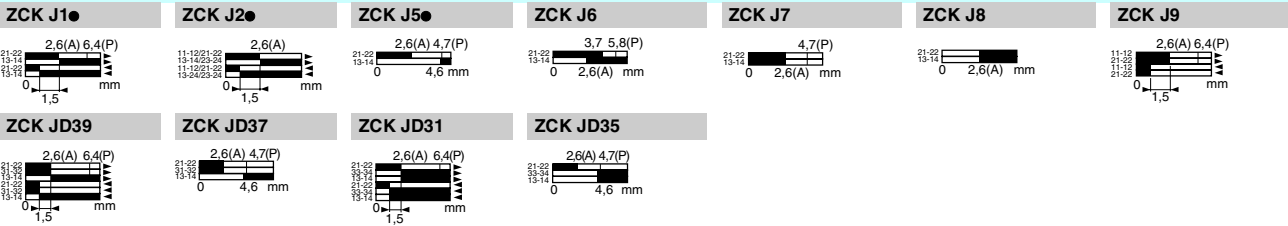
Heads ZCK E61, E619, E66 with body



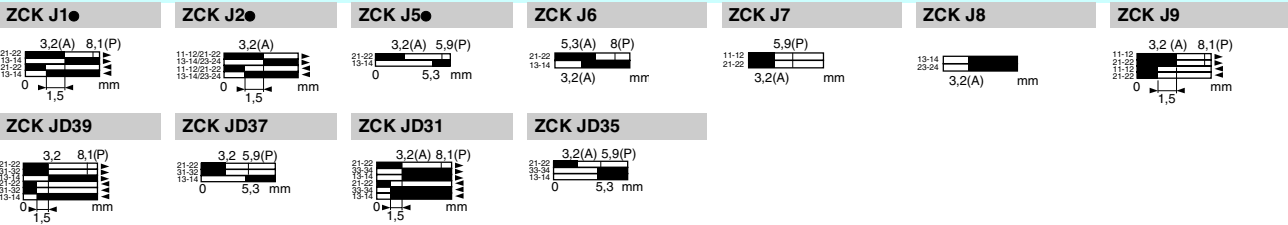
Head ZCK E63 with body



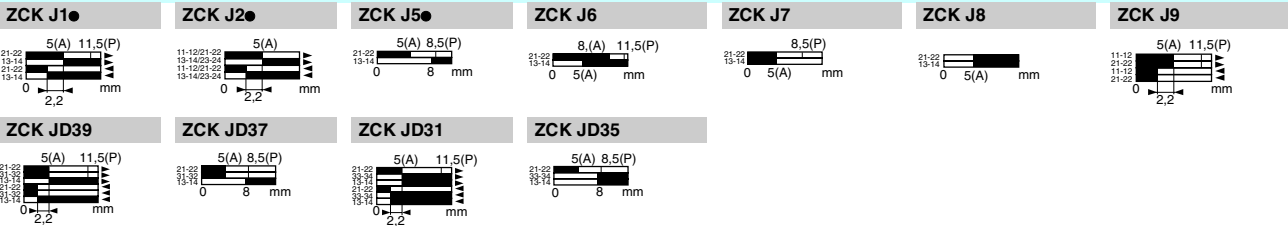
Heads ZCK E64, E65 with body



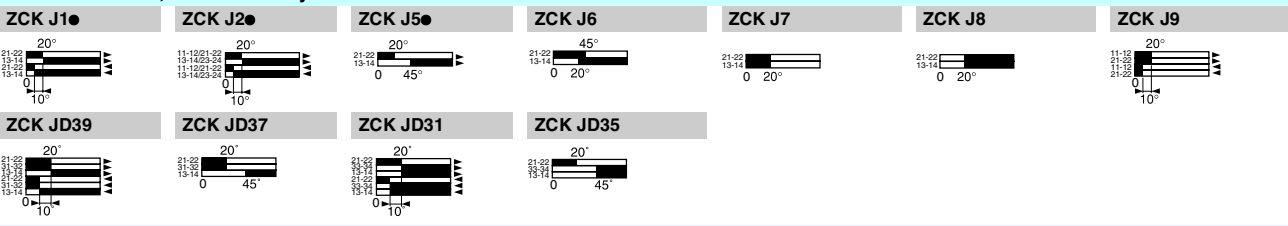
Heads ZCK E67, E629 with body



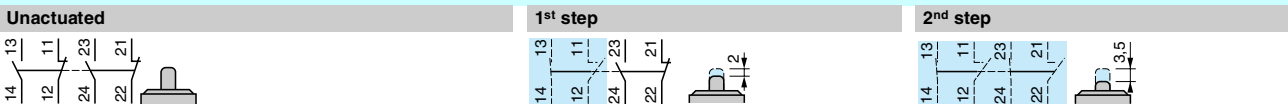
Heads ZCK E21, E23 with body



Heads ZCK E06, E08 with body



ZCK J4●



Contact operation

■ contact closed  
□ contact open

(A) = cam displacement  
(P) = positive opening point

# Limit switches

Osiswitch® Classic

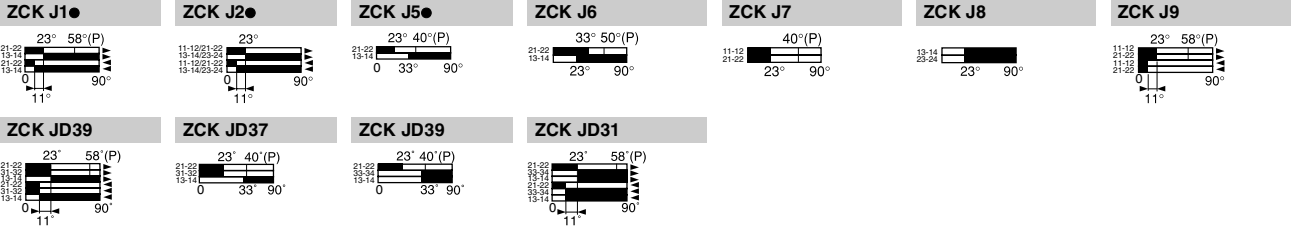
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

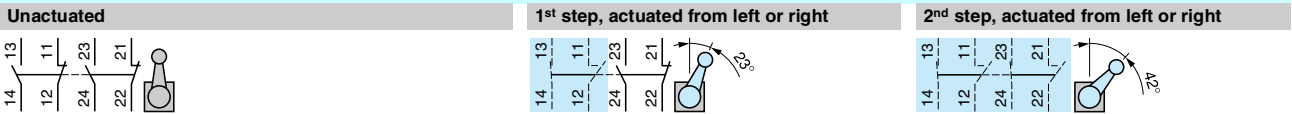
Adaptable sub-assemblies

## Function diagrams (positive operation assured only if the associated sub-assemblies are ☺)

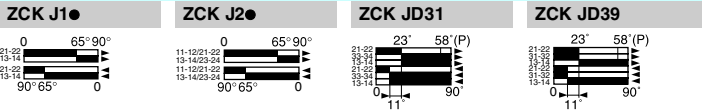
### Head ZCK E05 with body



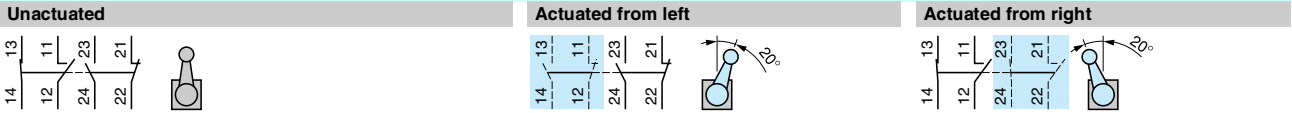
