# Limit switches XC Standard range

## Catalogue



Simply easy!™



## Limit switches XC Standard range

Selection guide page 2
■ Variable composition: Simplicity through innovation page 16
■ General
XC Standard
■ Miniature design, metal, XCMD
□ Presentation.       page 26         □ Pre-cabled.       page 28         □ Integral or remote connector       page 36         □ Separate components       page 49
■ Miniature design for mobile equipment, metal, XCMV
□ Presentation.       page 50         □ Complete units with connector.       page 53         □ Modular units with connector.       page 56         □ Pre-cabled modular units.       page 62
Compact design, plastic, XCKP
□ Presentation
Compact design, metal, XCKD
□ Presentation. page 80 □ Complete units with 1 cable entry page 88 □ Integral M12 connector page 92
■ Compact design, plastic, XCKT
□ Presentation
■ Compact design, XCKD, XCKP and XCKT
□ Presentation
XC Standard, with reset
Compact design, plastic, XCPR
□ Presentation
■ Compact design, plastic, XCTR
□ Presentation

#### **XC Basic**

■ Miniature design, plastic, XCMH - Presentation
■ Miniature design, plastic, XCMN - Presentation
■ Compact design, plastic, XCKN and XCNT - Presentation.       page 108         □ Complete units with 1 cable entry.       page 110         □ Complete units with 2 cable entries       page 112
■ Compact design, with reset, XCNR - Presentation
XC Standard, "Classic" format
■ Metal, XCKM - Presentation       page 120         □ Complete switches with 3 cable entries       page 122         ■ Metal, XCKL - Presentation       page 120         □ Complete switches incorporating cable gland       page 124         ■ Metal, 2 x 2-pole contacts, XCKML - Presentation       page 120         □ Complete switches with 3 cable entries       page 126         ■ Metal, XCKM and XCKL       Variable composition       page 128         □ Adaptable sub-assemblies       page 130         XC Standard, EN 50041 format         ■ Plastic, double insulated, XCKS - Presentation       page 136         □ Complete switches with 1 cable entry       page 138         □ Variable composition       page 142         □ Adaptable sub-assemblies: bodies, contact blocks       page 144
XC Standard, industrial EN 50041 format
■ Metal, XCKJ - Presentation
- Fixed body with 1 cable entry





## XC Standard range

Design/Applications		Miniature format for mobile equipments	Compact format, CENELEC EN 50047
	Metal, pre-cabled	Metal, pre-cabled	Plastic, 1 cable entry







Enclosure		Metal	Metal	Plastic, double insulated	
Modularity		Head, body and connection modularity	Head and body modularity	Head, body and cable entry modularity	
Conformity/Certifications		C€, UL, CSA, CCC, EAC	C€, UL, CSA	CENELEC EN 50047 UL, CSA, CCC, EAC	
Body dimensions (w x h x	d) in mm	30 x 50 x 16	30 x 50 x 20.5	31 x 65 x 30	
Head					
Contact blocks					
2 electrically separate contacts	snap action with positive opening operation	•	•	•	
	slow break with positive opening operation	•	•	•	
2 same polarity contacts	snap action	-	-	-	
	slow break	-	-	-	
3 electrically separate contacts	snap action with positive opening operation	•	-	•	
	slow break with positive opening operation	•	_	•	
4 electrically separate contacts	snap action with positive opening operation	•	-	-	
	slow break with positive opening operation	-	-	-	
4 contacts (2 x 2 same polarity contacts)	snap action	-	•	-	
Degree of protection IP/IK		IP 66, IP 67, IP 68, IK 06	IP 66, IP 67, IP 69, IK 04, IK 06 depending on model	IP 66, IP 67, IK 04,	
Operating temperature		- 25 °C + 70 °C, -40°C depending on heads			
Raccordement Screw terminals		-	-	1 entry for ISO M16 or M20, Pg 11, Pg 13.5 cable gland or 1/2" NPT, PF 1/2	
Pre-cabled		Ø 7.5 PvR, CEI, halogen free, depending on model	Ø 6,4 PvR	-	
Connector		Integral or remote M12 or remote 7/8"-16UN	M12, Deutsch DT04-4P or AMP Superseal 1.5	M12	
Type reference		XCMD	XCMV	XCKP	
Pages		28	50	82 and 86	

Compact format, CENELEC EN 50047		Compact format, with reset	
Plastic, 2 cable entries			Plastic, 2 cable entries









Plastic, double insulated	Metal	Plastic, double insulated		
Head and body modularity  Head, body and connection modularity		-		
CENELEC EN 50047, UL, CSA, CCC, E	EAC	C€, UL, CSA, EAC		
58 x 51 x 30	31 x 65 x 30	31 x 65 x 30	58 x 51 x 30	
		Linear movement (plunger) Rotary movement (lever)		
•	•	•	•	
•	•	•	•	
-	-	-	-	
-	-	-	-	
•	•	-	-	
•	•	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
IP 66, IP 67, IK 04	IP 66, IP 67, IK 06	IP 66, IP 67, IK 04		
- 25 °C + 70 °C				
2 entries for ISO M16 or Pg 11 cable gland or 1/2" NPT (using adaptor)	1 entry for ISO M16 or M20, Pg 11, Pg 13.5 cable gland or 1/2" NPT, PF 1/2	1 entry for ISO M20 or Pg 13.5 cable gland or 1/2" NPT	2 entries for ISO M16 or Pg 11 cable gland or 1/2" NPT (using adaptor)	
-				
-	M12	-		
XCKT	XCKD	XCPR	XCTR	
94	88 and 92	104	106	



## Selection guide

## **Limit switches**

XC Basic range

"Classic" format			1 format
Metal, 3 cable entries	Metal, 1 cable entry	Plastic, 1 cable entry	Metal, 1 cable entry or connector

**Limit switches** 

XC Standard range







Enclosure			Metal		Plastic, double	Metal	
Modularity			Head, body and opera	itor modularity			
Conformity/Cer	rtifications		C€, UL, CSA, CCC, EAC	C€, UL, CSA, EAC	CENELEC EN 50041 UL, CSA, CCC, EAC		
Body dimensio	ons (w x h x	d) in mm	63 x 64 x 30	52 x 72 x 30	40 x 72.5 x 36	40 x 77 x 44 42.5 x 84 x 36	
Head			Rotary movement (lev	Linear movement (plunger) Rotary movement (lever) Rotary movement, multidirectional			
Contact blocks	;						
2 electrically sep contacts	oarate	snap action with positive opening operation	•	•	•	•	
		slow break with positive opening operation	•	•	•	•	
2 same polarity	contacts	snap action	-	-	-	•	
		slow break	-	-	-	-	
3 electrically sep contacts	parate	snap action with positive opening operation	•	•	•	•	
		slow break with positive opening operation	•	•	•	•	
4 electrically sep contacts	parate	snap action with positive opening operation	-	-	-	-	
		slow break with positive opening operation	-	-	-	-	
4 contacts (2 x 2 polarity contacts		snap action	-	-	•	•	
Degree of prote	ection IP/IK		IP 66, IK 06		IP 65, IK 03	IP 66, IK 07	
Operating temp	perature		- 25°C + 70°C			- 25°C + 70°C - 40°C or + 120°C depending on model	
Connection	Screw ter (entry for	minals cable gland)	3 entries for ISO M20, Pg 11 cable gland or 1/2" NPT	1 entry incorporating cable gland or tapped 1/2" NPT	1 entry for ISO M20, Pg 13.5 cable gland or 1/2" NPT	1 entry for ISO M20, Pg 13.5 cable gland or 1/2" NPT	
	Pre-cable	d	-				
	Connecto	or	-			Integral M12 or 7/8"-16UN	
Type reference			XCKM	XCKL	XCKS	XCKJ	
Pages			120	120	136	148	

Miniature format			Compact format, with reset knob
Plastic, pre-cabled	Plastic, 1 cable entry		Plastic, 1 cable entry











Plastic, double insulated				
_				
C€, cULus, CCC	CE, UL, CSA, CCC, EAC	CENELEC EN 50047, UL, CSA	, CCC, EAC	CE, UL, CSA, CCC, EAC
30 x 50 x 16	30 x 50 x 16	31 x 65 x 30	59 x 51 x 30	31 x 65 x 30
Linear movement (plunger) Rotary movement (lever)				
Rotary movement, multidirection	nal			
•	•	•	•	•
-	-	•	•	•
•	_			
-	-	-	•	_
-	-	•	-	•
	_	•	_	•
_			_	
-	-	-	-	
-	-	-	-	
-	-	-	-	
IP 66, IP 67, IK 04	IP 65, IK 04			
- 25 °C + 70 °C				
-	-	1 entry for ISO M20 or Pg 11 cable gland Other cable entries:	2 entries for ISO M16 or Pg 11 cable gland or 1/2" NPT (using adaptor)	1 entry for ISO M20 or Pg 11 cable gland Other cable entries:
		ISO M16 x 1.5 or PF 1/2 (G1/2)		ISO M16 x 1.5 or PF 1/2 (G1/2)
Ø 4.2 mm PvR, lateral or axial cable output, depending on model	Ø 7.5 PvR, CEI, halogen free, depending on model	-		
XCMH	XCMN	XCKN	XCNT	XCNR
68	78	110	112	118



## XC Special range

Design/Applications		For hoisting and material handling applications (XCR); for conveyor belt shift monitoring (XCRT)
	Metal, 1 cable entry	Metal or polyester, 1 cable entry





	3	And E
Enclosure	Metal	Metal or polyester
Modularity	Head and body modularity	-
Conformity/Certifications	C€, UL, CSA, EAC	CE, CSA (XCR) CCC (XCR), EAC
Body dimensions (w x h x d) in mm	40 x 81 x 41	85 x 95 x 75
Head	Linear movement (plunger) or rotary movement (lever)	Rotary movement (lever)
Contact blocks 2 electrically separate contacts snap action with positive opening operation	- -	-
slow break with positive opening operation  2 same polarity contacts  snap action	•	-
slow break 3 electrically separate contacts snap action with positive opening operation slow break with positive opening operation	- - -	-
4 electrically separate contacts     snap action with positive opening operation	-	
slow break with positive opening operation	-	•
4 contacts (2 x 2 same polarity contacts), snap action	•	•
Degree of protection IP/IK	IP 65, IK 08	IP 54, IK 07 or IP 65, depending on model
Operating temperature	- 25°C + 70°C; - 40° C or + 120° C (XC2J depending on	model)
Connection Screw terminals (entry for cable gland)	1 entry with integral cable gland	1 tapped entry for Pg 13.5 cable gland
Pre-cabled	-	
Connector	-	
Type reference	XC2J	XCR XCRT
Pages	Please refer to our catalogue "Limit switches XC Spec	ial".

Applications requiring high precision and a low operating force
Plastic, pre-cabled





XCKMR	XEP
3 tapped entries for Pg 13.5 cable gland or tapped M20 x 1.5, depending on model	Tag connections or pre-wired, depending on model
IP 66, IK 07 (metal) IP 65, IK 04 (plastic)	IP 67 or IP 40 depending on model IP 00 (tags)
	-
	-
	_
-	-
-	-
-	-
-	•
	-
-	-
Rotary movement (lever)	_
118 x 77 x 67 (plastic)	–
118 x 77 x 59 (metal)	Depending on model
− C€, UL, CSA, CCC, EAC	− C€, UL
	_
Metal or plastic	Polyester

Please refer to our catalogue "Limit switches XC Special".





## **Safety detection solutions** XCS safety switches

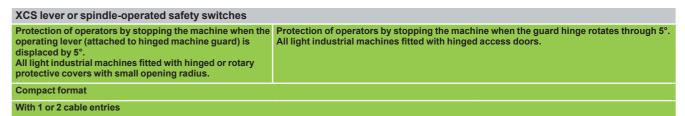
Switch type	XCS safety limit switches	
Applications	Protection of operators by stopping the machine when the gate is opened.  All machines with quick rundown time.	
Design	Miniature format	Compact format
	Pre-cabled	With 1 cable entry







Case			Metal	Plastic	Metal	
Features			-			
Conformity to standards Products			EN/IEC 60947-5-1, EN/ISO 13849-1, EN/IEC 62061, UL 508, CSA C22-2 no. 14			
	Machine assemblies		EN/IEC 60204-1, EN/ISO 14119			
Product certifications			UL, CSA, CCC, EAC			
Dimensions	Switch		30 x 50 x 16	31 x 34 x 89		
(w x h x d) in mm	Fixings	Centers	20	20/22		
Head			Plunger or rotary head Head adjustable in 15° steps through 360° Linear (plunger) or rotary (lever) actuation.			
Contact blocks			NC contacts with positive opening operation			
			2 NC + 1 NO break before make, slow break 2 NC + 1 NO and 2 NC + 2 NO snap action	XCSD: 2 NC + 1 NO b break or snap action XCSP: 2 NC + 1 NO si	reak before make, slow	
Degree of protection			IP 66, IP 67 and IP 68	IP 66 and IP 67		
Ambient air temperature	For operation		-25+70 °C			
Connection	Screw terminals (cable entry via cable	gland)	-	Tapped entry for Pg 13. or tapped 1/2" NPT	.5, ISO M20 cable gland	
	Pre-cabled		L = 1, 2 or 5 m	-		
Type reference			XCSM	XCSP	XCSD	
Pages			Please refer to our catalogue "Safety switche	s XCS range".		













## Safety detection solutions XCS safety switches

Switch type	XCS key-operated safety switches	
Applications	Protection of operators by stopping the machine when the actuating key (attached to machine guard) is withdrawn from the head of the switch.  All light industrial machines with quick rundown time (1).	
Design	Miniature format	Compact format
	Pre-cabled	With 1 or 2 cable entries







Case		Plastic		
Features		Without locking of actuating key.	Without locking of actuating ke Optional accessory: guard reta	
Conformity to standards	Products	EN/IEC 60947-5-1, EN/ISO 13	3849-1, EN/IEC 62061, UL 508, C	CSA C22-2 no. 14
	Machine assemblies	EN/IEC 60204-1, EN/ISO 141	19	
Product certifications		cULus	UL, CSA, CCC, EAC	
Dimensions	Switch	30 x 87 x 15	30 x 93.5 x 30	52 x 114.5 x 30
(w x h x d) in mm	Fixings	Centers: 20/22	Centers: 20/22	Centers: 20/22 or 40.3
Head		Fixed head: 2 positions for insertion of actuating key.	Turret head: 8 positions for inse	ertion of actuating key.
Contact blocks		Safety contacts actuated by th Slow break and NC positive op		
		1 NC + 1 NO break before make 2 NC 2 NC + 1 NO break before make 3 NC	1 NC + 1 NO slow break contacts, break before make or make before break, or snap action 2 NC slow break or snap action 2 NC + 1 NO slow break contacts, break before make, or snap action 1 NC + 2 NO slow break contacts, break before make, or snap action	1 NC + 2 NO break before make 2 NC + 1 NO break before make 3 NC
Degree of protection		IP 67		
Ambient air temperature	For operation	-25+70 °C		
Connection	Screw terminals (cable entry via cable gland)	-	Tapped entry for Pg 11, ISO M <sup>2</sup> NPT	16 cable gland or tapped 1/2"
	Pre-cabled	L = 2, 5 or 10 m	-	-
Type reference		XCSMP	XCSPA	XCSTA
Danes		Please refer to our catalogue	"Safety switches YCS range"	

(1) Machine stopping time less than time taken for operator to access hazardous zone.

XCS key-operated safety switches	
All heavy industrial machines with quick rundown time (1)	
Industrial format with or without locking	
With 1 cable entry, without locking	With 1 cable entry and manual locking/unlocking







	CONTRACTOR OF THE PARTY OF THE	O programme C
Metal		
Without locking of actuating key.	Manual locking and unlocking of actuating key by pushbutton (can be mounted on left or right-hand side of switch head).	Manual locking and unlocking of actuating key by key-operated lock (car be mounted on left or right-hand side of switch head).
EN/IEC 60947-5-1, EN/ISO 13849-1, EN/IEC 62061, UL 508, CSA C22-2 nd	0.14	
EN/IEC 60204-1, EN/ISO 14119		
UL, CSA, CCC, EAC		
40 x 113.5 x 44	52 x 113.5 x 44	
30 x 60	30 x 60	
Turret head: 8 positions for insertion of actuating key.	Turret head: 8 positions for insertion of	actuating key.
Safety contacts actuated by the actuating key. Slow break and NC positive opening operation.	Safety contacts actuated by the actuation Slow break and NC positive opening of	
1 NC + 2 NO break before make 2 NC + 1 NO break before make 3 NC	1 NC + 2 NO break before make 2 NC + 1 NO break before make 3 NC	
IP 67		
-25+70 °C		
Screw clamp terminals. Tapped entry for Pg 13.5, ISO M20 cable gland or tapped 1/2" NPT	Screw clamp terminals. Tapped entry for ISO M20 or tapped 1/2" NPT.	or Pg 13.5 cable gland,
-	-	
XCSA	XCSB	xcsc

## Safety detection solutions

XCS safety switches

Switch type **Applications** Design

XCS key-operated safety switches, locking and unlocking by solenoid

Protection of operators by stopping the machine when the actuating key (attached to machine guard) is withdrawn from the head of the switch. All industrial machines with long rundown time (1)

Slim format

With 3 cable entries

With 3 cable entries







Case		Plastic	Metal
Features		Locking and unlocking of actuating key using a solenoid (either on energization or on de-energization).  Manual unlocking (auxiliary release using special tool) of actuating key in abnormal conditions.	Locking and unlocking of actuating key by solenoid (either on energization or on de-energization).  Manual unlocking (auxiliary release using key lock) of actuating key in abnormal conditions.  Emergency release mushroom head pushbutton (only for XCSLF••••4•• and XCSLF••••6•»).
Conformity to standards	Products	EN/IEC 60947-5-1, EN/ISO 13849-1, EN/IEC 6	62061, UL 508 and CSA C22-2 no. 14
	Machine assemblies	EN/IEC 60204-1, EN/ISO 14119	
Product certifications		UL, CSA, CCC, EAC	
Dimensions	Switch	51 x 205 x 43.5	
(w x h x d or Ø) in mm	Fixings Centers	30 x 153.3	
Head		Turret head: 8 positions for insertion of actuating	g key.
Resistance to forcible	F <sub>1max</sub>	1400 N	3000 N
withdrawal of the actuator	F <sub>Zh</sub>	1100 N	2300 N
Contact blocks or outputs	Main contacts  Auxiliary contacts	Main safety contacts actuated by the actuating Contact states given with key inserted and sole Slow break and NC positive opening operation  1 NC + 1 NO break before make 2 NC 1 NC + 2 NO break before make 2 NC + 1 NO break before make 3 NC  1 NC + 1 NO break before make 2 NC 1 NC + 1 NO break before make 2 NC 1 NC + 1 NO break before make 2 NC 1 NC + 2 NO break before make 2 NC 1 NC + 1 NO break before make	enoid not energized.
Degree of protection		3 NC	
Ambient air temperature	For operation	-25+60 °C	
- Ambioni un tomporature	For storage	-40+70 °C	
Connection	Terminals	Spring terminals, 3 cable entries.  Tapped entry for ISO M20 cable gland or tapped	ed 1/2" NPT.
	Connector	M23 (18 + 1 PE)	
Type reference		XCSLE	XCSLF
Pages		Please refer to our catalogue "Safety switches	s XCS range".

(1) Machine stopping time greater than time taken for operator to access hazardous zone.

#### XCS key-operated safety switches, locking and unlocking by solenoid (continued)

Protection of operators by stopping the machine when the actuating key (attached to machine guard) is withdrawn from the head of the switch. All industrial machines with long rundown time (1)

#### Rectangular

With 2 cable entries





Plastic, double insulated

Locking and unlocking of actuator by solenoid (either on de-energization or on energization). Manual unlocking (auxiliary release using special tool) of actuating key in abnormal conditions.

de-energization). Manual unlocking (auxiliary release using key lock) of actuating key in abnormal conditions.

Metal

Locking and unlocking of actuating key by solenoid (either on energization or on

EN/IEC 60947-5-1, EN/ISO 13849-1, UL 508, CSA C22-2 no. 14, EN/IEC 62061,	EN/IEC 60947-1
EN/IEC 60204-1, EN/ISO 14119	
UL, CSA, CCC, EAC	UL, CSA, CCC, EAC
110 x 93.5 x 33	98 x 146 x 44
30 x 153.3	88 x 95
Turret head: 8 positions for insertion of actuating key	
650 N	2600 N
500 N	2000 N
Main safety contacts actuated by the actuating key; auxiliary contacts actuated Slow break and NC positive opening operation	by solenoid.
1 NC + 1 NO break before make 1 NC + 1 NO make before break 2 NC	1 NC + 2 NO break before make 2 NC + 1 NO break before make 3 NC
1 NC	1 NC + 1 NO 2 NC
IP 67	
-25+60 °C	-25+40 °C
-40+70 °C	-40+70 °C
Tapped entry for Pg 11 ISO M16 cable gland or tapped 1/2" NPT	Screw clamp terminals. 2 tapped entries for Pg 13.5 ISO M20 cable gland or tapped 1/2" NPT.
-	-
XCSTE	XCSE
Please refer to our catalogue "Safety switches YCS range"	



Please refer to our catalogue "Safety switches XCS range".





## **Safety detection solutions** XCS safety switches

## Switch type **Applications** Design

#### XCSR contactless RFID safety switches

Highly tamper-proof protection of operators by stopping the machine when the gate is opened (transfer lines, assembly lines, automated equipment, machine tools, etc.). All light industrial machines fitted with access gates with imprecise guidance and/or subjected to frequent washing, shocks and vibrations. This safety switch is suitable for machine with low inertia.

Rectangular format

M12 connector







Case		
Features		
	Accurad exercting concing	_
	Assured operating sensing distance (Sao)	ш
	Assured release distance (Sar)	
	Type of switch	П
	Operating mode	
Conformity to standards	Products	
	Machine assemblies	
	RFID protocol	
Product certifications		
Dimensions	Switch	
(w x h x d or Ø) in mm	Transponder	
	Fixings Centers	
	Reader	
	Transponder	
Contact blocks or outputs	Safety output	П
	Contact states given in presence of magnet	e
Degree of protection		
	Conforming to EN/IEC 60529 Conforming to DIN 40050	
Ambient air temperature	For operation	
Ambient an temperature	For storage	
Connection	Pre-cabled	
	Connector	
	Conforming to EN/IEC 60947-5-2- A3 and EN/IEC 61076	

factory-paired with a unique cod	of a microprocessor-controlled sw le. Multiposition sensor transpond	
15 mm		
35 mm		
Standalone RFID switch	Daisy-chain RFID switch for direct series connection	Single RFID switch for point-to-point connection
Possible functioning without association with a safety control unit (Integrated External Device Monitoring (EDM) and Start/Restart function)	Functioning in combination with PL=e/Cat4 - SIL 3	a safety control unit
EN/IEC 60947-5-2, EN/IEC 609 SIL 3 (IEC 61508), SILCL 3 (IEC	47-5-3, UL 508, CSA C22.2 6 62061), PLe–Cat. 4 (EN ISO 138	849-1)
EN/IEC 60204-1, EN/ISO 1411	9	
Based on ISO 15693		
CE, cULus, TÜV, FCC, EAC, IC	, RCM, E2, ECOLAB	
30 x 108.3 x 15	30 x 118.6 x 5	30 x 108.3 x 15
50 x 15 x 15		
-		
7478		
3034		
2 OSSDe (Safaty autaute DND	NO). OSSDs are in the ON state	when the gate is closed
2 00000 (Galety Gutputs FINF)	ino). Ossus are in the Oil state	when the gate is closed
Maximum current 400mA	Maximum current 200 mA	
Maximum current 400mA -	Maximum current 200 mA	
Maximum current 400mA	Maximum current 200 mA	
-	Maximum current 200 mA	
Maximum current 400mA  -  -  -  -  IP 65, IP 66, IP 67  IP 69K	Maximum current 200 mA	
- - IP 65, IP 66, IP 67 IP 69K	Maximum current 200 mA	
- - IP 65, IP 66, IP 67 IP 69K -25+70 °C	Maximum current 200 mA	
- - IP 65, IP 66, IP 67 IP 69K -25+70 °C	Maximum current 200 mA	
- - IP 65, IP 66, IP 67	Maximum current 200 mA	
- - IP 65, IP 66, IP 67 IP 69K -25+70 °C	Maximum current 200 mA  2 M12 5-pin connector (A coding)	1 M12 5-pin connector (A coding)

Protection of operators by stopping the machine all light industrial machines fitted with access gat	XCS safety coded magnetic safety switches for detection without contact  Protection of operators by stopping the machine when the gate is opened  All light industrial machines fitted with access gates with imprecise guidance and/or subjected to frequent washing  This Safety sensor is suitable for machine with low inertia.						
Miniature rectangular format Compact rectangular format Cylindrical format							
Pre-cabled or M8 connector on flying lead	Pre-cabled or M12 connector on flying lead						







The state of the s		
Plastic		
3 approach directions		1 approach direction
5 mm	8 mm	
15 mm	20 mm	
-		
EN/IEC 60947-5-1, EN/ISO 13849-1, EN/IEC 62061,	UL 508 and CSA C22-2 no. 14	
EN/IEC 60204-1, EN/ISO 14119		
-		
UL, CSA, EAC, ECOLAB		
16 x 51 x 7	25 x 88 x 13	Ø 30, L 38.5
-		
16	78	-
-		
-		
-		
1 NC + 1 NO staggered 2 NC staggered Independent Reed-type contacts operated by coded magnet.	1 NC + 1 NO staggered 2 NC staggered 2 NC + 1 NO (NC staggered) 1 NC + 2 NO (NO staggered)	1 NC + 1 NO staggered 2 NC staggered
To be used with safety control units.		
IP 66 and IP 67 for pre-cabled version, IP 67 for conne	ector on flying lead version	
-		
-		
-25+85 °C		
-		
L = 2, 5 or 10 m		
M8, on 0.15 m flying lead	M12, on 0.15 m flying lead	
-	-	-
XCSDMC	XCSDMP	XCSDMR
Please refer to our catalogue "Safety switches XCS r	ange".	





XC range

Variable composition: simplicity through innovation

#### **Principle**

#### Variable composition principle

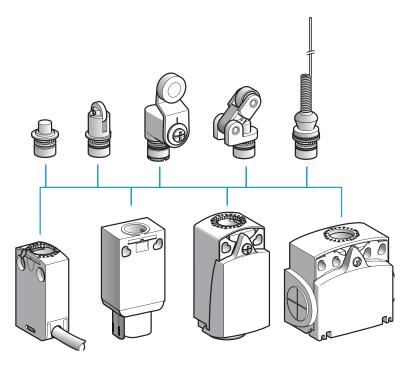
- The Miniature design XCMD and XCMV, and Compact design XCKD, XCKP and XCKT ranges benefit from the variable composition concept.
- A worldwide detection first for improving productivity.

A complete offer for resolving the most commonly encountered detection problems:

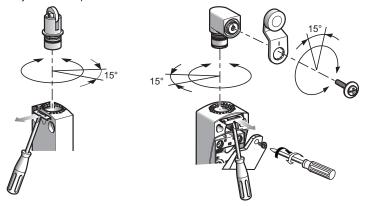
- □ product selection simplified,
- □ product availability simplified,
- □ installation and setting-up simplified,
- □ maintenance simplified.

#### Heads

■ A single metal operating head type for the Miniature design XCMD and XCMV, and Compact design XCKD, XCKP and XCKT ranges.



- Interchanging of heads achieved by simple operation of forked metal latch.
- Adjustable in 3 planes:



All the heads can be adjusted in 15° steps throughout 360°, in relation to the body.

All the levers can be adjusted in 15° steps throughout 360°, in relation to the horizontal axis of the head.

### XC range

Variable composition: simplicity through innovation

#### Principle (continued)

#### Cable entries

■ The cable entries for Compact design XCKD and XCKP switches enable:

□ simple cabling due to unrestricted access to contacts,



- □ simple adaptation to the various worldwide markets:
  - 6 models are available:



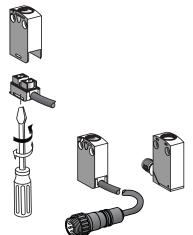
□ ISO M16 x 1.5 □ Pg 11



- $\hfill\Box$  ISO M20 x 1.5
- □ Pg 13.5
- □ 1/2" NPT
- □ PF 1/2 (G 1/2)

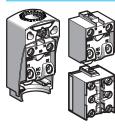
Each model is available in metal or plastic, respectively suited to Compact design XCKD and XCKP.

#### **Connection components**



- The miniature XCMD range allows interchanging of these pre-cabled connection components:
- $\ \square$  a 1/4 of a turn is all that is required for removing the connection component on XCMD bodies with 2 and 3 contacts,
- □ 6 alternative cable lengths are available as standard.
- The miniature XCMD range also includes an integral or remote connector solution.

#### Contact block or bodies with contact



■ 2 and 3 snap action and slow break contact blocks, with positive opening operation, are interchangeable between the Compact design XCKD and XCKP and Classic XCKJ, XCKS, XCKM and XCKL ranges.



- For the miniature design XCMD range, the contacts are an integral part of the body:

  □ 2 and 3 snap action and slow break contacts, with positive opening operation, and interchangeable connection component,
- □ 4 snap action contacts, with positive opening operation, with monolithic body and connection components.



#### XC range General

#### **Presentation**

#### **Electromechanical detection**

Limit switches are used in all automated installations and also in a wide variety of applications, due to the numerous advantages inherent to their technology.

- They transmit data to the logic processing system regarding:  $\quad \square \ \, \text{presence/absence},$
- □ presence/all□ passing,□ positioning,
- □ end of travel.

