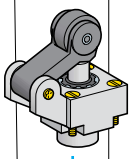
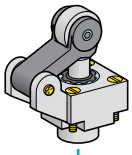
Limit switches

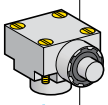
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Variable composition: standard bodies



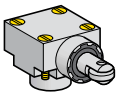
Thermoplastic roller lever plunger
1 direction of actuation
ZCKE21 →



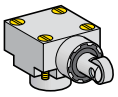
Steel roller lever plunger
1 direction of actuation
ZCKE23 →



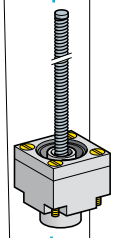
Side metal plunger
ZCKE63 →



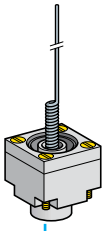
Side steel roller plunger, horizontal (1)
ZCKE64 →



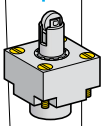
Side steel roller plunger, vertical (1)
ZCKE65 →



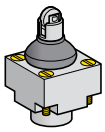
Spring rod
ZCKE08



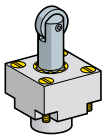
"Cat's whisker"
ZCKE06



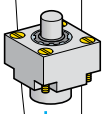
End reinforced steel roller plunger
ZCKE67 →



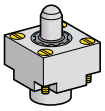
End steel roller plunger with protective boot
ZCKE629 →



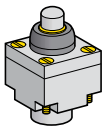
End steel roller plunger
ZCKE62 →



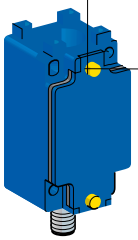
End metal plunger
ZCKE61 →



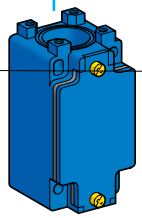
End steel ball bearing plunger
ZCKE66 →



End metal plunger with protective boot
ZCKE619 →



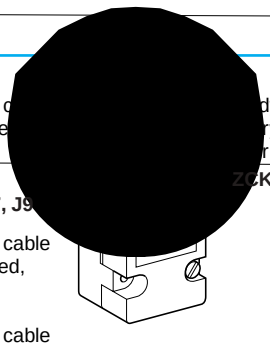
Body with 2-pole contact, fixed, 1 step, M12 connector (2)
ZCKJ1D, J5D, J6D, J7D →
ZCKJ8D



Body with contact, cable entry for Pg 13, fixed, 1 step (2) (3)
ZCKJD3●, ZCKJ1, J5, J6, J7, J9