### ZCK J4●



### Head ZCK E09 with body



### ZCK J404, J4104 (body with head)



Contact operation

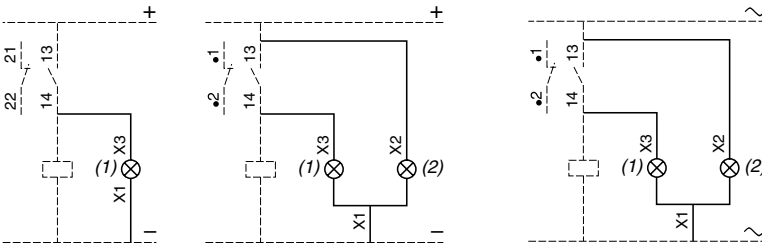
■ contact closed  
□ contact open

(P) = positive opening point

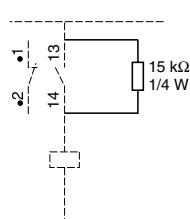
## Wiring schemes

### Indicator light modules

1 LED, = 24 V      2 LEDs, = 24 V      2 neon lights, ~ 110/120 or 220/240 V

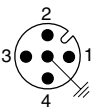


### Module with resistor



(1) Orange indicator  
(2) Green indicator

### ZCK J●D



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



# Limit switches

Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

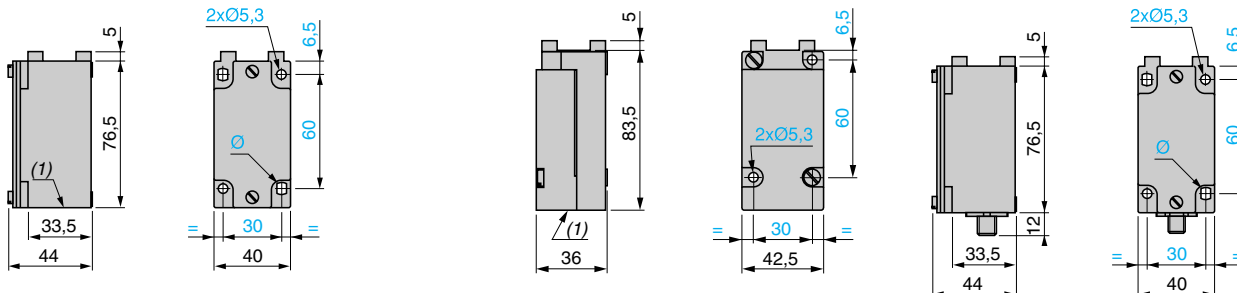
Adaptable sub-assemblies

## Bodies

ZCK J1, J2, J5, J4, J2●, J3●, J6, J7, J8, J9  
ZCK J1H29, J2H29, J5H29, J4H29, J2●H29, J3●H29, J6H29, J7H29, J8H29, J9H29  
ZCK J1H7, J2H7, J5H7, J4H7, J2●H7, J3●H7, J6H7, J7H7, J8H7, J9H7