#### Simplicity of installation, advantages

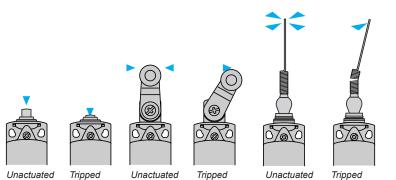
#### ■ From an electrical viewpoint

- □ galvanic separation of circuits,
- models suitable for low power switching combined with good electrical durability,
- □ very good short-circuit withstand in coordination with appropriate fuses,
- $\hfill \square$  total immunity to electromagnetic interference,
- high rated operational voltage.From a mechanical viewpoint
- □ NC contacts with positive opening operation,
  □ high resistance to the different ambient conditions encountered in industry (standard tests and specific tests under laboratory conditions),
- □ high repeat accuracy, up to 0.01 mm on the tripping points.

#### **Detection movements**

■ Linear movement (plunger) ■ Rotary movement (lever)

■ Multi-directional movement



#### **Terminology**

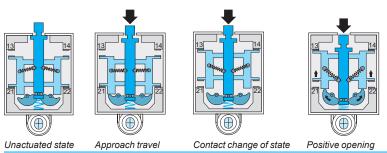
Rated value of a quantity	<ul><li>This replaces the term "nominal value".</li><li>It is the fixed value for a specific function.</li></ul>
Utilisation categories:	<ul> <li>AC-15 replaces AC-11: control of an electromagnet on AC, test 10 le/le.</li> <li>AC-12: control of a resistive load on AC or static load isolated by opto-coupler.</li> <li>DC-13 replaces DC-11: control of an electromagnet on DC, test le/le.</li> </ul>
Positive opening travel	Minimum travel from the initial movement of contact actuator to the position required to accomplish positive opening operation.
Positive opening force	The force required on the contact actuator to accomplish positive opening operation.
Switching capacity	■ Ithe is no longer a rated value but a conventional current used for heating tests.  Example: for category A300 the corresponding operational current, le maximum, is 6 A-120 V or 3 A-240 V, the equivalent Ithe being 10 A.
Positive opening operation	<ul> <li>A limit switch complies to this specification when all the closed contact elements of the switch can be changed, with certainty, to the open position (no flexible link between the moving contacts and the operator of the switch, to which an actuating force is applied).</li> <li>All limit switches incorporating either a slow break contact block or a snap action NC + NO (form Zb), NC + NO + NO, NC + NC + NO, NC + NO + NO contact block are positive opening operation, in complete conformity with standard IEC 60947-5-1 Appendix K.</li> </ul>

XC range General

#### **Contact blocks**

#### **Snap action contacts**

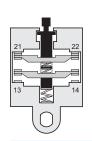
- Snap action contacts are characterised by different tripping and reset points (differential travel).
- The displacement speed of the moving contacts is not related to the speed of the operator. This feature ensures satisfactory electrical performance in applications involving low speed
- actuators

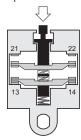


#### Slow break contacts

- Slow break contacts are characterised by identical tripping and resetting points.
   The displacement speed of the moving contacts is equal, or proportional, to the speed of the operator (which must not be less than 0.1 m/s = 6 m/minute).

The opening distance is also dependent on the distance travelled by the operator.





#### **Electrical durability for normal loads**

■ Normally, for inductive loads, the current value is less than 0.1 A (sealed), i.e. values of 3 to 40 VA sealed and 30 to 1000 VA inrush, depending on the voltage

For this type of application the electrical durability will exceed 10 million operating cycles. **Application example:** XCKJ161 + LC1D12•••• (7 VA sealed, 70 VA inrush).

Electrical durability = 10 million operating cycles.

#### Switching capacity

- 1 Normal industrial PLC input type 1 (PLC: industrial programmable logic controllers)
- 2 Normal industrial PLC input type 2
- Switching capacity conforming to IEC 60947-5-5, utilisation category AC-15, DC-13 A300 240 V 3 A B300 240 V 1.5 A
- Q300 250 V 0.27 A R300 250 V 0.13 A Switching capacity conforming to IEC 60947-5-1, utilisation category AC-15, DC-13 120 V 3 A A300 120 V 6 A B300 Q300 125 V 0.55 A R300 125 V 0.27 A

#### **Electrical durability for small loads**

- The use of limit switches with programmable controllers is becoming more common.
   With small loads, limit switches offer the following levels of reliability:
- ☐ failure rate of less than 1 for 100 million operating cycles using snap action contacts (contacts XE2SP),
- □ failure rate of less than 1 for 20 million operating cycles using slow break contacts (contacts XE

  NP and XE3SP).
- ☐ failure rate of less than 1 for 5 million operating cycles using contacts XCMD.

500										_	
000								•			
240 200								3			
150								<u> </u>			
							ļ	<u> </u>	4		
120 100								<u> </u>	+	_	
								İ			
60								<u> </u>	_		
			(1)			Inductiv	e	!			
48					!	zone		!			
					į			<b>!</b>			
24					į			<b> </b>			_
20					-			-	+		the
15		1			l						=
13				2	İ						<u>=</u>
10				<b></b>				<u> </u>	_		Heating limit (Ithe)
8		1		-				i	$\perp$		eat
6											Ĭ
5					LjĻ				_		
	1 mA		3mA	6mA 1	o	IA :	2A :	3A	6A	10	А
		mΑ		n	nΑ						

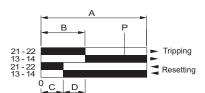
V Insulation voltage limit

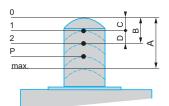
		Range	of use
Standard	XE2SP2151, P3151		
contacts	XE2NP••••		
Continuous service (frequent switching)	Contacts of XCMD XE3•P••••		
Gold flashed contacts on resistive load	Occasional service Infrequent switching, ≤ 1 operating cycle/ day, and/or corrosive atmosphere	(1)	

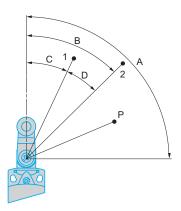
(1) Usable up to 48 V/10 mA.

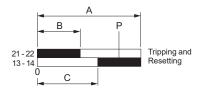
#### XC range General

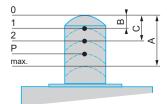
#### **Contact blocks** (continued)

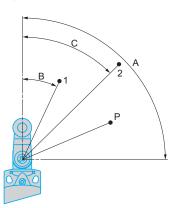












#### Functional diagrams of snap action contacts

#### ■ Example: NC + NO

- A Maximum travel of operator in millimetres or degrees.
- B Tripping travel of contact.
- C Resetting travel of contact.
- D Differential travel = B C.
- P Point from which positive opening is assured.

#### □ Linear movement (plunger)

- 1 Resetting point of contact.
- 2 Tripping point of contact.
- A Maximum travel of operator in millimetres.
- B Tripping travel of contact.
- C Resetting travel of contact. D Differential travel = B C.
- P Point from which positive opening is assured.

#### □ Rotary movement (lever)

- 1 Resetting point of contact.
- 2 Tripping point of contact.
- A Maximum travel of operator in degrees.
- B Tripping travel of contact.
- C Resetting travel of contact.
- D Differential travel = B C.
- P Point from which positive opening is assured.

#### Functional diagrams of slow break contacts

#### ■ Example: NC + NO break before make

- A Maximum travel of operator in millimetres or degrees.
- B Tripping and resetting travel of contact 21-22.
- C Tripping and resetting travel of contact 13-14. P Point from which positive opening is assured.

#### □ Linear movement (plunger)

- 1 Tripping and resetting points of contact 21-22.
- 2 Tripping and resetting points of contact 13-14. A Maximum travel of operator in millimetres.
- B Tripping and resetting travel of contact 21-22.
  C Tripping and resetting travel of contact 13-14.
- P Positive opening point.

#### □ Rotary movement (lever)

- 1 Tripping and resetting points of contact 21-22.
- 2 Tripping and resetting points of contact 13-14.

- 2 Impling and resetting points of contact 13-14.

  A Maximum travel of operator in degrees.

  B Tripping and resetting travel of contact 21-22.

  C Tripping and resetting travel of contact 13-14.

  P Positive opening point.

## Contact blocks (continued), mounting

## **Limit switches**

XC range General

#### Contact blocks (continued)



XE2●P screw clamp terminal connections



XE3•P screw clamp terminal connections

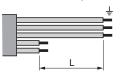
#### Mounting

#### **Contact connections**

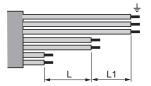
- Tightening torque:
- □ minimum tightening torque ensuring the nominal characteristics of the contact: 0.8 N.m,
  □ maximum tightening torque without damage to the terminals: 1.2 N.m for XE2•P, 1 N.m for
- Connecting cable: cable preparation lengths:

  □ for XE2•P, L = 22 mm,

  □ for XE2•P3•••, L = 45 mm,

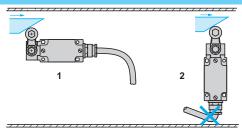


☐ for **XE3•P**, L = 14 mm, L1 = 11 mm.



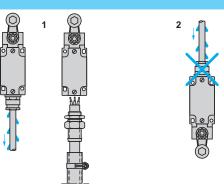
#### Sweep of connecting cable

- Recommended
   To be avoided Recommended



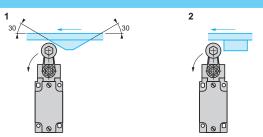
#### Position of cable gland

- Recommended
- Recommended
   To be avoided



#### Type of cam

- Recommended
- 2 To be avoided



#### Mounting and fixing limit switches by the head

- 1 Recommended 2 Forbidden



## XC range General

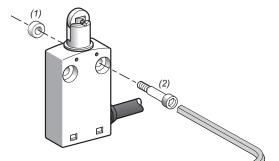
#### **Setting-up**

#### **Tightening torque**

- The minimum torque is that required to ensure correct operation of the switch.
   The maximum torque is the value which, if exceeded, will damage the switch.

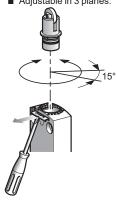
Range	Item	Torque (N.m)		Torque (	lb-in)
		Min.	Max.	Min.	Max.
Compact design XCKD, XCKP, XCKT	Cover	0.8	1.2	7.08	10.62
	Fixing screw for lever on rotary head	1	1.5	8.85	13.27
Miniature design XCMD, XCMH, XCMN, XCMV	Fixing screw for the product	1	1.5	8.85	13.27
	Fixing screw for lever on rotary head	1	1.5	8.85	13.27
Compact design XCKN	Cover	0.8	1.2	7.08	10.62
	Fixing screw for lever on rotary head	1	1.5	8.85	13.27
Classic design XCKJ	Cover	1	1.5	8.85	13.27
	Fixing nut for lever on rotary head	1	1.5	8.85	13.27
Classic design XCKS	Cover	0.8	1.2	7.08	10.62
	Fixing nut for lever on rotary head ZCKD	1	1.5	8.85	13.27
	Fixing nut for lever on rotary head XCKS	0.8	1.2	7.08	10.62
	Fixing head on body	0.8	1.2	7.08	10.62
Classic design XCKM, XCKML, XCKL	Cover	0.8	1.2	7.08	10.62
	Fixing nut for lever on rotary head	1	1.5	8.85	13.27

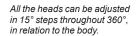
#### XCMH, XCMN

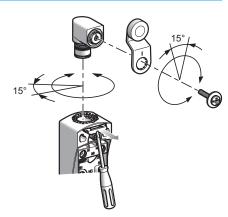




■ Adjustable in 3 planes:





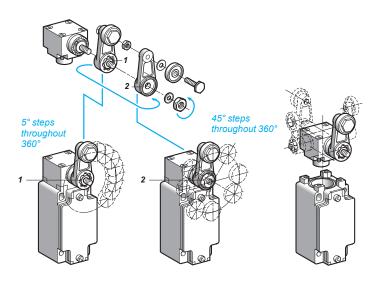


All the levers can be adjusted in 15° steps throughout 360°, in relation to the horizontal axis

#### (1) 2 spacers supplied with the switch.

(2) 2 screws Ø 4mm (not included).

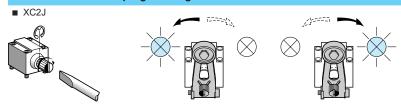
- Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever or its mounting. 1 Reversed  $\alpha = 5^{\circ}$
- **2** Forward  $\alpha = 45^{\circ}$



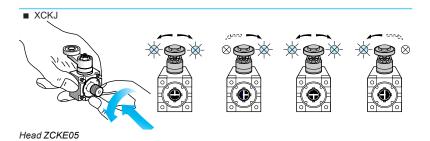
XC range General

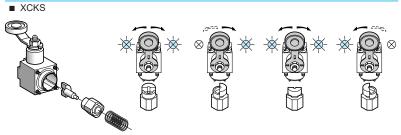
#### Setting-up (continued)

#### **Direction of actuation programming**



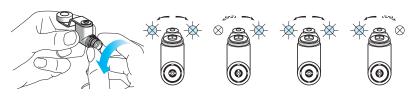
Head ZC2JE05





Head ZCKD05

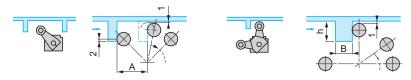
#### ■ XCKD, XCKP, XCKT and XCMD



Head ZCE05

#### Specific cams for heads ZCKE09 and ZC2JE09

- 1 0.5 mm min. 2 2 mm min.



A = length of lever + 11 mm ZCKE09: 13 < h < 18 mm and B = 12 mm max. ZC2JE09: 14 < h < 24 mm and B = 6 mm max.

XC range General

#### Reminder of the standards

The majority of Telemecanique Sensors products comply to national standards (for example French NF C standards, German DIN standards), European standards (for example CENELEC) or international standards (for example IEC). These standards rigidly stipulate the characteristic requirements of the designated products (for example IEC 60947 relating to low voltage switchgear and control gear). These products, when correctly used, enable the production of control equipment assemblies, machine control equipment or installations conforming to their own specific standards (for example IEC 60204 for the electrical equipment of industrial machines).

#### IEC 60947-5-1

Insulation coordination (and dielectric strength)	■ The standard IEC 60664 defines 4 categories of prospective transient overvoltages. It is important for the user to select control circuit components which are able to withstand these overvoltages. To these ends, the manufacturer states the rated impulse withstand voltage (U imp) applicable to the product.				
Terminal connections	<ul> <li>The cabling capacity, mechanical robustness and durability of the terminals, as well as the ability to resist loosening, are verified by standardised tests.</li> <li>Terminal reference marking conforms to standard IEC 60947-5-1 Appendix M .</li> </ul>				
Switching capacity	<ul> <li>With maximum electrical load. A single designation (A300 for example) enables indication of the contact block characteristics related to its utilisation category.</li> </ul>				
Positive opening operation (IEC 60947-5-1 Appendix K)	■ For contacts used in safety applications (end of travel, emergency stop device, etc.) the assurance of positive opening is required (see IEC 60204, EN 60204) after each test, the opening of the contact being verified by testing with an impulse voltage (2500 V).				
Electrical symbols for contacts	Form Za, the 2 contacts (NO + NC) are electrically separate.				
Symbol for positive opening	Simplified version				

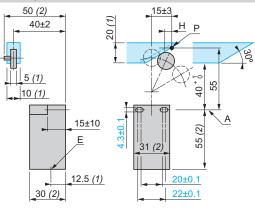
#### **CENELEC EN 50047**

The European standards organisation CENELEC, which has 14 member countries, has defined in this standard the first type of limit switch.

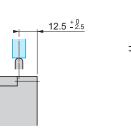
It defines 4 variants of devices (forms A, B, C, E). Limit switches XCKP, XCKD and XCKT conform to standard EN 50047. (1) Minimum value (2) Maximum value A: reference axis H: differential travel

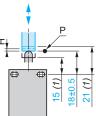
P: tripping point E: cable entry

#### Form A, with roller lever

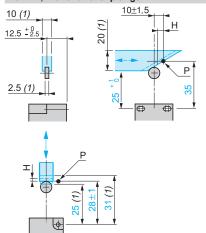


#### Form B, with end plunger (rounded)

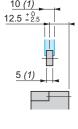


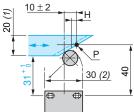


#### Form C, with end roller plunger



#### Form E, with roller lever for 1 direction of actuation





XC range General

#### Reminder of the standards (continued)

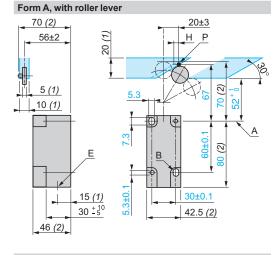
#### **CENELEC EN 50041**

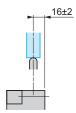
The European standards organisation CENELEC, which has 14 member countries, has defined in this standard the second type of limit switch.

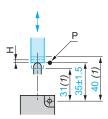
It defines 6 variants of devices (forms A, B, C, D, F, G). Limit switches XCKJ and XCKS conform to standard EN 50041.

- (1) Minimum value
- (2) Maximum value
- A: reference axis
- B: optional elongated holes H: differential travel
- P: tripping point
- E: cable entry

#### Form B, with end plunger (rounded)



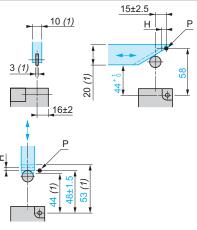




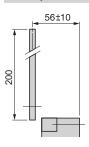
Za: tripping zone

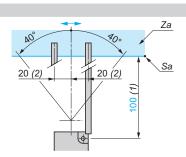
Sa: tripping threshold

#### Form C, with end roller plunger

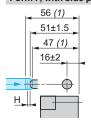


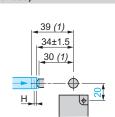
#### Form D, with rod lever



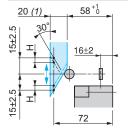


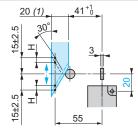
#### Form F, with side plunger (rounded)

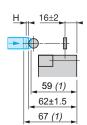


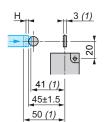


#### Form G, with side roller plunger









XC Standard range Miniature design, metal, XCMD

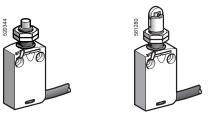
## ■ XCMD pre-cabled

#### $\hfill \square$ With head for linear movement (plunger). Fixing by the body



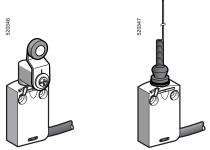
Complete switches: page 28. Variable composition: page 30

#### ☐ With head for linear movement (plunger). Fixing by the head



Complete switches: page 28. Variable composition: page 30

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



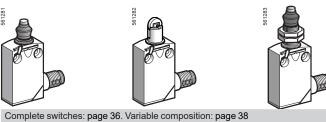
Complete switches: page 29. Variable composition: page 31

#### ■ XCMD with connector

□ With head for linear movement (plunger)

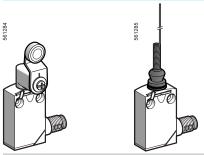
Fixing by the body

Fixing by the head



1 1 3 22

#### $\hfill \square$ With head for rotary movement (lever) or multi-directional. Fixing by the body



Complete switches: page 37. Variable composition: page 39

XC Standard range Miniature design, metal, XCMD

<b>Environment chara</b>	cteristics					
Conformity to standards	Products	C€, IEC 60947-5-1, EN 60947-5-1, UL 508,	CSA C22-2 n° 14, EAC			
	Machine assemblies	IEC 60204-1, EN 60204-1				
Product certifications		UL, CSA (except products with special cable	es), CCC			
Protective treatment		Standard version: "TC"				
Ambient air temperature	For operation	- 25+ 70°C (- 40+ 70 °C with ZCE106, 2	ZCE026 and ZCE016 heads)			
	For storage	- 40+ 70°C				
/ibration resistance		XCMD snap action: 5 gn. XCMD slow break conforming to IEC 60068-2-6	:: 25 gn (10500 Hz)			
hock resistance		25 gn (18 ms) conforming to IEC 60068-2-2	7 except head ZCE08: 15 gn (18 ms)			
Electric shock protection		Class I conforming to IEC 61140 and NF C 2	20-030			
Degree of protection		IP 66, IP 67 and IP 68 (1) conforming to IE	C 60529; IK 06 conforming to IEC 62262			
<b>Naterials</b>		Bodies: Zamak, heads: Zamak				
Repeat accuracy		0.05 mm on the tripping points, with 1 million	n operations for head with end plunger			
		(1) Protection against prolonged immersion: between the manufacturer and the user.	the test conditions are subject to agreement			
Contact block char						
Rated operational characteristics	Switches with 2 contacts	· · · · · · · · · · · · · · · · · · ·	orming to IEC 60947-5-1 Appendix A, EN 60947-5-			
	Switches with 3 and 4 contacts	~ AC-15; C300 (Ue = 240 V, Ie = 0.75 A) DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-				
	Pre-cabled switches	Ithe = 6 A for 2 contacts, 4 A for 3 contact	s, 3 A for 4 contacts			
	Switches with M12, 4-pin connector	Ui = 250 V, le = 3 A maximum, Ithe = 3 A				
	Switches with M12, 5-pin connector	Ui = 60 V, le = 4 A maximum, Ithe = 4 A				
	Switches with 7/8"-16UN, 5-pin connector	Ui = 250 V, le = 6 A maximum, Ithe = 6 A				
Rated insulation voltage		Ui = 400 V degree of pollution 3 conforming to IEC 60947-5-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14				
Rated impulse withstand vol	ltage	U imp = 4 kV conforming to IEC 60947-1, IEC 60664				
Positive operation (dependin	g on model)	NC contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-				
Resistance across terminals	<b>3</b>	≤ 25 mΩ conforming to IEC 60255-7 category 3				
Short-circuit protection		6 A cartridge fuse type gG (gI)				
linimum actuation speed		Snap action contact: 0.01 m/minute,				
for head with end plunger)		slow break contact: 6 m/minute				
Electrical durability		<ul> <li>Conforming to IEC 60947-5-1 Appendix (</li> <li>Utilisation categories AC-15 and DC-13</li> <li>Maximum operating rate: 3600 operating</li> <li>Load factor: 0.5</li> </ul>				
	AC supply 50/60 Hz ~ mm inductive circuit	XCMD snap action (NC + NO, NC + NC, NC + NC + NO, NC + NC + NO + NO contacts)	XCMD slow break (NC + NO, NC + NC + NO contacts)			
		0.5 1 2 3 4 5 6 10 Current in A	0.1 0.5 1 2 3 4 56 10 Current in A			
	DC supply <del></del>	Power broken in W for	Power broken in W for			



5 million operating cycles

V 24 48

Voltage

 $\overline{m}$ 

5 million operating cycles

24

48

120

Voltage

 $\overline{m}$ 

120

XC Standard range Miniature design, metal, XCMD Complete units Pre-cabled

Type of head	Plunger (fixing	by the body)			Plunger (fixing by the head)		
		200					
Type of operator	Metal end plunger	Metal end plunger with elastomer boot (1)	Steel roller plunger	Retractable steel roller lever plunger	M12 with metal end plunger	M16 with metal end plunger with elastomer boot (1)	M12 with steel roller plunger
References							
2-pole NC + NO snap action	XCMD2110L1 →	XCMD2111L1 →	XCMD2102L1 →	XCMD2124L1 →	XCMD21F0L1 →	XCMD21G1L1 →	XCMD21F2L1 →
HW-YR GN-YE	1.8 4.2(P) BN-BU	BK-BK-WH 1.8 4.2(P) BN-BU BN-BU 5mm 0.8	BK-BK-WH BN-BU BN-BU BN-	BK-BK-WH 11.2(A) 25(P) BK-BK-WH BK-BK-WH BK-BK-WH 4.9 mm	BK-BK-WH BN-BU DN-BU DN-	1.8 4.2(P) BK-BK-WH BK-BK-WH BK-BK-WH BN-BU 0.8	3.1(A) 7(P) BK-BK-WH BK-BK-WH BN-BU 0
2-pole NC + NO break before make, slow break	XCMD2510L1	XCMD2511L1	XCMD2502L1	XCMD2524L1	XCMD25F0L1	XCMD25G1L1	XCMD25F2L1
HW-YB - GN-YE	1.8 3.1(P) BN-BU 0 2.6 5 mm	1.8 3.1(P) BN-BU 0 2.6 5 mm	3.1(A) 5.6(P) BN-BU 0 4.6 mm	11.2(A) 19.5(P) BN-BU 0 16 mm	1.8 3.1(P) BN-BU 0 2.6 5 mm	1.8 3.1(P) BN-BU 0 2.6 5 mm	3.1(A) 5.6(P) BN-BU 0 4.6 mm
Weight (kg)	0.180	0.180	0.185	0.200	0.195	0.220	0.205
Contact operation	closed open	1	(A) = cam displace (P) = positive open		NC contact wit	h positive opening o	pperation

Switch act	tuation	On end	By 30° cam		On end	By 30° cam
Type of actuation					₩ C	
/laximum	actuation speed	0.5 m/s				
/lechanica	al durability	10 million operating cycles				
Minimum orce or	For tripping	8.5 N	7 N	2.5 N	8.5 N	7 N
torque	For positive opening	42.5 N	35 N	12.5 N	42.5 N	35 N
Cabling		PvR cable, 5 x 0.75 mm <sup>2</sup> , length 1 r	n	,		

(1) Nitrile for indoor use



XC Standard range Miniature design, metal, XCMD Complete units Pre-cabled

Type of head		Rotary (fixing	by the body)			Multi-directional
Type of operator		Thermoplastic roller lever	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's whisker" (1)
References						
2-pole NC + NO snap action		XCMD2115L1 → 25° 70°(P)	XCMD2116L1 → 25° 70°(P)	XCMD2117L1 ⊕  25° 70°(P)	XCMD2145L1 →  25° 70°(P)	XCMD2106L1
BK-WH		BN-BU 0 90°	BN-BU 0 90° 12°	EN-BU 0 90°	BN-BU 0 90°	BUSN BUSN BUSN BUSN BUSN BUSN BUSN BUSN
2-pole NC + NO break before m	ake, slow break	XCMD2515L1	XCMD2516L1	XCMD2517L1	XCMD2545L1	XCMD2506L1
HW-WH BN BN BN-YE		25° 45°(P) BN-BU 0 36° 90°	25° 45°(P) BN-BU 0 36° 90°	25° 45°(P) BK-BK-WH 0 36° 90°	25° 45°(P)	BK-BK-WH BN-8U 40°
Weight (kg)		0.220	0.225	0.220	0.230	0.180
Contact operation		closed open	(A) = cam displace (P) = positive oper	ning point	operation	vith positive opening
	aracteristics not shown		ral character	'iStiCS (see pa	ge 27)	la
Switch actuation		By 30° cam			T	By any moving part
Type of actuation						<b>*</b>
Maximum actuation speed		1.5 m/s				1 m/s
Mechanical durability		10 million operati	ing cycles			5
Minimum force or torque	For tripping	0.1 N.m				
	For positive opening	0.5 N.m				_

PvR cable, 5 x 0.75 mm<sup>2</sup>, length 1 m

Cabling

<sup>(1)</sup> Value taken with actuation by moving part at 100 mm from the fixing.

