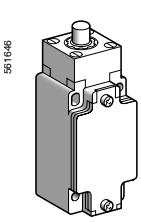
Limit switches
Osiswitch® Classic
Metal, type XCK J
Conforming to CENELEC EN 50041

■ XCK J
fixed body with 1 cable entry

□ With head for linear movement (plunger)



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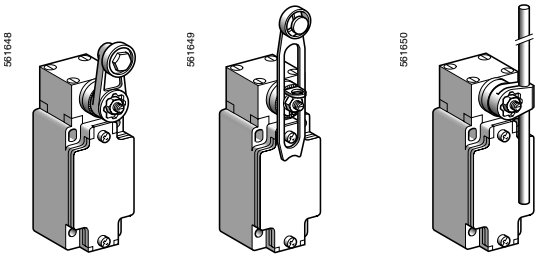
□ With head for rotary movement (lever) or multi-directional



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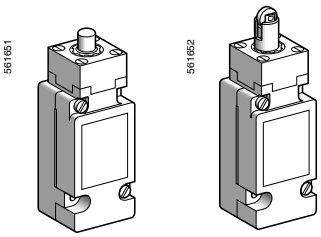
■ XCK J
plug-in body with 1 cable entry

□ With head for linear movement (plunger)



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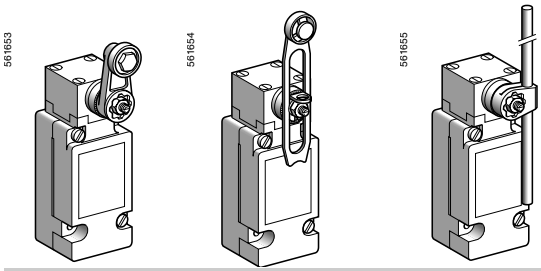
□ With head for rotary movement (lever)



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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

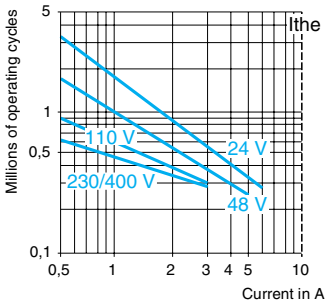
Limit switches
Osiswitch® Classic
Metal, type XCK J
Conforming to CENELEC EN 50041

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

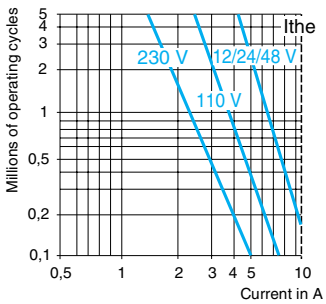


d.c. supply ⎓

Power broken in W for 5 million operating cycles.

Voltage	V	24	48	120
⌇⌇⌇	W	10	7	4

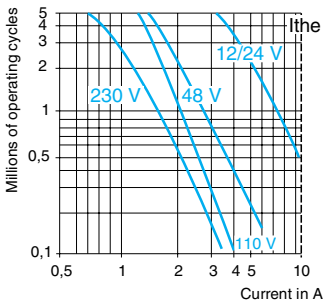
XE2N P21●1



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



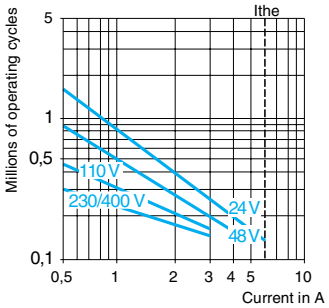
Power broken in W for 5 million operating cycles.

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

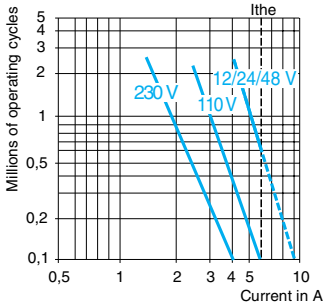


d.c. supply ⎓

Power broken in W for 5 million operating cycles.

Voltage	V	24	48	120
⌇⌇⌇	W	3	2	1

XE3S P●●●●



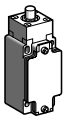
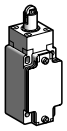
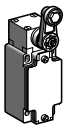
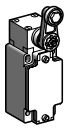
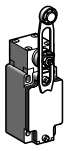
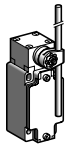
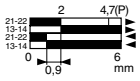
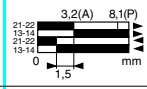
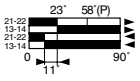
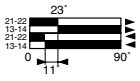
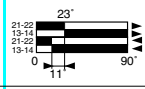
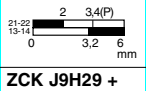
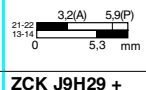
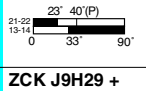
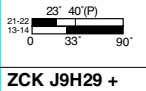
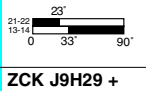
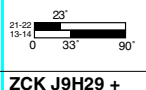
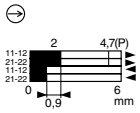
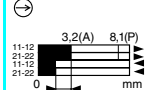
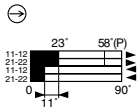
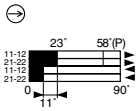
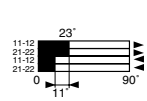
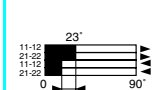
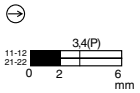
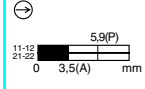
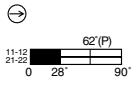
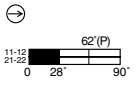
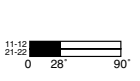
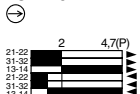
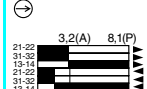
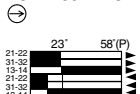
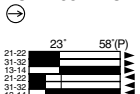
Power broken in W for 5 million operating cycles.

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
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
- ■ *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 *(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				

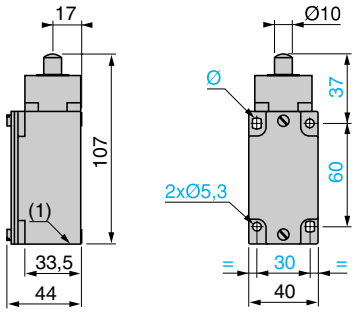
(1) Form conforming to EN 50041, see page 5/185.
(2) Switches with gold contacts or eyelet type connections: please consult your Regional Sales Office.
*(3) For an entry tapped for a Pg 13 cable gland, delete **H29** from the end of the reference. Example: **XCK J161H29** becomes **XCK J161**.*
*For 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

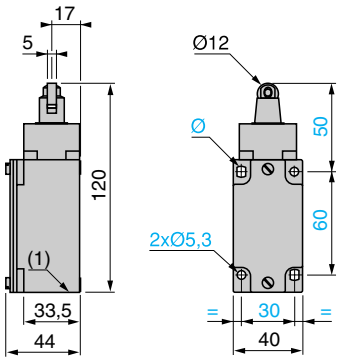
Osiswitch® Classic

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

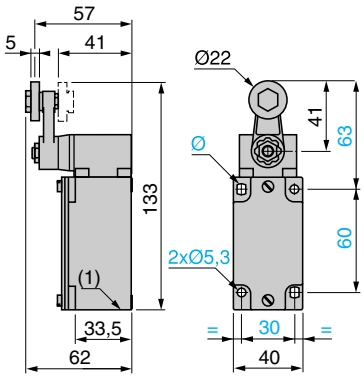
XCK J●61H29
ZCK J● + ZCK E61



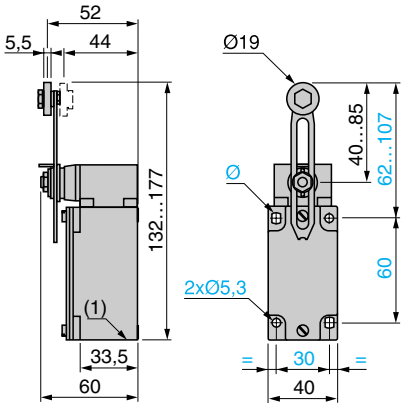
XCK J●67H29
ZCK J● + ZCK E67



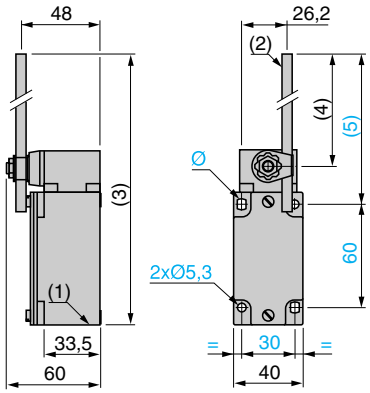
XCK J●051●H29
ZCK J● + ZCK E05 + ZCK Y11 or Y13