ZCK J11, J21, J41, J11●●  
ZCK J11H29, J21H29, J41H29, J11●●H29  
ZCK J11H7, J21H7, J41H7, J11●●H7

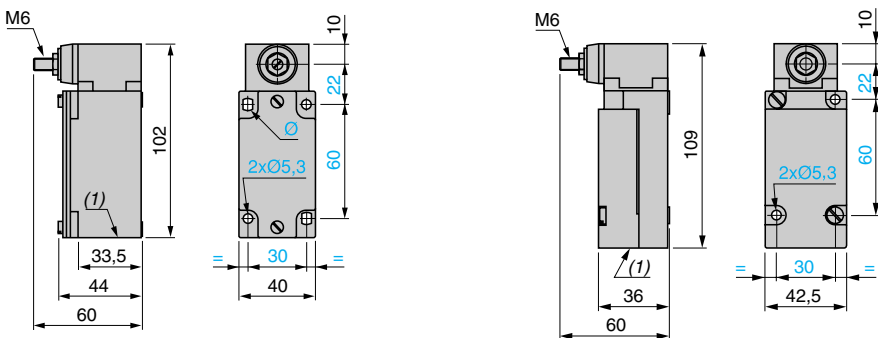
ZCK J1D, J5D, J6D, J7D, J8D



## Bodies with rotary head mounted

ZCK J404, ZCK J404H29, ZCK J404H7

ZCK J4104, ZCK J4104H29, ZCK J4104H7

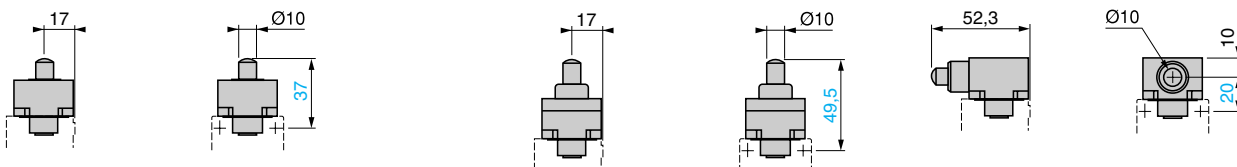


## Plunger heads

ZCK E61

ZCK E619

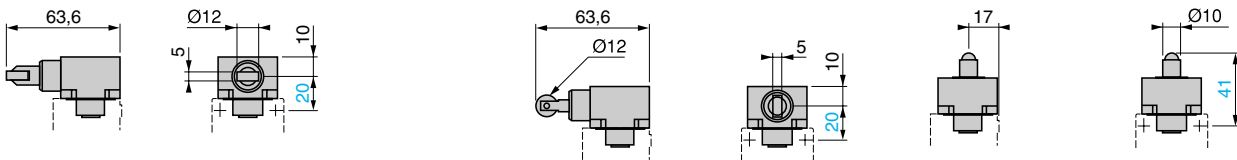
ZCK E63



ZCK E64

ZCK E65

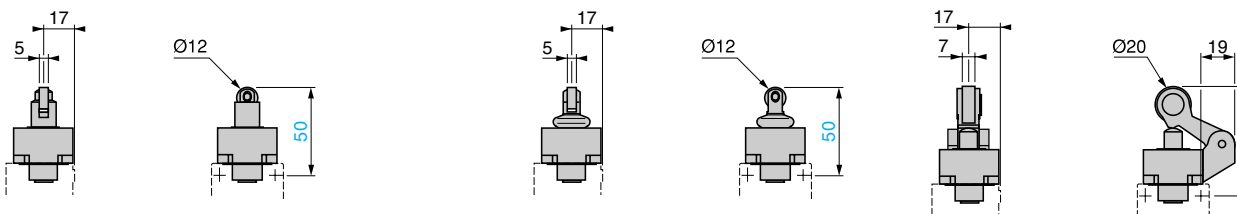
ZCK E66



ZCK E62, ZCK E67

ZCK E629

ZCK E21, E23



(1) 1 tapped entry for ISO M20 x 1.5 or Pg 13 cable gland or tapped 1/2" NPT.  
Ø: 2 elongated holes Ø 5.3 x 7.3.