XC Standard range Miniature design, metal, XCMD Modular units Pre-cabled

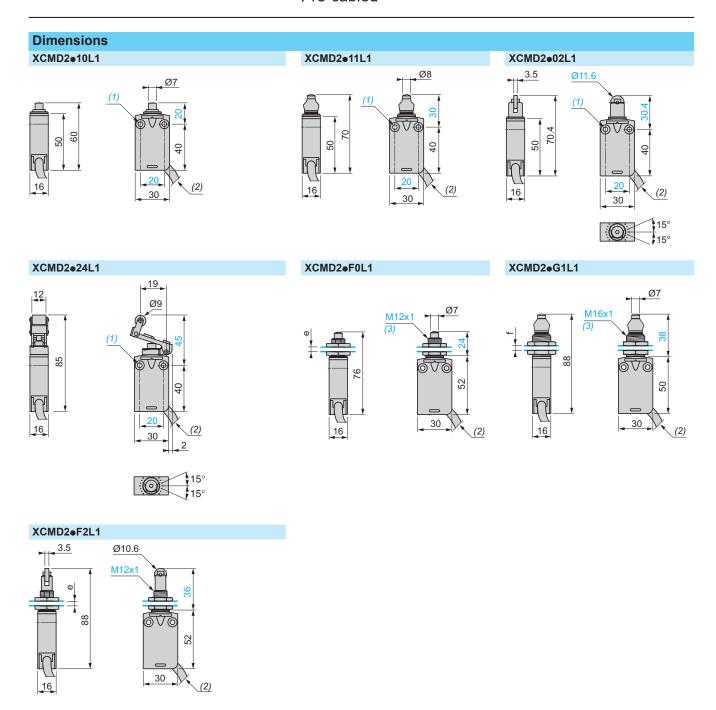
Type of head	Plunger (fixing by the body)			Plunger (fixing by the head)			
Type of operator	Metal end plunger	Metal end plunger with elastomer boot (1)	Steel roller plunger	Retractable steel roller lever plunger	M12 with metal end plunger	M16 with metal end plunger with elastomer boot (1)	M12 with steel roller plunger
References (comb	ined with rer	novable tern	ninal block)				
2-pole NC + NC	ZCMD29L1+	ZCMD29L1 +	ZCMD29L1+	ZCMD29L1+	ZCMD29L1+	ZCMD29L1+	ZCMD29L1+
snap action  \[ \frac{1}{2} \]	2CE10 →  1.8 4.2 (P)	2CE11 (P)  8D-80-WH 8D-80-WH 8D-80-WH 8D-80-WH 8D-80-WH 8D-80-WH	ZCE02 (STATE OF THE PROPERTY O	11.2(A) 25(P)	2CEF0   1.8 4.2 (P)  BK-BK-WH BR-RD-WH RD-RD-WH 0.8	ZCEG1 →  1.8 4.2 (P)  BK-SK-WH BK-SK-WH RD-RD-WH 0 0.8	3.1(A) 7(F BC-BC-WH BC-WH BC-BC-WH BC-WH BC-BC-WH BC-WH
3-pole NC + NC + NO	ZCMD39L1 +	ZCMD39L1 +	ZCMD39L1 +	ZCMD39L1 +	ZCMD39L1+	ZCMD39L1 +	ZCMD39L1+
Snap action  XB Q DB	2CE10   1.8 4.2(P) RD 5D WH RD 5D WH RD 5D WH RD 5D WH RD 5D WH RD 6D WH RD	2CE11 (P)  8C. SEC. ADM. 1.8 4.2(P)  8C. SEC. ADM. 1.8 4.2(P)  8C. SEC. ADM. 1.8 5. MIN. 1.8 0.2(P)  8. SEC. SEC. ADM. 1.8 0.2(P)  9. SEC. SEC. SEC. SEC. SEC. SEC. SEC. SEC	ZCE02 → 3.1(A) 7(P)  BN-BU-MH	2CE24 (	2CEF0 (	2CEG1 →  1.8 4.2(P)  RD-RD-WH  RD-R	ZCEF2 3.1(A) 7(P
3-pole NC + NC + NO break before make, slow break	ZCMD29L1 + ZCE10 →	ZCMD37L1 + ZCE11 →	ZCMD37L1 + ZCE02 →	ZCMD37L1 + ZCE24 →	ZCMD37L1 + ZCEF0 →	ZCMD37L1 + ZCEG1 →	ZCMD37L1 + ZCEF2 →
#W-74 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4	1.8 3.1(P) RD-RD-WH BN-BU 0 2.6 5 mm	1.8 3.1(P) RD-RD-WH BN-BU 0 2.6 5 mm	3.1(A) 5.6(P) RD-RD-WH RD-WH RD-RD-WH RD-WH RD-RD-WH RD-WH R	11.2(A) 19.5(P) RD-RD-WH BU-BN 0 16 mm	1.8 3.1(P) RD.RD.WH BN-BU 0 2.6 5 mm	1.8 3.1(P) RK-BK-WH BN-BU 0 2.6 5 mm	3.1(A) 5.6(I
Weight (kg)	0.180	0.180	0.185	0.200	0.195	0.220	0.205
4-pole 2 NC + 2 NO snap action	ZCMD4DL1 + ZCE10 →	ZCMD4DL1 + ZCE11 →	ZCMD4DL1 + ZCE02 →	ZCMD4DL1 + ZCE24 →	ZCMD4DL1 + ZCEF0 →	ZCMD4DL1+ ZCEG1 →	ZCMD4DL1 + ZCEF2 →
M-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W	1.8 4.2(P)  BIG BIC WHITE BIT TOTAL WHITE BIT	1.8 4.2(P) RD-RD-WH RD-RD-WH RD-RD-WH RD-RD-WH RK-RK-WH R	S.1(A) 7(P) BD.ROWH BD.ROWH BN-BU WT-Y-WH BN	11.2(A) 25(P) RD-RD-RD-RD-RD-RD-RD-RD-RD-RD-RD-RD-RD-R	1.8 4.2(P)  RD-RD-WH RD-RD-WH RD-RD-WH RD-RD-WH RD-RD-WH RK-BK-WH	1.8 4.2(P) RD-RD-WH RD-RD-WH RD-RD-WH RD-RD-WH RK-RK-WH R	3.1(A) 7(P) RD-RD-WH RD-WH RD-RD-WH RD-WH RD-RD-WH RD-WH RD-
Weight (kg)	0.160	0.160	0.165	0.180	0.175	0.200	0.185
References (comb	ined with fix	ed terminal k	olock)				
4-pole 2 NC + 2 NO snap action	ZCMD41L1 + ZCE10 →	ZCMD41L1 + ZCE11 →	ZCMD41L1 + ZCE02 →	ZCMD41L1 + ZCE24 →	ZCMD41L1 + ZCEF0 →	ZCMD41L1 + ZCEG1 →	ZCMD41L1 + ZCEF2 →
M	1.8 4.2(P)  BIX BIX WHY  BIX BI	1.8 4.2(P)  BURDWH BURDWH BURDWH BURBUH VT-VT-WH BURBUH UT-VT-WH BURBUH UT-VT-WH BURBUH BURBUH UT-VT-WH BURBUH BURBH BURBUH BURB	BLOCK WHAT BLOCK WHAT	11.2(A) 25(P) BD-BD-WH BD-BD-BD-WH BD-BD-WH BD-BD-WH BD-BD-WH BD-BD-WH BD-BD-WH BD-BD-WH BD-B	1.8 4.2(P)  RDROWN RDRO	1.8 4.2(P) RDROWN RDROW	3.1(A) 7(P) BK-BK-WH RC-RD-WH BK-BK-WH RB-BK-WH BK-BK-WH BK-WK-WH BK-BK-WH BK-WK-WH BK-BK-WH BK-WK-WH BK-BK-WH BK-WK-WK-WH BK-WK-WK-WK-WK-WK-WK-WK-WK-WK-WK-WK-WK-WK
Weight (kg)	0.160	0.160	0.165	0.180	0.175	0.200	0.185
Contact operation  Complementary c	closed copen  haracteristic	s not shown	(A) = cam displace (P) = positive open under gener	ing point	Ŭ	h positive opening o	operation
Switch actuation	On end		By 30° cam		On end		By 30° cam
Type of actuation							
Maximum actuation speed	0.5 m/s						0.1m/s
Mechanical durability	10 million operati	ng cycles					
Minimum For tripping	8.5 N		7 N	2.5 N	8.5 N		7 N
force or For positive	42.5 N		35 N	12.5 N	42.5 N		35 N
opening							
			or 2-pole contact ve other lengths, see p	rsions, 7 x 0.5 mm <sup>2</sup> loage 48.	length 1 m for 3-pole	e contact versions, 9	x 0.34 mm² lengt

XC Standard range Miniature design, metal, XCMD Modular units Pre-cabled

Type of head		Rotary (fixing	by the body)			Multi-directiona
ype of operator		Thermoplastic roller lever	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's whisker" (1)
References (combin	ed with removable ter	rminal block)				
P-pole NC + NC snap action		ZCMD29L1 + ZCE01 + ZCY15	ZCMD29L1+ ZCE01+ ZCY16    25° 70°(P)  ROBOWN R R R R R R R R R R R R R R R R R R R	ZCMD29L1+ ZCE01+ ZCY17   BK-BK-WH BB SB	ZCMD29L1 + ZCE01 + ZCY45   Z6° 70°(P) EKBK/M 25° 70°(P)	ZCMD29L1 + ZCE06
S-pole NC + NC + NO snap acti	on	ZCMD39L1 + ZCE01 + ZCY15 →  BLGGGGH	ZCMD39L1+ ZCE01+ ZCY16	ZCMD39L1+ ZCE01+ ZCY17	ZCMD39L1 + ZCE01 + ZCY45 →  EXCEPTION 1	ZCMD39L1 + ZCE06  20° RD RD ND
G-pole NC + NC + NO break ber	fore make, slow break	ZCMD37L1 + ZCE01 + ZCY15 BK-BK-WH RD-RD-WH DN-RD	ZCMD37L1+ ZCE01+ ZCY16 → 25° 45°(P)	ZCMD37L1+ ZCE01+ ZCY17 → 25° 45°(P) BR BR BR HI DN BU HI DN	ZCMD37L1 + ZCE01 + ZCY45   25° 45°(P) REBENIES A	ZCMD37L1 + ZCE06  20° REGENANT A0° A0°
Veight (kg) I-pole 2 NC + 2 NO snap action	<u> </u>	0.220 ZCMD4DL1 +	0.225 ZCMD4DL1+	0.220 ZCMD4DL1+	0.230 <b>ZCMD4DL1 +</b>	0.180 <b>ZCMD4DL1 +</b>
		ZCE01 + ZCY15	ZCE01+ ZCY16 → 25′ 70′(P)	ZCE01 + ZCY17 → 25' 70'(P) PS-BS-W-1- SCRW-1-	ZCE01 + ZCY45 → 25′ 70′(P)	ZCE06  80 50 50 50 50 50 50 50 50 50 50 50 50 50
Veight (kg)		0.200	0.205	0.200	0.210	0.160
References (combin	ed with fixed terminal	l block)				
I-pole 2 NC + 2 NO snap action		ZCMD41L1 + ZCE01 + ZCY15 → 25' 70'(P)	ZCMD41L1 + ZCE01 + ZCY16 → 25' 70'(P)	ZCMD41L1 + ZCE01 + ZCY17 → 25' 70'(P)	ZCMD41L1 + ZCE01 + ZCY45 → 25' 70'(P)	ZCMD41L1 + ZCE06  20°  BK-BK-WH RD-RD-WH RD-RD-WH RD-RD-WH RD-RD-WH RD-RD-WH
Z - Q - Z - Z - Z - Z - Z - Z - Z - Z -		BC-BC-WH BC-BC-WH BC-BC-WH DC-WH DC-BC-WH DC-BC-WH DC-BC-WH DC-BC-WH DC-BC-WH DC-BC-WH DC-BC-	BL BL WH	VT-VT-WH BC-BD-WH BC-BB-WH BC-BD-WH DD-BD-W DD-BD-W DD-BD	BD SB - WH HE HAD A HAD	BK-BK-WH BQ-BD-WH BQ-BD-WH BQ-BK-WH BC-BK-WH BD-BD-BD-WH BD-WH BD-BD-WH BD-WH BD-BD-WH BD-W BD-W BD-W BD-W BD-W BD-W BD-W BD-W
Veight (kg) Contact operation		0.200 closed	0.205 (A) = cam displace	0.200	0.210	0.160 vith positive opening
Jontact Operation		open	(P) = carri displace (P) = positive oper		operation	nui positive operiirig
	racteristics not show		ral character	istics (see pag	ge 27)	
Switch actuation		By 30° cam				By any moving pa
ype of actuation						<b>→</b>
Maximum actuation speed		1.5 m/s				1 m/s
Mechanical durability Minimum force or torque	For tripping	10 million operati 0.1 N.m	ng cycles			5
N. I. P	For positive opening	0.5 N.m	25 21			-
Cabling			75 mm <sup>2</sup> length 1 m f rsions, 9 x 0.34 mm			n <sup>2</sup> length 1 m for ns. For other length:

<sup>(1)</sup> Value taken with actuation by moving part at 100 mm from the fixing.

XC Standard range Miniature design, metal, XCMD Complete units Pre-cabled



- (1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep (2) External diameter of cable 7.5 mm

- (3) Fixing nut thickness 3.5 mm e: 8 mm max, panel cut-out Ø 12.5 mm f: 8 mm max, panel cut-out Ø 16.5 mm



## Dimensions (continued), mounting

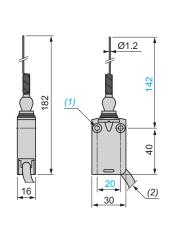
## **Limit switches**

XC Standard range Miniature design, metal, XCMD Complete units Pre-cabled

#### **Dimensions** (continued) XCMD2e15L1 XCMD2e16L1 XCMD2e17L1 31 31 \_ 24 24 24 5.8 Ø16 5.8 Ø16 Ø16 5.8 34.4 34.4 34.4 94 94 94 4 16 16 16 30 30 30 32.4 32.4

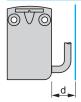
XCMD2e06L1

## XCMD2e45L1 33 Ø16 5.5 .83.5 103 143 33.5.. 93. 4 30



#### Mounting: distance required for connection

#### XCMD2eeeL1



d: 20 mm min.

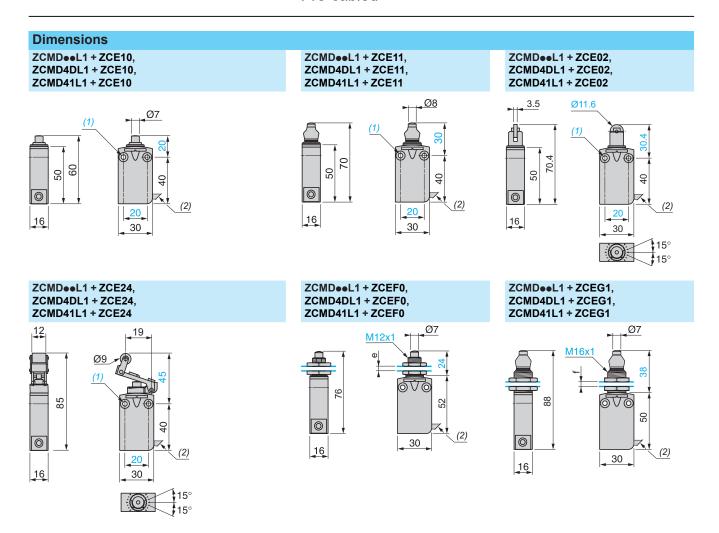
Note: For modular switches ZCMD4D, ZCMD4DL● and ZCMC4DL●: d: 35 mm min.

(1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep

(2) External diameter of cable 7.5 mm

e: 8 mm max, panel cut-out Ø 12.5 mm f: 8 mm max, panel cut-out Ø 16.5 mm

XC Standard range Miniature design, metal, XCMD Modular units Pre-cabled



- (1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep (2) External diameter of cable 7.5 mm
- e: 8 mm max, panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm. f: 8 mm max, panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

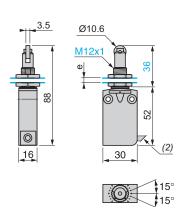
## Dimensions (continued)

## **Limit switches**

XC Standard range Miniature design, metal, XCMD Modular units Pre-cabled

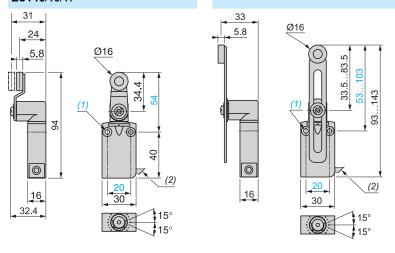
#### **Dimensions** (continued)

ZCMDeeL1 + ZCEF2, ZCMD4DL1 + ZCEF2, ZCMD41L1 + ZCEF2

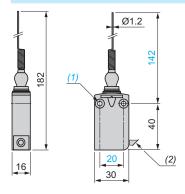


ZCMDeeL1 + ZCE01 + ZCY15/16/17, ZCMD4DL1 + ZCE01 + ZCY15/16/17, ZCMD41L1 + ZCE01 + ZCY15/16/17

ZCMDeeL1 + ZCE01 + ZCY45, ZCMD4DL1 + ZCE01 + ZCY45, ZCMD41L1 + ZCE01 + ZCY45



ZCMDeeL1 + ZCE06, ZCMD4DL1 + ZCE06, ZCMD41L1 + ZCE06



(1) 2 fixing holes  $\emptyset$  4.2 mm, counterbored  $\emptyset$  8 mm by 4 mm deep

(2) External diameter of cable 7.5 mm e: 8 mm max, panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm. f: 8 mm max, panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

XC Standard range Miniature design miniature, metal, XCMD Complete units Connector

Plunger (fixing by the body) Plunger (fixing by the head) Type of head Type of operator Metal end Metal end Steel roller Retractable steel M12 with metal M16 with metal M12 with steel plunger plunger with roller lever end plunger with roller plunger plunger end plunger elastomer boot elastomer boot plunger (1) (1) References XCMD2110M12 XCMD2111M12 XCMD2102M12 XCMD2124M12 XCMD21F0M12 XCMD21G1M12 XCMD21F2M12 Single-pole CO snap action + integral M12 11.2(A) 25(P) 4-pin connector 2-pole NC + NO XCMD2110C12 XCMD2111C12 XCMD2102C12 XCMD2124C12 XCMD21F0C12 XCMD21G1C12 XCMD21F2C12 snap action +  $\Theta$  $\Theta$  $\Theta$ integral M12 ± 5-pin connector 11.2(A) 25(P) 0.8 0.8 0.085 Weight (kg) 0.085 0.090 0.105 0.100 0.125 0.110 (A) = cam displacement Contact operation NC contact with positive opening operation closed (P) = positive opening point open

Complementary characteristics not shown under general characteristics (see page 27)							
Switch acti	uation	On end	By 30° cam		On end	By 30° cam	
Type of act	uation					P	
Maximum actuation speed 0.5 m/s						0.1 m/s	
Mechanical durability 10 million operating cycles							
Minimum	For tripping	8.5 N	7 N	2.5 N	8.5 N	7 N	
force or torque	For positive opening	42.5 N	35 N	12.5 N	42.5 N	35 N	
Positive op	Although their design is identical to the pre-cabled switches, the switches incorporating an M12 4-pin connector cannot be marked with the symbol because they are single-pole CO.						

<sup>(1)</sup> Nitrile for indoor use.



XC Standard range Miniature design miniature, metal, XCMD Complete units Connector

Type of head	Rotary (fixing	Rotary (fixing by the body)				
Type of operator		Thermoplastic roller lever	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's whisker" (1)
References						
Single-pole CO s With integral M12	nap action 2 4-pin connector	XCMD2115M12	XCMD2116M12	XCMD2117M12	XCMD2145M12	XCMD2106M12
		25° 70°(P)	25° 70°(P) 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-2 1-4 1-2 1-2 1-4 1-4 1-2 1-4 1-4 1-2 1-4 1-4 1-2 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4	25° 70°(P) 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-2 1-4 1-2 1-2 1-4 1-2 1-2 1-4 1-2 1-2 1-4 1-4 1-2 1-4 1-4 1-2 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4	25° 70°(P) 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-2 1-4 1-2 1-2 1-4 1-2 1-2 1-4 1-2 1-2 1-4 1-4 1-2 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4	20° 1-2 1-4 1-2 1-4 10°
2-pole NC + NO s With integral M12		XCMD2115C12 → 25° 70°(P)	XCMD2116C12  ⇒ 25° 70°(P) 32 32 32 90° 12° 90°	XCM D2117C12  → 25° 70°(P) 32 32 32 32 32 32 32 32 32 32 32 32 32	XCMD2145C12  ⇒  25° 70°(P)  32  32  32  32  90°	XCMD2106C12
Weight (kg)		0.125	0.130	0.125	0.135	0.085
Contact operation		closed open	(A) = cam displace (P) = positive openi	ment	→ NC contact with operation	1 1 1 1 1
Complementary cha	aracteristics not show	n under gene	ral characte	ristics (see pa	ige 27)	
Switch actuation		By 30° cam				By any moving part
Type of actuation						<b>→</b>
Maximum actuation speed		1.5 m/s				1 m/s
Mechanical durability		10 million operat	ng cycles			5
Minimum force or torque	For tripping	0.1 N.m				
	For positive opening	0.5 N.m				_
Positive operation					tches, the switches	incorporating an are single-pole CO.

<sup>(1)</sup> Value taken with actuation by moving part at 100 mm from the fixing.

XC Standard range Miniature design miniature, metal, XCMD Modular units Connector

Type of head Plunger (fixing by the body) Plunger (fixing by the body) Type of operator Metal end Metal end Steel roller Retractable steel M12 with metal M16 with metal M12 with steel plunger with roller lever end plunger end plunger with roller plunger plunger plunger elastomer boot plunger elastomer boot References Single-pole CO ZCMD21M12 + ZCMD21M12 + ZCMD21M12 + ZCMD21M12 + ZCMD21M12 + ZCMD21M12 + ZCMD21M12 + snap action + ZCE10 → ZCE11 → ZCE02 → ZCE24 → ZCEF0 → ZCEG1 → ZCEF2 → integral M12 1.8 4.2(P) 3.1(A) 7(P) 11.2(A) 25(P) 1.8 4.2(P) 1.8 4.2(P) 3.1(A) 7(P) 4-pin connector 0 4.9 mm 0.8 2-pole NC + NO ZCMD21C12 + ZCMD21C12 + ZCMD21C12 + ZCMD21C12 + ZCMD21C12 + ZCMD21C12 + ZCMD21C12+ ZCE02 → ZCEF0 → ZCEG1 → ZCE10 → ZCE11 → ZCE24 → ZCEF2 → snap action + integral M12 1.8 4.2(P) 1.8 4.2(P) 3.1(A) 7(P) 11.2(A) 25(P) 1.8 4.2(P) 1.8 4.2(P) 3.1(A) 7(P) 5-pin connector 4.9 mm 0.8 0.8 0.8 0.8 2-pole NC + NC ZCMD29C12 + ZCMD29C12 + ZCMD29C12 + ZCMD29C12 + ZCMD29C12 + ZCMD29C12 + ZCMD29C12 + ZCEF0 → snap action + ZCE10 → ZCE11 → ZCE02 → ZCE24 → ZCEG1 → ZCEF2 → integral M12 1.8 4.2(P 3.1(A) 7(P) 11.2(A) 25(P) 3.1(A) 7(P) ± 5-pin connector 0.8 0.8 1.4 mm 0<u>4.9</u> mm 1.4 mm Weight (kg) 0.085 0.085 0.090 0.105 0.100 0.125 0.110 2-pole NC + NO ZCMD21L08R12 ZCMD21L08R12 ZCMD21L08R12 ZCMD21L08R12 ZCMD21L08R12 ZCMD21L08R12 ZCMD21L08R12 + ZCE10 → + ZCE02 → + ZCE24 → ZCEF0 FZCEG1 → +ZCEF2 → snap action + FZCE11 → M12 5-pin 1.8 4.2(P 1.8 4.2(P) 3.1(A) 7(P) 11.2(A) 25(P) 1.8 4.2(P) 1.8 4.2(P) 3.1(A) 7(P) connector on 0.8 m flying lead 4.9 mm ZCMD21L08U78 ZCMD21L08U78 ZCMD21L08U78 ZCMD21L08U78 ZCMD21L08U78 ZCMD21L08U78 ZCMD21L08U78 2-pole NC + NO + ZCE11 → + ZCE02 → + ZCE24 → + ZCEF0 → +ZCEG1 → +ZCEF2 → snap action + + ZCE10 → 7/8"-16 UN 1.8 4.2(P) 1.8 4.<u>2(P)</u> 3.1(A) 7(P) 1.8 4.2(P 1.8 4.2(P) 3.1(A) 7(P) 11.2(A) 25(P) 5-pin connector on 0.8 m flying 0.150 Weight (kg) 0.150 0.155 0.165 0.190 Contact operation closed (A) = cam displacement NC contact with positive opening operation (P') = positive opening point open Complementary characteristics not shown under general characteristics (see page 27) By 30° cam Switch actuation On end On end By 30° cam Type of actuation I₩I 'n ہِمَ 0.5 m/s 0.1 m/s Maximum actuation speed Mechanical durability 10 million operating cycles Minimum 8.5 N 7 N 2.5 N 8.5 N 7 N For tripping force or torque For positive 42.5 N 35 N 12.5 N 42.5 N 35 N opening Positive operation Although their design is identical to the pre-cabled switches, the switches incorporating an M12 4-pin connector cannot be marked with the o symbol because they are single-pole CO.

XC Standard range Miniature design miniature, metal, XCMD Modular units Connector

Type of head	Rotary (fixing	by the body)			Multi-directional
Type of operator	Thermoplastic roller lever	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's whisker" (1)
References					
Single-pole CO snap action With integral M12 4-pin connector	ZCMD21M12 + ZCE01 + ZCY15 → 25° 70°(P)	ZCMD21M12 + ZCE01 + ZCY16 → 25° 70°(P)	ZCMD21M12 + ZCE01 + ZCY17 → 25° 70°(P)	ZCMD21M12 + ZCE01 + ZCY45 ⊕ 25° 70°(P)	ZCMD21M12 + ZCE06
	1-4 1-4 1-2 1-4 0 90°	1-4 1-4 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-4 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	1.4 1.4 1.2 1.4 0 90°	1.4 1.4 1.2 1.4 0 90°	1-2 1-4 1-10°
2-pole NC + NO snap action With integral M12 5-pin connector	ZCMD21C12 + ZCE01 + ZCY15 (	ZCMD21C12 + ZCE01 + ZCY16 →	ZCMD21C12 + ZCE01 + ZCY17 →	ZCMD21C12 + ZCE01 + ZCY45 ⊕	ZCMD21C12 + ZCE06
	25° 70°(P) 3-4 1-2 3-4 0 90° 12°	25° 70°(P) 1-2 3-4 1-2 3-4 12° 90°	25° 70°(P) 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 3-4 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	25° 70°(P)	20° 1-2 3-4 1-2 3-4 1-2 3-4 10°
2-pole NC + NC snap action With integral M12 5-pin connector	ZCMD29C12 + ZCE01 + ZCY15 →	ZCMD29C12 + ZCE01 + ZCY16 →	ZCMD29C12 + ZCE01 + ZCY17 →	ZCMD29C12 + ZCE01 + ZCY45 →	ZCMD29C12 + ZCE06
	25° 70°(P)	25° 70°(P)	25° 70°(P)	25° 70°(P)	20° 1-2 3-4 1-2 3-4 1-2 3-4 1-2 10°
Weight (kg)	0.125	0.130	0.125	0.135	0.085
2-pole NC + NO snap action With M12 5-pin connector on 0.8 m flying lead	ZCMD21L08R12 + ZCE01 + ZCY15 → 25° 70°(P)	ZCMD21L08R12 + ZCE01 + ZCY16 → 25° 70°(P)	ZCMD21L08R12 + ZCE01 + ZCY17 → 25° 70°(P)	ZCMD21L08R12 + ZCE01 + ZCY45 → 25° 70°(P)	ZCMD21L08R12 + ZCE06
2-pole NC + NO snap action With 7/8"-16 UN 5-pin connector on 0.8 m flying lead	0 12° 90° 12° 2CMD21L08U78 + ZCE01 + ZCY15 →	0 12° 90° 12° 2CMD21L08U78 + ZCE01 + ZCY16 →	0 12° 90° 12° 2CMD21L08U78 + ZCE01 + ZCY17 →	0	ZCMD21L08U78 + ZCE06
	25° 70°(P) 12° 90°	25° 70°(P)	25° 70°(P) 4-5 1-2 1-2 1-2 1-2 90°	25° 70°(P)	20° 4-5 1-2 4-5 1-2 1-0°
Weight (kg)	0.200	0.205	0.200	0.210	0.160
Contact operation	closed	(A) = cam displacer		NC contact with	positive opening
Complementary characteristics not shown	open	(P) = positive openi		operation	
Switch actuation	By 30° cam	i di cilal actel	istics (see pa	ge Zij	By any moving part
Type of actuation	= O				→
Maximum actuation speed	1.5 m/s				1 m/s
Mechanical durability	10 million operati	ng cycles			5
Minimum force or torque For tripping	0.1 N.m				
For positive opening	0.5 N.m –  Although their design is identical to the pre-cabled switches, the switches incorporating an M				neerneretin M40
Positive operation	4-pin connector of			ches, the switches i because they are si	
(1) Value taken with actuation by moving part at 100 mm from the f	ixing.				



XC Standard range Miniature design, metal, XCMD Connector cabling accessories

Reference	s of suitab	le pre-wired fema	ale connectors		
Type of connec	tor	M12 straight, 4-pin 4 A, 250 V	M12 straight, 5-pin 4 A, 24 V	M12 elbowed, 5-pin 4 A, 24 V	7/8"-16 UN straight, 5-pin 6 A, 250 V
With cable	L = 2 m	XZCP1169L2	XZCP1164L2	XZCP1264L2	XZCP1771L2
	L = 5 m	XZCP1169L5	XZCP1164L5	XZCP1264L5	XZCP1771L5
	L = 10 m	XZCP1169L10	XZCP1164L10	XZCP1264L10	XZCP1771L10
Weight (kg)		0.105	0.115	0.115	0.190

#### **Connections**

#### **XCMD** with connector

4-pin, M12



3 A - 250 V 1 = commOn 2 = NC 3 = ≟

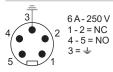
4 = NO

5-pin, M12



4A-60 V XCMD21•• ou ZCMD21•• 1-2=NC 3-4=NO 5=±

XCMD29•• ou ZCMD29•• 1 - 2 = NC 3 - 4 = NC 5 = \frac{1}{2} 5-pin, 7/8"-16 UN



#### XZCP pre-wired female connectors

4-pin, M12



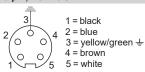
1 = brown 2 = blue 3 = yellow/green <del>\frac{1}{2}</del> 4 = black

#### 5-pin, M12



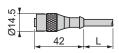
1 = brown 2 = white 3 = blue 4 = black \$\driver\text{\frac{1}{2}} = yellow/green

#### 5-pin, 7/8"-16 UN

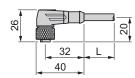


#### **Dimensions**

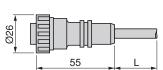
XZCP116eLe



#### XZCP1264L●



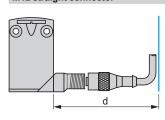
#### XZCP1771Le



L: cable length 2, 5 or 10 m.