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



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

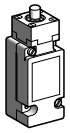
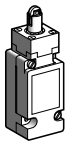
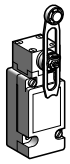
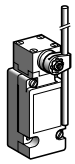
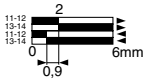
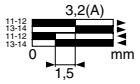
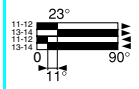
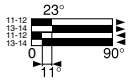
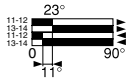
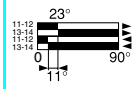


(1) 1 tapped entry for ISO M20 x 1.5 or Pg 13 cable gland or 1/2" NPT.
(2) Ø 6 rod, length 200 mm.
(3) 282 max.
(4) 190 max.
(5) 212 max.
Ø: 2 elongated holes Ø 5.3 x 7.3.

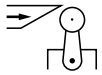
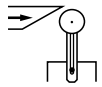
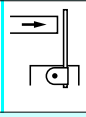
Limit switches

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 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					

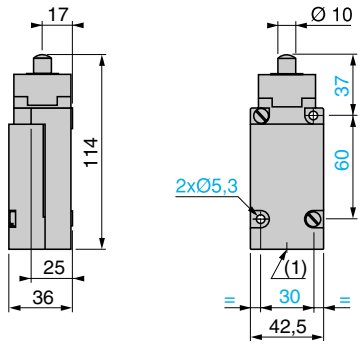
(1) Form conforming to EN 50041, see page 5/185.
(2) Switches with gold contacts: please consult your Regional Sales Office.
*(3) For an entry tapped for a n° 13 cable gland, delete **H29** from the end of the reference. Example: **XCK J1161H29** becomes **XCK J1161**.*
*For an entry tapped for 1/2" 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

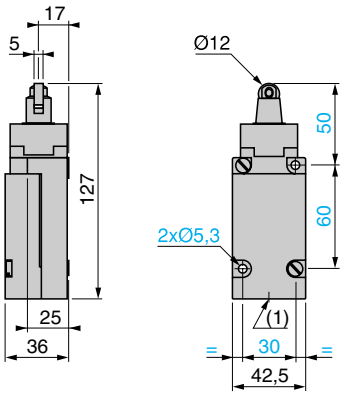
Osiswitch® Classic

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

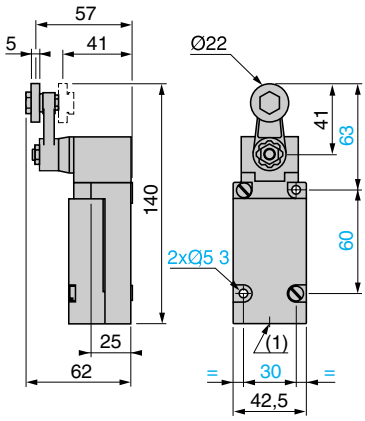
XCK J1611H29



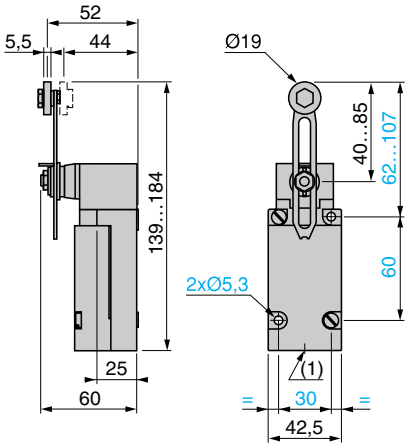
XCK J1167H29



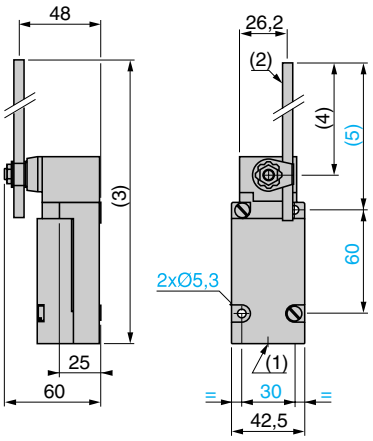
XCK J110511H29, XCK J110513H29



XCK J110541H29



XCK J110559H29

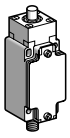
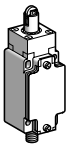
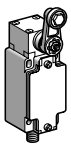
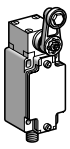
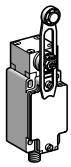
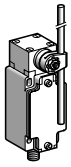
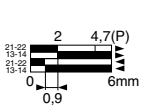
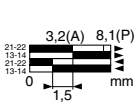
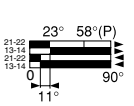
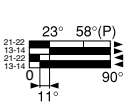
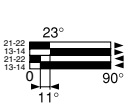
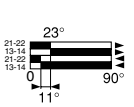


(1) Tapped entry for ISO M20 x 1.5 or Pg 13 cable gland or 1/2" NPT conduit.
(2) Ø 6 rod, length 200 mm.
(3) 289 max.
(4) 190 max.
(5) 212 max.

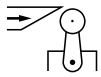
Limit switches

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)*
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).				

(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.

References of suitable pre-wired female connectors

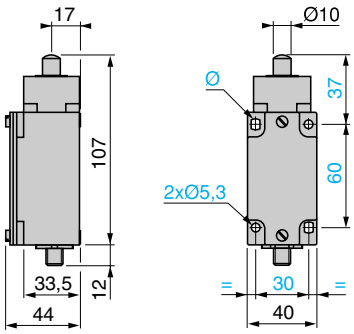
Type of connector		**M12 straight, 5-pin, 4 A/24 V max.**	**M12 elbowed, 5-pin, 4 A/24 V max.**
With cable, Ø 5.8 mm (4 x 0.34 mm² + 1 x 0.5 mm²)	L = 2 m	**XZ CP1164L2**	**XZ CP1264L2**
	L = 5 m	**XZ CP1164L5**	**XZ CP1264L5**
	L = 10 m	**XZ CP1164L10**	**XZ CP1264L10**
Weight (kg)	L = 2 m	0.115	
	L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

Limit switches

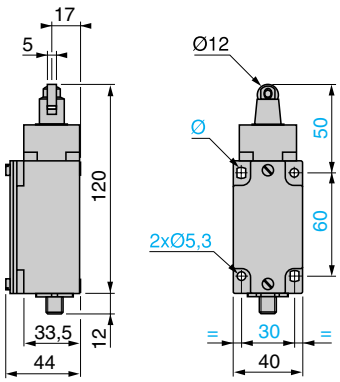
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
Integral M12 connector