# Limit switches

Osiswitch® Classic

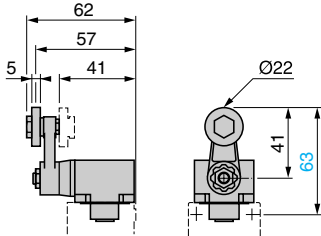
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

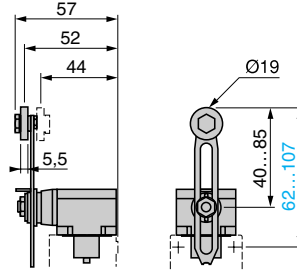
Adaptable sub-assemblies

## Rotary head ZCK E05 with operating lever

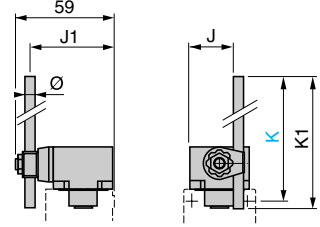
ZCK Y11, Y13, Y14



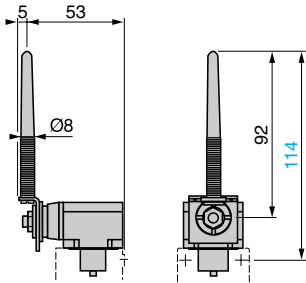
ZCK Y41, Y43



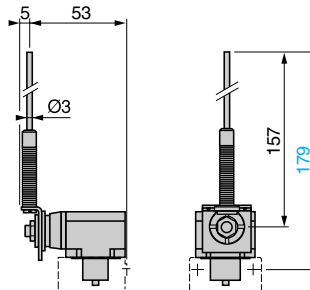
ZCK Y51, Y52, Y53, Y59



ZCK Y81



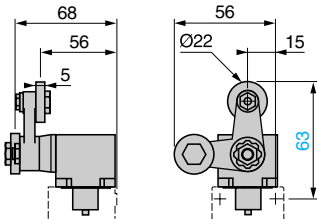
ZCK Y91



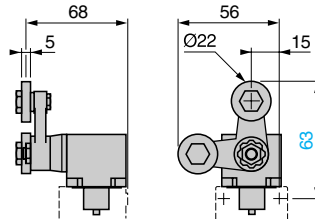
	J	J1	K max.	K1	Ø
ZCK Y51	20	49	137	123	∅ 3
ZCK Y52	20	49	137	125	∅ 3
ZCK Y53	20	49	137	125	∅ 3
ZCK Y59	26.2	48	212	200	∅ 6

## Rotary head ZCK E09 with operating lever

ZCK Y61

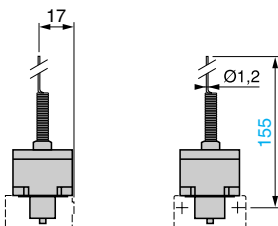


ZCK Y71

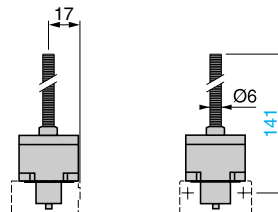


## Multi-directional heads

ZCK E06



ZCK E08



Note: operating lever spindle threaded M6.

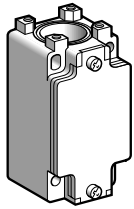
## Limit switches

## Osiswitch® Classic

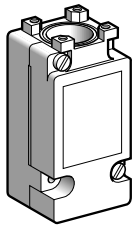
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Adaptable sub-assemblies for low temperature applications (- 40 °C)



ZCK J1



ZCK J11

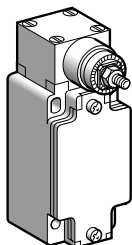
## Body with contacts For plunger or rotary head

Type	Contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
<b>Fixed body</b>						
1 step	2-pole 1 N/C + 1 N/O snap action (XE2S P2151)		⊕	Pg 13	<b>ZCK J1</b>	0.310
				ISO M20 x 1.5	<b>ZCK J1H29</b>	0.310
				1/2" NPT	<b>ZCK J1H7</b>	0.310
	Double-pole 2 C/O simultaneous snap action (XES P2021)		-	Pg 13	<b>ZCK J2</b>	0.310
				ISO M20 x 1.5	<b>ZCK J2H29</b>	0.310
				1/2" NPT	<b>ZCK J2H7</b>	0.310
	2-pole 1 N/C + 1 N/O break before make slow break (XE2N P2151)		⊕	Pg 13	<b>ZCK J5</b>	0.310
				ISO M20 x 1.5	<b>ZCK J5H29</b>	0.310
				1/2" NPT	<b>ZCK J5H7</b>	0.310
	2-pole 1 N/O + 1 N/C make before break slow break (XE2N P2161)		⊕	Pg 13	<b>ZCK J6</b>	0.310
				ISO M20 x 1.5	<b>ZCK J6H29</b>	0.310
				1/2" NPT	<b>ZCK J6H7</b>	0.310
2-pole 1 N/C + 1 N/C simultaneous slow break (XE2N P2141)		⊕	Pg 13	<b>ZCK J7</b>	0.310	
			ISO M20 x 1.5	<b>ZCK J7H29</b>	0.310	
			1/2" NPT	<b>ZCK J7H7</b>	0.310	
2-pole 1 N/O + 1 N/O simultaneous slow break (XE2N P2131)		-	Pg 13	<b>ZCK J8</b>	0.310	
			ISO M20 x 1.5	<b>ZCK J8H29</b>	0.310	
			1/2" NPT	<b>ZCK J8H7</b>	0.310	
2-pole 1 N/C + 1 N/C snap action (XE2S P2141)		⊕	Pg 13	<b>ZCK J9</b>	0.310	
			ISO M20 x 1.5	<b>ZCK J9H29</b>	0.310	
			1/2" NPT	<b>ZCK J9H7</b>	0.310	
2 step	Double-pole 2 C/O staggered snap action (XES P2031)		-	Pg 13	<b>ZCK J4</b>	0.310
				ISO M20 x 1.5	<b>ZCK J4H29</b>	0.310
				1/2" NPT	<b>ZCK J4H7</b>	0.310
<b>Plug-in body</b>						
1 step	Single-pole 1 C/O snap action		-	Pg 13	<b>ZCK J11</b>	0.300
				ISO M20 x 1.5	<b>ZCK J11H29</b>	0.300
				1/2" NPT	<b>ZCK J11H7</b>	0.300
	Double-pole 2 C/O simultaneous snap action		-	Pg 13	<b>ZCK J21</b>	0.300
				ISO M20 x 1.5	<b>ZCK J21H29</b>	0.300
				1/2" NPT	<b>ZCK J21H7</b>	0.300
2 step	Double-pole 2 C/O staggered snap action		-	Pg 13	<b>ZCK J41</b>	0.300
				ISO M20 x 1.5	<b>ZCK J41H29</b>	0.300
				1/2" NPT	<b>ZCK J41H7</b>	0.300