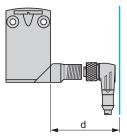
#### Distances required for plug-in connectors

M12 straight connector



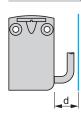
d: min. 65 mm, recommended 69 mm

#### M12 elbowed connector



d: min. 42 mm, recommended 45 mm

#### Connector on flying lead

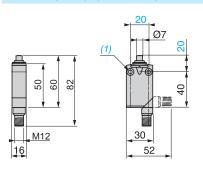


d: min. 20 mm

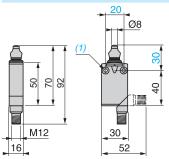
XC Standard range Miniature design, metal, XCMD Complete units Connector

#### **Dimensions**

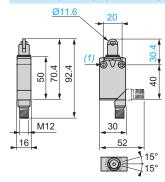
#### XCMD2110M12 and XCMD2110C12



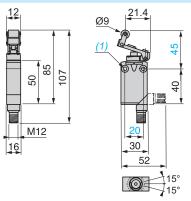
#### XCMD2111M12 and XCMD2111C12



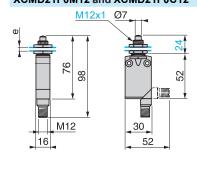
#### XCMD2102M12 and XCMD2102C12



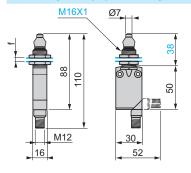
#### XCMD2124M12 and XCMD2124C12



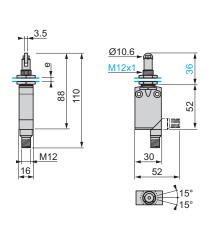
#### XCMD21F0M12 and XCMD21F0C12



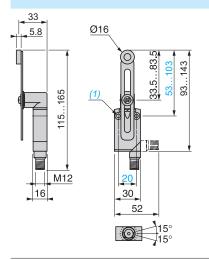
#### XCMD21G1M12 and XCMD21G1C12



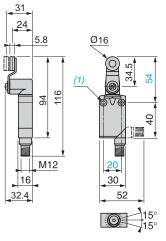
#### XCMD21F2M12 and XCMD21F2C12



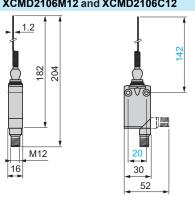
#### XCMD2145M12 and XCMD2145C12



#### XCMD2115M12 /116M12 /117M12 XCMD2115C12/116C12/117C12



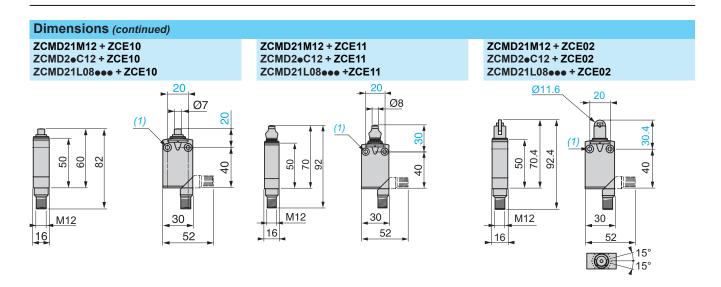
#### XCMD2106M12 and XCMD2106C12

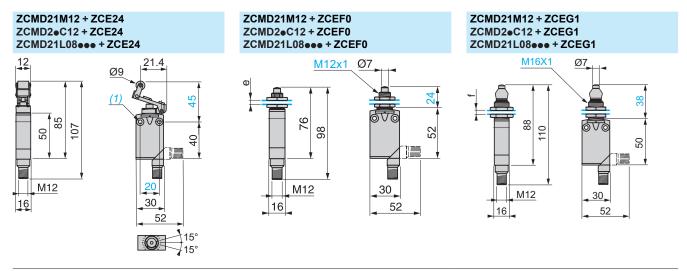


(1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep

e: 8 mm max., panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm. f: 8 mm max., panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

XC Standard range Miniature design, metal, XCMD Modular units Connector





(1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep. e: 8 mm max., panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm. f: 8 mm max., panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

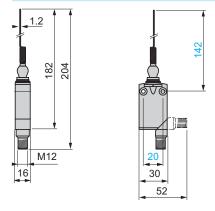
## **Dimensions** (continued)

## **Limit switches**

XC Standard range Miniature design, metal, XCMD Modular units Connector

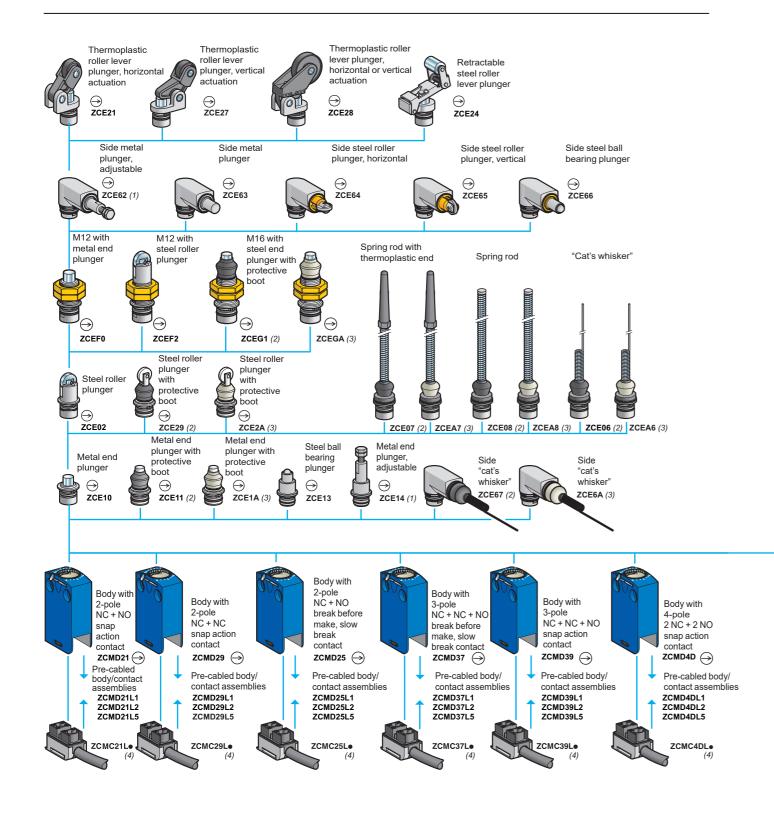
#### **Dimensions** (continued) ZCMD21M12 + ZCEF2 ZCMD21M12 + ZCE01 + ZCY45 ZCMD21M12 + ZCE01 + ZCY1. ZCMD2•C12 + ZCEF2 ZCMD2eC12 + ZCE01 + ZCY45 ZCMD2•C12 + ZCE01 + ZCY1• ZCMD21L08 • • • + ZCEF2 ZCMD21L08 • • + ZCE01 + ZCY45 ZCMD21L08 • • • + ZCE01 + ZCY1 • 5.8 Ø16 24 3.5 5.8 Ø16 83 143 103 Ø10.6 33.5.. M12x1 53. 93. 34. 165 116 110 88 94 115.. 52 M12 30 M12 M12 20 16 52 16 30 16 30 52 32.4

ZCMD21M12 + ZCE06 ZCMD2•C12 + ZCE06 ZCMD21L08••• + ZCE06



(1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep. e: 8 mm max., panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm. f: 8 mm max., panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

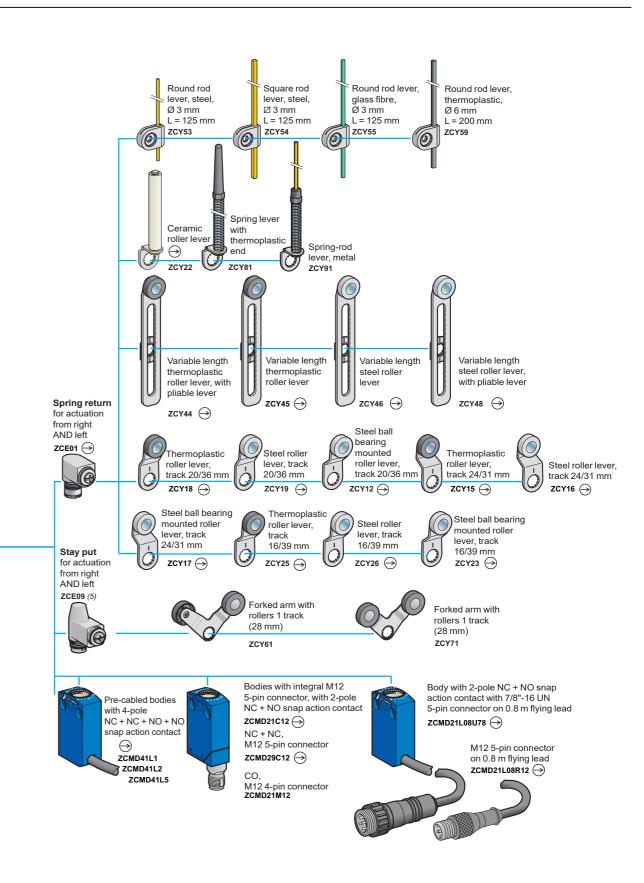
XC Standard range Miniature design, metal, XCMD Variable composition



- (1) A minimum 5 mm of threaded length must be maintained inside the head. Plunger length can be adjusted from 30.5 to 35.5 mm.
- (2) Nitrile boot for indoor use.

44

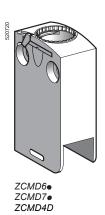
- (3) Silicone boot for outdoor use.
- (4) Connection components: replace the "•" in the reference with the required cable length in metres (1, 2, 3, 5, 7 or 10 m). For example, ZCMC21L becomes ZCMC21L7 for a 7 m cable.
- Note: Only cable lengths of 1, 2 and 5 m are available for connection components ZCMC37Le, ZCMC39Le and ZCMC4DLe



(5) Suitable with bodies: ZCMD21, ZCMD29, ZCMD39, ZCMD41, ZCMD4D, ZCMD21C12, ZCMD21M12, ZCMD29C12 or ZCMD21L08 • •

(E) Telemecanique

XC Standard range Miniature design, metal, XCMD Body/contact assemblies



Type of contact	Positive operation (1)	Scheme	Type of contact	Reference	Weight kg
2-pole					
NC + NO snap action	$\Theta$	₩ B GN-YE	Standard	ZCMD21	0.055
		BK-WH	Gold plated	ZCMD61	0.055
NC + NC snap action	$\Theta$	품 있 GN-YE	Standard	ZCMD29	0.055
		BK-WH RD- <u>WH</u>	Gold plated	ZCMD69	0.055
NC + NO break before make, slow break	$\Theta$	ă a GN-YE	Standard	ZCMD25	0.055
		AW-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-W-	Gold plated	ZCMD65	0.055
3-pole					
NC + NC + NO break before make, slow break	$\Theta$	품 위 3 GN-YE	Standard	ZCMD37	0.055
		BK-WH RD-WH	Gold plated	ZCMD77	0.055
NC + NC + NO snap action	$\Theta$	*	Standard	ZCMD39	0.055
		BK-WH RD-WH	Gold plated	ZCMD79	0.055
4-pole					
2 NC + 2 NO snap action	$\ominus$	RD-WH CD-WH	Standard  -YE	ZCMD4D	0.055

(1)  $\bigoplus$  bodies with contacts assuring positive opening operation.



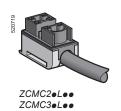
XC Standard range Miniature design, metal, XCMD Pre-cabled body/contact assemblies

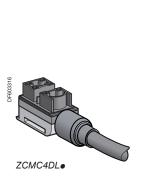


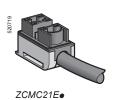
Body/contact	ct assen	nblies with rem	ovable c	able	
Type of contact	Positive operation (1)	Scheme	Length of cable in metres	Reference	Weight kg
2-pole	( )				
NC + NO snap action	$\Theta$	푔 殟	1	ZCMD21L1	0.160
Shap action		HW-YB	2	ZCMD21L2	0.250
		B -	5	ZCMD21L5	0.520
NC + NC snap action	$\Theta$	<u> </u>	1	ZCMD29L1	0.160
		// GN-YE	2	ZCMD29L2	0.250
		BK-WH RD-WH	5	ZCMD29L2	0.520
NC + NO break before	$\Theta$	<u>#</u>	1	ZCMD25L1	0.160
make, slow break		H N GN-YE	2	ZCMD25L2	0.250
		ᄶ	5	ZCMD25L5	0.520
3-pole					
NC + NC + NO break before	$\Theta$	₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩	1	ZCMD37L1	0.160
make, slow break			2	ZCMD37L2	0.250
		RD-WH	5	ZCMD37L5	0.520
NC + NC + NO snap action	$\Theta$	푔 집 집	1	ZCMD39L1	0.160
onup dollon	-	GN-YE	2	ZCMD39L2	0.250
		RD-WH	5	ZCMD39L5	0.520
4-pole					
2 NC + 2 NO snap action	$\Theta$	₩ 2 ₩ 5 GN-YE	1	ZCMD4DL1	0.160
		BK-WH RD-WH VT-WH	2	ZCMD4DL2	0.250
			5	ZCMD4DL5	0.520
Pre-cabled b	oodies/c	contact assemb	lies (fixe	d cable)	
4-pole	20.0070				
2 NC + 2 NO snap action	$\Theta$	新	1	ZCMD41L1	0.160
		RD-WHH	2	ZCMD41L2	0.250
		m & >	5	ZCMD41L5	0.520
Pre-cabled b	oodies v	vith gold contac	cts (fixed	cable)	
4-pole					
2 NC + 2 NO snap action	$\Theta$	新	1	ZCMD81L1	0.160
		RD-WH NT-WH	2	ZCMD81L2	0.250
		A G .T	5	ZCMD81L5	0.520

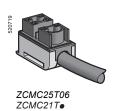
<sup>(1)</sup>  $\bigoplus$  bodies with contacts assuring positive opening operation.

XC Standard range Miniature design, metal, XCMD Connection components









Pre-cabled con	nection compo	nonte wi	th DVC cable	
2-pole	nection compo	iciitə wi	tii i vo cabie	
NC + NO	뽔	1	ZCMC21L1	0.100
snap action	_ith	2	ZCMC21L2	0.190
	U GN-YE ∃	3	ZCMC21L3	0.280
	BK-WH	5	ZCMC21L5	0.460
	Δ	7	ZCMC21L7	0.700
		10	ZCMC21L10	0.970
NC + NC	원	1	ZCMC29L1	0.100
snap action	7-7 GN-YE	2	ZCMC29L2	0.190
		3	ZCMC29L3	0.280
	BK-WH	5	ZCMC29L5	0.460
	ш ш	7	ZCMC29L7	0.700
		10	ZCMC29L10	0.970
NC + NO	M T GN-AE	1	ZCMC25L1	0.100
break before make, slow break		2	ZCMC25L2	0.190
Slow break		3	ZCMC25L3	0.280
		5	ZCMC25L5	0.460
		7	ZCMC25L7	0.700
		10	ZCMC25L10	0.970
3-pole				
NC + NC + NO	뾨 입 꾋	1	ZCMC37L1	0.100
break before make, slow break	7-7-1 GN-YI	E 2	ZCMC37L2	0.190
Slow bleak	RD-WH	<u> </u>	ZCMC37L5	0.460
NC + NC + NO	뾨 입 꾋	1	ZCMC39L1	0.100
snap action	7-7-\ GN-YI	E 2	ZCMC39L2	0.190
	RD-WH	<u> </u>	ZCMC39L5	0.460
4-pole				
2 NC + 2 NO	뾨 입 핑 >	1	ZCMC4DL1	0.100
snap action	/		ZCMC4DL2	0.190
	3K-WH 3CD-WH 1-WH	<u>-</u> 5	ZCMC4DL5	0.460

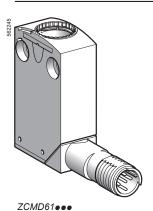
Pre-cabled co	nnection compoi	nents with	CEI cable	
(Connitato Elettro	tecnico Italiano) (1)			
Type of contact	Scheme	Length of CEI cable in metres	Reference	Weight kg
2-pole				
NC + NO	집	1	ZCMC21E1	0.100
snap action	F-1 GN-YE	2	ZCMC21E2	0.190
	_4	3	ZCMC21E3	0.280
	%-WH   NB   -  -	5	ZCMC21E5	0.460
	_	7	ZCMC21E7	0.700
		10	ZCMC21E10	0.970

Pre-cabled connection components with halogen free cable (2)					
Type of contact	Positive operation (3)	Scheme	Length of cable in metres	Reference	Weight kg
2-pole					
NC + NO break before make, slow break	$\Theta$	1 3 5 4 - 5 4	0.6	ZCMC25T06	0.080
NC + NO	$\Theta$	1 3	1	ZCMC21T1	0.130
snap action		5	2	ZCMC21T2	0.250
		2l l4 <del>+</del>	5	ZCMC21T5	0.520

- (1) Cable not UL or CSA certified.
  (2) For other types of contacts and cable, please contact our Customer Care Centre.
- (3) → bodies with contacts assuring positive opening operation.



XC Standard range Miniature design, metal, XCMD Separate parts

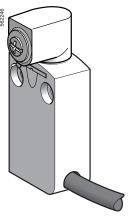




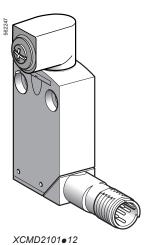
ZCE05







XCMD2•01L1



<b>Bodies with</b>	gold con	tacts, coi	nnector		
Type of contact	Positive operation (1)	Scheme	Connector	Reference	Weight kg
2-pole					
NC + NO snap action	-	 	M12 5-pin	ZCMD61C12	0.065
NC + NC snap action	-	 	M12 5-pin	ZCMD69C12	0.065
Single-pole					
CO snap action	_	<u></u>	M12 4-pin	ZCMD61M12	0.065

	•			
Accessories				
Description	Positive operation (1)	Suitable levers for use with head	Reference	Weight kg
Rotary head, without lever, spring return, for actuation from right AND left or from right OR left	$\Theta$	ZCY12, ZCY15, ZCY16, ZCY17, ZCY18, ZCY19, ZCY22, ZCY23, ZCY25, ZCY26, ZCY39, ZCY53, ZCY54, ZCY55, ZCY81	ZCE05	0.045
Spacer for mounting multi-track XCMD	_	-	XCMZ06	0.005
Spacer for angular positioning of heads with adjustable levers, for values other than -90°, 0° and 90°	-	-	XCMZ07	0.005

Pre-cabled be operating lever)	ody/con	tact asse	mblies, with	rotary head	(without
Type of contact	Positive operation (1)	Scheme	Length of cable in metres	Reference	Weight kg
2-pole					
NC + NO snap action	$\Theta$	HM-YB	1 ″E ¬ <del>-</del>	XCMD2101L1	0.180
NC + NO break before make, slow break	$\Theta$	HM-YM GN-Y	1 E - <del>-</del>	XCMD2501L1	0.180

Body/contac connector	t asseml	blies with	rotary head	(without operating	g lever),
Type of contact	Positive operation (1)	Scheme	Connector	Reference	Weight kg
2-pole					
NC + NO snap action	$\Theta$	    	M12 5-pin	XCMD2101C12	0.110
Single-pole					
CO snap action	-	<u> </u>	M12 4-pin	XCMD2101M12	0.110

<sup>(1)</sup>  $\bigoplus$  bodies with contacts or head assuring positive opening operation.

XC Standard range Miniature design, metal, XCMV for mobile equipment

The range of XCMV limit switches is an offer dedicated to mobile equipment:

- special connectors
- a metal body for robustness
- compact dimensions (among the smallest on the market)
- IP 69 degree of protection, for high-pressure cleaning
- for outdoor use at -25 °...+70 °C

Complete units with Deutsch DT04-4P connector

□ With head for linear (plunger) and rotary (lever) movement







Page 53

Complete units with AMP Superseal 1.5 connector

☐ With head for linear (plunger) and rotary (lever) movement







Page 54

Complete units with M12 connector

☐ With head for linear (plunger) and rotary (lever) movement







Page 55

## Presentation (continued)

## **Limit switches**

XC Standard range Miniature design, metal, XCMV for mobile equipment

Modular units
Body with Deutsch DT04-4P connector

□ With head for linear (plunger) and rotary (lever) movement



Pages 56 and 57

**Modular units**Body with AMP Superseal 1.5 connector

☐ With head for linear (plunger) and rotary (lever) movement



Pages 58 and 59

**Modular units**Body with M12 connector

□ With head for linear (plunger) and rotary (lever) movement



Pages 60 and 61

Modular units
Pre-cabled body

☐ With head for linear (plunger) and rotary (lever) movement



Pages 62 and 63

Product certifications				
-roduct certifications		C€, cURus		
Conformity to standards	Products	EN/IEC 60947-5-1, UL 508, CSA C22-2 n°14	4, GB/T 14048.5	
	Machine assemblies	EN/IEC 60204-1		
rotective treatment		Standard version: "TC"		
mbient air temperature	For operation	- 25+ 70 °C (- 40+ 70 °C with ZCE106, Z	CE026 and ZCE016 heads)	
	For storage	-40+70 °C		
bration resistance		± 1.76 mm (1060 Hz), 25 gn (61500 Hz)		
nock resistance		40 gn (11 ms) conforming to IEC 60068-2-27		
otection against electric		Class III conforming to IEC 61140, class 2 co		
egree of protection	Switches with 4-pin M12 connector Switches with 4-pin Deutsch DT04-4P or AMP Superseal 1.5 connector Pre-cabled swiches	IP 66, IP 67 and IP 69 conforming to EN/IEC 60529; IK 04 conforming to EN 62262  IP 66, IP 67 and IP 69 conforming to EN/IEC 60529; IK 06 conforming to EN 62262  IP 66 and IP 67 conforming to EN/IEC 60529		
aterials		Body: Zamak, heads: Zamak, connectors: th		
peat accuracy		0.1 mm on the tripping points, with 1 million of	• • • • • • • • • • • • • • • • • • • •	
Contact block cha	ractoristics	or thin or the dipping points, with i million of	sporating system for mode with one planger	
		- AC 44:11 C4 V 1 CA 186 - 4 A		
ated operational haracteristics	Switches with 4-pin M12 connector  Pre-cabled swiches or switches	∼ AC-14; Ue = 24 V, Ie = 3 A, Ith = 4 A     ∴ DC-13; Ue = 24 V, Ie = 1 A, conforming to     ∼ AC-14; Ue = 24 V, Ie = 3 A, Ith = 6 A	IEC 60947-5-1, EN 60947-5-1	
	with 4-pin Deutsch DT04-4P or AMP Superseal 1.5 connector	DC-13; Ue = 24 V, Ie = 1 A, conforming to	IEC 60947-5-1, EN 60947-5-1	
ated insulation voltage		Ui = 36 V degree of pollution 3 conforming to Ui = 36 V conforming to UL 508, CSA C22-2		
ated impulse withstand v	oltage	U imp = 0.8 kV conforming to IEC 60947-1, I		
ositive operation (depend	<del>_</del>	NC contacts with positive opening operation		
esistance across termina	<u> </u>	≤ 25 mΩ conforming to IEC 60255-7 categor		
nort-circuit protection.		6 A cartridge fuse type gG (gI)	, -	
·	(for head with end plunger)	Snap-action contact: 0.01 m/minute, slow-br	reak contact: 6 m/minute	
	AC supply	<ul> <li>Utilisation categories AC-14 and DC-13</li> <li>Maximum operating rate: 3600 operating</li> <li>Load factor: 0.5</li> <li>XCMV snap-action</li> </ul>	XCMV slow-break	
	$\sim$ 50/60 Hz $\sim$ inductive circuit	(NC+NO contact) Switches with M12 connector	(NC+NO contact)	
		0.5 1 2 3 4 5 6 10  Current in A	0.5 1 2 3 4 5 6 10 Current in A	
		Pre-cabled switches or switches with Deu	utsch DT04-4P or AMP Superseal 1.5 connect	
		See 5 4 3 1 1th 3 2 2 12/24 V 1 1 10.5 1 2 3 4 5 6 10	S 5 4 4 12/24 V 11/10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		Current in A	Current in A	
	DC supply	Power broken in W for 0.1 million operating cycles Voltage V 24	Power broken in W for 1.3 million operating cycles Voltage V 24	

Type of head		Plunger (fixing by the body	)	Rotary (fixing by the body)
		S. Reinneumentage		
Form conforming to EN 50	047	В	С	A
Type of operator		Metal end plunger	Steel roller plunger	Thermoplastic roller lever (1)
Positive operation		$\Theta$	$\Theta$	$\Theta$
References of cor	nplete units with male De	eutsch DT04-4P conne	ector	
2-pole NC + NO snap actio	n	XCMV2110D44	XCMV2102D44	XCMV2115D44
2 4		1,8 4,2(P) 1,8 4,2(P) 3,4 0 5mm 0,8	3,1(A) 7(P)	25° 70°(P) 34 0 90° 12°
2-pole NC + NO break befo	re make, slow break	XCMV2510D44	XCMV2502D44	XCMV2515D44
2 4		1,8 3,1(P) 134 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	25° 45°(P) 1-2 3-4 0 36° 90°
Weight (kg)		0.090	0.090	0.130
Contact operation		closed open		(A) = cam displacement (P) = positive opening point
	haracteristics not shown			
Switch actuation		On end	By 30° cam	1
Type of actuation				
Maximum actuation speed		0.5 m/s	0.5 m/s	1.5 m/s
Mechanical durability (in millions of operating cycle	es)	10		
Minimum force or torque	For tripping	8.5 N	7 N	0.1 N.m
	For positive opening	42.5 N	35 N	0.5 N.m

<sup>(1)</sup> Can be adjusted throughout 360° in 15° steps.

Type of head		Plunger (fixing by the body	)	Rotary (fixing by the body)
		* Linnachipus	* Teamonnique	* Interestables
Form conforming to EN 50	0047	В	С	A
Type of operator		Metal end plunger	Steel roller plunger	Thermoplastic roller lever (1)
Positive operation		$\ominus$	$\ominus$	$\ominus$
	mplete units with male AN		nector	
2-pole NC + NO snap action	on	XCMD2110AM4	XCMD2102AM4	XCMD2115AM4
2 4		1,8 4,2(P) 1,8 4,2(P) 1,8 4,2(P) 5mm 0,8	3,1(A) 7(P) 34 12 34 0 mm	25° 70°(P)  1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-
2-pole NC + NO break before	ore make, slow break	XCMD2510AM4	XCMD2502AM4	XCMD2515AM4
7 4		1,8 3,1(P) 1,2 3,1(P) 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	25° 45°(P) 1-2 3-4 0 36° 90°
Weight (kg)		0.090	0.090	0.130
Contact operation		closed open	1	(A) = cam displacement (P) = positive opening point
Characteristics		opon		· · · · · ·
Switch actuation		On end	By 30° cam	
Type of actuation		H		
Maximum actuation speed		0.5 m/s	0.5 m/s	1.5 m/s
Mechanical durability (in millions of operating cycl	es)	10		
Minimum force or torque	For tripping	8.5 N	7 N	0.1 N.m
	For positive opening	42.5 N	35 N	0.5 N.m

<sup>(1)</sup> Can be adjusted throughout 360° in 15° steps.