Body with contact, cable entry for Pg 13, fixed, 1 step (2) (3)
ZCKJ2, J8

Body with contact, cable entry for Pg 13, fixed, 2 step (2) (3)
ZCKJ4

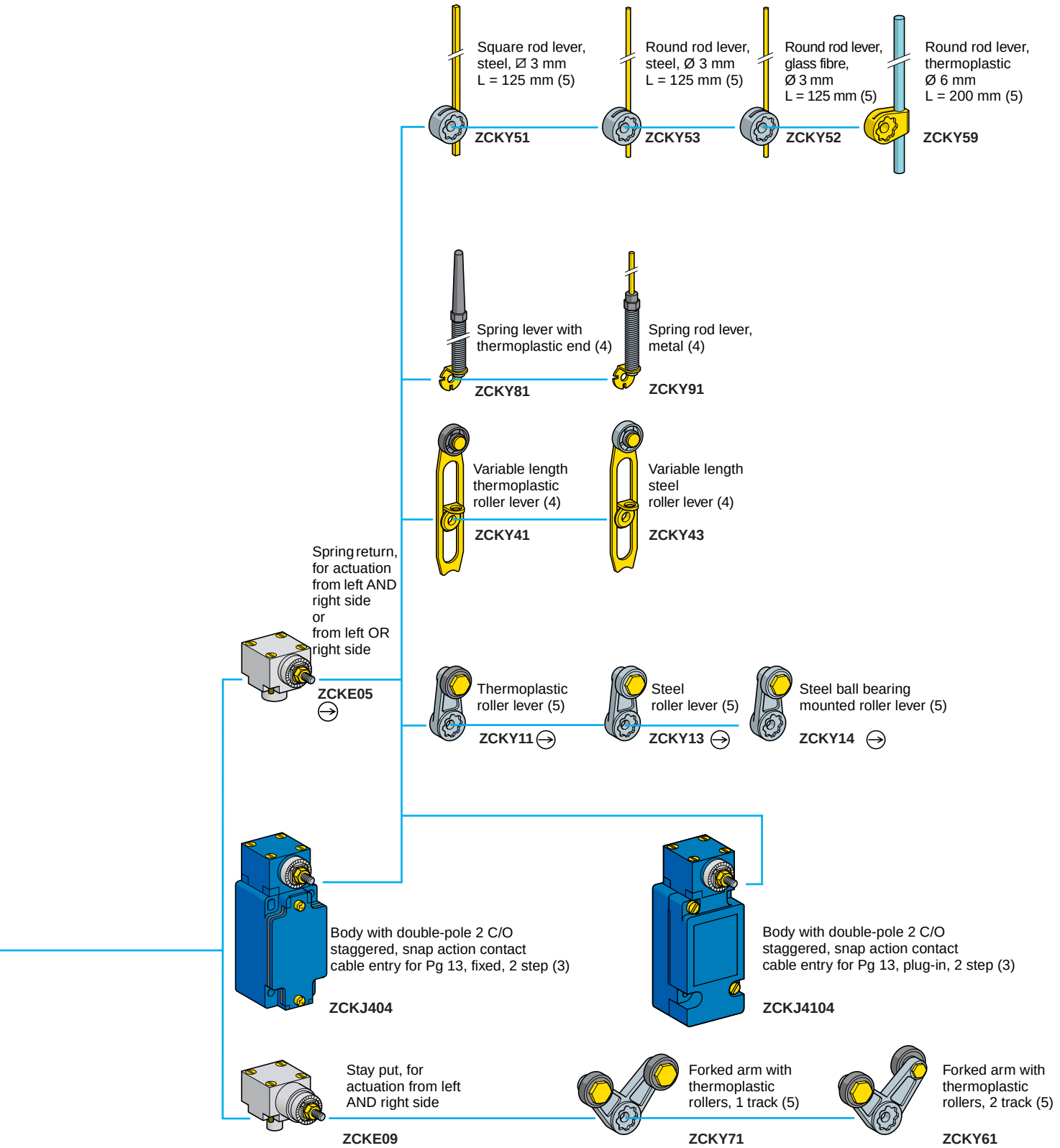


Body with contact, cable entry for Pg 13, plug-in, 2 step (2) (3)
ZCKJ11, J21, J41

(1) Cannot be used on ZCKJ4 and ZCKJ41 bodies.
(2) For further details, see page 32402/4.
(3) For a cable entry tapped ISO M20 x 1.5, add the suffix **H29** to the reference. Example: ZCKJ1 becomes **ZCKJ1H29**.
For a cable entry tapped 1/2" NPT, add the suffix **H7** to the reference. Example: ZCKJ1 becomes **ZCKJ1H7**.

Limit switches

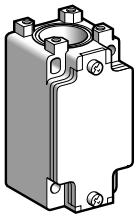
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Variable composition: standard bodies



⊖: 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.

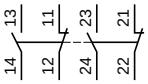
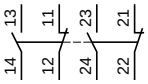
Limit switches

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

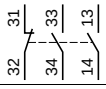
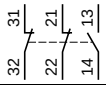
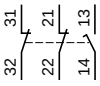
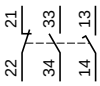


ZCK J●

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/O + 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
	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

–	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

Plug-in bodies with contact

Type	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
1 step	Single-pole C/O snap action		–	Pg 13	**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

Bodies with contact and rotary head (without operating lever)

Fixed body

2 step 1 from the left AND 1 from the right	Double-pole 2 C/O staggered, snap action		–	Pg 13	**ZCK J**	0.455
				ISO M20 x 1.5	**ZCK H29**	0.455
				1/2" NPT	**ZCK 04H7**	0.455

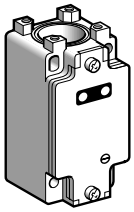
Plug-in body

2 step 1 from the left AND 1 from the right	Double-pole 2 C/O staggered, snap action		–	Pg 13	**ZCK J4104**	0.465
				ISO M20 x 1.5	**ZCK J4104H29**	0.465
				1/2" NPT	**ZCK J4104H7**	0.465

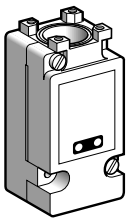
(1) : N/C contact with positive opening operation.