## Body with contacts With spring return rotary head (without operating lever)

Type	Contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
<b>Fixed body</b>						
2 step 1 from the left and 1 from the right	Double-pole 2 C/O staggered snap action		-	Pg 13	<b>ZCK J4046</b>	0.455
				ISO M20 x 1.5	<b>ZCK J4046H29</b>	0.455
				1/2" NPT	<b>ZCK J4046H7</b>	0.455
<b>Plug-in body</b>						
2 step 1 from the left and 1 from the right	Double-pole 2 C/O staggered snap action		-	Pg 13	<b>ZCK J41046</b>	0.465
				ISO M20 x 1.5	<b>ZCK J41046H29</b>	0.465
				1/2" NPT	<b>ZCK J41046H7</b>	0.465

(1) ⊕ : operating head able to guarantee positive opening operation.



ZCK J4046

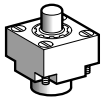
# Limit switches

## Osiswitch® Classic

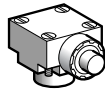
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

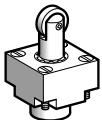
Adaptable sub-assemblies for low temperature applications (-40 °C)



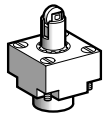
ZCK E616



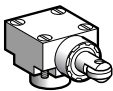
ZCK E636



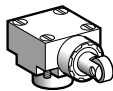
ZCK E626



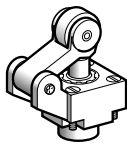
ZCK E676



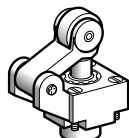
ZCK E646



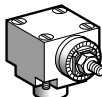
ZCK E656



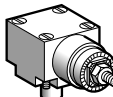
ZCK E216



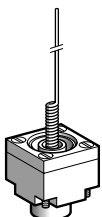
ZCK E236



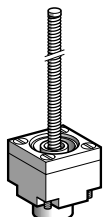
ZCK E056



ZCK E096



ZCK E066



ZCK E086

### Plunger heads

Type of operator	Compatible bodies	Max. actuation speed	Positive operation (1)	Reference	Weight kg	
<b>For actuation on end</b>						
<b>End plunger metal</b>	ZCK J●, ZCK J●●	0.5 m/s	⊖	<b>ZCK E616</b>	0.140	
<b>Side plunger metal</b>	ZCK J●, ZCK J●●, except ZCK J4 and J41	0.5 m/s	⊖	<b>ZCK E636</b>	0.200	
<b>For actuation by 30° cam</b>						
<b>End roller plunger steel</b>	ZCK J●, ZCK J●●	1 m/s	⊖	<b>ZCK E626</b>	0.155	
<b>End reinforced roller plunger steel</b>	ZCK J●, ZCK J●●	1 m/s	⊖	<b>ZCK E676</b>	0.155	
<b>Side roller plunger steel</b>	Horizontal	ZCK J●, ZCK J●●, except ZCK J4 and J41	0.6 m/s	⊖	<b>ZCK E646</b>	0.205
	Vertical	ZCK J●, ZCK J●●, except ZCK J4 and J41	0.6 m/s	⊖	<b>ZCK E656</b>	0.205
<b>Roller lever plunger (1 direction of actuation)</b>	Thermoplastic	ZCK J●, ZCK J●●	1.5 m/s	⊖	<b>ZCK E216</b>	0.185
	Steel	ZCK J●, ZCK J●●	1.5 m/s	⊖	<b>ZCK E236</b>	0.195

### Rotary heads (without operating lever)

Type	Compatible bodies	Max. actuation speed	Positive operation (1)	Reference	Weight kg
<b>Spring return, actuation from left AND right or from left OR right (see page 5/184)</b>	ZCK J●, ZCK J●●	1.5 m/s by 30° cam	⊖	<b>ZCK E056</b>	0.165
<b>Stay put, actuation from left AND right (see page 5/184)</b>	ZCK J1, J11 ZCK J2, J21	1.5 m/s	–	<b>ZCK E096</b>	0.190