Type of head		Plunger (fixing by the body	)	Rotary (fixing by the body)
		(§) Identification	(ii) Independent of the control of t	
Form conforming to EN 50	0047	В	С	A
Type of operator		Metal end plunger	Steel roller plunger	Thermoplastic roller lever (1)
Positive operation		$\Theta$	$\ominus$	$\Theta$
References of cor	mplete units with M12 co	nnector		
2-pole NC + NO snap action	on	XCMV2110M12	XCMV2102M12	XCMV2115M12
2 4		1,8 4,2(P) 1,8 4,2(P) 1,2 3,4 0 5mm 0,8	3,1(A) 7(P) 3,14 1,2 1,4 1,4 1,4	25° 70°(P) 3-4 1-2 3-4 0 90° 12°
2-pole NC + NO break befo	ore make, slow break	XCMV2510M12	XCMV2502M12	XCMV2515M12
2 4		1,8 3,1(P) 12 34 0 2,6 5 mm	3,1(A) 5,6(P) 1.2 3.4 0 4,6 mm	25° 45°(P) 1-2 3-4 0 36° 90°
Weight (kg)		0.090	0.090	0.130
Contact operation		closed open		(A) = cam displacement (P) = positive opening point
Complementary of	characteristics not show	n under general chara	cteristics (see page 51)	
Switch actuation		On end	By 30° cam	
Type of actuation				
Maximum actuation speed		0.5 m/s	0.5 m/s	1.5 m/s
Mechanical durability (in millions of operating cycl	es)	10	,	
Minimum force or torque	For tripping	8.5 N	7 N	0.1 N.m
	For positive opening	42.5 N	35 N	0.5 N.m

<sup>(1)</sup> Can be adjusted throughout 360° in 15° steps.

ype of head	Plunger (fixing	by the body)					Plunger (fixing by the head)	Plunger (fixing by the head)		Rotary (fixing b	y the body)				Multi-
	* Extraction													ZOV45	The state of the s
e of operator	Metal end plunger	Metal end plunger - 40 °C (1)	Metal end plunger with elastomer boot	Steel roller plunger	Steel roller plunger - 40 °C (1)	Retractable steel roller lever plunger	M12 with metal end plunger	M16 with metal end plunger with elastomer boot	M12 with steel roller plunger	Thermoplastic roller lever	Thermoplastic roller lever -40 °C (1)	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's
References of mod	dular units (b	ody with male Γ	(2)   (2)   (2)	P connector an	d removable ter	rminal block)									
-pole C + NO nap action	ZCMV21D44+	ZCMV21D44 + ZCE106 →	ZCMV21D44 + ZCE11 ⊕	ZCMV21D44+ ZCE02⊖	ZCMV21D44 + ZCE026 ⊖	ZCMV21D44 + ZCE24 ⊖	ZCMV21D44 + ZCEF0 →	ZCMV21D44 + ZCEG1 ⊖	ZCMV21D44 + ZCEF2 →	ZCMV21D44 + ZCE01 + ZCY15 →	ZCMV21D44 + ZCE016 + ZCY15 →	ZCMV21D44 + ZCE01 + ZCY16 ⊖	ZCMV21D44 + ZCE01 + ZCY17 →	ZCMV21D44 + ZCE01 + ZCY45 →	ZCMV: ZCE06
7	1,8 4,2(P) 1,2 3,4 1,2 3,4 1,2 3,4 1,2 3,4 1,2 3,4 1,2 3,4 1,2 4,2(P) 5mm	1,8 4,2(P) 1,8 4,2(P) 3,4 0,8	1,8 4,2(P) 1,2 4,2(P) 1,2 3,4 0 5mm 0,8	3,1(A) 7(P)	3,1(A) 7(P)	11,2(A) 25(P) 1-2 3-4 1-2 3-4 0 4,9 mm	1,8 4,2(P) 3-4 3-4 0 5mm	1,8 4,2(P)	3,1(A) 7(P)	25° 70°(P) 34 0 90° 12°	25° 70°(P)	25° 70°(P)	25° 70°(P)	25° 70°(P)	1-2 3-4 1-2 3-4
pole NC + NO reak before make, ow break	ZCMV25D44 + ZCE10 ⊖	ZCMV25D44 + ZCE106 ⊖	ZCMV25D44 + ZCE11 ⊖	ZCMV25D44+ ZCE02⊖	ZCMV25D44 + ZCE026 ⊖	ZCMV25D44 + ZCE24 ⊖	ZCMV25D44 + ZCEF0 →	ZCMV25D44 + ZCEG1 →	ZCMV25D44 + ZCEF2 →	ZCMV25D44 + ZCE01 + ZCY15 →	ZCMV25D44 + ZCE016 + ZCY15 →	ZCMV25D44 + ZCE01 + ZCY16 →	ZCMV25D44 + ZCE01 + ZCY17 →	ZCMV25D44 + ZCE01 + ZCY45 →	ZCMV ZCE0
4	1,8 3,1(P) 1,2 3,4 0 2,6 5 mm	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm	1,8 3,1(P) 1.2 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	11,2(A) 19,5(P) 1-2 3-4 0 16 mm	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm	1,8 3,1(P) 1,2 3,4 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	25° 45°(P) 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 3-4 0 36° 90°	25° 45°(P) 3-4 0 36° 90°	1-2 3-4
-pole	ZCMV29D44 + ZCE10 ⊖	ZCMV29D44 + ZCE106 ⊖	ZCMV29D44 + ZCE11 ⊖	ZCMV29D44 + ZCE02 ⊖	ZCMV29D44 + ZCE026 ⊖	ZCMV29D44 + ZCE24 →	ZCMV29D44 + ZCEF0 →	ZCMV29D44 + ZCEG1 ⊖	ZCMV29D44 + ZCEF2 →	ZCMV29D44 + ZCE01 + ZCY15 →	ZCMV29D44 + ZCE016 + ZCY15 →	ZCMV29D44 + ZCE01 + ZCY16 →	ZCMV29D44 + ZCE01 + ZCY17 →	ZCMV29D44 + ZCE01 + ZCY45 →	ZCMV ZCE0
4	1,8 4,2 (P) 1,8 4,2 (P) 1,2 3,4 3,2 4 1,2 3,4 4 1,2 3,4 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,2 4 1,4 4 1,	1,8 4,2 (P)	1,8 4,2 (P)	3,1(A) 7(P)	3,1(A) 7(P)	11,2(A) 25(P) 1-2 3-4 1-2 3-4 0 4,9 mm	1,8 4,2 (P) 1,2 34 1,2 34 0 5 mm	1,8 4,2 (P)	3,1(A) 7(P) 34 0 mm	25° 70°(P)	25° 70°(P) 1-2 3-4 1-2 1-2 3-4 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	25° 70°(P)	25° 70°(P)	25° 70°(P)	1-2 3-4 1-2 3-4
ontact operation			(A) = cam displac (P) = positive ope	cement ening point	→ NC contact w	ith positive opening	operation	closed open		(A) = cam displac (P) = positive ope	ement ning point	,	→ NC contact wi	ith positive opening o	peration
complementary ch		s not shown	under gene		ristics (see pa	ge 51)									
	On end			By 30° cam			On end	On end	By 30° cam	l					By any
pe of actuation	₩ F							<u> \   </u>		- O					
aximum actuation speed	0.5 m/s							0.5 m/s	0.1 m/s	1.5 m/s				1.5 m/s	1 m/s
chanical durability	10 million operati	ng cycles		_		_	_	10 million operation						10 million	5 millio
ominal For tripping	8.5 N		·	7 N		2.5 N	8.5 N	8.5 N	7 N.m	0.1 N.m		·		0.1 N.m	0.1 N.ı
				35 N		12.5 N	42.5 N	42.5 N	35 N.m	0.5 N.m				0.5 N.m	-
orce or For positive opening	42.5 N														





								_								
Type of head	Plunger (fixing	g by the body)					Plunger (fixing by the head)		Plunger (fixing by the head)		Rotary (fixing by	y the body)				Multi-directio
	* Education														XCV45	
ype of operator	Metal end plunger	Metal end plunger - 40 °C (1)	Metal end plunger with elastomer boot	Steel roller plunger	Steel roller plunger - 40 °C (1)	Retractable steel roller lever plunger	M12 with metal end plunger	_	M16 with metal end plunger with elastomer boot	M12 with steel roller plunger	Thermoplastic roller lever	Thermoplastic roller lever -40 °C (1)	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's whisker
References of m	nodular units (	body with male	AMP Superseal	1.5 connector a	ind removable t	erminal block)										
2-pole 'NC + NO" snap action	ZCMD21AM4+ ZCE10 →	ZCMD21AM4 + ZCE106 ⊖	ZCMD21AM4 + ZCE11 🖯	ZCMD21AM4 + ZCE02 →		ZCMD21AM4 + ZCE24 ⊖	ZCMD21AM4 + ZCEF0 ⊖		ZCMD21AM4+ ZCEG1⊖	ZCMD21AM4 + ZCEF2 →	ZCMD21AM4 + ZCE01 + ZCY15 →	ZCMD21AM4+ ZCE016+ ZCY15 →	ZCMD21AM4 + ZCE01 + ZCY16 →	ZCMD21AM4+ ZCE01+ ZCY17 →	ZCMD21AM4 + ZCE01 + ZCY45 →	ZCMD21AM4 ZCE06
4	1.8 4.2(P) 34 0 0,8 5mm	1,8 4,2(P) 1-2 3-4 1-2 3-2 3-4 0,8	1,8 4,2(P) 34 12 34 0 5mm	3,1(A) 7(P) 1-2 3-4 1-2 3-4 0 mm	3,1(A) 7(P) 1-2 3-4 1-2 3-4 0 mm	11,2(A) 25(P) 12 34 12 34 0 4,9 mm	1,8 4,2(P) 1,2 3,4 3,2 3,4 0,8		1,8 4,2(P) 34 12 34 0 5mm	3,1(A) 7(P) 1-2 3-4 1-2 3-4 0 mm	25° 70°(P)	25° 70°(P) 12° 25° 70°(P) 90° 12°	25° 70°(P) 1-2 3-4 1-2 3-4 0 90° 12°	25° 70°(P) 3-4 1-2 3-4 0 90° 12°	25° 70°(P) 3-4 1-2 3-4 0 90° 12°	20° 3-4 1-2 3-4 1-2 3-4 1-2 3-4
2-pole NC + NO break before make, slow break	ZCMD25AM4 + ZCE10 →	ZCMD25AM4+ ZCE106 →	ZCMD25AM4 + ZCE11 ⊖	ZCMD25AM4 + ZCE02 ⊖	ZCMD25AM4 + ZCE026 ⊖	ZCMD25AM4 + ZCE24 ⊖	ZCMD25AM4 + ZCEF0 ⊖	_	ZCMD25AM4 + ZCEG1 ⊖	ZCMD25AM4 + ZCEF2 →	ZCMD25AM4 + ZCE01 + ZCY15 →	ZCMD25AM4 + ZCE016 + ZCY15 →	ZCMD25AM4 + ZCE01 + ZCY16 →	ZCMD25AM4 + ZCE01 + ZCY17 →	ZCMD25AM4 + ZCE01 + ZCY45 →	ZCMD25AM4 ZCE06
7-7	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm	1,8 3,1(P) n 0 2,6 5 mm	1,8 3,1(P) 1,2 3,4 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	11,2(A) 19,5(P	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm		1,8 3,1(P) 1,2 3,4 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	20° 3-4 40°
2-pole NC + NC snap action	ZCMD29AM4+ ZCE10 →	ZCMD29AM4+ ZCE106 →	ZCMD29AM4+ ZCE11 ⊖	ZCMD29AM4 + ZCE02 ⊖	ZCMD29AM4+ ZCE026⊖	ZCMD29AM4 + ZCE24 →	ZCMD29AM4 + ZCEF0 →	_	ZCMD29AM4+ ZCEG1 ⊖	ZCMD29AM4+ ZCEF2 →	ZCMD29AM4+ ZCE01+ ZCY15 ⊖	ZCMD29AM4 + ZCE016 + ZCY15 ⊖	ZCMD29AM4 + ZCE01 + ZCY16 ⊖	ZCMD29AM4+ ZCE01+ ZCY17 →	ZCMD29AM4 + ZCE01 + ZCY45 ⊖	ZCMD29AM4 ZCE06
2 4	1,8 4,2 (P)	1,8 4,2 (P)	1,8 4,2 (P) 1,2 34 1,2 34 0 5 mm	3,1(A) 7(P) 1-2 3-4 1-2 3-4 0 mm	3,1(A) 7(P) 1-2 3-4 0 mm	11,2(A) 25(P) 1-2 3-4 1-2 3-4 0 4,9 mm	1,8 4,2 (P) 1,2 3,4 1,2 3,4 0,8 5 mm		1,8 4,2 (P) 1,8 4,2 (P) 1,2 34 1,2 34 0 5 mm	3,1(A) 7(P)	25° 70°(P)	25° 70°(P)	25° 70°(P) 3-4 1-2 3-4 1-2 3-4 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	25° 70°(P) 3-4 1-2 3-4 1-2 3-4 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	25° 70°(P) 3.4 1.2 3.4 0 90° 12°	20° 1-2 3-4 1-2 3-4 1-2 10°
Contact operation	closed open		(A) = cam displac (P) = positive op		→ NC contact w	vith positive opening	goperation	_	closed open		(A) = cam displace (P) = positive ope			→ NC contact wi	th positive opening o	pperation
Complementary	·	re not chown	. ,	• .	ristics (soo pa	go 51)					, , , , , , , , , , , , , , , , , , , ,	Jr				
Switch actuation	On end	oo not snown	rander gene	By 30° cam	iotios (see pa	ge o i j	On end		On end	By 30° cam						By any moving
Type of actuation	<u> </u>					- 9	<u>₩</u>		<u> </u>	<b>→</b>	<del>-</del>					<b>→</b>
Maximum actuation spec	ed 0.5 m/s						1	_	0.5 m/s	0.1 m/s	1.5 m/s				1.5 m/s	1 m/s
lechanical durability	10 million operat	ting cycles						_	10 million operating	g cycles	<u> </u>				10 million	5 million
lominal For tripping	8.5 N			7 N		2.5 N	8.5 N	_	8.5 N	7 N.m	0.1 N.m				0.1 N.m	0.1 N.m
orce or orque For positive opening	42.5 N			35 N		12.5 N	42.5 N	_	42.5 N	35 N.m	0.5 N.m				0.5 N.m	-
Connection (1) For use at -40 °C.	Male AMP Supe	rseal 1.5 connector	r 					_	Male AMP Superse	al 1.5 connector						
2) Nitrile for indoor use																







<sup>(2)</sup> Nitrile for indoor use.
(3) Value taken with actuation by moving part at 100 mm from the fixing.

Type of head	Plunger (fixing	by the body)					Plunger (fixing by the head)	-	Plunger (fixing by the head)		Rotary (fixing by	the body)				Multi-directional
															ZOVAS	
Type of operator	Metal end plunger	Metal end plunger - 40 °C (1)	Metal end plunger with elastomer boot (2)	Steel roller plunger	Steel roller plunger - 40 °C (1)	Retractable steel roller lever plunger	M12 with metal end plunger	-	M16 with metal end plunger with elastomer boot	M12 with steel roller plunger	Thermoplastic roller lever	Thermoplastic roller lever -40 °C (1)	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's whisker" (3)
References of mod	ular units (b	odv with male N	( )	and removable t	erminal block)											
2-pole "NC + NO" snap action	ZCMV21M12+		ZCMV21M12 + ZCE11 →	ZCMV21M12 + ZCE02 →	ZCMV21M12 + ZCE026 →	ZCMV21M12+ ZCE24⊖	ZCMV21M12 + ZCEF0 →		ZCMV21M12 + ZCEG1 ⊕	ZCMV21v + ZCEF2 →	ZCMV21M12 + ZCE01 + ZCY15 →	ZCMV21M12 + ZCE016 + ZCY15 →	ZCMV21M12 + ZCE01 + ZCY16 →	ZCMV21M12 + ZCE01 + ZCY17 →	ZCMV21M12 + ZCE01 + ZCY45 ⊖	ZCMV21M12 + ZCE06
2 4	1,8 4,2(P) 1,8 4,2(P) 1,2 3,4 5 1,8 4,2(P) 5,7 5 1,8 4,2(P)	1,8 4,2(P) 1,8 4,2(P) 1,2 3,4 1,2 3,4 1,2 3,4 1,3 4,2(P) 5 mm	1,8 4,2(P) 34 1,2 34 0 5mm	3,1(A) 7(P)	3,1(A) 7(P)	11,2(A) 25(P) 1-2 3-4 1-2 3-4 0 4,9 mm	1,8 4,2(P) 1,8 4,2(P) 1,8 4,2(P) 1,8 4,2(P) 1,8 4,2(P) 1,8 4,2(P)		1,8 4,2(P) 1,8 4,2(P) 1,2 1,8 4,2(P) 1,8 4,2(P) 1,8 4,2(P)	3,1(A) 7(P)	25° 70°(P)	25° 70°(P) 1-2 3-4 1-2 3-4 0 90° 12°	25° 70°(P)	25° 70°(P) 34 12 34 12 34 12 34 12 34 12 34 12 34 12 34 12 34 12 34 12 34 12 34 12 34 12 34 12 12 12 12 12 12 12 12 12 12	25° 70°(P) 25° 70°(P) 24 12° 90° 12°	20° 1-2 3-4 1-2 3-4 10°
2-pole NC + NO break before make, slow break	ZCMV25M12 + ZCE10 →	ZCMV25M12 + ZCE106 →	ZCMV25M12 + ZCE11 →	ZCMV25M12+ ZCE02 →	ZCMV25M12 + ZCE026 →	ZCMV25M12 + ZCE24 →	ZCMV25M12 + ZCEF0 →	_	ZCMV25M12 + ZCEG1 ⊖	ZCMV25M12 + ZCEF2 →	ZCMV25M12 + ZCE01 + ZCY15 ⊖	ZCMV25M12 + ZCE016 + ZCY15 ⊖	ZCMV25M12 + ZCE01 + ZCY16 →	ZCMV25M12 + ZCE01 + ZCY17 ⊖	ZCMV25M12 + ZCE01 + ZCY45 ⊖	ZCMV25M12 + ZCE06
7 4	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	11,2(A) 19,5(P) 1-2 3-4 0 16 mm	1,8 3,1(P) 1-2 3-4 0 2,6 5 mm		1,8 3,1(P) 1-2 3-4 0 2,6 5 mm	3,1(A) 5,6(P) 1-2 3-4 0 4,6 mm	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	25° 45°(P) 1-2 3-4 0 36° 90°	1-2 3-4 40°
2-pole NC + NC snap action	ZCMV29M12 + ZCE10 ⊖	ZCMV29M12 + ZCE106 ⊖	ZCMV29M12 + ZCE11 →	ZCMV29M12 + ZCE02 ⊖	ZCMV29M12 + ZCE026 ⊖	ZCMV29M12+ ZCE24⊖	ZCMV29M12 + ZCEF0 →	-	ZCMV29M12 + ZCEG1 →	ZCMV29M12 + ZCEF2 →	ZCMV29M12 + ZCE01 + ZCY15 ⊖	ZCMV29M12 + ZCE016 + ZCY15 →	ZCMV29M12 + ZCE01 + ZCY16 →	ZCMV29M12 + ZCE01 + ZCY17 →	ZCMV29M12 + ZCE01 + ZCY45 →	ZCMV29M12 + ZCE06
2/ 4/ 	1,8 4,2 (P) 1,8 4,2 (P) 1,8 4,2 (P) 5 mm	1,8 4,2 (P)	1,8 4,2 (P)	3,1(A) 7(P)	3,1(A) 7(P)	11,2(A) 25(P)	1,8 4,2 (P)		1,8 4,2 (P) 1,2 3,4 0 5 mm	3,1(A) 7(P) 1-2 3-4 1-2 3-4 1,4	25° 70°(P)	25° 70°(P) 1-2 3-4 1-2 3-4 0 90°	25° 70°(P)	25° 70°(P) 1-2 3-4 1-2 3-4 0 90°	25° 70°(P)	20° 1-2 3-4 1-2 3-4 1-2 3-4 1-0°
Contact operation	closed open		(A) = cam displac (P) = positive ope		O NC contact w	ith positive opening	operation	-	closed open		(A) = cam displace (P) = positive oper			ONC contact wit	h positive opening op	peration
Complementary ch	aracteristic	s not shown	under gene	ral character	istics (see pa	ge 51)										
Switch actuation	On end			By 30° cam			On end		On end	By 30° cam						By any moving part
Type of actuation	<b>⊎</b> 						<u>₩</u> -		□		<del>-</del> 0					*
Maximum actuation speed	0.5 m/s			1				-	0.5 m/s	0.1 m/s	1.5 m/s				1.5 m/s	1 m/s
Mechanical durability	10 million operati	ng cycles						-	10 million operating	cycles	1				10 million	5 million
Nominal For tripping	8.5 N			7 N		2.5 N	8.5 N	-	8.5 N	7 N.m	0.1 N.m				0.1 N.m	0.1 N.m
force or For positive	42.5 N			35 N		12.5 N	42.5 N	=	42.5 N	35 N.m	0.5 N.m				0.5 N.m	_
opening Connection	M12 connector					<u> </u>		_	M12 connector							
<ul><li>(1) For use at -40 °C.</li><li>(2) Nitrile for indoor use.</li><li>(3) Value taken with actuation</li></ul>	by moving part at	100 mm from the fi	xing.													



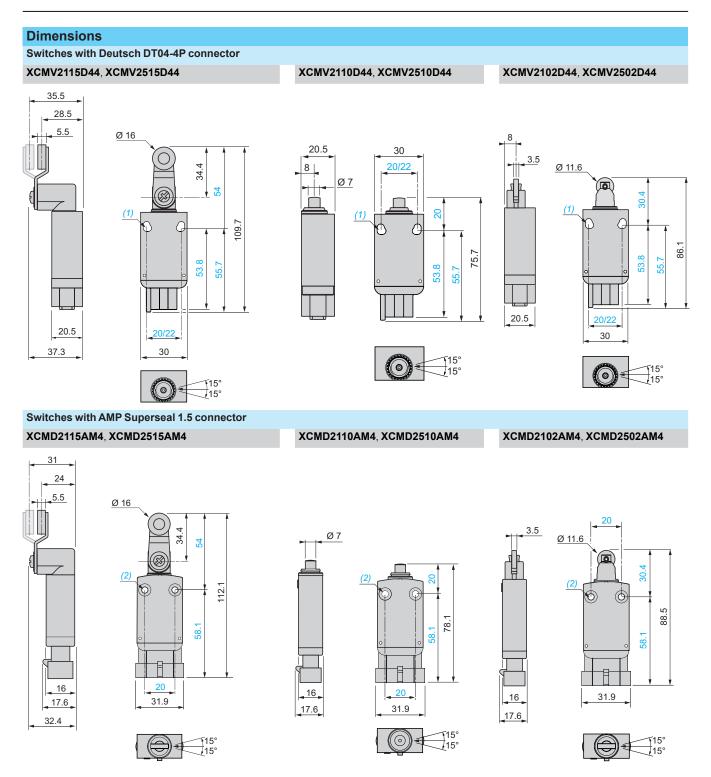


Type of h	head	Plunger (fixing	by the body)					Plunger (fixing by the head)	Plunger (fixing by the head)		Rotary (fixing by	the body)				Multi-directional
		* Information													ZCY45	
Type of op	erator	Metal end plunge	Metal end plunge - 40 °C (1)	r Metal end plunge with elastomer boot (2)	Steel roller plunger	Steel roller plunger - 40 °C (1)	Retractable steel roller lever plunger	M12 with metal end plunger	M16 with metal end plunger with elastomer boot	M12 with steel roller plunger	Thermoplastic roller lever	Thermoplastic roller lever -40 °C (1)	Steel roller lever	Roller lever with ball bearing mounted roller	Variable length thermoplastic roller lever	"Cat's whisker" (3)
Refere	nces of mod	dular units (p	re-cabled body a	and removable to	erminal block)										,	
4-pole 2 No snap actio		ZCMV41L03 + ZCE10 →	ZCMV41L03 + ZCE106 →	ZCMV41L03+ ZCE11 →	ZCMV41L03 + ZCE02 →	ZCMV41L03 + ZCE026 →	ZCMV41L03 + ZCE24 ⊖	ZCMV41L03 + ZCEF0 →	ZCMV41L03+ ZCEG1⊖	ZCMV41L03 + ZCEF2 →	ZCMV41L03 + ZCE01 + ZCY15 →	ZCMV41L03 + ZCE016 + ZCY15 →	ZCMV41L03 + ZCE01 + ZCY16 →	ZCMV41L03 + ZCE01 + ZCY17 →	ZCMV41L03 + ZCE01 + ZCY45 →	ZCMV41L03 + ZCE06
BK-WH RD BN BN BN BN	GN-YE	1,8 4,2(P) 80-80-494 80-80-494 80-80-494 80-80-494 80-80-494 91-47-494 91-80-80-494 91-47-494 91-80-80-494 91-47-494 91-80-80-494 91-47-494 91-80-80-494 91-80-80-494 91-80-80-494 91-80-80-494 91-80-80-494 91-80-80-494 91-80-80-494 91-80-80-494 91-80-80-80-494 91-80-80-80-494 91-80-80-80-494 91-80-80-80-494 91-80-80-80-80-80-80 91-80-80-80-80-80 91-80-80-80-80 91-80-80-80-80 91-80-80-80-80 91-80-80-80-80 91-80-80-80-80 91-80-80-80-80 91-80-80 91-80-8	1,8 4,2(P) 80-80-90 80-80-90 80-80 80-80 91-91-91-91-91 80-80-91 91-91-91-91 9	1,8 4,2(P) BN-BU-NN BN-BU-NN BN-BU-NN BN-BU-NN BN-BU-NN NN-BU-NN N	3,1(A) 7(P) RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH RS-RD-WH	BK.BK.WH BD.BD.WH BD.BD.WH BK.BK.WH BK.BK.WH BK.BK.WH BK.BW.WH BK.	11,2(A) 25(P) R0-B0-VH1 R0-B0-B0-VH1 B0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-B0-VH1 R0-B0-VH1 R0-B0-R0-VH1 R0-B0-R0-WH1 R0-	1,8 4,2(P) 80-60-7019 80-7019 80-7019 80-7019 80-7019 80-7019 80-7019 80-7019 80-7019 80	1,8 4,2(P) INC. DEC. WITH IN THE COLUMN TO T	BK.BK.WH BD.BQ.WH BD.BQ.WH BC.BK.WH BC.	25' 70'(P) BIS BU WH BIS B	25' 70'(P)	25° 70°(P) BICAL WHITE BIT STATE OF THE STAT	25' 70'(P) BIS BU WH BIS B	25° 70°(P)	BIS-BIS-WH RO-RED-WH BIS-BIS-WH B
Contact op	peration	closed		(A) = cam displac		→ NC contact w	ith positive opening	g operation	closed		(A) = cam displace			→ NC contact wit	h positive opening op	peration
Compl	omonton: al	open	not obour	(P) = positive ope	• .	otion (account	F0)		□ open		(P) = positive oper	ing point				
Switch act		On end	s not snown	under genera	By 30° cam	Sucs (see page	9 52)	On end	On end	By 30° cam						By any moving part
Type of act		₩ C			- A			<u>₩</u>	<u>₩</u>	<b>=</b>	<del>-</del> 0					<b>→</b>
Maximum a	actuation speed	0.5 m/s					•		0.5 m/s	0.1 m/s	1.5 m/s				1.5 m/s	1 m/s
Mechanica	al durability	10 million operatir	ng cycles						10 million operating	cycles					10 million	5 million
Nominal force or	For tripping	8.5 N			7 N		2.5 N	8.5 N	8.5 N	7 N.m	0.1 N.m				0.1 N.m	0.1 N.m
torque	For positive opening	42.5 N			35 N		12.5 N	42.5 N	42.5 N	35 N.m	0.5 N.m				0.5 N.m	_
Connectio		PvR cable, length	30 cm		<u> </u>		1		PvR cable, length 3	0 cm	1				1	1

- (1) For use at -40 °C.
  (2) Nitrile for indoor use.
  (3) Value taken with actuation by moving part at 100 mm from the fixing.



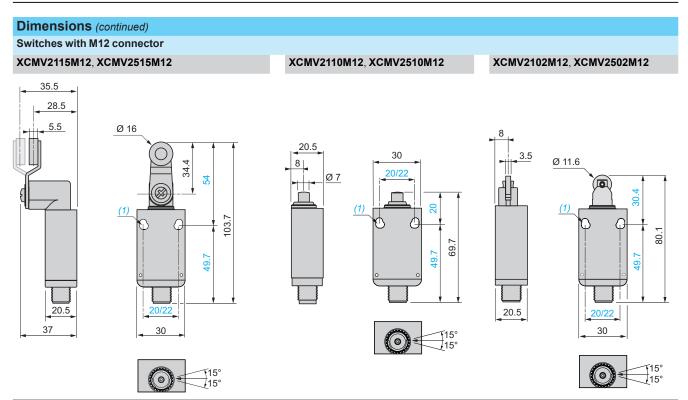




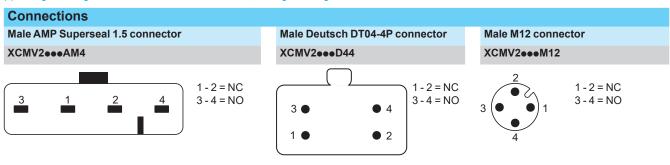
- (1) 2 elongated fixing holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 elongated fixing holes Ø 4.3 on 20 mm centres. (2) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.



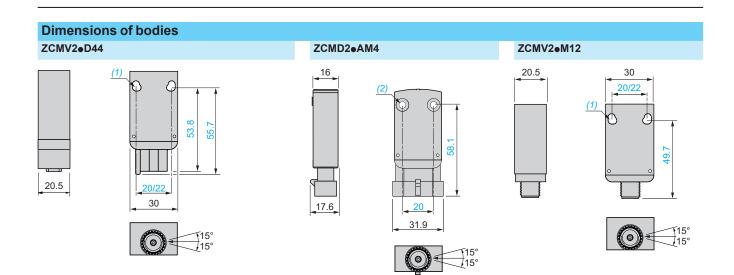
XC Standard range Miniature design, metal, XCMV Complete units for mobile equipment



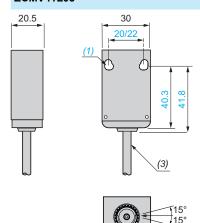
(1) 2 elongated fixing holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 elongated fixing holes Ø 4.3 on 20 mm centres.