Dimensions

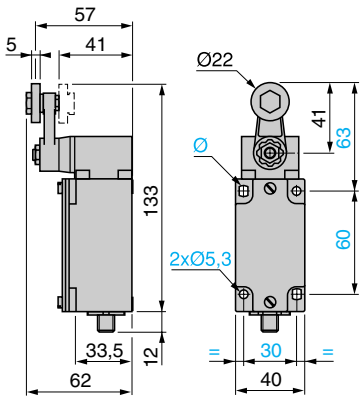
XCK J161D



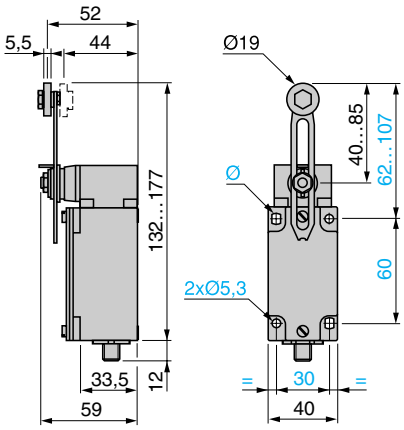
XCK J167D



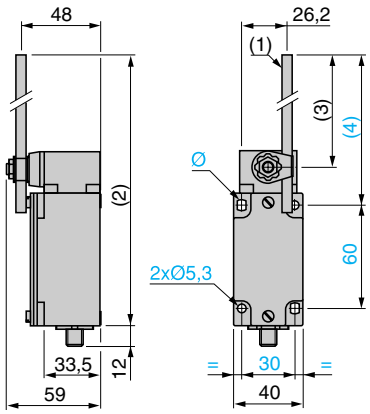
XCK J1051●D



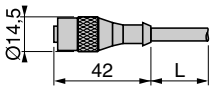
XCK J10541D



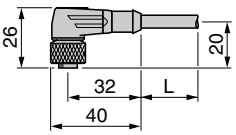
XCK J10559D



XZ CP1164L●



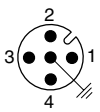
XZ CP1264L●



(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

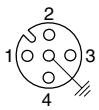
Limit switch XCK J●●●●D



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



Pre-wired female connector XZ CP1●64L●

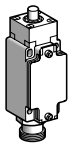
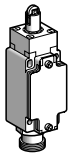
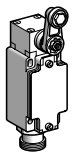
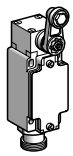
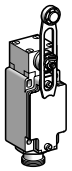
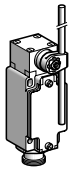
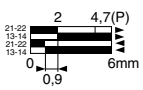
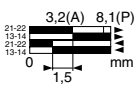
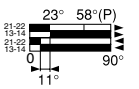
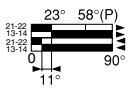
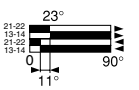
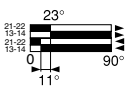


1 = brown
2 = white
3 = blue
4 = black
5 = ⏚ yellow/green

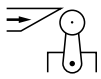
Limit switches

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 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

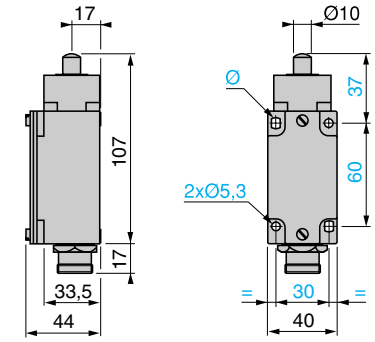
Type of connector		**7/8" 16UN straight, 5-pin, 6 A/250 V max.**
With cable, Ø 6.7 mm (5 x 0.5 mm²)	L = 2 m	**XZ CP1771L2**
	L = 5 m	**XZ CP1771L5**
	L = 10 m	**XZ CP1771L10**
Weight (kg)	L = 2 m	0.190
	L = 5 m	0.475
	L = 10 m	0.950

Limit switches

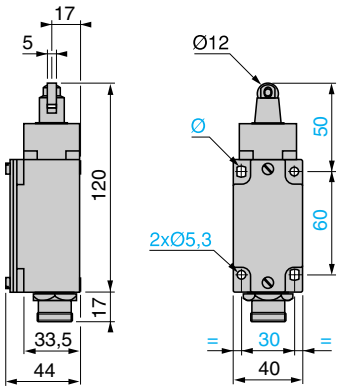
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Complete switches, fixed body
Integral 7/8" 16UN connector

Dimensions

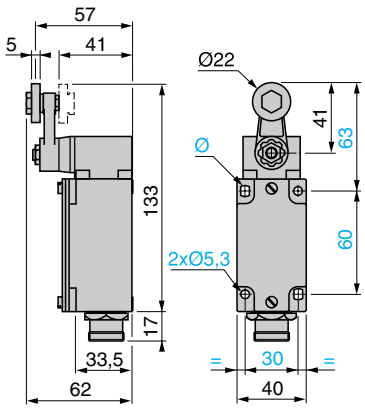
XCK J161A



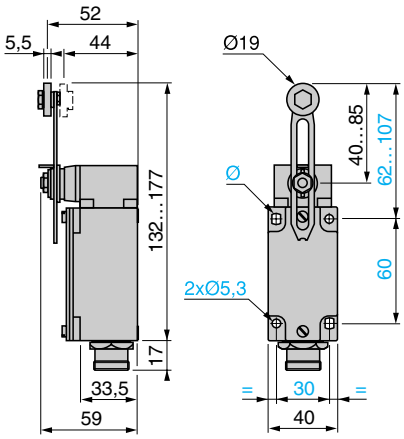
XCK J167A



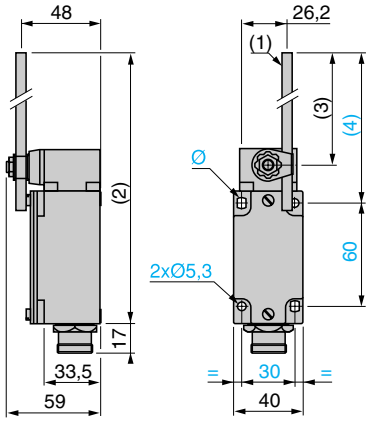
XCK J1051●A



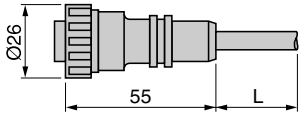
XCK J10541A



XCK J10559A



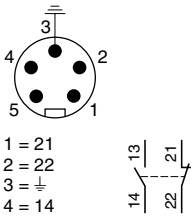
XZ CP1771L●



(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.*

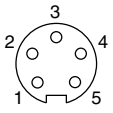
Connections

Limit switch XCK J●●●●A



1 = 21
2 = 22
3 = ⏚
4 = 14
5 = 13

Pre-wired female connector XZ CP1771L●

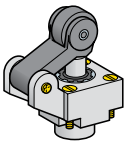


1 = black
2 = blue
3 = yellow/green ⏚
4 = brown
5 = white

Limit switches

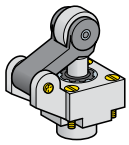
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Variable composition: standard bodies



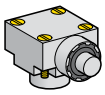
Thermoplastic roller lever plunger, 1 direction of actuation

ZCK E21 →



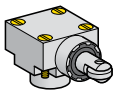
Steel roller lever plunger, 1 direction of actuation

ZCK E23 →



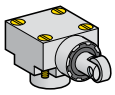
Side metal plunger

ZCK E63 →



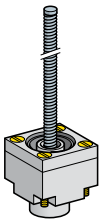
Side steel roller plunger, horizontal *(1)*

ZCK E64 →



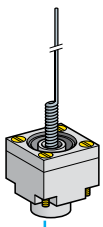
Side steel roller plunger, vertical *(1)*

ZCK E65 →



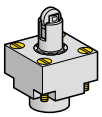
Spring rod

ZCK E08



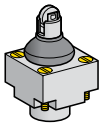
"Cat's whisker"

ZCK E06



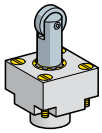
End reinforced steel roller plunger

ZCK E67 →



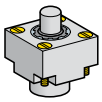
End steel roller plunger with protective boot