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●●●



ZCK J1●●●

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)	13 21 / 14 22	⊖	Pg 13	**ZCK J120**	0.320
	N/C + N/O break before make, slow break (XE2N P2151)	13 21 / 14 22	⊖	Pg 13	**ZCK J520**	0.320
With module comprising 2 LEDs, ⎓ 24 V						
1 step	N/C + N/O snap action (XE2S P2151)	13 21 / 14 22	⊖	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)	13 21 / 14 22	⊖	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)	13 21 / 14 22	⊖	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)	13 21 / 14 22	⊖	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)	13 21 / 14 22	⊖	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)	13 21 / 14 22	⊖	Pg 13	**ZCK J534**	0.320
				ISO M20 x 1.5	**ZCK J534H29**	0.320

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	13 11 / 14 12	–	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	13 11 / 14 12	–	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	13 11 / 14 12	–	Pg 13	**ZCK J1134**	0.340
				ISO M20 x 1.5	**ZCK J1134H29**	0.340

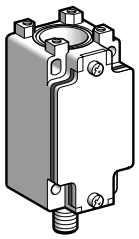
(1) ⊖ : N/C contact with positive opening operation.

Indicator light module characteristics

Type of indicator	**1 LED or 2 LEDs**	**2 neon lights**	
Rated insulation voltage	⎓ 50 V, to IEC 60947-1	∿ 250V, 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

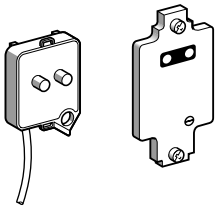
Fixed bodies with 2-pole contact

Type	With contact block	Scheme	Positive operation (1)	Reference	Weight kg
1 step	N/C + N/O snap action (XE2S P2151)		(2)	**ZCK J1D**	0.320
	N/C + N/O break before make, slow break (XE2N P2151)		(2)	**ZCK J5D**	0.320
	N/O + N/C make before break, slow break (XE2N P2161)		(2)	**ZCK J6D**	0.320
	N/C + N/C simultaneous, slow break (XE2N P2141)		(2)	**ZCK J7D**	0.320
	N/O + N/O simultaneous, slow break (XE2N P2131)		–	**ZCK J8D**	0.320

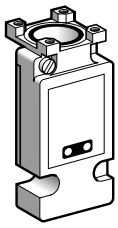
(1) ⊖: N/C contact with positive opening operation.
(2) Although their design is identical to switches with cable entries, the switches incorporating an M12 5-pin connector cannot be marked with the ⊖ symbol according to the standard IEC 60947-5-1, Appendix K (the insulation voltage Ui of the connector must be greater than or equal to 250 V).

Limit switches

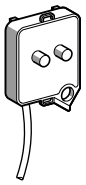
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies: add-ons



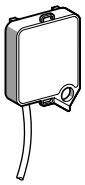
ZCK Z0●●



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 indicators	∿ 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 indicators	∿ 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 indicators	∿ 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 kW, 1/4 W	**ZCK J82A**	0.030

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

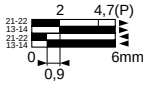
Limit switches

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

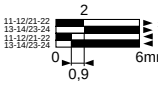
Function diagrams (positive operation assured only if the associated sub-assemblies are ⊕)

Heads ZCK E61, E619, E66 with body

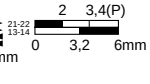
ZCK J1●



ZCK J2●



ZCK J5●



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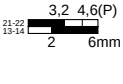


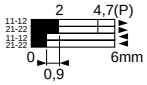
ZCK J7●



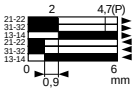
ZCK J8●



ZCK J9



ZCK JD39



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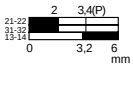
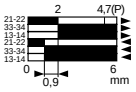
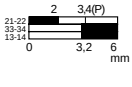


ZCK JD31

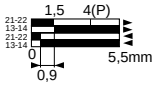


ZCK JD35



Head ZCK E63 with body

ZCK J1●



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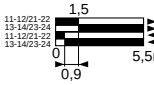

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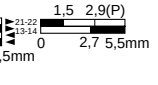

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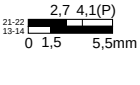

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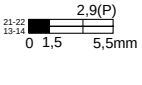