### Multi-directional heads

Type of operator	Compatible bodies	Max. actuation speed	Positive operation (1)	Reference	Weight kg
<b>For actuation by any moving part</b>					
<b>“Cat's whisker”</b>	ZCK J●, ZCK J●●, except ZCK J4 and ZCK J41	1 m/s in any direction	–	<b>ZCK E066</b>	0.115
<b>Spring rod lever</b>	ZCK J●, ZCK J●●, except ZCK J4 and ZCK J41	0.5 m/s in any direction	–	<b>ZCK E086</b>	0.125

(1) ⊖ : operating head able to guarantee positive opening operation.



## Limit switches

## Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

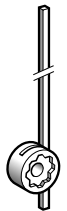
Adaptable sub-assemblies for low temperature applications (-40 °C)



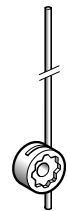
ZCK Y1●



ZCK Y4●



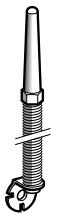
ZCK Y51



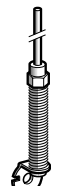
ZCK Y5●



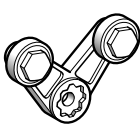
ZCK Y59



ZCK Y81



ZCK Y91



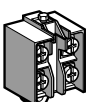
ZCK Y71



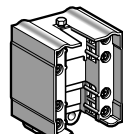
ZCK Y61



XE2S P21●1



XE2N P21●1



XES P20●1

## Operating levers for rotary heads

Description		Positive operation (1)	Reference	Weight kg
<b>For actuation by 30° cam</b>				
Roller lever (2)	Thermoplastic	⊕	ZCK Y11	0.025
	Steel	⊕	ZCK Y13	0.035
	Steel, ball bearing mounted	⊕	ZCK Y14	0.030
Variable length roller lever (3)	Thermoplastic	–	ZCK Y41	0.030
	Steel	–	ZCK Y43	0.040

## For actuation by any moving part

Square rod (2)	∅ 3 mm steel, L = 125 mm	–	ZCK Y51	0.025
Round rod (2)	∅ 3 mm steel, L = 125 mm	–	ZCK Y53	0.025
	∅ 3 mm glass fibre, L = 125 mm	–	ZCK Y52	0.020
	∅ 6 mm thermoplastic, L = 200 mm	–	ZCK Y59	0.030
Spring lever (3)		–	ZCK Y81	0.020
Spring metal rod lever (3)		–	ZCK Y91	0.025

## For actuation by specific cam (for operation with ZCK-E096 head)

Forked arm and rollers (2)	1 track	–	ZCK Y71	0.035
	2 track	–	ZCK Y61	0.035

## 2- or double-pole contact blocks

Type	Scheme	For body type	Positive operation (1)	Reference	Weight kg
1 N/C + 1 N/O snap action		ZCK J1	⊕	XE2S P2151	0.020
1 N/C + 1 N/O break before make slow break		ZCK J5	⊕	XE2N P2151	0.020
2 C/O simultaneous snap action		ZCK J2	–	XES P2021	0.045
2 C/O staggered snap action		ZCK J4	–	XES P2031	0.045
1 N/O + 1 N/C make before break slow break		ZCK J6	⊕	XE2N P2161	0.020
1 N/C + 1 N/C simultaneous slow break		ZCK J7	⊕	XE2N P2141	0.020
1 N/O + 1 N/O simultaneous slow break		ZCK J8	–	XE2N P2131	0.020
1 N/C + 1 N/C snap action		ZCK J9	⊕	XE2S P2141	0.020

(1) ⊕ : operating lever able to guarantee positive opening operation or N/C contact with positive opening operation.

(2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting or clamp.

(3) Adjustable throughout 360° in 5° steps.

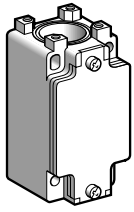
## Limit switches

## Osiswitch® Classic

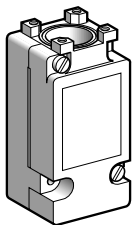
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

Adaptable sub-assemblies for high temperature applications (+ 120 °C)