ZCK E629 →



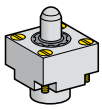
End steel roller plunger

ZCK E62 →



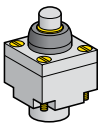
End metal plunger

ZCK E61 →



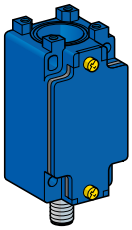
End steel ball bearing plunger

ZCK E66 →



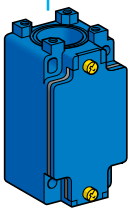
End metal plunger with protective boot

ZCK E619 →



Body with 2-pole contact, fixed, 1 step, M12 connector *(2)*

ZCK J1D, J5D, J6D, J7D →
ZCK J8D



Body with contact, cable entry for Pg 13, fixed, 1 step *(2) (3)*

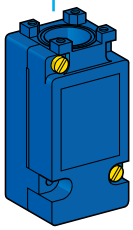
ZCK JD3●,
ZCK J1, J5, J6, J7, J9 →

Body with contact, cable entry for Pg 13, fixed, 1 step *(2) (3)*

ZCK J2, J8

Body with contact, cable entry for Pg 13, fixed, 2 step *(2) (3)*

ZCK J4



Body with contact, cable entry for Pg 13, plug-in, 1 or 2 step *(2) (3)*

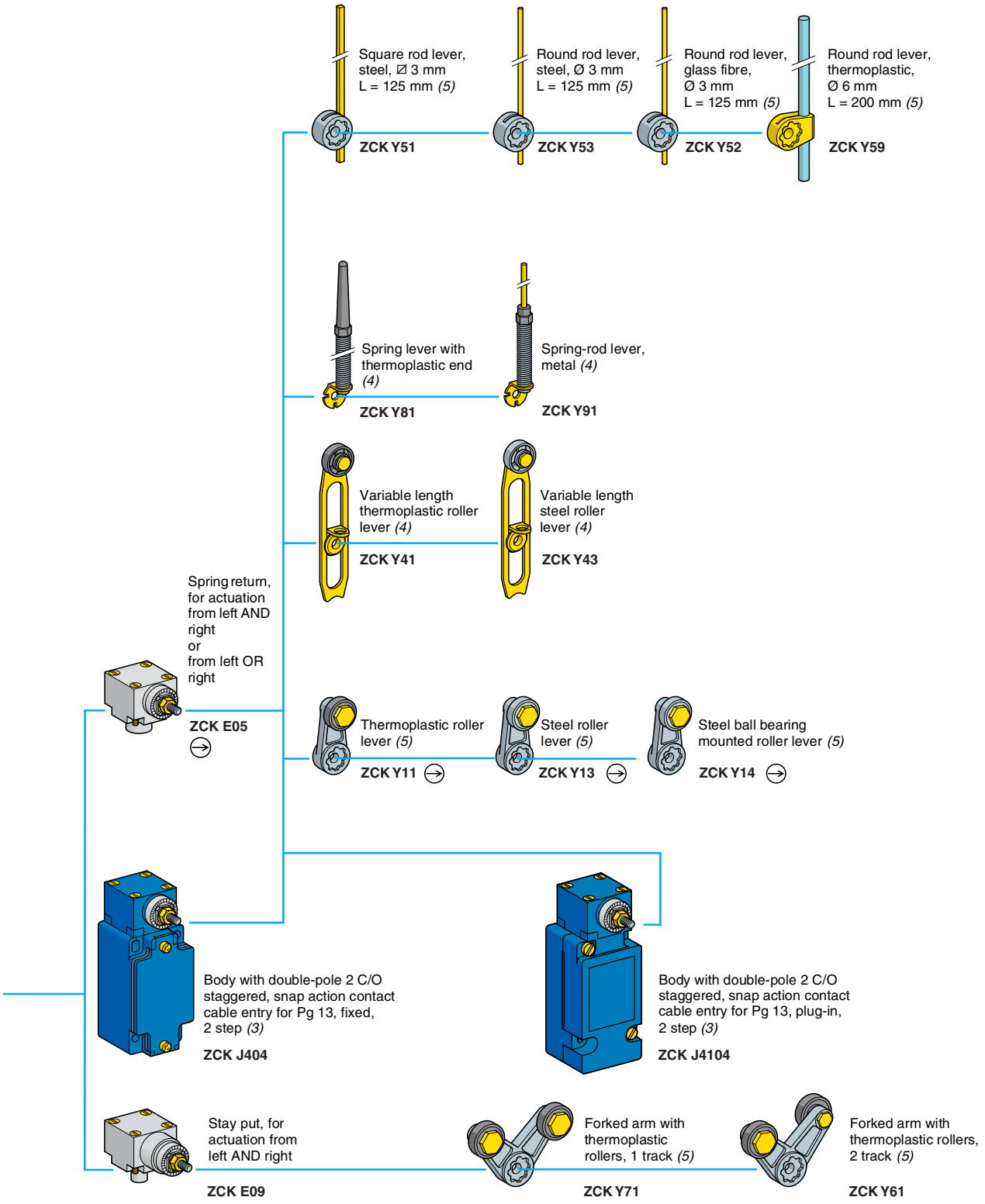
ZCK J11, J21, J41

(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

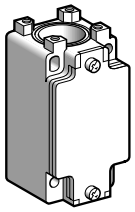


⊖ : *head assuring positive opening operation.*
(4) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
(5) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting.

Limit switches

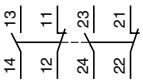
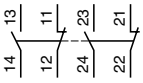
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies: standard bodies

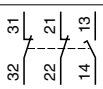


ZCK J●

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	**ZCK J1**	0.310
				ISO M20 x 1.5	**ZCK J1H29**	0.310
				1/2" NPT	**ZCK J1H7**	0.310
	2 C/O simultaneous, snap action (XES P2021)		–	Pg 13	**ZCK J2**	0.310
				ISO M20 x 1.5	**ZCK J2H29**	0.310
				1/2" NPT	**ZCK J2H7**	0.310
	N/C + N/O break before make, slow break (XE2N P2151)		⊖	Pg 13	**ZCK J5**	0.310
				ISO M20 x 1.5	**ZCK J5H29**	0.310
				1/2" NPT	**ZCK J5H7**	0.310
	N/C + N/O make before make, slow break (XE2N P2161)		⊖	Pg 13	**ZCK J6**	0.310
				ISO M20 x 1.5	**ZCK J6H29**	0.310
				1/2" NPT	**ZCK J6H7**	0.310
	N/C + N/C simultaneous, slow break (XE2N P2141)		⊖	Pg 13	**ZCK J7**	0.310
				ISO M20 x 1.5	**ZCK J7H29**	0.310
				1/2" NPT	**ZCK J7H7**	0.310
	N/O + N/O simultaneous, slow break (XE2N P2131)		–	Pg 13	**ZCK J8**	0.310
				ISO M20 x 1.5	**ZCK J8H29**	0.310
				1/2" NPT	**ZCK J8H7**	0.310
	N/C + N/C snap action (XE2S P2141)		⊖	Pg 13	**ZCK J9**	0.310
				ISO M20 x 1.5	**ZCK J9H29**	0.310
				1/2" NPT	**ZCK J9H7**	0.310
2 step	2 C/O staggered, snap action (XES P2031)		–	Pg 13	**ZCK J4**	0.310
				ISO M20 x 1.5	**ZCK J4H29**	0.310
				1/2" NPT	**ZCK J4H7**	0.310

Fixed bodies with 3-pole contact

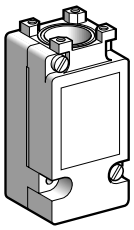
Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
–	N/C + N/O + N/O snap action (XE3S P2151)		⊖	Pg 13	**ZCK JD31**	0.310
				ISO M20 x 1.5	**ZCK JD31H29**	0.310
				1/2" NPT	**ZCK JD31H7**	0.310
	N/C + N/C + N/O snap action (XE3S P2141)		⊖	Pg 13	**ZCK JD39**	0.310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

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

Limit switches

Osiswitch® Classic

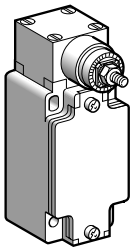
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies: standard bodies