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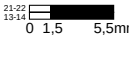
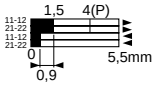
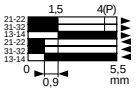


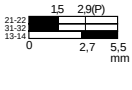
ZCK J9



ZCK JD39



ZCK JD37



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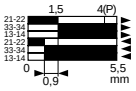

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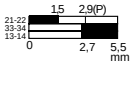
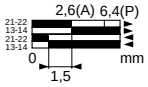
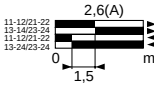


Heads ZCK E64, E65 with body

ZCK J1●



ZCK J2●



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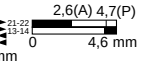
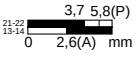


ZCK J6



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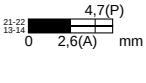

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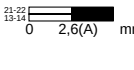
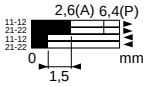
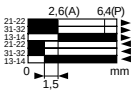


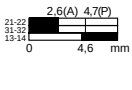
ZCK J9



ZCK JD39



ZCK JD37



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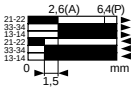
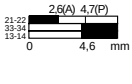
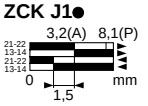


ZCK JD35

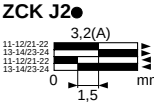


Heads ZCK E67, E629 with body

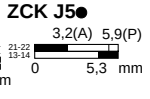
ZCK J1●



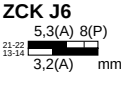
ZCK J2●



ZCK J5●



ZCK J6



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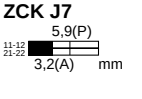

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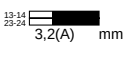

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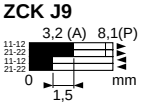


ZCK JD39

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

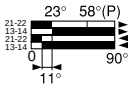
Limit switches

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

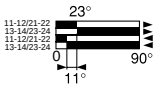
Function diagrams (positive operation assured only if the associated sub-assemblies are ⊖)

Head ZCK E05 with body

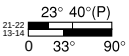
ZCK J1●



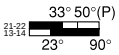
ZCK J2●



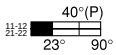
ZCK J5●



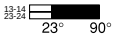
ZCK J6



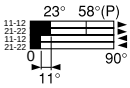
ZCK J7



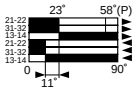
ZCK J8



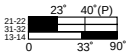
ZCK J9



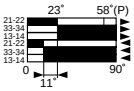
ZCK JD39



ZCK JD37



ZCK JD31



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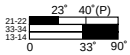
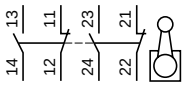
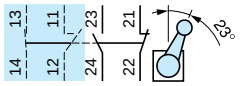


ZCK J4●

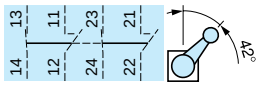
Unactuated



1st step, actuated from the left or right

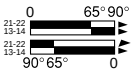


2nd step, actuated from the left or right

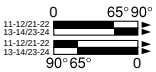


Head ZCK E09 with body

ZCK J1●

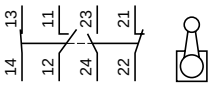


ZCK J2●

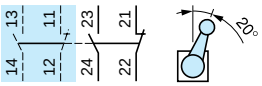


ZCK J404, J4104 (body with head)