ZCK J●



ZCK J●15

Body with contacts		For plunger or rotary head				
Type	Contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
<b>Fixed body</b>						
1 step	2-pole 1 N/C + 1 N/O snap action (XE2S P2151)		⊕	Pg 13	<b>ZCK J1</b>	0.310
				ISO M20 x 1.5	<b>ZCK J1H29</b>	0.310
				1/2" NPT	<b>ZCK J1H7</b>	0.310
	Double-pole 2 C/O simultaneous snap action (XES P20215)		-	Pg 13	<b>ZCK J25</b>	0.310
				ISO M20 x 1.5	<b>ZCK J25H29</b>	0.310
				1/2" NPT	<b>ZCK J25H7</b>	0.310
	2-pole 1 N/C + 1 N/O break before make slow break (XE2N P2151)		⊕	Pg 13	<b>ZCK J5</b>	0.310
ISO M20 x 1.5				<b>ZCK J5H29</b>	0.310	
1/2" NPT				<b>ZCK J5H7</b>	0.310	
2-pole 1 N/O + 1 N/C make before break slow break (XE2N P2161)		⊕	Pg 13	<b>ZCK J6</b>	0.310	
			ISO M20 x 1.5	<b>ZCK J6H29</b>	0.310	
			1/2" NPT	<b>ZCK J6H7</b>	0.310	
2-pole 1 N/C + 1 N/C simultaneous slow break (XE2N P2141)		⊕	Pg 13	<b>ZCK J7</b>	0.310	
			ISO M20 x 1.5	<b>ZCK J7H29</b>	0.310	
			1/2" NPT	<b>ZCK J7H7</b>	0.310	
2-pole 1 N/O + 1 N/O simultaneous slow break (XE2N P2131)		-	Pg 13	<b>ZCK J8</b>	0.310	
			ISO M20 x 1.5	<b>ZCK J8H29</b>	0.310	
			1/2" NPT	<b>ZCK J8H7</b>	0.310	
2-pole 1 N/C + 1 N/C snap action (XE2S P2141)		⊕	Pg 13	<b>ZCK J9</b>	0.310	
			ISO M20 x 1.5	<b>ZCK J9H29</b>	0.310	
			1/2" NPT	<b>ZCK J9H7</b>	0.310	
2 step	Double-pole 2 C/O break before make snap action (XES P20315)		-	Pg 13	<b>ZCK J45</b>	0.310
				ISO M20 x 1.5	<b>ZCK J45H29</b>	0.310
				1/2" NPT	<b>ZCK J45H7</b>	0.310
<b>Plug-in body</b>						
1 step	Single-pole 1 C/O snap action		-	Pg 13	<b>ZCK J115</b>	0.300
				ISO M20 x 1.5	<b>ZCK J115H29</b>	0.300
				1/2" NPT	<b>ZCK J115H7</b>	0.300
Double-pole 2 C/O simultaneous snap action		-	Pg 13	<b>ZCK J215</b>	0.300	
			ISO M20 x 1.5	<b>ZCK J215H29</b>	0.300	
			1/2" NPT	<b>ZCK J215H7</b>	0.300	
2 step	Double-pole 2 C/O break before make snap action		-	Pg 13	<b>ZCK J415</b>	0.300
				ISO M20 x 1.5	<b>ZCK J415H29</b>	0.300
				1/2" NPT	<b>ZCK J415H7</b>	0.300
<b>Body with contacts</b>		<b>With spring return rotary head (without operating lever)</b>				
Type	Contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
<b>Fixed body</b>						
2 step 1 from the left AND 1 from the right	Double-pole 2 C/O break before make snap action		-	Pg 13	<b>ZCK J4045</b>	0.455
				ISO M20 x 1.5	<b>ZCK J4045H29</b>	0.455
<b>Plug-in body</b>						
2 step 1 from the left AND 1 from the right	Double-pole 2 C/O break before make snap action		-	Pg 13	<b>ZCK J41045</b>	0.465
				ISO M20 x 1.5	<b>ZCK J41045H29</b>	0.465
				1/2" NPT	<b>ZCK J41045H7</b>	0.465

(1) ⊕ : operating head able to guarantee positive opening operation.

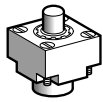
## Limit switches

## Osiswitch® Classic

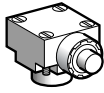
Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

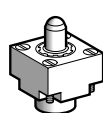
Adaptable sub-assemblies for high temperature applications (+ 120 °C)



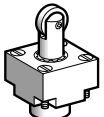
ZCK E615



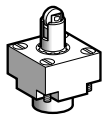
ZCK E635



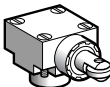
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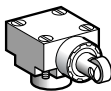
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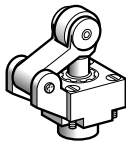
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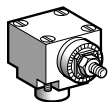
ZCK E645