ZCK J●1

Plug-in bodies with contact

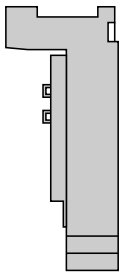
Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
1 step	Single-pole C/O snap action	13 11 / 14 12	–	Pg 13	**ZCK J11**	0.300
				ISO M20 x 1.5	**ZCK J11H29**	0.300
				1/2" NPT	**ZCK J11H7**	0.300
	Double-pole 2 C/O simultaneous, snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J21**	0.300
				ISO M20 x 1.5	**ZCK J21H29**	0.300
				1/2" NPT	**ZCK J21H7**	0.300
2 step	Double-pole 2 C/O staggered, snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J41**	0.300
				ISO M20 x 1.5	**ZCK J41H29**	0.300
				1/2" NPT	**ZCK J41H7**	0.300



ZCK J404

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

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
Fixed body						
2 step 1 from the left AND 1 from the right	Double-pole 2 C/O staggered, snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J404**	0.455
				ISO M20 x 1.5	**ZCK J404H29**	0.455
				1/2" NPT	**ZCK J404H7**	0.455
Plug-in body						
2 step 1 from the left AND 1 from the right	Double-pole 2 C/O staggered, snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J4104**	0.465
				ISO M20 x 1.5	**ZCK J4104H29**	0.465
				1/2" NPT	**ZCK J4104H7**	0.465



ZCK J0●

Plug-in housing only

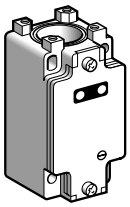
Description	For use with	Contacts	Reference	Weight kg
Single-pole 1 C/O with positive opening operation	ZCK J11	Silver	**ZCK J01**	0.150
Double-pole 2 C/O simultaneous with positive opening operation	ZCK J21	Silver	**ZCK J02**	0.160
Double-pole 1 C/O + 1 C/O staggered	ZCK J41	Silver	**ZCK J04**	0.160

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

Limit switches

Osiswitch® Classic

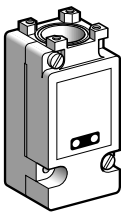
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies: bodies with indicator light module



ZCK J●●●

Fixed bodies with 2-pole contact

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



ZCK J1●●●

Plug-in bodies with single-pole contact

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

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

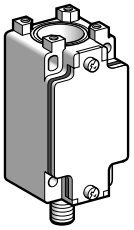
Indicator light module characteristics

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 J●D

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.

5

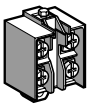
Limit switches

Osiswitch® Classic

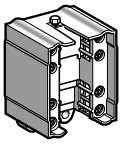
Metal, conforming to CENELEC EN 50041, type XCKJ
Fixed or plug-in body
Adaptable sub-assemblies: contact blocks



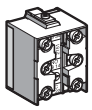
XE2S P21●1



XE2N P21●1

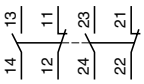
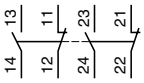
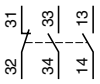
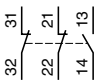
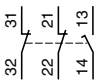
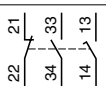


XES P20●1



XE3● P21●1

Contact blocks

Type of contact	Scheme	For bodies	Positive operation *(1)*	Reference	Weight kg
2-pole contact					
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
3-pole contact					
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

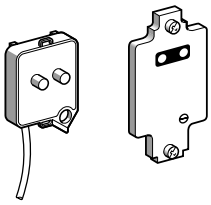
(1) ⊖ : N/C contact with positive opening operation.

5

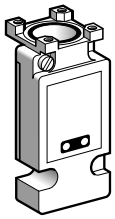
Limit switches

Osiswitch® Classic

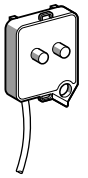
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies: add-ons



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.

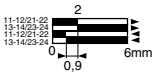
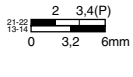
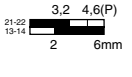
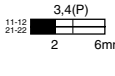
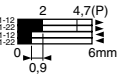
Limit switches

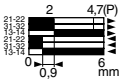
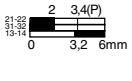
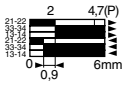
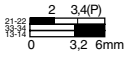
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCKJ
Fixed or plug-in body
Adaptable sub-assemblies

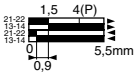
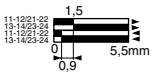
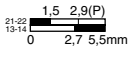
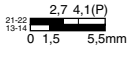
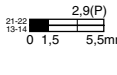
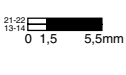
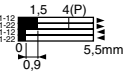
Function diagrams (positive operation assured only if the associated sub-assemblies are ⊖)

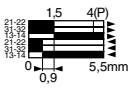
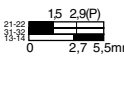
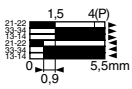
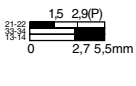
Heads ZCK E61, E619, E66 with body

ZCK J1●	ZCK J2●	ZCK J5●	ZCK J6●	ZCK J7●	ZCK J8●	ZCK J9
						

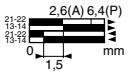
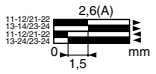
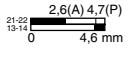
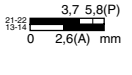
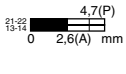
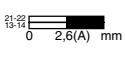
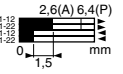
ZCK JD39	ZCK JD37	ZCK JD31	ZCK JD35
			

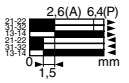
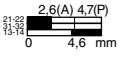
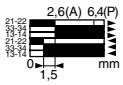
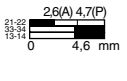
Head ZCK E63 with body

ZCK J1●	ZCK J2●	ZCK J5●	ZCK J6	ZCK J7	ZCK J8	ZCK J9
						

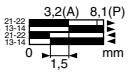
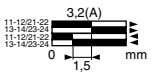
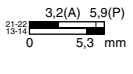
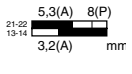
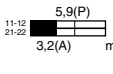
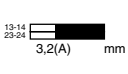
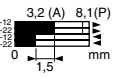
ZCK JD39	ZCK JD37	ZCK JD31	ZCK JD35
			

Heads ZCK E64, E65 with body

ZCK J1●	ZCK J2●	ZCK J5●	ZCK J6	ZCK J7	ZCK J8	ZCK J9
						

ZCK JD39	ZCK JD37	ZCK JD31	ZCK JD35
			

Heads ZCK E67, E629 with body

ZCK J1●	ZCK J2●	ZCK J5●	ZCK J6	ZCK J7	ZCK J8	ZCK J9
						

ZCK JD39	ZCK JD37	ZCK JD31	ZCK JD35

Heads ZCK E21, E23 with body

ZCK J1●	ZCK J2●	ZCK J5●	ZCK J6	ZCK J7	ZCK J8	ZCK J9

ZCK JD39	ZCK JD37	ZCK JD31	ZCK JD35

Heads ZCK E06, E08 with body

ZCK J1●	ZCK J2●	ZCK J5●	ZCK J6	ZCK J7	ZCK J8	ZCK J9

ZCK JD39	ZCK JD37	ZCK JD31	ZCK JD35

ZCK J4●

Unactuated	1st step	2nd step

Contact operation

■ contact closed
□ contact open

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

5

Limit switches

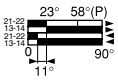
Osiswitch® Classic

Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies

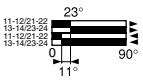
Function diagrams (positive operation assured only if the associated sub-assemblies are ⊕)

Head ZCK E05 with body

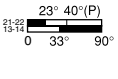
ZCK J1●



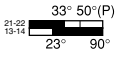
ZCK J2●



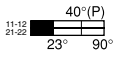
ZCK J5●



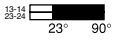
ZCK J6



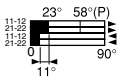
ZCK J7



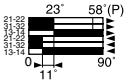
ZCK J8



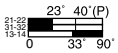
ZCK J9



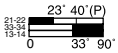
ZCK JD39



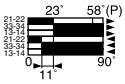
ZCK JD37



ZCK JD39

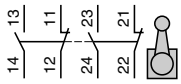


ZCK JD31

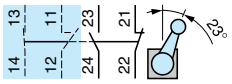


ZCK J4●

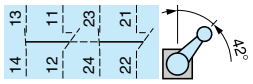
Unactuated



1st step, actuated from left or right

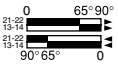


2nd step, actuated from left or right

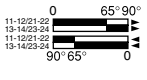


Head ZCK E09 with body

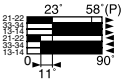
ZCK J1●



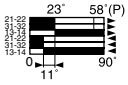
ZCK J2●



ZCK JD31

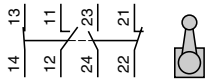


ZCK JD39

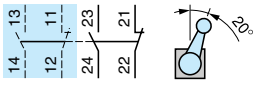


ZCK J404, J4104 (body with head)