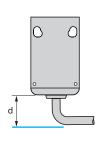
XC Standard range Miniature design, metal, XCMV Modular units for mobile equipment



#### ZCMV41L03



Mounting: distance required for connection



d: min. 20 mm

## **Dimensions of heads**

ZCE106, ZCE10



#### ZCE11

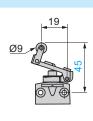


## ZCE02, ZCE026



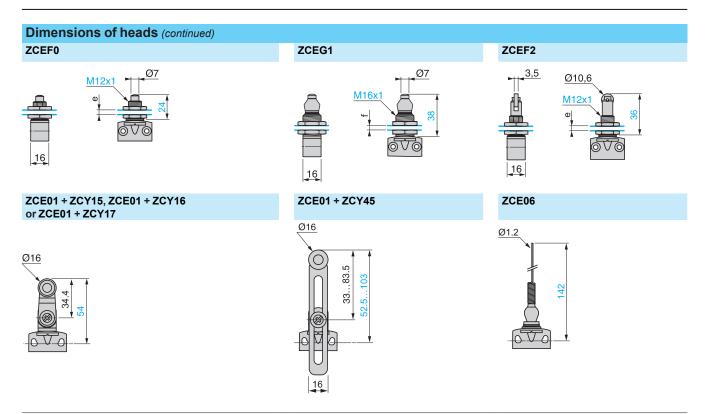
#### ZCE24





- (1) 2 elongated fixing holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 elongated fixing holes Ø 4.3 on 20 mm centres.
  (2) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.
  (3) External diameter of cable 6.4 mm.





e: 8 mm max., panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm. f: 8 mm max., panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

XC Basic range Miniature design, plastic, XCMH Pre-cabled

# Complete units pre-cabled

☐ With head for linear movement (plunger), lateral or axial cable output



Pages 70 et 71

 $\hfill \square$  With head for rotary movement (lever), lateral or axial cable output



Page 71

☐ With head for multi-directional movement, lateral cable output



Page 72

<b>Environment chara</b>	icteristics	
Conformity to standards	Products	CE, 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		cULus, CCC, UKCA
Protective treatment	Standard version	"TC"
Ambient air temperature	For operation	- 25+ 70 °C
	For storage	-40+70 °C
Vibration resistance	Conforming to IEC 60068-2-6	5 gn (10500 Hz)
Shock resistance	Conforming to IEC 60068-2-27	25 gn (18 ms)
Electric shock protection		Class II conforming to IEC 61140 and NF C 20-030
Degree of protection		IP 66, IP67 conforming to IEC 60529 IK 04 conforming to IEC 50102
Materials	Bodies	Plastic
	Heads	Zamak
Contact block char	acteristics	
Rated operational character	ristics	∼ AC-15 ; C300 (Ue = 240 V, le = 0.75 A) ; Ith = 3 A
		DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix C, EN 60947-5-1
Rated insulation voltage		Ui = 300 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 vo	ltage	U imp = 4 kV conforming to IEC 60947-1, IEC 60664
Short-circuit protection		6 A cartridge fuse type gG (gl)

Type of he	ad	Plunger (fixing	by the body)					
		· S REMINISTRATION IN THE PARTY OF THE PARTY	• Eterocondes	• Independent of the second	(a) Renvezantes	* International **	• Estatement •	(a) Removement
Type of ope	rator	Metal end plunge	r	Metal end plunger with silicone boot (1)	Steel roller plunger approach	for lateral cam	Steel roller plunger for traverse cam approach	Thermoplastic roller lever plunger, horizontal actuation in 1 direction
Cable outpu	it	Lateral	Axial	Lateral	Lateral	Axial	Lateral	Lateral
Reference Management M	Ces 2-pole NC + NO snap action	XCMH2110L1 ⇒ XCMH2110L2 ⇒ XCMH2110L3	XCMH2110LA1 ♣	XCMH211AL05 ⇒  XCMH211AL1	XCMH2102L1  → XCMH2102L2  → XCMH2102L3  → XCMH2102L5  → XCMH2102L6  → XCMH2102L7  → XCMH2102L8  → XCMH2102L9	XCMH2102LA1  ♣	XCMH2103L1 → XCMH2103L2 → XCMH2103L3 → XCMH2103L5 → XCMH2103L8	XCMH2121L1 → XCMH2121L2 → XCMH2121L5
HW NB	2-pole NC + NC snap action	XCMH2910L1	1,8 4,2(P) BKBKWH 1,8 4,2(P) BKBKWH 1,8 4,2(P) BKBKWH 1,8 4,2(P)	1,8 4,2(P) BR BU 0 BR BU 0 0,8	XCMH2902L1  → XCMH2902L5  → 3,1(A) 7(P)  BR-BU-WH1 BN-BU U	BK-BK-WH 3,1(A) 7(P) BN-BU WH	XCMH2903L1  →  SK-BK-WH 3,1(A) 7(P) BN-BU WH 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65(A) 14 (P) BN 88 U Wh BN 80 U M BN
Weight (kg)	0.5 m cable (L05)  1 m cable (L1)  2 m cable (L2)  3 m cable (L3)  5 m cable (L5)  6 m cable (L6)  7 m cable (L7)  8 m cable (L8)	- 0.064 0.092 0.120 - - -	- 0.064 - - - - -	0.055 0.069 - - - - -		- 0.070 - - - - -	- 0.070 0.099 0.127 0.184 - - 0.269	- 0.077 0.106 - 0.191 - -
Contact ope	9 m cable (L9) eration	closed	<u> </u> –	– (A) = cam displace		I − → NC contact wit	– h positive opening	- operation
		open		(P) = positive oper	• .			-1
_			ot snown ur	idei general		ilos (see page	09)	
Switch actu Type of actu	ation	On end			By 30° cam			
	ctuation speed	0.5 m/s		1.5 m/s	0.5 m/s			0.5 m/s
Mechanical Minimum force or torque	For tripping For positive opening	5 million operating 8.5 N.m 42.5 N.m	g cycles	0.1 N.m 0.5 N.m	7 N.m 35 N.m			2.5 N.m 12.5 N.m
Cabling	poot for outdoor use.	PvR cable, 4 x 0.3	34 mm <sup>2</sup>					

<sup>(1)</sup> Silicone boot for outdoor use.



<sup>▲</sup> Available 1<sup>st</sup> quarter 2024.

Type of hea	ad	Plunger (fixing by the body)	Plunger (fixing by	y the head)	Rotary (fixing by	y the body)	
		⊕ Información (m. 1974)	(a) Esperante Marie (a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	To Name and Park	O Extracorrect of		© Edwardings
Type of oper		Thermoplastic roller lever plunger, horizontal actuation in 1 direction Head oriented at 270°	M12 with metal end plunger	M12 with steel roller plunger for lateral cam approach	Thermoplastic rolle	rlever	Thermoplastic roller lever Head oriented at 180°
Cable output	t	Lateral	Lateral	Lateral	Lateral	Axial	Lateral
Referen	ces						
<del>                                      </del>	2-pole NC + NO snap action	XCMH2121L1R0 ⊖	XCMH21F0L1	XCMH21F2L1	XCMH2115L1 →	XCMH2115LA1 ▲ ⊖	XCMH2115L1L0 →
M M			XCMH21F0L2	XCMH21F2L2	XCMH2115L2 ⊖ XCMH2115L3 ⊖	-	XCMH2115L2L0 ⇒ XCMH2115L3L0 ⇒
					XCMH2115L8		
		BK-BK-WH BN-BU BK-BK-WH BN-BU 0 mm	1,8 4,2(P) BN-BU BK-BK-WH BN-BU 0 5mm	3,1(A) 7(P) BK-BK-WH BN-BU 0 mm	25° 70°(P) BK-BK-WH BK-BW WH B	25° 70°(P) BK-BK-WH BN-BU 0 90°	25* 70*(P) BK-BK-WH-BB-BU, WH-BU BK-BU, WH-BU DN-BU 0 90*
Weight (kg)	1 m cable (L1)	0.077	0.081	0.091	0.106	0.106	0.106
	2 m cable (L2)	_	0.110	0.120	0.134	_	0.134
	3 m cable (L3) 8 m cable (L8)	-  -	_	_	0.163 0.304	_	0.163
Contact ope	ration	closed open	(A) = cam displacem (P) = positive openin		→ NC contact with	positive opening opera	ation
Comple	mentary cha	racteristics not	shown under	general chara	cteristics (see	page 69)	
Switch actua		By 30° cam	On end	By 30° cam°			
Type of actua	ation		<u>\</u>				
Maximum ac	tuation speed	0.5 m/s	0.5 m/s	0.1 m/s	0.1 m/s	1.5 m/s	
Mechanical		5 million operating cy					
Minimum force or	For tripping	2.5 N.m	8.5 N.m	7 N.m	0.1 N.m	0.1 N.m	
torque	For positive opening	12.5 N.m	42.5 N.m	35 N.m	0.5 N.m	0.5 N.m	
Cabling		PvR cable, 4 x 0.34 n	nm²				
A Available 1	st quarter 2024						

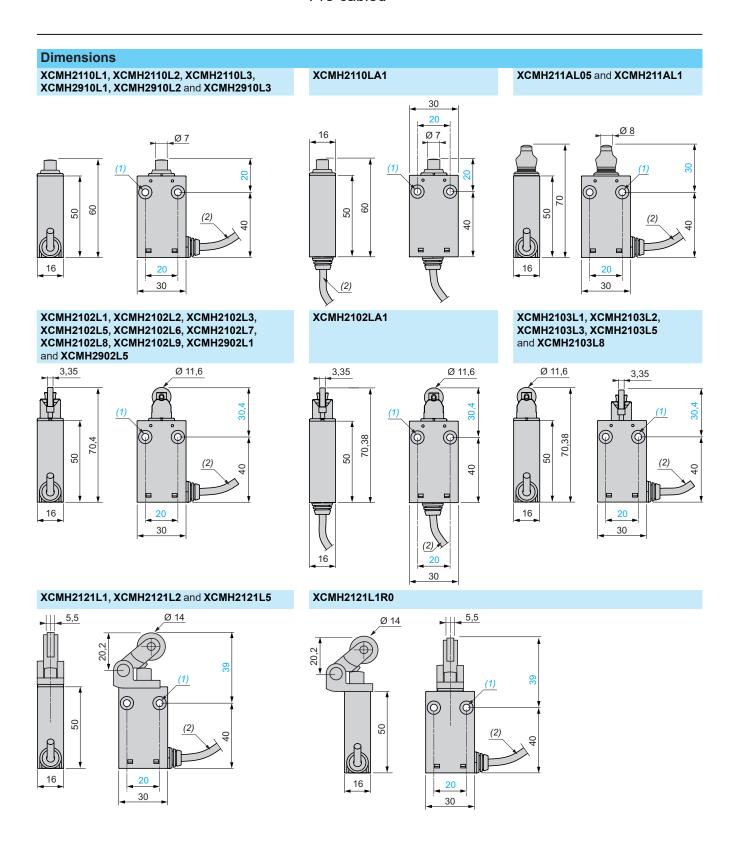
<sup>▲</sup> Available 1st quarter 2024.

Type of head		Rotary (fixing by t	he body)	Multi-directional	
Type of operator		Variable length thermoplastic roller lever	Round thermoplastic rod lever, Ø 6 mm (1)	Spring lever with thermoplastic end (1)	"Cat's whisker" (1)
Cable output		Lateral	Lateral	Lateral	Lateral
References					
위 <u>위</u>	2-pole NC + NO snap action	XCMH2145L1	XCMH2159L1	XCMH2107L1	XCMH2106L1
H Z	·	XCMH2145L2 ⊖	XCMH2159L2	XCMH2107L2 XCMH2107L3	XCMH2106L2
		8K-BK-WH BN-BU BN-BN-BU BN-BN-BU BN-BN-BN-BN-BN-BN-BN-BN-BN-BN-BN-BN-BN-B	8K-BK-WH BN-BU BN-BU BN-BU 0 90°	BK-BK-WH BU-BN BK-SK-WH BU-BN	BK-BK-WH BU-BN BK-BK-WH BU-BN
Weight (kg)	1 m cable (L1)	0.115	0.070	0.079	0.068
	2 m cable (L2)	0.144	0.099	0.107	0.096
	3 m cable (L3)	-	-	0.136	-
Contact operation	closed open	(A) = cam displacemen (P) = positive opening p	t point	ONC contact with pos	sitive opening operation
Complementar	y characteristics not sho	own under gener	al characteristic	CS (see page 69)	
		By 30° cam	By any moving part		
Switch actuation		7			
Type of actuation				***	***
	peed	<del></del>		1 m/s (any direction)	*
Type of actuation	peed	1.5 m/s 5 million operating cyc	1 m/s		
Type of actuation  Maximum actuation sp  Mechanical durability  Minimum	For tripping	1.5 m/s 5 million operating cyclo.1 N.m	1 m/s	1 m/s (any direction)	0.1 N.m
Maximum actuation sp Mechanical durability Minimum force or	For tripping For positive	1.5 m/s 5 million operating cyc	1 m/s		0.1 N.m
Type of actuation  Maximum actuation sp  Mechanical durability  Minimum	For tripping	1.5 m/s 5 million operating cyclo.1 N.m	1 m/s cles 0.1 N.m	0.1 N.m	

<sup>(1)</sup> Value taken with actuation by moving part at 100 mm from the fixing.



XC Basic range Miniature design, plastic, XCMH Pre-cabled



<sup>(1) 2</sup> fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.

(2) External diameter 4.2 mm.

XC Basic range Miniature design, plastic, XCMH Pre-cabled

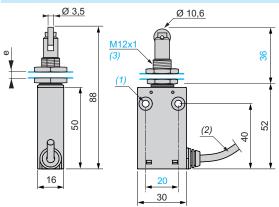
## **Dimensions** (continued)

#### XCMH21F0L1 and XCMH21F0L2

# M12x1 Ø 7 (3) (1) (2) 0 7 (2)

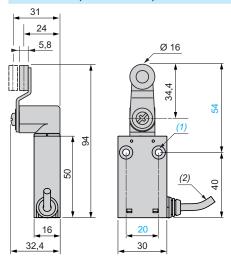
e: 8 mm max, panel cut-out Ø 12.5 mm. Fixing nut thickness 3.5 mm.

#### XCMH21F2L1 and XCMH21F2L2

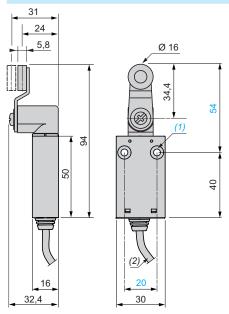


e: 8 mm max, panel cut-out Ø 12.5 mm. Fixing nut thickness 3.5 mm.

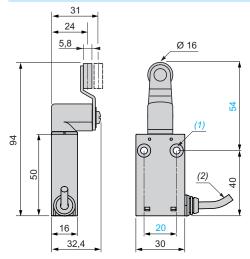
#### XCMH2115L1, XCMH2115L2, XCMH2115L5 and XCMH2115L8



#### XCMH2115LA1



## XCMH2115L1L0, XCMH2115L2L0 and XCMH2115L3L0



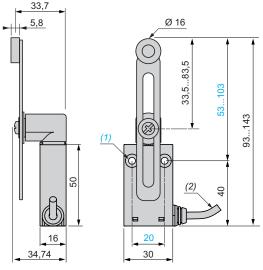
- (1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.
- (2) External diameter 4.2 mm.
- (3) Fixing nut thickness 3.5 mm.



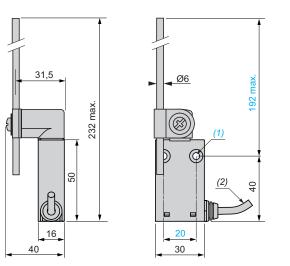
XC Basic range Miniature design, plastic, XCMH Pre-cabled

## **Dimensions** (continued)

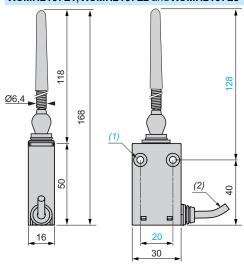
#### XCMH2145L1 and XCMH2145L2



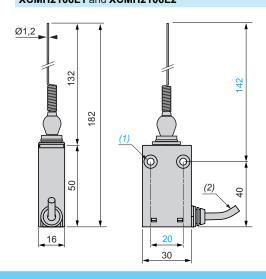
#### XCMH2159L1 and XCMH2159L2



#### XCMH2107L1, XCMH2107L2 and XCMH2107L3

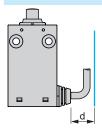


## XCMH2106L1 and XCMH2106L2

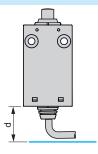


## Mounting: distance required for connection

## Limit switches with cable lateral output



### Limit switches with cable axial output



d: min. 15 mm.

- (1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.
- (2) External diameter 4.2 mm.

XC Basic range Miniature design, plastic, XCMN

## ■ XCMN pre-cabled

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



## ☐ With head for linear movement (plunger). Fixing by the head

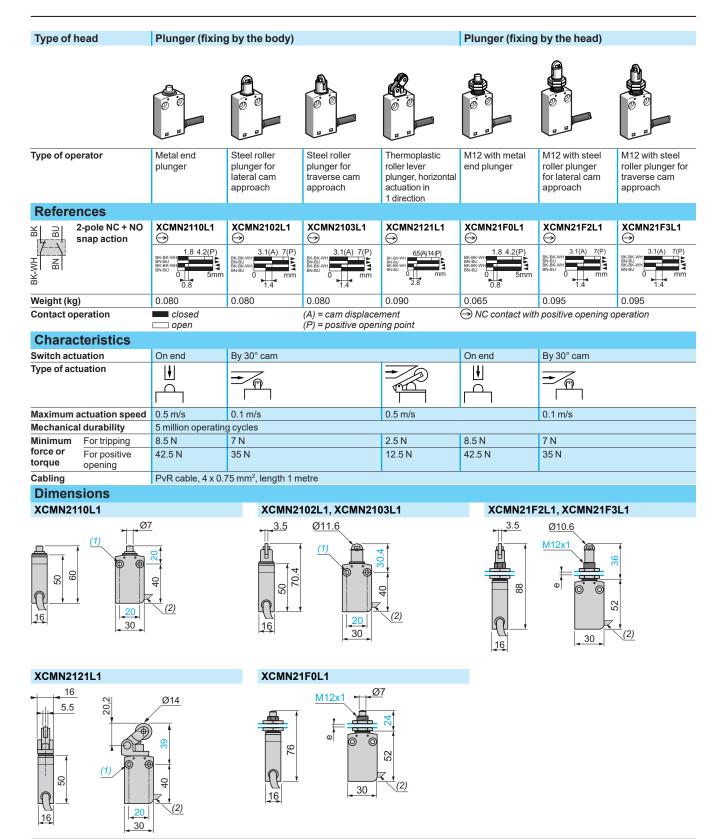


## ☐ With head for rotary movement (lever) or multi-directional



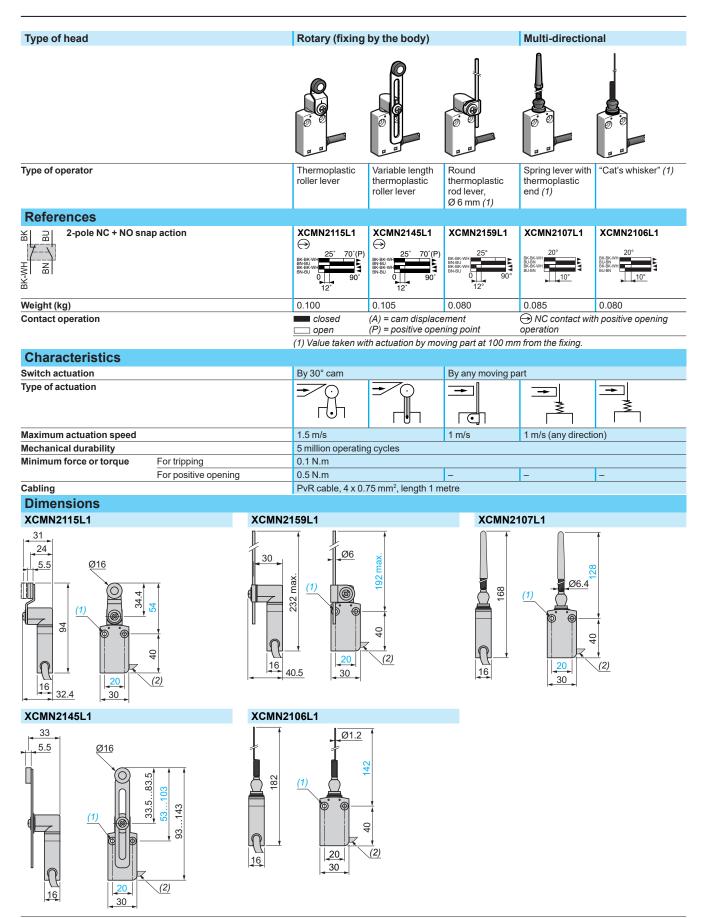
XC Basic range Miniature design, plastic, XCMN

<b>Environment chara</b>	acteristics	
Conformity to standards	Products	CE, IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14, EAC
	Machine assemblies	IEC 60204-1, EN 60204-1
Product certifications		UL, CSA, CCC
Protective treatment	Standard version	"TC"
Ambient air temperature	For operation	-25+70°C
	For storage	-40+70°C
Vibration resistance	Conforming to IEC 60068-2-6	5 gn (10500 Hz)
Shock resistance	Conforming to IEC 60068-2-27	25 gn (18 ms)
Electric shock protection		Class II conforming to IEC 61140 and NF C 20030
Degree of protection		IP 65 conforming to IEC 60529; IK 04 conforming to IEC 62262
Materials	Bodies	Plastic
	Heads	Zamak
Contact block char	acteristics	
Rated operational character	ristics	∼ 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		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 vo	ltage	U imp = 4 kV conforming to IEC 60947-1, IEC 60664
Short-circuit protection		6 A cartridge fuse type gG (gI)



- (1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.
- (2) External diameter 7.5 mm.
- e: 8 mm max, panel cut-out Ø 12.5 mm. Fixing nut thickness 3.5 mm.





- (1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.
- (2) External diameter 7.5 mm.

# Presentation, general characteristics

## **Limit switches**

XC Standard range Compact design, plastic, XCKP and XCKT Compact design, metal, XCKD

## ■ XCKP, XCKD

with 1 cable entry Conforming to CENELEC EN 50047

# ☐ With head for linear movement (plunger). Fixing by the head or by the body XCKD XCKP





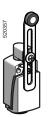




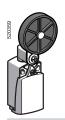
Pages 88 and 92

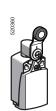
Pages 82 and 86

# ☐ With head for rotary movement (lever) or multi-directional. Fixing by the body XCKD XCKP









Pages 89 and 93

Pages 83 and 87

#### **■ XCKT**

with 2 cable entries

Tripping/resetting points and fixing centres conform to CENELEC EN 50047

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







Page 94

# $\hfill \square$ With head for rotary movement (lever) or multi-directional. Fixing by the body XCKT





Page 94

<b>Environment chara</b>	cteristics	
Conformity 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	Standard version	"TC"
Ambient air temperature	For operation	- 25+ 70°C (- 40+ 70 °C with ZCE106, ZCE026 and ZCE016 heads)
	For storage	-40+70°C
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10500 Hz) except product with head ZCE24: 20 gn
Shock resistance	Conforming to IEC 60068-2-27	50 gn (11 ms) except head ZCE08: 15 gn (11 ms) and ZCE24: 30 gn (18 ms)
Electric shock protection		Class II conforming to IEC 61140 and NF C 20-030 for XCKP and XCKT
		Class I conforming to IEC 61140 and NF C 20-030 for XCKD
Degree of protection		IP 66 and IP 67 conforming to IEC 60529; IK 04 conforming to IEC 62262 for XCKP and XCKT, IK 06 conforming to IEC 62262 for XCKD
Repeat accuracy		0.1 mm on the tripping points, with 1 million operating cycles for head with end plunger
Cable entry or connector	Depending on model	Either tapped entry for n° 11 or n° 13 cable gland, tapped ISO M16 x 1.5 or ISO M20 x 1.5, tapped 1/2" NPT or PF 1/2 (G1/2) or M12 connector
Materials		XCKD Zamak bodies and heads, XCKP and XCKT plastic bodies, Zamak heads

## General characteristics (continued)

## **Limit switches**

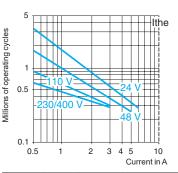
XC Standard range Compact design, plastic, XCKP and XCKT Compact design, metal, XCKD

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 <b>●</b> 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	XE2•P	U imp = 6 kV conforming to IEC 60947-1, IEC 60664
withstand voltage	XE3•P	U imp = 4 kV conforming to IEC 60947-1, IEC 60664
Positive operation (dependi	ing on model)	NC contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-
Resistance across terminal	Is	≤ 25 mΩ conforming to IEC 60255-7 category 3
Short-circuit	XE2•P	10 A cartridge fuse type gG (gl)
protection	XE3●P	6 A cartridge fuse type gG (gI)
Connection	XE2SP●151 and XE2SP2141	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 2 x 1.5 mm <sup>2</sup>
(screw clamp terminals)	XE2NP21●1 and XE2NP31●1	Clamping capacity, min: 1 x 0.5 mm <sup>2</sup> , max: 2 x 2.5 mm <sup>2</sup>
	XE3NP and XE3SP	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 1 x 1 mm <sup>2</sup> or 2 x 0.75 mm <sup>2</sup>
Minimum actuation speed		XE2SP●151, XE2SP2141 and XE3SP: 0.01 m/minute
(for head with end plunger)		XE2NP21●1, XE2NP31●1 and XE3NP: 6 m/minute
Electrical durability		■ Conforming to IEC 60947-5-1 Appendix C

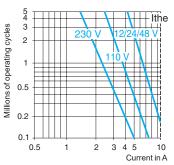
- Utilisation categories AC-15 and DC-13
   Maximum operating rate: 3600 operating cycles/hour
   Load factor: 0.5

AC supply 50/60 Hz ∼ m inductive circuit

## XE2SPe151, XE2SP2141



XE2NP21•1, XE2NP31•1



DC supply ===

#### Power broken in W for 5 million operating Voltage 24 48 120

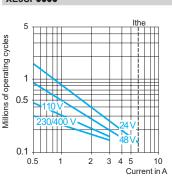
W 10 7 Power broken in W for 5 million operating 24 48 Voltage

m w 13 9 For XE2SPullet151 on  $\sim$  or  $\overline{...}$ , NC and NO contacts simultaneously loaded to the values shown

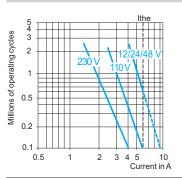
AC supply 50/60 Hz  $\sim$ m inductive circuit

#### XE3SP••••

with reverse polarity.



XE3NP••••



DC supply ===

Power broken in W for 5 million operating	g
cycles.	

Voltage	٧	24	48	120	
m	W	3	2	1	

Power broken in W for 5 million operating

0,0.00.					
Voltage	٧	24	48	120	
m	W	4	3	2	



XC Standard range Compact design, plastic, XCKP Complete switches with 1 cable entry

Type of head	Plunger (fixing by the body)		Form C (4)	Form F (4)		
	Form B (1)		Form C (1)	Form E (1)		
	<b>√</b> B <sub>N</sub>		A			
Type of operator	Metal end plunger	Metal end plunger with elastomer boot	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction	Thermoplastic roller lever plunger, horiz. or vert. actuatio in 1 direction
References of complete switch	hes with 1 IS	O M16 x 1.5 d	cable entry(2)			
2-pole NC + NO snap action (XE2SP2151)	XCKP2110P16 <b>⊝</b>	XCKP2111P16 <b>⊝</b>	XCKP2102P16 <b>⊖</b>	XCKP2121P16 <b>⊖</b>	XCKP2127P16 <b>⊖</b>	XCKP2128P16 <b>⊝</b>
22	1.8 4.6(P) 13-14 21-22 13-14 0 5mm	1.8 4.6(P) 13-14 13-14 10.9 5mm	3.1(A)7.8(P) 21-22 13-14 21-22 13-14 1.5	6.5(A) 15.7(P) 13-14 21-22 13-14 21-22 13-14 3 mm	6.5(B) 15.7(P)  21-22 13-14 0 mm	9.8(A) 22.5(P 9.8(A) 22.5(P 13-14 21-22 13-14 0 mm 4.9
2-pole NC + NO break before make, slow break (XE2NP2151)	XCKP2510P16 <b>→</b>	XCKP2511P16 <b>→</b>	XCKP2502P16 <b>→</b>	XCKP2521P16 →	XCKP2527P16 <b>→</b>	XCKP2528P16 →
<del>[</del> <del> </del> <del> </del> <del> </del> <del> </del>	1.8 3.2(P) 13-14 0 3 5mm	1.8 3.2(P) 13-14 0 3 5mm	3.1(A) 5.6(P) 21-22 13-14 0 5.2 mm	6.5(A) 11.3(P) 13-14 0 10.5 mm	6.5(B) 11.3(P) 21-22 13-14 0 10.5 mm	9.8(A) 17.2(P) 21-22 13-14 0 16.1 mm
2-pole NC + NC snap action (XE2SP2141)	ZCP29 + ZCPEP16 + ZCE10 → 1.8 4.6(P) 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12	ZCP29 + ZCPEP16 + ZCE11 → 1.8 4.6(P)	ZCP29 + ZCPEP16 + ZCE02 → 3.1(A)7.8(P)	ZCP29 + ZCPEP16 + ZCE21 → 6.5(A) 15.7(P)	ZCP29 + ZCPEP16 + ZCE27 → 6.5(B)15.7(P)	ZCP29 + ZCPEP16 + ZCE28 → 9.8(A)22.5(P
2-pole NC + NC simultaneous, slow break (XE2NP2141)	ZCP27 + ZCPEP16 + ZCE10 $\longrightarrow$ 1.8 3.2(P) 1.8 3.2(P) 5 5 mm	ZCP27 + ZCPEP16 + ZCE11 → 1.8 3.2(P)	ZCP27 + ZCPEP16 + ZCE02 → 3.1 5.6(P)	ZCP27 + ZCPEP16 + ZCE21 → 6.6(A) 11.6(P)	ZCP27 + ZCPEP16 + ZCE27 → 6.6(B) 11.6(P)	ZCP27 + ZCPEP16 + ZCE28 → 5.3(A)
3-pole NC + NC + NO snap action (XE3SP2141)	ZCP39 + ZCPEP16 + ZCE10 → 1.8 4.6(P)	ZCP39 + ZCPEP16 + ZCE11 → 1.8 4.6(P)	ZCP39 + ZCPEP16 + ZCE02 → 3.1(A) 7.8(P)	ZCP39 + ZCPEP16 + ZCE21	ZCP39 + ZCPEP16 + ZCE27 → 6.5(B) 15.7(P)	ZCP39 + ZCPEP16 + ZCE28 → 9.8(A) 22.5(P)
3-pole NC + NC + NO break before make, slow break (XE3NP2141)	ZCP37 + ZCPEP16 + ZCE10 → 1.8 3.2(P)	ZCP37 + ZCPEP16 + ZCE11 → 1.8 3.2(P)	ZCP37 + ZCPEP16 + ZCE02 → 3.1(A) 5.6(P)	ZCP37 + ZCPEP16 + ZCE21 → 6.5(A)11.3(P)	ZCP37 + ZCPEP16 + ZCE27 → 6.5(B)11.3(P)	ZCP37 + ZCPEP16 + ZCE28 → 9.8(A) 17.2(P)
Weight (kg)	0.090	0.090	0.095	0.105	0.100	0.105
References of complete switch		try for n° 11	cable gland			
or an entry tapped for a n° 11 cable gland, repla	ace P16 in the referer	ice by G11. Example			_	
Contact operation	closed open		(A) (B) = cam disp (P) = positive oper		NC contact wit operation	h positive openir
Characteristics	_					
Switch actuation	On end		By 30° cam			1
Type of actuation			<b>-</b>			
Maximum actuation speed	0.5 m/s			1 m/s		•
Mechanical durability (in millions of operating cycles)	15		10	15		
Minimum force or For tripping For positive opening	15 N 45 N		12 N 36 N	6 N 18 N		
Cable entry (3)	1 entry tapped M <sup>2</sup>	16 x 1.5 mm for ISO	cable gland, clamp	ing capacity 4 to 8 m	ım	

<sup>(1)</sup> Form conforming to EN 50047, see page 24.
(2) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.