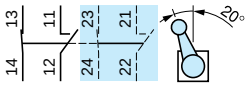
Unactuated



Actuated from the left



Actuated from the right



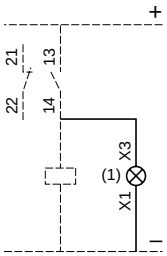
Contact operation

■ contact closed (P) = positive opening point
□ contact open

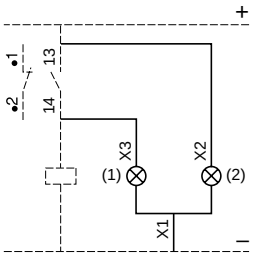
Wiring schemes

Indicator light modules

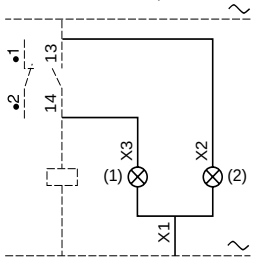
1 LED, ⎓ 24 V



2 LEDs, ⎓ 24 V

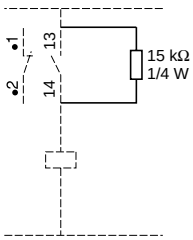


2 neon indicators, ∿ 110/120 or 220/240 V

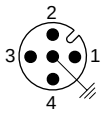


(1) Orange indicator
(2) Green indicator

Module with resistor



ZCK J●D



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

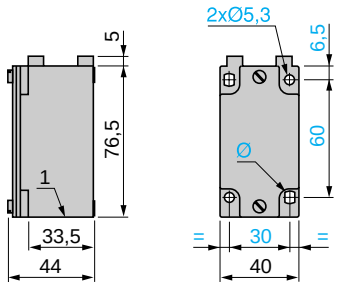


Limit switches

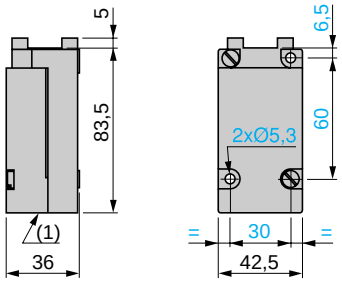
Osiswitch® Classic
Metal, conforming to CENELEC EN 50041, type XCK J
Fixed or plug-in body
Adaptable sub-assemblies

Bodies

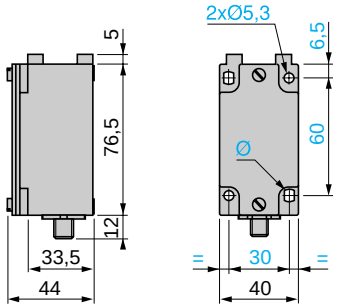
ZCK J1, J2, J5, J4, J●2●, J●3●, J6, J7, J8, J9
ZCK J1H29, J2H29, J5H29, J4H29, J●2●H29, J●3●H29, J6H29, J7H29, J8H29, J9H29
ZCK J1H7, J2H7, J5H7, J4H7, J●2●H7, J●3●H7, J6H7, J7H7, J8H7, J9H7



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



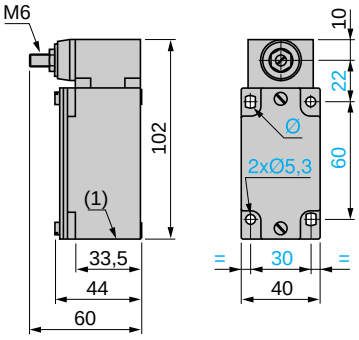
ZCK J1D, J5D, J6D, J7D, J8D



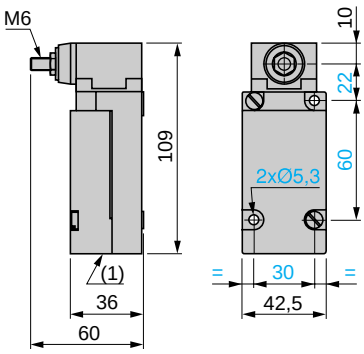
(1) 1 tapped entry for ISO M20 x 1.5 or Pg 13 or cable gland or 1/2" NPT.
Ø: 2 elongated holes Ø 5.3 x 7.3.

Bodies with rotary head mounted

ZCK J404, ZCK J404H29, ZCK J404H7



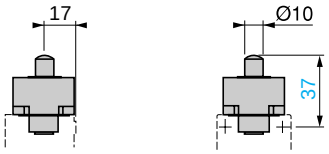
ZCK J4104, ZCK J4104H29, ZCK J4104H7



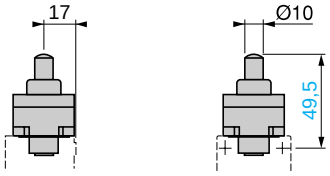
(1) 1 tapped entry for ISO M20 x 1.5 or Pg 13 cable gland or 1/2" NPT.
Ø: 2 elongated holes Ø 5.3 x 7.3.