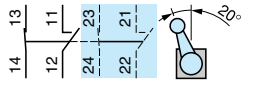
Unactuated



Actuated from left



Actuated from right

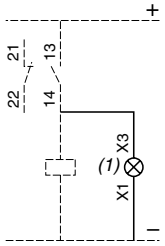


Contact operation — contact closed, contact open — (P) = positive opening point

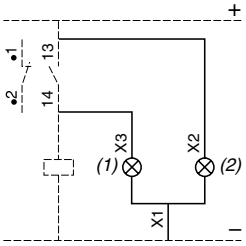
Wiring schemes

Indicator light modules

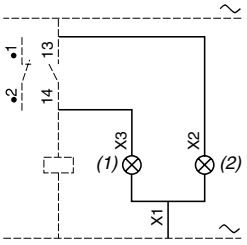
1 LED, ⎓ 24 V



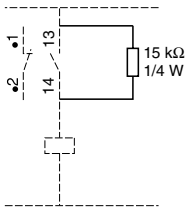
2 LEDs, ⎓ 24 V



2 neon lights, ∿ 110/120 or 220/240 V

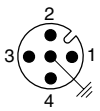


Module with resistor



(1) Orange indicator
(2) Green indicator

ZCK J●D



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

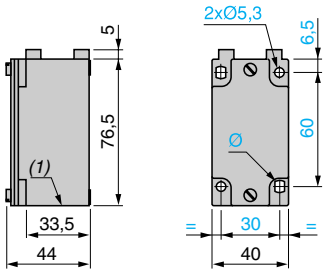


5

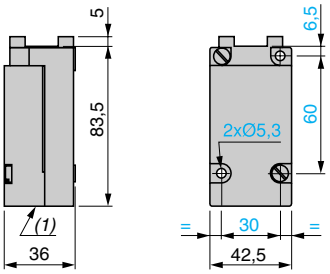
Limit switches
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies

Bodies

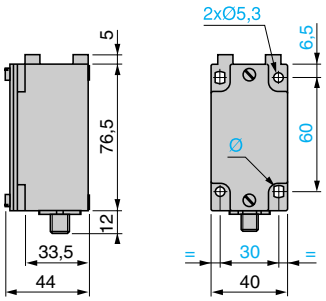
ZCK J1, J2, J5, J4, J●2●, J●3●, J6, J7, J8, J9
ZCK J1H29, J2H29, J5H29, J4H29, J●2●H29, J●3●H29, J6H29, J7H29, J8H29, J9H29
ZCK J1H7, J2H7, J5H7, J4H7, J●2●H7, J●3●H7, J6H7, J7H7, J8H7, J9H7



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

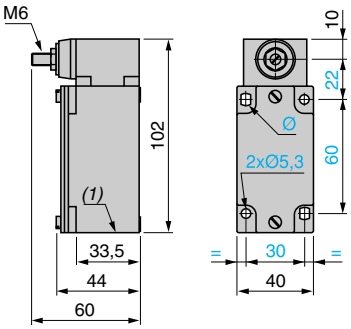


ZCK J1D, J5D, J6D, J7D, J8D

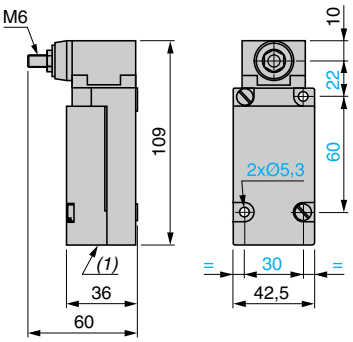


Bodies with rotary head mounted

ZCK J404, ZCK J404H29, ZCK J404H7

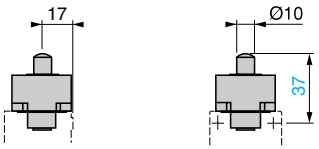


ZCK J4104, ZCK J4104H29, ZCK J4104H7

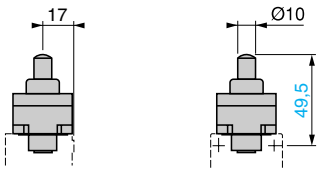


Plunger heads

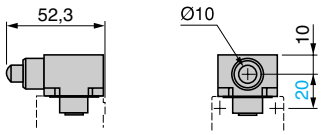
ZCK E61



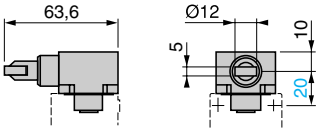
ZCK E619



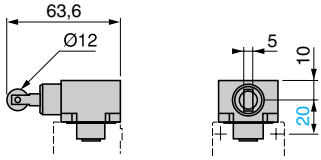
ZCK E63



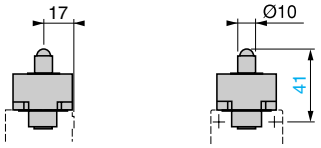
ZCK E64



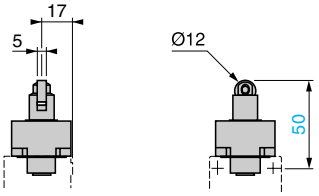
ZCK E65



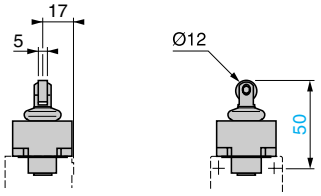
ZCK E66



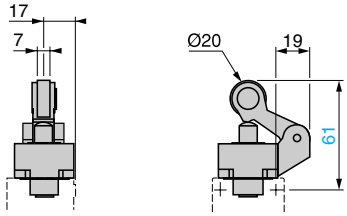
ZCK E62, ZCK E67



ZCK E629



ZCK E21, E23

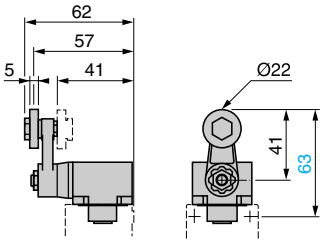


(1) 1 tapped entry for ISO M20 x 1.5 or Pg 13 cable gland or tapped 1/2" NPT.
Ø: 2 elongated holes Ø 5.3 x 7.3.