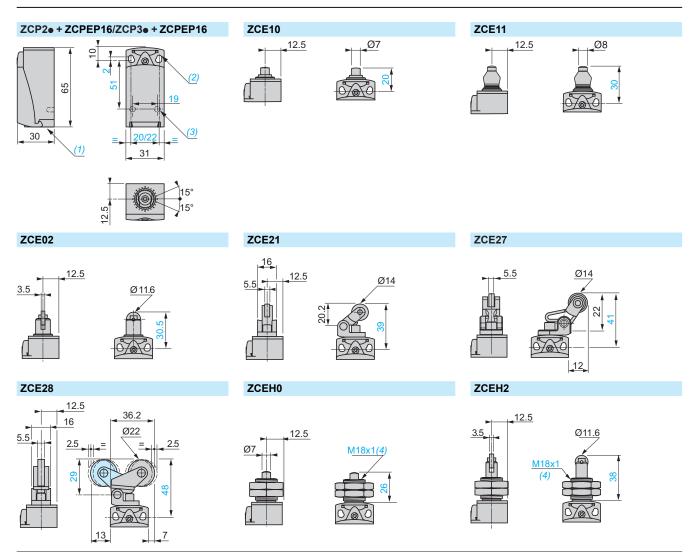
XC Standard range Compact design, plastic, XCKP Complete switches with 1 cable entry

Type of head	Plunger (fixing	g by the head)	Rotary (fixing by the body)				Multi- directional
			Form A (1)				
Type of operator	M18 with metal end plunger	M18 with steel roller plunger	Thermoplastic roller lever	Variable length thermoplastic roller lever	Thermoplastic roller lever, Ø 50 mm	Variable length thermoplastic roller lever, Ø 50 mm	"Cat's whisker" (2)
References of com	nolete switch	es with 1 IS	O M16 x 1.5 c	able entry(3)		D 00 11111	
2-pole NC + NO snap action (XE2SP2151)	XCKP21H0P16	XCKP21H2P16 3.1(A)7.8(P) 213-21 213-		XCKP2145P16  25° 70°(P)  25° 70°(P)  25° 70°(P)  25° 70°(P)	XCKP2139P16  21-22 25° 70°(P) 21-12 21-22 25° 90°	XCKP2149P16  25° 70°(P) 21-22 25° 70°(P) 21-21 21-22 90°	XCKP2106P16  21-22 21-22 13-14 0 15-6
2-pole NC + NO break before make, slow break (XE2NP2151)	21-22	XCKP25H2P16 → 3.1(A) 5.6(P)	XCKP2518P16 → 25° 46°(P)	XCKP2545P16 → 25° 46°(P)	XCKP2539P16 → 25° 46°(P)	XCKP2549P16 → 25° 46°(P)	XCKP2506P16 → 20° 21-22 13-14
2-pole NC + NC snap action (XE2SP2141)	0 3 5mm ZCP29 + ZCPEP16 + ZCEH0 →	ZCP29 + ZCPEP16 + ZCEH2 →	0 42° 90° ZCP29 + ZCPEP16 + ZCE01 + ZCY18 →	0 42° 90° ZCP29 + ZCPEP16 + ZCE01 + ZCY45 →	0 42° 90°  ZCP29 +  ZCPEP16 +  ZCE01 +  ZCY39 →	0 42° 90°  ZCP29 +  ZCPEP16 +  ZCE01 +  ZCY49 →	0 45° ZCP29 + ZCPEP16 + ZCE06
	1.8 4.6(P) 11-12 12-22 11-12 21-22 0 5mm	3.1(A)7.8(P)  11-12 21-22 11-12 21-22 11-15 1.5	25° 70°(P) 11-12 21-22 11-12 21-22 21-22 11-12 21-22 11-12 21-22 11-12 21-22	25° 70°(P) 11-12 21-22 11-12 21-22 11-1	25° 70°(P) 11-12 11-1	25° 70°(P) 11-12 11-12 11-12 11-12 11-12 11-12 11-12 11-12	21:32 11:32 11:32 11:32 11:32 11:32 11:32
2-pole NC + NC simultaneous, slow break (XE2NP2141)	ZCP27 + ZCPEP16 + ZCEH0 →	ZCP27 + ZCPEP16 + ZCEH2 →	ZCP27 + ZCPEP16 + ZCE01 + ZCY18 →	ZCP27 + ZCPEP16 + ZCE01 + ZCY45 →	ZCP27 + ZCPEP16 + ZCE01 + ZCY39 →	ZCP27 + ZCPEP16 + ZCE01 + ZCY49 →	ZCP27 + ZCPEP16 + ZCE06
	1.8 3.2(P) 11-12 0 5mm 2CP39 +	3.1 5.6(P) 11-12 21-22 0 mm	25° 46°(P) 11-12 0 90° 2CP39 +	25° 46°(P) 21-22 0 90° 2CP39 +	25° 46°(P) 21-22 0 90° <b>ZCP39 +</b>	25° 46°(P) 11-12 0 90° 2CP39 +	11-12 21-22 0 ZCP39 +
SE 2 4 Snoole NC + NC + NO snap action (XE3SP2141)	ZCPEP16 + ZCEH0 ⊕	ZCPEP16+ ZCEH2 →	ZCPEP16+ ZCE01+ ZCY18 →	ZCPEP16+ ZCE01+ ZCY45 →	ZCPEP16 + ZCE01 + ZCY39 →	ZCPEP16 + ZCE01 + ZCY49 →	ZCPEP16 + ZCE06
	1.8 4.6(P) 31.32 31.32 31.32 31.32 0 5mm	3.1(A) 7.8(P) 3133 3134 2132 3134 3134 1544 0 mm	25° 70°(P)	25° 70°(P) 31321 31321 42132 1314 0 90°	25° 70°(P)	25° 70°(P)	20° 31324 21324 13-14 15-0
3-pole NC + NC + NO break before make, slow break	ZCP37+ ZCPEP16+ ZCEH0 →	ZCP37 + ZCPEP16 + ZCEH2 →	ZCP37 + ZCPEP16 + ZCE01 + ZCY18 →	ZCP37 + ZCPEP16 + ZCE01 + ZCY45 →	ZCP37 + ZCPEP16 + ZCE01 + ZCY39 →	ZCP37 + ZCPEP16 + ZCE01 + ZCY49 →	ZCP37 + ZCPEP16 + ZCE06
(XE3NP2141)	1.8 3.2(P) 21-22 31-32 13-14 0 3 5mm	3.1(A) 5.6(P) 21-22 31-32 13-14 0 5.2 mm	25° 46°(P) 21-22 31-32 13-14 0 42° 90°	25° 46°(P) 21-22 31-32 13-14 0 42° 90°	25° 46°(P) 21-22 31-34 0 42° 90°	25° 46°(P) 21-22 31-32 0 42° 90°	20° 21-22 31-32 13-14 0 45° °
Weight (kg)	0.130	0.130	0.135	0.145	0.145	0.155	0.085
References of com					V6/27-11/2	11 700	
For an entry tapped for a n° 11  Contact operation	cable gland, replace closed	P16 in the reference	ce by <b>G11</b> . Example: (A) = cam displace		_	<b>11</b> or ZCPEP16 beco In positive opening c	
·	open open		(P) = positive open			. positive operiting t	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Characteristics							
Switch actuation	On end	By 30° cam	1	1			By any moving par
Type of actuation	<b>₩</b>						*
Maximum actuation speed	0.5 m/s		1.5 m/s				1 m/s (any direct
Maakaalalaakiiita	10 million operation	ng cycles					5 million
Mechanical durability		· · · · · · · · · · · · · · · · · · ·					
Minimum For tripping	15 N	10 N	0.1 N.m				0.13 N.m
		10 N 36 N	0.1 N.m 0.25 N.m				0.13 N.m -

- (1) Form conforming to EN 50047, see page 24.
  (2) Value taken with actuation by moving part at 100 mm from the fixing.
  (3) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.

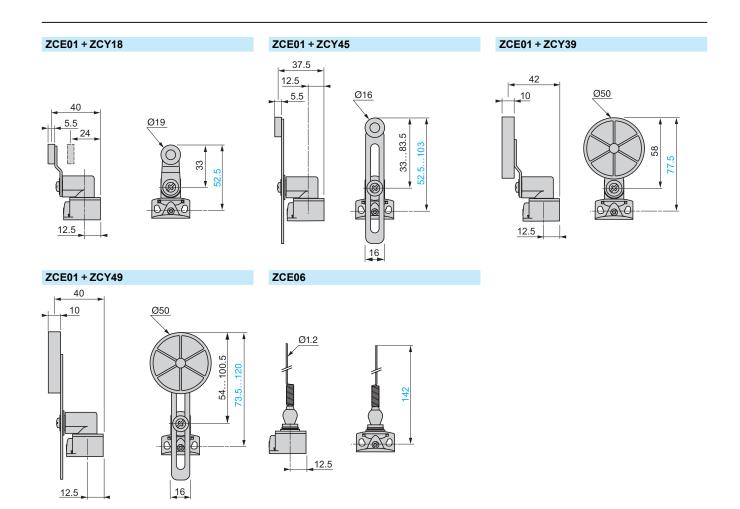


XC Standard range Compact design, plastic, XCKP Complete switches with 1 cable entry

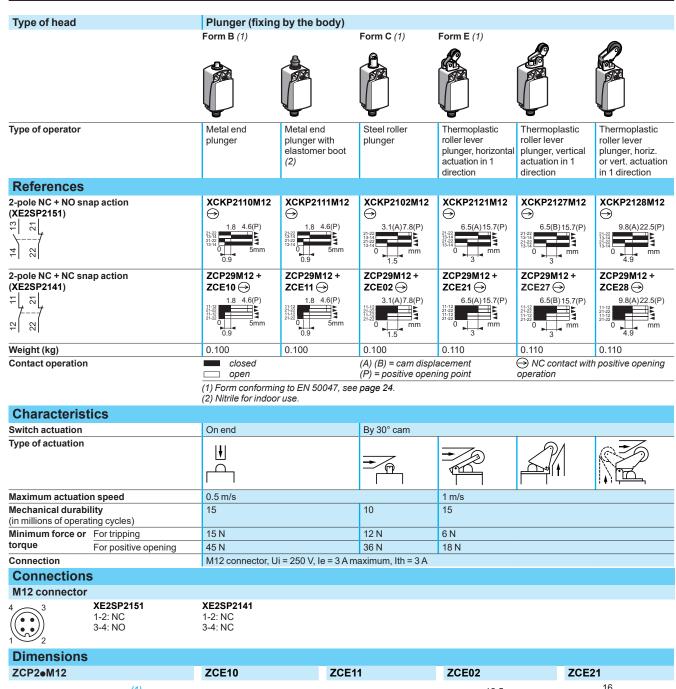


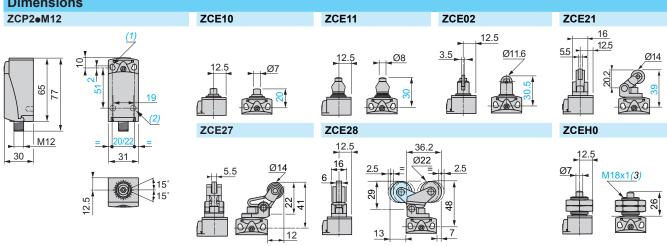
- (1) Tapped entry for ISO M16 x 1.5 or Pg 11 cable gland.
  (2) 2 elongated holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.
  (3) 2 x Ø 3 holes for support studs, depth 4 mm.
  (4) Fixing nut thickness 3.5 mm.

XC Standard range Compact design, plastic, XCKP Complete switches with 1 cable entry



XC Standard range Compact design, plastic, XCKP M12 connector

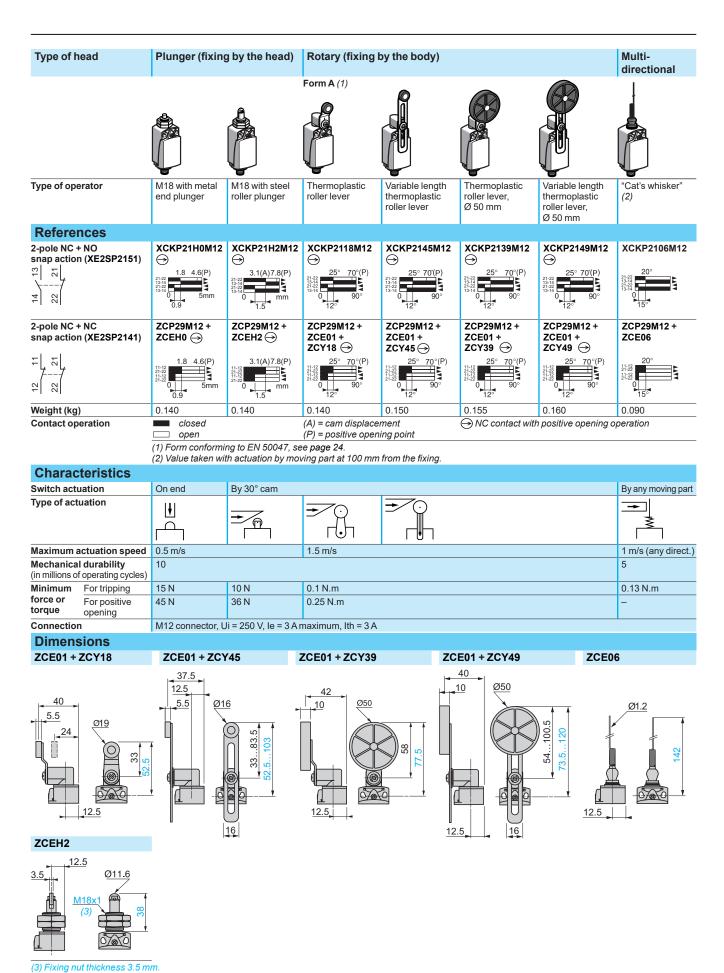




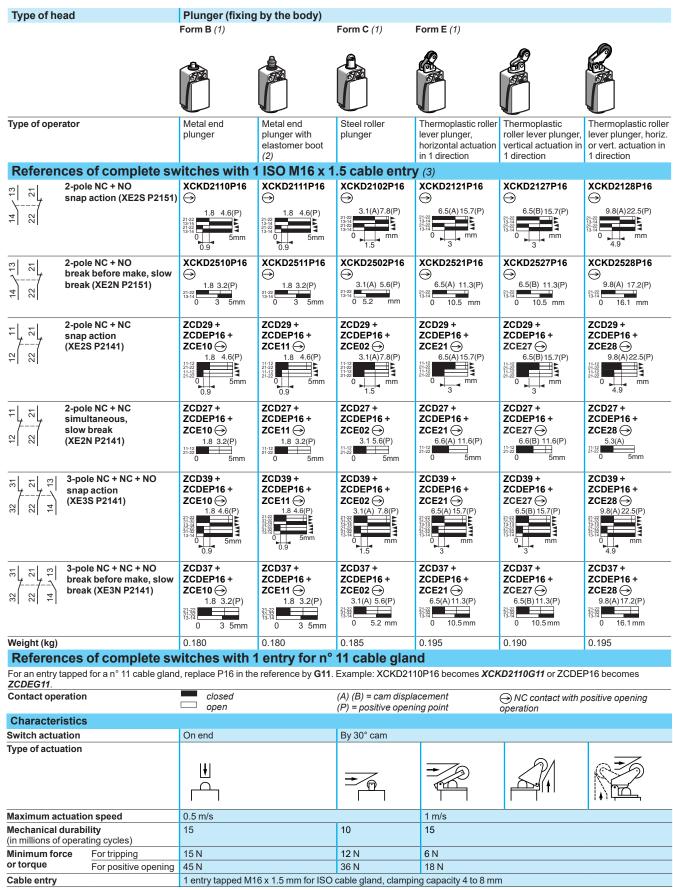
- (1) 2 elongated holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.
- (2) 2 x Ø 3 holes for support studs, depth 4 mm.
- (3) Fixing nut thickness 3.5 mm.



XC Standard range Compact design, plastic, XCKP M12 connector



XC Standard range Compact design, metal, XCKD Complete switches with 1 cable entry



- (1) Form conforming to EN 50047, see page 24.
- (2) Nitrile for indoor use.
- (3) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.



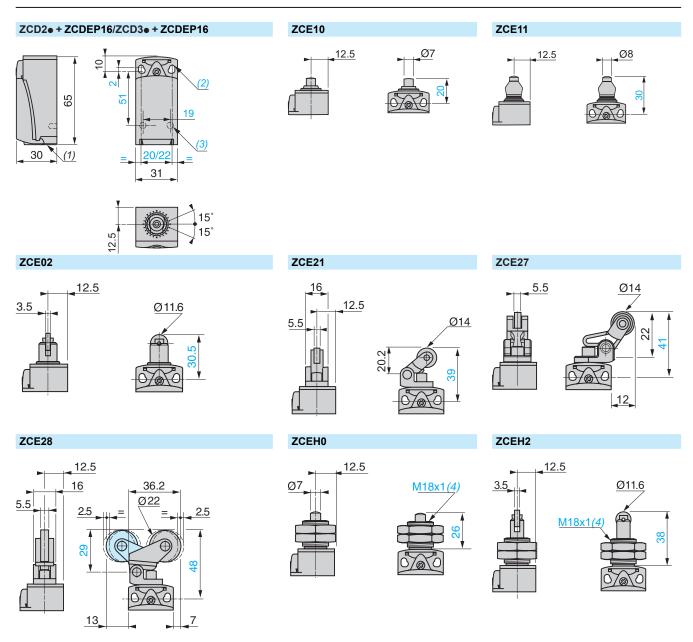
XC Standard range Compact design, metal, XCKD Complete switches with 1 cable entry

Type of head	Plunger (fixing	g by the head)	Rotary (fixing	by the body)			Multi- directional
			Form A (1)				
Type of operator	M18 with metal end plunger	M18 with steel roller plunger	Thermoplastic roller lever	Variable length thermoplastic roller lever	Thermoplastic roller lever, Ø 50 mm	Variable length thermoplastic roller lever, Ø 50 mm	"Cat's whisker" (2)
References of comp	lete switche	s with 1 ISO	M16 x 1.5 ca	able entry (3)			
2-pole NC + NO snap action (XE2S P2151)	XCKD21H0P16  1.8 4.6(P) 21-22 13-14 21-22 13-14 0 0 5 mm	XCKD21H2P16 → 3.1(A)7.8(P) 21.22 15.14 0 mm	XCKD2118P16 → 25° 70°(P) 21-22 21-22 21-23 21-	XCKD2145P16 → 25° 70′(P) 21-32 21-32 21-32 31-314 0 90°	XCKD2139P16 → 25° 70°(P) 21:22 25° 90°	XCKD2149P16  25° 70°(P) 21-22 21-22 21-22 21-22 30°	20° 21-22 21-22 21-22 15-34
2-pole NC + NO break before make, slow break (XE2N P2151)	XCKD25H0P16 1.8 3.2(P)	XCKD25H2P16 → 3.1(A) 5.6(P) 21:21 13:14  mm	XCKD2518P16 → 25° 46°(P) 21-22 13-14 0 42° 90°	XCKD2545P16 → 25° 46°(P) 21-22 13-14 0 42° 90°	XCKD2539P16 → 25° 46°(P) 21:22 13:14 0 42° 90°	XCKD2549P16 → 25° 46°(P) 21-22 13-14 0 42° 90°	XCKD2506P16 21-22 13-14 0 45°
2-pole NC + NC snap action (XE2S P2141)	ZCD29 + ZCDEP16 + ZCEH0 →	ZCD29 + ZCDEP16 + ZCEH2 → 3.1(A)7.8(P)	ZCD29 + ZCDEP16 + ZCE01 + ZCY18 → 25° 70°(P)	ZCD29 + ZCDEP16 + ZCE01 + ZCY45 → 25° 70°(P)	ZCD29 + ZCDEP16 + ZCE01 + ZCY39 → 25° 70°(P)	ZCD29 + ZCDEP16 + ZCE01 + ZCY49 → 25° 70°(P)	ZCD29 + ZCDEP16 + ZCE06
	11-12 21-22 11-12 0 5mm 0.9	11-12 21-22 11-12 21-22 0 mm	11-12 21-22 11-12	11-12 21-22 11-12	11-12 21-22 11-12 21-22 21-22 11-12 11-12 21-22	11-12 21-22 11-12 11-12 21-22 0 90°	11-12 21-22 21-22 11-12
2-pole NC + NC simultaneous, slow break (XE2N P2141)	ZCD27 + ZCDEP16 + ZCEH0 →	ZCD27 + ZCDEP16 + ZCEH2 → 3.1 5.6(P)	ZCD27 + ZCDEP16 + ZCE01 + ZCY18 ⊕ 25° 46°(P)	ZCD27 + ZCDEP16 + ZCE01 + ZCY45 → 25° 46°(P)	ZCD27 + ZCDEP16 + ZCE01 + ZCY39 → 25° 46°(P)	ZCD27 + ZCDEP16 + ZCE01 + ZCY49 → 25° 46°(P)	ZCD27 + ZCDEP16 + ZCE06
	11-12 21-22 0 5mm	11-12 21-22 0 5mm	11-12 21-22 0 90°	11-12 21-22 0 90°	11-12 21-22 0 90°	11-12 21-22 0 90°	0 mm 1.5
\(\frac{\gamma}{\gamma}\begin{pmatrix} \frac{\gamma}{\gamma}\end{pmatrix} \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \frac{\gamma}{\gamma}\gamma \gamm	ZCD39+ ZCDEP16+ ZCEH0⊖	ZCD39 + ZCDEP16 + ZCEH2 →	ZCD39 + ZCDEP16 + ZCE01 + ZCY18 →	ZCD39 + ZCDEP16 + ZCE01 + ZCY45 →	ZCD39 + ZCDEP16 + ZCE01 + ZCY39 →	ZCD39 + ZCDEP16 + ZCE01 + ZCY49 →	ZCD39 + ZCDEP16 + ZCE06
	1.8 4.6(P) 1.3 4.6(P) 1.3 4.6 1.3 br>1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1	3.1(A) 7.8(P) 3.1(2) 3.1(3) 3.1(4) 7.8(P) 3.1(2) 3.1(3) 3.1(4) 7.8(P) 3.1(3) 3.1(4) 7.8(P) 3.1(3) 3.1(4) 7.8(P) 3.1(3) 3.1(4) 7.8(P) 3.1(3) 3.1(4) 7.8(P) 3.1(4) 7.8(P) 3.1(4) 7.8(P) 3.1(4) 7.8(P) 3.1(4) 7.8(P) 3.1(4) 7.8(P) 3.1(4) 7.8(P) 4.1(4) 7.8(P) 4.	25° 70°(P) \$1.25 \$1.31 \$1.32 \$1.31 \$1.32 \$1.31 \$1.32 \$1.3	25° 70°(P)	25° 70°(P)	25° 70°(P)	20° 21-22 21-32 21
3-pole NC + NC + NO break before make, slow	ZCD37+ ZCDEP16+ ZCEH0 →	ZCD37 + ZCDEP16 + ZCEH2 →	ZCD37 + ZCDEP16 + ZCE01 + ZCY18 ⊕	ZCD37 + ZCDEP16 + ZCE01 + ZCY45 →	ZCD37 + ZCDEP16 + ZCE01 + ZCY39 →	ZCD37 + ZCDEP16 + ZCE01 + ZCY49 →	ZCD37 + ZCDEP16 + ZCE06
break (XE3N P2141)	1.8 3.2(P) 21-22 31-32 13-14 0 3 5mm	3.1(A) 5.6(P) 21-22 31-32 13-14 0 5.2 mm	25° 46°(P) 21-22 31-32 13-14 0 42° 90°	25° 46°(P) 21-22 31-32 13-14 0 42° 90°	25° 46°(P) 21-22 31-32 13-14 0 42° 90°	25° 46°(P) 21-22 31-32 13-14 0 42° 90°	20° 21-22 31-32 13-14 0 45°
Weight (kg)	0.220	0.220	0.225	0.235	0.235	0.245	0.175
References of comp				_			
For an entry tapped for a n° 11 cable		6 in the reference b					
Contact operation	closed open		(A) = cam displace (P) = positive oper		→ NC contact wit	h positive opening	operation
Characteristics							
Switch actuation	On end	By 30° cam					By any moving part
Type of actuation		<del>-</del>					*
Maximum actuation speed	0.5 m/s	1	1.5 m/s				1 m/s (any direct.)
Mechanical durability	10 million operati	ing cycles					5 million
Minimum For tripping	15 N	10 N	0.1 N.m				0.13 N.m
force or For positive opening torque  Cable entry		36 N 16 x 1.5 mm for IS	0.25 N.m O cable gland, cla	mping capacity 4 to	0 8 mm		-
(1) Form conforming to EN 5004			ousio giaria, cia	ping supusity 4 to	J 111111		

- (1) Form conforming to EN 50047, see page 24.
  (2) Value taken with actuation by moving part at 100 mm from the fixing.
  (3) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.



XC Standard range Compact design, metal, XCKD Complete switches with 1 cable entry



- (1) Tapped entry for ISO M16 x 1.5 or Pg 11 cable gland.
- (2) 2 elongated holes Ø 4.3 x 6.3 mm on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres. (3) 2 x Ø 3 holes for support studs, depth 4 mm. (4) Fixing nut thickness 3.5 mm.

12.5

# **Limit switches**

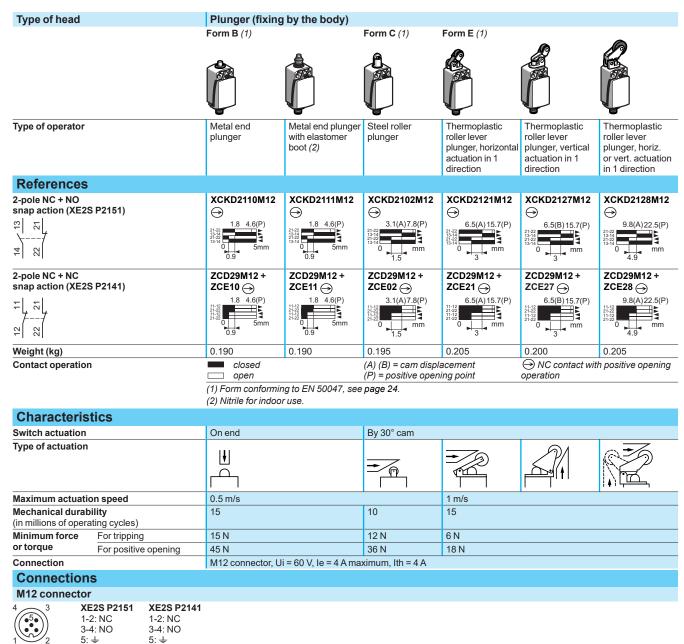
XC Standard range Compact design, metal, XCKD Complete switches with 1 cable entry

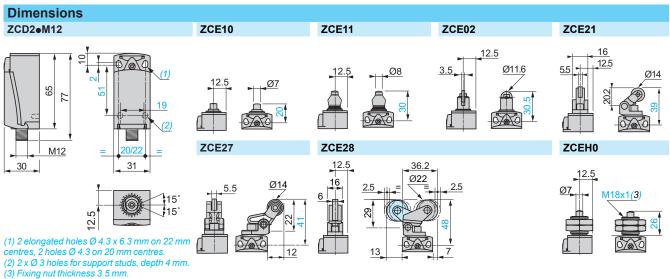
### ZCE01 + ZCY18 ZCE01 + ZCY45 ZCE01 + ZCY39 40 37.5 Ø50 5.5 Ø19 12.5 Ø16 5.5 33 .83.5 33.. 52.5... 12.5 12.5 16 ZCE01 + ZCY49 ZCE06 Ø1.2 40 Ø50 10 120 54.. 12.5

References, characteristics, connections, dimensions

### **Limit switches**

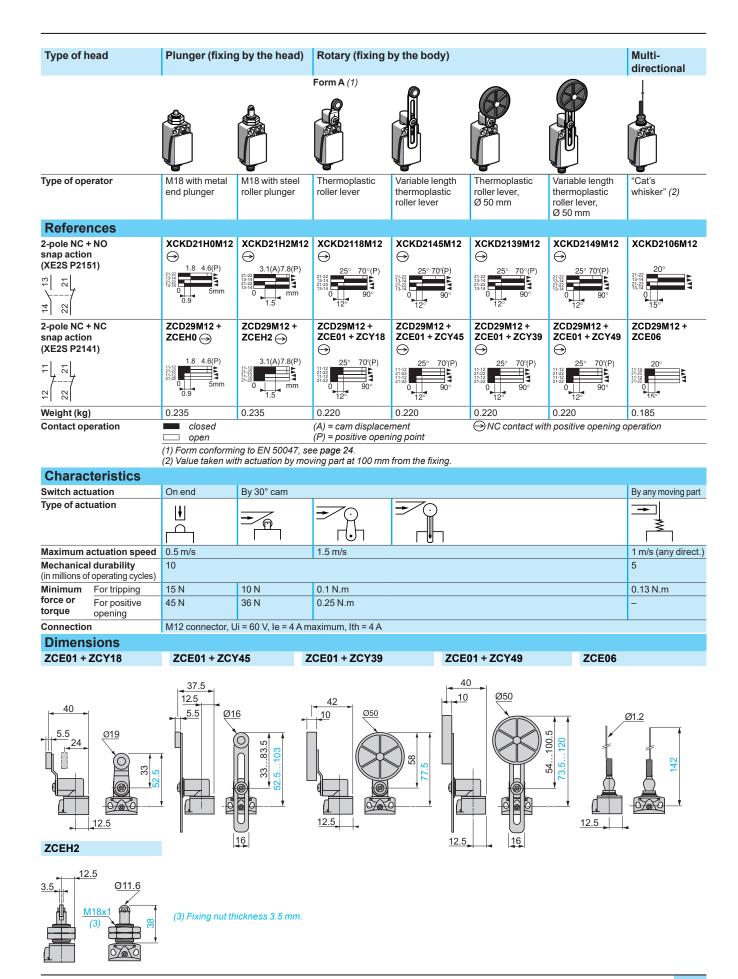
XC Standard range Compact design, metal, XCKD M12 connector



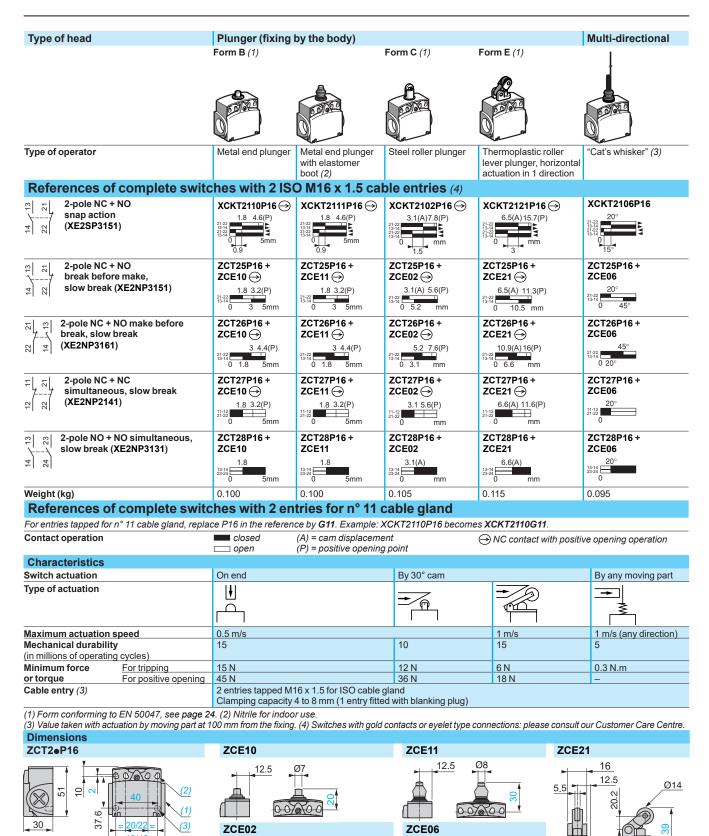




XC Standard range Compact design, metal, XCKD M12 connector



XC Standard range Compact design, plastic, XCKT Complete switches with 2 cable entries



40/42 58 115°

(1) Tapped entry for ISO M16 x 1.5 or Pg 11 cable gland.

cable gland.
(2) 4 elongated holes Ø 4.3 x 6.3 mm on 22/42 mm ctrs, 4 holes Ø 4.3 on 20/40 mm ctrs.