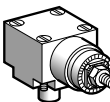
ZCK E655



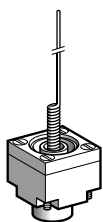
ZCK E235



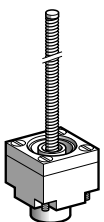
ZCK E055



ZCK E095



ZCK E065



ZCK E085

## Plunger heads

Type of operator		Compatible bodies	Max. actuation speed	Positive operation (1)	Reference	Weight kg
<b>For actuation on end</b>						
End plunger	Metal	ZCK J1, J2, J4, ZCK J115, J215, J415, ZCK J5, J6, J7, J8, J9	0.5 m/s	⊖	ZCK E615	0.140
Side plunger	Metal	ZCK J1, J2, ZCK J115, J215, ZCK J5, J6, J7, J8, J9	0.5 m/s	⊖	ZCK E635	0.200
<b>For actuation by 30° cam</b>						
End ball bearing plunger	Steel	ZCK J1, J2, J4, ZCK J115, J215, J415, ZCK J5, J6, J7, J8, J9	0.1 m/s	⊖	ZCK E665	0.150
End roller plunger	Steel	ZCK J1, J2, J4, ZCK J115, J215, J415, ZCK J5, J6, J7, J8, J9	1 m/s	⊖	ZCK E625	0.155
End reinforced roller plunger	Steel	ZCK J1, J2, J4, ZCK J115, J215, J415, ZCK J5, J6, J7, J8, J9	1 m/s	⊖	ZCK E675	0.155
Side roller plunger	Steel Horizontal	ZCK J1, J2, ZCK J115, J215, ZCK J5, J6, J7, J8, J9	0.6 m/s	⊖	ZCK E645	0.205
	Steel Vertical	ZCK J1, J2, ZCK J115, J215, ZCK J5, J6, J7, J8, J9	0.6 m/s	⊖	ZCK E655	0.205
Roller lever plunger (1 direction of actuation)	Steel	ZCK J1, J2, J4, ZCK J115, J215, J415, ZCK J5, J6, J7, J8, J9	1.5 m/s	⊖	ZCK E235	0.195
	Thermoplastic	ZCK J1, J2, J4, ZCK J115, J215, J415, ZCK J5, J6, J7, J8, J9	1.5 m/s	⊖	ZCK E215	0.185

## Rotary heads (without operating lever)

Type	Compatible bodies	Max. actuation speed	Positive operation (1)	Reference	Weight kg
Spring return, actuation from left AND right or from left OR right (see page 5/184)	ZCK J1, J2, J4, ZCK J115, J215, ZCK J415, ZCK J5, J6, J7, J8, J9	1.5 m/s by 30° cam	⊖	ZCK E055	0.165
Stay put, actuation from left AND right (see page 5/184)	ZCK J1, J2, ZCK J115, J215	0.5 m/s	–	ZCK E095	0.190

## Multi-directional heads

Type of operator	Compatible bodies	Max. actuation speed	Positive operation (1)	Reference	Weight kg
<b>For actuation by any moving part</b>					
“Cat's whisker”	ZCK J1, J2, ZCK J115, J215, ZCK J5, J6, J7, J8, J9	1 m/s in any direction	–	ZCK E065	0.115
Spring rod lever	ZCK J1, J2, ZCK J115, J215, ZCK J5, J6, J7, J8, J9	0.5 m/s in any direction	–	ZCK E085	0.125

(1) ⊖ : operating head able to guarantee positive opening operation.

# Limit switches

## Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J

Fixed or plug-in body

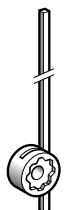
Adaptable sub-assemblies for high temperature applications (+ 120 °C)



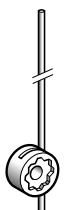
ZCK Y1●



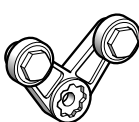
ZCK Y43



ZCK Y51



ZCK Y5●



ZCK Y715



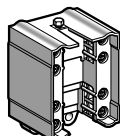
ZCK Y615



XE2S P21●1



XE2N P21●1



XES P20●15

### Operating levers for rotary heads

Description		Positive operation (1)	Reference	Weight kg
<b>For actuation by 30° cam</b>				
Roller lever (2)	Thermoplastic	⊕	ZCK Y115	0.025
	Steel	⊕	ZCK Y13	0.035
	Steel, ball bearing mounted	⊕	ZCK Y14	0.030
Variable length roller lever (3)	Thermoplastic	–	ZCK Y415	0.030
	Steel	–	ZCK Y43	0.040
<b>For actuation by any moving part</b>				
Square rod (2)	∅ 3 mm Steel, L = 125 mm	–	ZCK Y51	0.025
Round rod (2)	∅ 3 mm steel, L = 125 mm	–	ZCK Y53	0.025
	∅ 3 mm glass fibre, L = 125 mm	–	ZCK Y52	0.020

### For actuation by specific cam (for operation with ZCK-E095 head only)

Forked arm and rollers (2)	1 track	–	ZCK Y715	0.035
	thermoplastic	–	ZCK Y615	0.035

### 2- or double-pole contact blocks

Type of operator	Scheme	For body type	Positive operation (1)	Reference	Weight kg
1 N/C + 1 N/O snap action		ZCK J1	⊕	XE2S P2151	0.020
1 N/C + 1 N/O break before make slow break		ZCK J5	⊖	XE2N P2151	0.020
2 C/O simultaneous snap action		ZCK J25	–	XES P20215	0.045
2 C/O staggered snap action		ZCK J45	–	XES P20315	0.045
1 N/O + 1 N/C make before break slow break		ZCK J6	⊕	XE2N P2161	0.020
1 N/C + 1 N/C simultaneous slow break		ZCK J7	⊕	XE2N P2141	0.020
1 N/O + 1 N/O simultaneous slow break		ZCK J8	–	XE2N P2131	0.020
1 N/C + 1 N/C snap action		ZCK J9	⊕	XE2S P2141	0.020

(1) ⊕ : operating lever able to guarantee positive opening operation or N/C contact with positive opening operation.

(2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting or clamp.

(3) Adjustable throughout 360° in 5° steps.