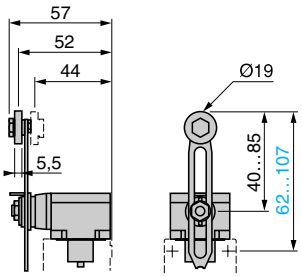
Limit switches
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies

Rotary head ZCK E05 with operating lever

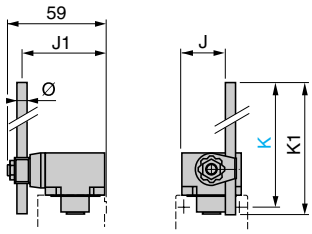
ZCK Y11, Y13, Y14



ZCK Y41, Y43

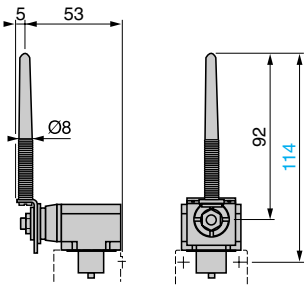


ZCK Y51, Y52, Y53, Y59

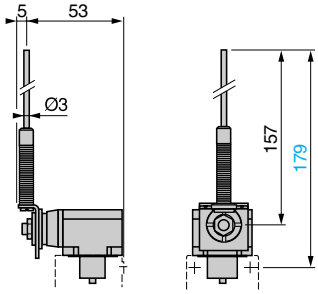


	J	J1	K max.	K1	Ø
ZCK Y51	20	49	137	123	Ø 3
ZCK Y52	20	49	137	125	Ø 3
ZCK Y53	20	49	137	125	Ø 3
ZCK Y59	26.2	48	212	200	Ø 6

ZCK Y81

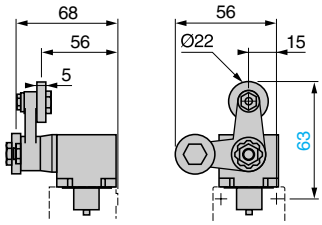


ZCK Y91

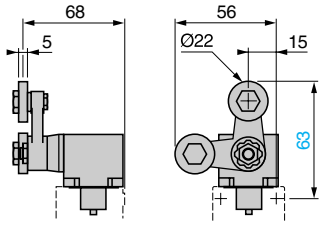


Rotary head ZCK E09 with operating lever

ZCK Y61

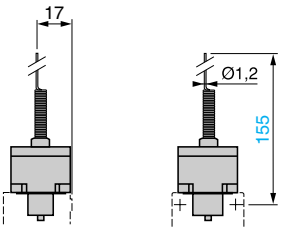


ZCK Y71

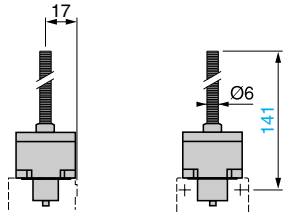


Multi-directional heads

ZCK E06



ZCK E08

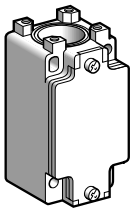


Note: *operating lever spindle threaded M6.*

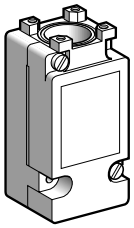
Limit switches

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)

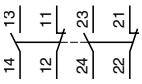
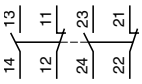
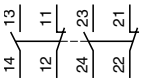
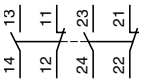


ZCK J1

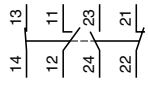
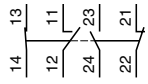


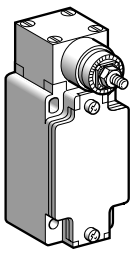
ZCK J11

Body with contacts For plunger or rotary head

Type	Contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
Fixed body						
1 step	2-pole 1 N/C + 1 N/O snap action (XE2S P2151)		⊖	Pg 13	**ZCK J1**	0.310
				ISO M20 x 1.5	**ZCK J1H29**	0.310
				1/2" NPT	**ZCK J1H7**	0.310
	Double-pole 2 C/O simultaneous snap action (XES P2021)		–	Pg 13	**ZCK J2**	0.310
				ISO M20 x 1.5	**ZCK J2H29**	0.310
				1/2" NPT	**ZCK J2H7**	0.310
	2-pole 1 N/C + 1 N/O break before make slow break (XE2N P2151)		⊖	Pg 13	**ZCK J5**	0.310
				ISO M20 x 1.5	**ZCK J5H29**	0.310
				1/2" NPT	**ZCK J5H7**	0.310
	2-pole 1 N/O + 1 N/C make before break slow break (XE2N P2161)		⊖	Pg 13	**ZCK J6**	0.310
				ISO M20 x 1.5	**ZCK J6H29**	0.310
				1/2" NPT	**ZCK J6H7**	0.310
	2-pole 1 N/C + 1 N/C simultaneous slow break (XE2N P2141)		⊖	Pg 13	**ZCK J7**	0.310
				ISO M20 x 1.5	**ZCK J7H29**	0.310
				1/2" NPT	**ZCK J7H7**	0.310
	2-pole 1 N/O + 1 N/O simultaneous slow break (XE2N P2131)		–	Pg 13	**ZCK J8**	0.310
				ISO M20 x 1.5	**ZCK J8H29**	0.310
				1/2" NPT	**ZCK J8H7**	0.310
	2-pole 1 N/C + 1 N/C snap action (XE2S P2141)		⊖	Pg 13	**ZCK J9**	0.310
				ISO M20 x 1.5	**ZCK J9H29**	0.310
				1/2" NPT	**ZCK J9H7**	0.310
2 step	Double-pole 2 C/O staggered snap action (XES P2031)		–	Pg 13	**ZCK J4**	0.310
				ISO M20 x 1.5	**ZCK J4H29**	0.310
				1/2" NPT	**ZCK J4H7**	0.310
Plug-in body						
1 step	Single-pole 1 C/O snap action		–	Pg 13	**ZCK J11**	0.300
				ISO M20 x 1.5	**ZCK J11H29**	0.300
				1/2" NPT	**ZCK J11H7**	0.300
	Double-pole 2 C/O simultaneous snap action		–	Pg 13	**ZCK J21**	0.300
				ISO M20 x 1.5	**ZCK J21H29**	0.300
				1/2" NPT	**ZCK J21H7**	0.300
2 step	Double-pole 2 C/O staggered snap action		–	Pg 13	**ZCK J41**	0.300
				ISO M20 x 1.5	**ZCK J41H29**	0.300
				1/2" NPT	**ZCK J41H7**	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
Fixed body						
2 step 1 from the left and 1 from the right	Double-pole 2 C/O staggered snap action		–	Pg 13	**ZCK J4046**	0.455
				ISO M20 x 1.5	**ZCK J4046H29**	0.455
				1/2" NPT	**ZCK J4046H7**	0.455
Plug-in body						
2 step 1 from the left and 1 from the right	Double-pole 2 C/O staggered snap action		–	Pg 13	**ZCK J41046**	0.465
				ISO M20 x 1.5	**ZCK J41046H29**	0.465
				1/2" NPT	**ZCK J41046H7**	0.465



ZCK J4046

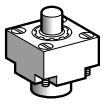
(1) ⊖ : operating head able to guarantee positive opening operation.

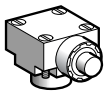
Setting-up: pages 5/96 and 5/97
Dimensions: pages 5/98 and 5/99

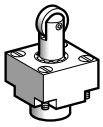
Limit switches

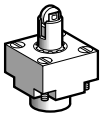
Osiswitch® Classic

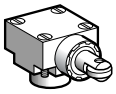
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies for low temperature applications (-40 °C)

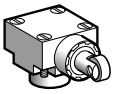

ZCK E616

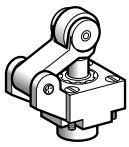

ZCK E636

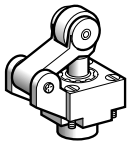

ZCK E626


ZCK E676


ZCK E646


ZCK E656


ZCK E216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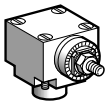
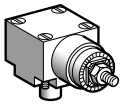
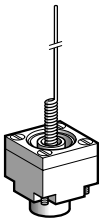
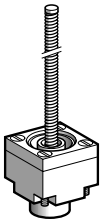

ZCK E056


ZCK E096


ZCK E066


ZCK E086

Plunger heads

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

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 J●, ZCK J●●	1.5 m/s by 30° cam	⊖	**ZCK E056**	0.165
Stay put, actuation from left **AND** right (see page 5/184)	ZCK J1, J11 ZCK J2, J21	1.5 m/s	–	**ZCK E096**	0.190

Multi-directional heads

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

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

Setting-up: pages 5/96 and 5/97
Dimensions: pages 5/98 and 5/99

Limit switches

Osiswitch® Classic

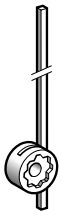
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies for low temperature applications (- 40 °C)



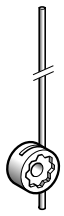
ZCK Y1●



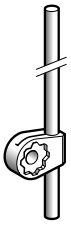
ZCK Y4●



ZCKY51



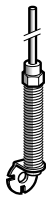
ZCKY5●



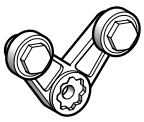
ZCK Y59



ZCK Y81



ZCK Y91



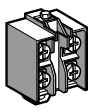
ZCK Y71



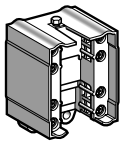
ZCK Y61



XE2S P21●1



XE2N P21●1

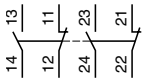
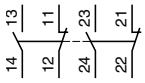


XES P20●1

Operating levers for rotary heads

Description		Positive operation (1)	Reference	Weight kg
For actuation by 30° cam				
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)	Ø 3 mm steel, L = 125 mm	–	**ZCK Y53**	0.025
	Ø 3 mm glass fibre, L = 125 mm	–	**ZCK Y52**	0.020
	Ø 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) thermoplastic	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

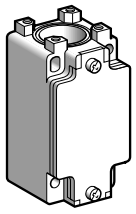
(1) ⊖ : operating lever able to guarantee positive opening operation or N/C contact with positive opening operation.
(2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting or clamp.
(3) Adjustable throughout 360° in 5° steps.