Plunger heads

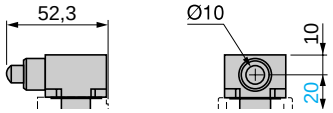
ZCK E61



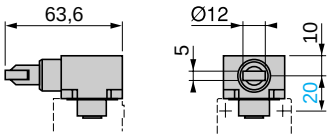
ZCK E619



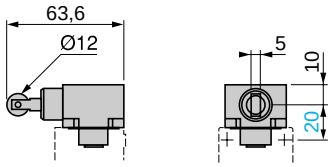
ZCK E63



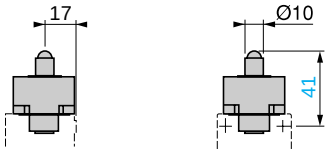
ZCK E64



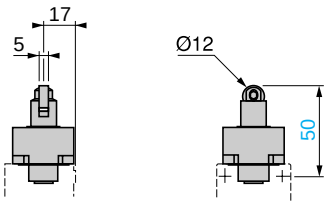
ZCK E65



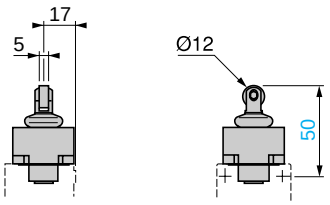
ZCK E66



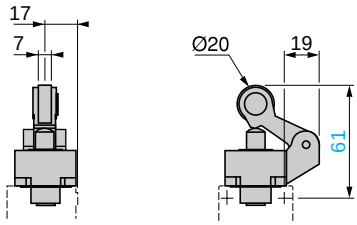
ZCK E62, ZCK E67



ZCK E629



ZCK E21, E23

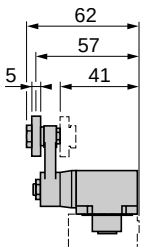


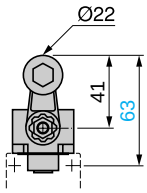
Limit switches

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

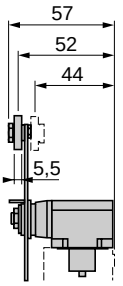
Rotary head ZCK E05 with operating lever

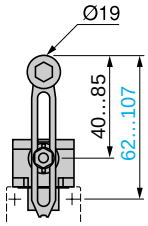
ZCK Y11, Y13, Y14



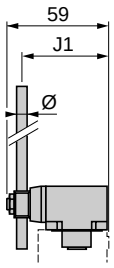


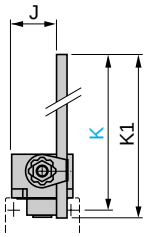
ZCK Y41, Y43





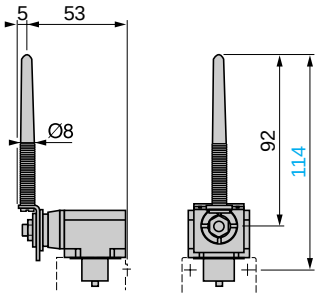
ZCK Y51, Y52, Y53, Y59



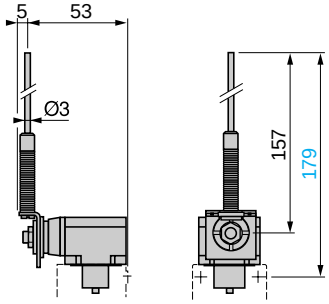


	J	J1	K max.	K1	Ø
ZCK Y51	20	49	137	123	Ø3
ZCK Y52	20	49	137	125	Ø3
ZCK Y53	20	49	137	125	Ø3
ZCK Y59	26.2	48	212	200	Ø6

ZCK Y81



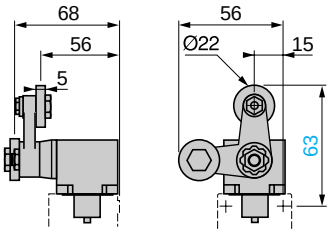
ZCK Y91



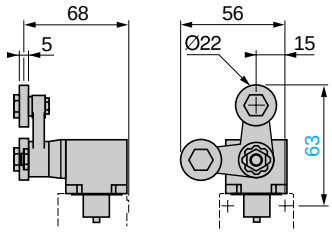
Note: operating lever spindle threaded M6

Rotary head ZCK E09 with operating lever

ZCK Y61



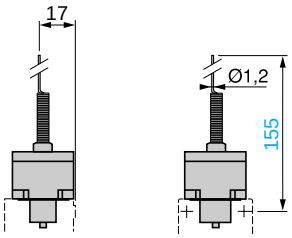
ZCK Y71



Note: operating lever spindle threaded M6

Multi-directional heads

ZCK E06



ZCK E08