Setting-up: pages 5/96 and 5/97
Dimensions: pages 5/98 and 5/99

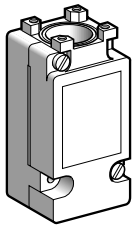
Limit switches

Osiswitch® Classic

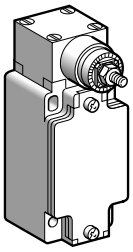
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies for high temperature applications (+ 120 °C)



ZCK J●



ZCK J●15



ZCK J4045

Body with contacts — For plunger or rotary head

Type	Contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
Fixed body						
1 step	2-pole 1 N/C + 1 N/O snap action (XE2S P2151)	13 21 / 14 22	⊖	Pg 13	**ZCK J1**	0.310
				ISO M20 x 1.5	**ZCK J1H29**	0.310
				1/2" NPT	**ZCK J1H7**	0.310
	Double-pole 2 C/O simultaneous snap action (XES P20215)	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J25**	0.310
				ISO M20 x 1.5	**ZCK J25H29**	0.310
				1/2" NPT	**ZCK J25H7**	0.310
	2-pole 1 N/C + 1 N/O break before make slow break (XE2N P2151)	13 21 / 14 22	⊖	Pg 13	**ZCK J5**	0.310
				ISO M20 x 1.5	**ZCK J5H29**	0.310
				1/2" NPT	**ZCK J5H7**	0.310
	2-pole 1 N/O + 1 N/C make before break slow break (XE2N P2161)	21 13 / 22 14	⊖	Pg 13	**ZCK J6**	0.310
				ISO M20 x 1.5	**ZCK J6H29**	0.310
				1/2" NPT	**ZCK J6H7**	0.310
	2-pole 1 N/C + 1 N/C simultaneous slow break (XE2N P2141)	11 21 / 12 22	⊖	Pg 13	**ZCK J7**	0.310
				ISO M20 x 1.5	**ZCK J7H29**	0.310
				1/2" NPT	**ZCK J7H7**	0.310
	2-pole 1 N/O + 1 N/O simultaneous slow break (XE2N P2131)	13 23 / 14 24	–	Pg 13	**ZCK J8**	0.310
				ISO M20 x 1.5	**ZCK J8H29**	0.310
				1/2" NPT	**ZCK J8H7**	0.310
	2-pole 1 N/C + 1 N/C snap action (XE2S P2141)	11 21 / 12 22	⊖	Pg 13	**ZCK J9**	0.310
				ISO M20 x 1.5	**ZCK J9H29**	0.310
				1/2" NPT	**ZCK J9H7**	0.310
2 step	Double-pole 2 C/O break before make snap action (XES P20315)	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J45**	0.310
				ISO M20 x 1.5	**ZCK J45H29**	0.310
				1/2" NPT	**ZCK J45H7**	0.310
Plug-in body						
1 step	Single-pole 1 C/O snap action	13 11 / 14 12	–	Pg 13	**ZCK J115**	0.300
				ISO M20 x 1.5	**ZCK J115H29**	0.300
				1/2" NPT	**ZCK J115H7**	0.300
	Double-pole 2 C/O simultaneous snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J215**	0.300
				ISO M20 x 1.5	**ZCK J215H29**	0.300
				1/2" NPT	**ZCK J215H7**	0.300
2 step	Double-pole 2 C/O break before make snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J415**	0.300
				ISO M20 x 1.5	**ZCK J415H29**	0.300
				1/2" NPT	**ZCK J415H7**	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
Fixed body						
2 step 1 from the left **AND** 1 from the right	Double-pole 2 C/O break before make snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J4045**	0.455
				ISO M20 x 1.5	**ZCK J4045H29**	0.455
				1/2" NPT	**ZCK J4045H7**	0.455
Plug-in body						
2 step 1 from the left **AND** 1 from the right	Double-pole 2 C/O break before make snap action	13 11 23 21 / 14 12 24 22	–	Pg 13	**ZCK J41045**	0.465
				ISO M20 x 1.5	**ZCK J41045H29**	0.465
				1/2" NPT	**ZCK J41045H7**	0.465

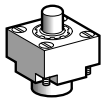
(1) ⊖ : operating head able to guarantee positive opening operation.

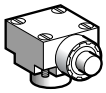
Setting-up: pages 5/96 and 5/97
Dimensions: pages 5/98 and 5/99

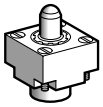
Limit switches

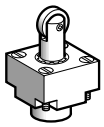
Osiswitch® Classic

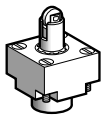
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies for high temperature applications (+ 120 °C)

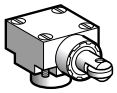

ZCK E615


ZCK E635


ZCK E665


ZCK E625


ZCK E675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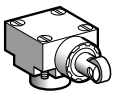
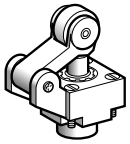

ZCK E655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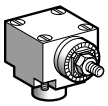
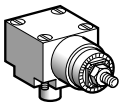
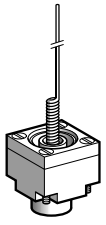
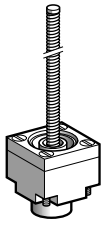

ZCK E055


ZCK E095


ZCK E065


ZCK E085

Plunger heads

Type of operator		Compatible bodies	Max. actuation speed	Positive operation (1)	Reference	Weight kg
For actuation on end						
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
For actuation by 30° cam						
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
For actuation by any moving part					
"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.

Setting-up: pages 5/96 and 5/97
Dimensions: pages 5/98 and 5/99

Limit switches

Osiswitch® Classic

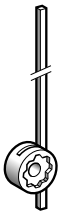
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies for high temperature applications (+ 120 °C)



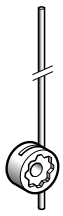
ZCK Y1●



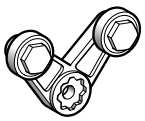
ZCK Y43



ZCK Y51



ZCK Y5●



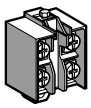
ZCK Y715



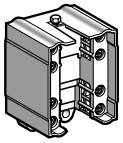
ZCK Y615



XE2S P21●1



XE2N P21●1

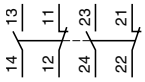
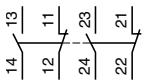


XES P20●15

Operating levers for rotary heads

Description		Positive operation (1)	Reference	Weight kg
For actuation by 30° cam				
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
For actuation by any moving part				
Square rod (2)	⧄ 3 mm Steel, L = 125 mm	–	**ZCK Y51**	0.025
Round rod (2)	Ø 3 mm steel, L = 125 mm	–	**ZCK Y53**	0.025
	Ø 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) thermoplastiic	1 track	–	**ZCK Y715**	0.035
	2 track	–	**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.

Setting-up:
pages 5/96 and 5/97

Dimensions:
pages 5/98 and 5/99