(3) 2 x Ø 3 holes for support studs, depth 4 mm

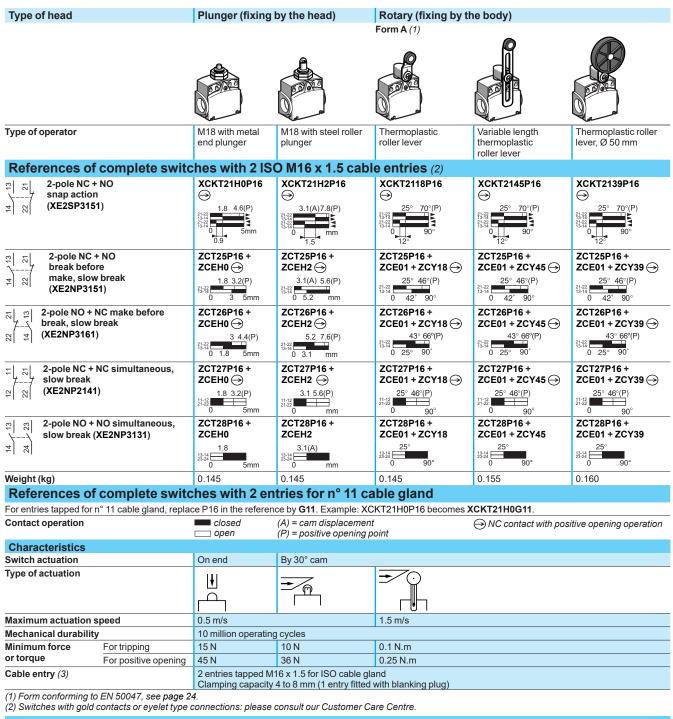
Ø11.6

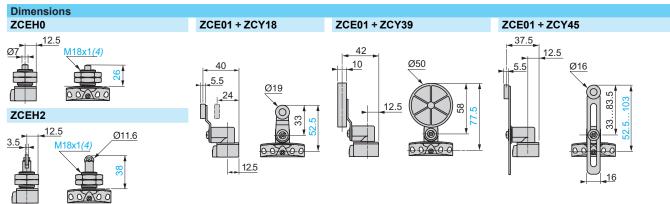
Ø1.2

142

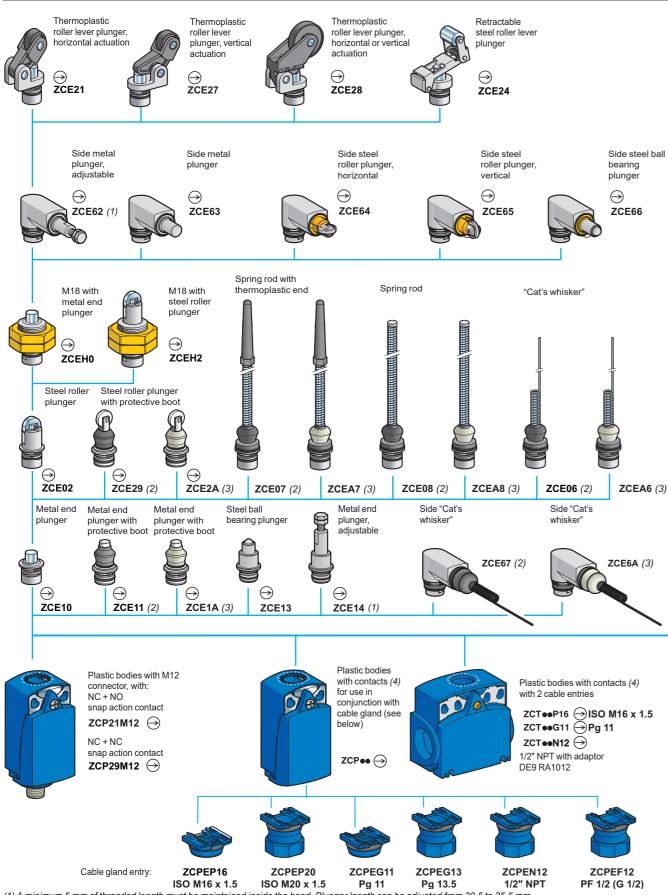
12.5

XC Standard range Compact design, plastic, XCKT Complete switches with 2 cable entries





XC Standard range Compact design, XCKD, XCKP and XCKT Variable composition

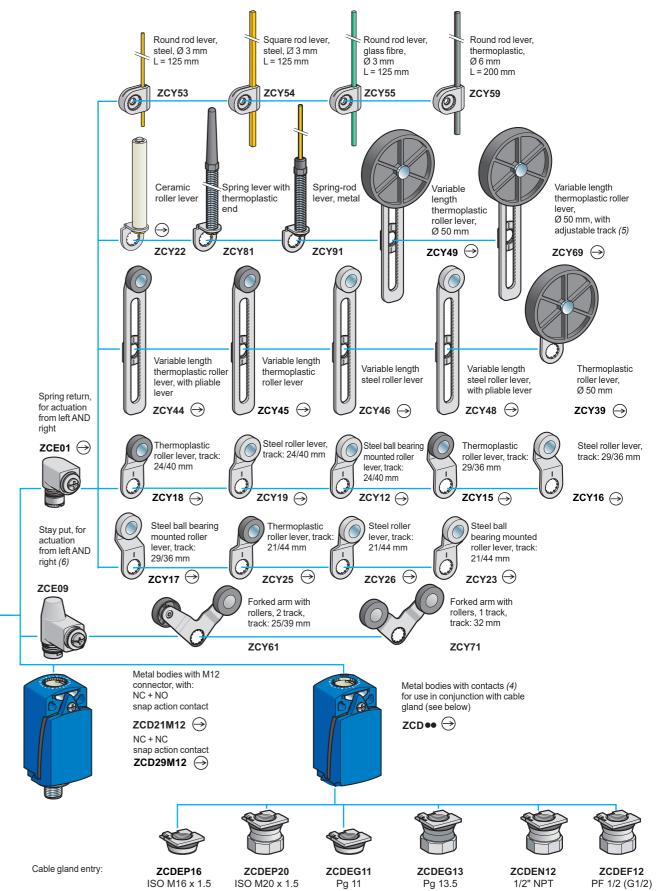


(1) A minimum 5 mm of threaded length must be maintained inside the head. Plunger length can be adjusted from 30.5 to 35.5 mm.

(2) Nitrile boot for indoor use.

(3) Silicone boot for outdoor use.

(4) For further information, see page 98.

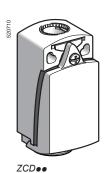


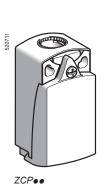
(5) Variable length and adjustable track by lever deformation.

(6) Suitable with bodies: ZCD21, ZCP21, ZCT21, ZCD29, ZCP29, ZCD31, ZCP31, ZCD39, ZCP39, ZCD2●M12, ZCP2●M12

XC Standard range Compact design, metal, XCKD or plastic, XCKP

Adaptable sub-assemblies: bodies with contacts







ZCP21D44



Type of contact	Positive operation (2)	Scheme	Body material	Reference	Weight kg
2-pole	operation (2)		material		ng.
NC + NO snap action	$\Theta$	£  2  <sup>1</sup>	Metal	ZCD21	0.140
XE2SP2151)		4 22	Plastic	ZCP21	0.070
IC + NC nap action	$\Theta$	=	Metal	ZCD29	0.140
(E2SP2141)		22   12	Plastic	ZCP29	0.070
NC + NO preak before make,	$\Theta$	2 2 7	Metal	ZCD25	0.140
slow break XE2NP2151)		4 8	Plastic	ZCP25	0.070
NO + NC nake before break,	$\Theta$	£ 2 7	Metal	ZCD26	0.140
slow break XE2NP2161)		45 22	Plastic	ZCP26	0.070
IC + NC simultaneous,	$\Theta$	=[, 5[,	Metal	ZCD27	0.140
slow break XE2NP2141)		[22]	Plastic	ZCP27	0.070
IO + NO simultaneous,	_	2   2   2   2   2   2	Metal	ZCD28	0.140
slow break XE2NP2131)		4 4	Plastic	ZCP28	0.070
3-pole					
IC + NO + NO snap action	$\Theta$	12 × 12 × 12 × 13 × 12 × 12 × 12 × 12 ×	Metal	ZCD31	0.140
XE3SP2151)		22 45 4	Plastic	ZCP31	0.070
NC + NC + NO nap action	$\Theta$	5 7 2 8	Metal	ZCD39	0.140
XE3SP2141)		32 4	Plastic	ZCP39	0.070
NC + NC + NO break before make,	$\Theta$	E	Metal	ZCD37	0.140
slow break XE3NP2141)		22   25	Plastic	ZCP37	0.070
NC + NO + NO break before make,	$\Theta$	13 L 21	Metal	ZCD35	0.140
slow break XE3NP2151)		22 45 4	Plastic	ZCP35	0.070

Components	Components for connection using DEUTSCH connector					
<b>Bodies with c</b>	Bodies with contacts for DEUTSCH connector					
Type of contact	Positive operation (2)	Scheme	Cable entry	Reference	Weight kg	
2-pole						
NC + NO snap action (XE2SP2151)	$\Theta$	22   21   21	Connector	ZCP21D44	0.065	
DEUTSCH male con	nector			ZCPED44	0.015	

<sup>(1)</sup> Bodies with gold contacts or eyelet type connections: please consult your Regional Sales Office. (2)  $\bigoplus$ : bodies with contacts assuring positive opening operation.

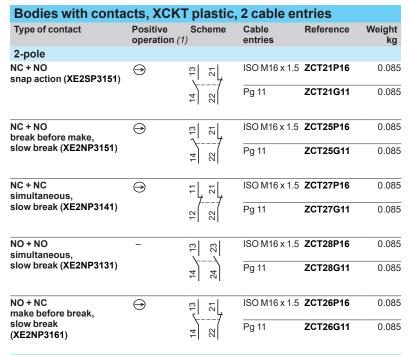


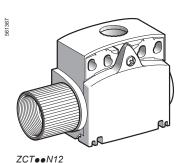
XC Standard range

Compact design, plastic, XCKT

Adaptable sub-assemblies: bodies with contacts







Bodies with co NPT adaptor	ntacts, XCK	T plastic, 2	2 cable entries with	า 1/2"
Type of contact	Positive operation (	Scheme	Reference	Weight kg
2-pole				
NC + NO snap action (XE2SP3151)	$\Theta$	22 2 21	ZCT21N12	0.130
NC + NO break before make, slow break (XE2NP3151)	$\Theta$	22 21	ZCT25N12	0.130
NC + NC simultaneous, slow break (XE2NP3141)	$\Theta$	22 - 21	ZCT27N12	0.130
NO + NO simultaneous, slow break (XE2NP3131)	-	24 – 42   23   13	ZCT28N12	0.130
NO + NC make before break, slow break (XE2NP3161)	$\Theta$	22 21	ZCT26N12	0.130

(1)  $\bigcirc$ : bodies with contact assuring positive opening operation.



### References (continued)

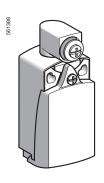
### **Limit switches**

XC Standard range Compact design, metal, XCKD or plastic, XCKP and XCKT

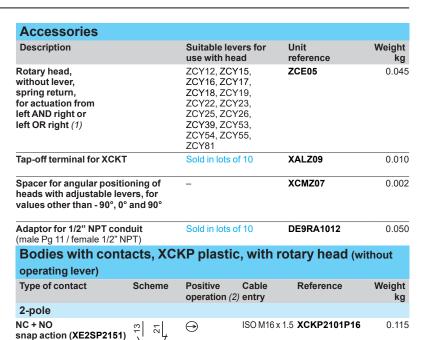
Adaptable sub-assemblies: bodies with contacts







XCK•2•01••



 $\Theta$ 

 $\Theta$ 

 $\Theta$ 

21

XCKP2101G11

XCKP2101M12

XCKP2501G11

ISO M16 x 1.5 XCKP2501P16

Pg 11

M12

Pg 11

connector

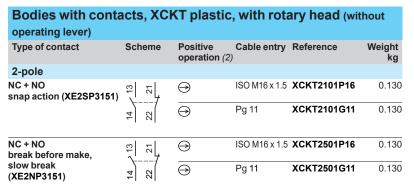
0.115

0.125

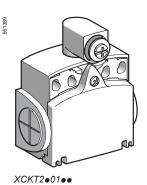
0.115

0.115

Bodies with conta operating lever)	icts, XCk	(D metal,	with rota	<b>ry head</b> (with	out
Type of contact	Scheme	Positive operation (2)	Cable entry	Reference	Weight kg
2-pole					
NC + NO snap action (XE2SP2151)	E 2 7	$\Theta$	ISO M16 x 1.5	XCKD2101P16	0.185
	4 8	$\Theta$	Pg 11	XCKD2101G11	0.185
		$\Theta$	M12 connector	XCKD2101M12	0.195
NC + NO break before make,	<u>دا</u> 2/	$\Theta$	ISO M16 x 1.5	XCKD2501P16	0.185
slow break (XE2NP2151)	4 8	$\overline{\ominus}$	Pg 11	XCKD2501G11	0.185



<sup>(1)</sup> For programming see page 18.



NC + NO

(XE2NP2151)

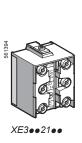
break before make, slow break

<sup>(2) :</sup> bodies with contact assuring positive opening operation.

XC Standard range Compact design, metal, XCKD or plastic, XCKP and XCKT

Adaptable sub-assemblies: contact blocks





Contact blocks	with screw cl	amp terminals	s for XCKD and X	CKP
Type of contact	Positive operation (1)	Scheme	Reference for standard contacts	Weight kg
2-pole				
NC + NO snap action	$\Theta$	22 21 21	XE2SP2151	0.020
NC + NC simultaneous, snap action	$\ominus$	22 - 21	XE2SP2141	0.020
NC + NO break before make, slow break	$\Theta$	22 - 21	XE2NP2151	0.020
NO + NC make before break, slow break	$\Theta$	22 21	XE2NP2161	0.020
NC + NC simultaneous, slow break	$\ominus$	12 22 21 11	XE2NP2141	0.020
NO + NO simultaneous, slow break	-	24 - 13   24 - 23   13	XE2NP2131	0.020
3-pole				
NC + NO + NO snap action	$\Theta$	22 24 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	XE3SP2151	0.035
NC + NC + NO snap action	$\Theta$	32 31 14 13 13	XE3SP2141	0.035
NC + NC + NO break before make, slow break	$\Theta$	22 22 4	XE3NP2141	0.035
NC + NO + NO break before make, slow break	$\Theta$	22 21 4 4 7 13 33 13 13	XE3NP2151	0.035

Contact blocks	with screw	clamp terminal	s for XCKT	
Type of contact	Positive operation (1)	Scheme	Reference for standard contacts	Weight kg
2-pole				
NC + NO snap action	$\Theta$	22 21 21	XE2SP3151	0.015
NC + NO break before make, slow break	$\Theta$	22 21	XE2NP3151	0.015
NO + NC make before break, slow break	$\Theta$	22 13	XE2NP3161	0.015
NC + NC simultaneous, slow break	$\Theta$	22 21	XE2NP3141	0.015
NO + NO simultaneous, slow break	-	47 47 43 23 23	XE2NP3131	0.015

(1) : contact blocks assuring positive opening operation.



XC Standard range

Compact design, plastic, with reset, XCPR and XCTR

### **■** XCPR

with 1 cable entry

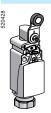
# $\hfill \square$ With head for linear movement (plunger). Fixing by the body XCPR





Page 104

 $\hfill \square$  With head for rotary movement (lever) or multi-directional. Fixing by the body XCPR



Page 104

#### ■ XCTR

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

# $\hfill \square$ With head for linear movement (plunger). Fixing by the body XCTR





Page 106

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



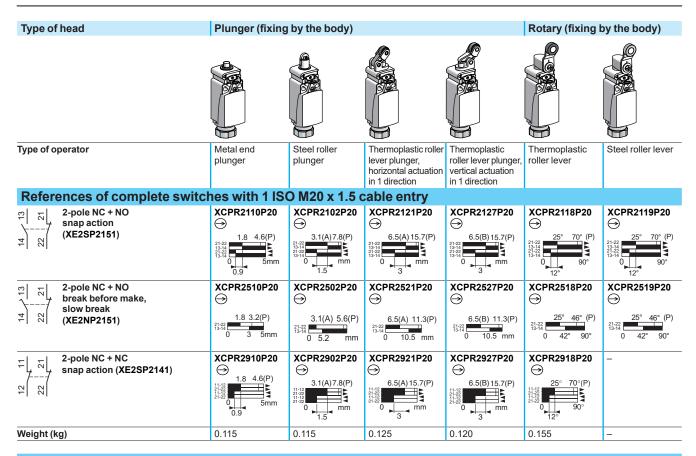
Page 106

XC Standard range Compact design, plastic, with reset, XCPR and XCTR

<b>Environment charac</b>	teristics			
Conformity to standards	Products	C€, EN/IEC 60947-5-1, UL 508, CSA C22-2 n° 14, EAC		
	Machine assemblies	EN/IEC 60204-1		
Product certifications		UL, CSA		
Protective treatment	Standard version	"TC"		
Ambient air temperature	For operation	- 25+ 70 °C (- 40+ 70 °C with ZCE106, ZCE026 and ZCE016 heads)		
	For storage	-40+70 °C		
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10500 Hz)		
Shock resistance	Conforming to IEC 60068-2-27	50 gn (11 ms)		
Electric shock protection		Class II conforming to IEC 61140 and NF C 20-030		
Degree of protection		IP 66 and IP 67 conforming to IEC 60529 IK 04 conforming to IEC 62262		
Repeat accuracy		0.1 mm on the tripping points, with 1 million operating cycles for head with end plunger		
Cable entry	Depending on model	Either: tapped entry for n° 13 cable gland, tapped ISO M20 x 1.5 or tapped 1/2" NPT		
Materials		Plastic bodies, Zamak heads		
<b>Contact block chara</b>	cteristics			
Rated operational characteris	tics	~ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 A DC-13; Q300 (Ue = 250 V, Ie = 0.27 A), conforming to EN/IEC 60947-5-1 Appendix A		
Rated insulation voltage		Ui = 500 V degree of pollution 3 conforming to IEN/IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14		
Rated impulse withstand volta	age	U imp = 6 kV conforming to EN/IEC 60947-1, IEC 60664		
Positive operation (depending	on model)	NC contacts with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K		
Resistance across terminals		≤ 25 mΩ conforming to IEC 60255-7 category 3		
Short-circuit protection		10 A cartridge fuse type gG (gl)		
Connection	XE2SP2151	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 2 x 1.5 mm <sup>2</sup>		
(screw clamp terminals)	XE2NP2151	Clamping capacity, min: 1 x 0.5 mm², max: 2 x 2.5 mm²		
Minimum actuation speed		XE2SP2151: 0.01 m/minute		
(for head with end plunger)		XE2NP2151: 6 m/minute		
		I .		

XC Standard range

Compact design, plastic, with reset, XCPR Complete switches with 1 cable entry



#### References of complete switches with 1 Pg 13.5 cable entry

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

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

For complete switches with 1 entry for 1/2" NPT conduit replace P20 by N12.

Example: XCPR2110P20 becomes XCPR2110N12.

Contact operation				(A) (B) = cam displacement (P) = positive opening point		NC contact with positive opening operation
Characterist	ics					
Switch actuation		On end	By 30° cam			
Type of actuation		<b>₩</b>	<del>-</del>			<del>-</del> 0
Maximum actuatio	n speed	0.5 m/s		1 m/s		1.5 m/s
Minimum force or	For tripping	15 N	12 N	6 N		0.1 N.m
torque	For positive opening	45 N	36 N	18 N		0.25 N.m
Cable entry  1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm 1 entry tapped Pg 13.5 for cable gland, clamping capacity 9 to 12 mm 1 entry tapped for 1/2" NPT (USAS B2-1) conduit			mm			

Complete switches with cable entries other than those listed above.

please consult our Customer Care Centre.



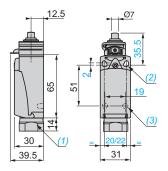
Other versions

XC Standard range

Compact design, plastic, with reset, XCPR Complete switches with 1 cable entry

#### **Dimensions**

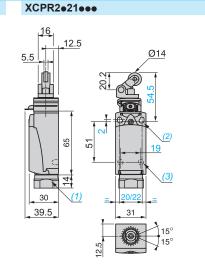
#### XCPR2e10eee



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

# 12.5 3.5 Ø11.6 51 65 30 39.5\_ 31

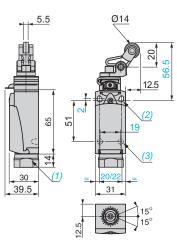
XCPR2•02•••

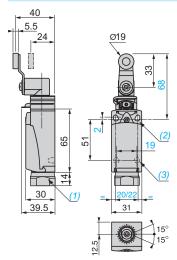


#### **Dimensions**

#### XCPR2•27•••

#### XCPR2e18eee, XCPR2e19eee





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

XC Standard range Compact design, plastic, with reset, XCTR Complete switches with 2 cable entries

Type of head	Plunger (fixing by t	he body)		Rotary (fixing by the body)
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger
References of complete switches with 2 ISC	D M16 x 1.5 cable	e entries		
2-pole NC + NO snap action (XE2SP3151)	XCTR2110P16 →  1.8 4.6(P)  1.8 4.6(P)  1.8 4.6(P)  1.8 4.6(P)  1.8 4.6(P)	XCTR2102P16 → 3.1(A)7.8(P) 3.1(A)7.8(P) 1.5 mm	XCTR2121P16 → 6.5(A) 15.7(P) 6.5(3) 15.7(P) mm	XCTR2118P16 → 25° 70° (P)  213-22 13-14 12° 90°
2-pole NC + NO break before make, slow break (XE2NP3151)	XCTR2510P16 → 1.8 3.2(P) 21-22 13-14 0 3 5mm	XCTR2502P16 → 3.1(A) 5.6(P) 21.22 13.44	XCTR2521P16 → 6.5(A) 11.3(P) 21-22 13-14 0 10.5 mm	XCTR2518P16 → 25° 46°(P) 21-22 13-14 0 42° 90°
Weight (kg)	0.120	0.125	0.135	0.165

### References of complete switches with 2 Pg 11 cable entries

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

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

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

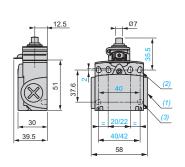
Contact operation		closed open	(A) = cam displa (P) = positive op → NC contact w		ation
Characteristics					
Switch actuation		On end	By 30° cam		
Type of actuation					
Maximum actuation speed		0.5 m/s		1 m/s	1.5 m/s
Minimum force or torque	For tripping	15 N	12 N	6 N	0.1 N.m
	For positive opening	45 N	36 N	18 N	0.25 N.m
Cable entry (1 entry fitted with blanking plu	2 entries tapped	2 entries tapped M16 x 1.5 mm for ISO cable gland, clamping capacity 4 to 8 mm 2 entries tapped Pg 11 for cable gland, clamping capacity 7 to 10 mm 2 entries tapped for 1/2" NPT (USAS B2-1) conduit using Pg 11 - 1/2" NPT adaptor <b>DE9RA1012</b>			

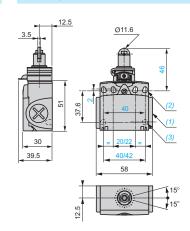
XC Standard range Compact design, plastic, with reset, XCTR Complete switches with 2 cable entries

#### **Dimensions**

XCTR2e10eee

#### XCTR2e02eee





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

# **Dimensions** DE9RA1012 XCTR2e18eee XCTR2e21eee 5.5 Ø19 Ø14 30 39.5 39.5 58

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

XC Basic range Compact design, plastic, XCKN and XCNT

### ■ XCKN

with 1 cable entry Conforming to CENELEC EN 50047

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

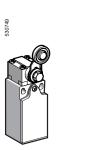






Page 110

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





Page 111

#### ■ XCNT

with 2 cable entries Conforming to CENELEC EN 50047

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



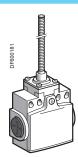




Page 112

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





Page 113

### XC Basic range Compact design, plastic, XCKN and XCNT

<b>Environment chara</b>	cteristics	
Conformity to standards	Products	IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14, EAC
	Machine assemblies	IEC 60204-1, EN 60204-1
Product certifications		UL, CSA, CCC
Protective treatment	Version	Standard: "TC"
Ambient air temperature	For operation	-25+70°C
	For storage	-40+70°C
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10500 Hz) except XCKN●●08: 10 gn, XCKN●●39 and XCKN●●49: 15 gn
Shock resistance	Conforming to IEC 60068-2-27	50 gn (11 ms) except XCKN2●49●● and XCKN●●39: 15 gn, XCKN2●08●●: 20 gn and XCKN2●45●●: 35 gn
Electric shock protection		Class II conforming to IEC 61140 and NF C 20030
Degree of protection		IP 65 conforming to IEC 60529; IK 04 conforming to IEC 62262
Cable entry		Depending on model: tapped entry for ISO M20 x 1.5 or Pg 11 cable gland, ISO M 16 x 1.5 cable gland or PF 1/2 (G 1/2).
Materials	Bodies	Plastic
	Heads	Plastic
Contact block char	acteristics	
Rated operational character	istics	∼ AC-15; A300 (Ue = 240 V, le = 3 A); Ithe = 10 A
		DC-13; R300 (Ue = 250 V, le = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
Rated insulation voltage	2-pole contact	Ui = 500 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	2-pole contact	U imp = 6 kV conforming to IEC 60947-1, IEC 60664
Positive operation		NC contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-1
Short-circuit protection		10 A cartridge fuse type gG (gI)
Connection	Screw clamp terminals	Clamping capacity, min: 1 x 0.34 mm², max: 2 x 1.5 mm²

XC Basic range Compact design, plastic, XCKN Complete switches with 1 cable entry

#### Plunger (fixing by the body) Type of head Type of operator Plastic roller Plastic roller Thermoplastic Thermoplastic Metal end roller lever plunger plunger for lateral plunger for roller lever plunger, vertical cam approach traverse cam plunger, horizontal actuation in approach actuation in 1 direction 1 direction Sold and packed in lots of 20 References of complete switches with 1 ISO M20 x 1.5 cable entry XCKN2110P20 XCKN2103P20 2-pole NC + NO XCKN2102P20 XCKN2121P20 XCKN2127P20 33 7 snap action 2.5 4.5(P) 4.3(A) 7.8( 4.3(A) 7.8(P) 9(A)15.9(P) 9(B)15.9(P) 4 22 XCKN2503P20 XCKN2510P20 XCKN2502P20 XCKN2521P20 XCKN2527P20 2-pole NC + NO 13 21 4.8(A) 7.3(P) 21-22 13-14 0 7 mm 4.8(A) 7.3(P) 21-22 13-14 0 7 mm break before make, slow break 2.8 4.2(P) 4 5.5mm 10(A) 14.9(P) 10(B) 14.9(P) 21-22 13-14 0 14.1 mm 0 14.1 mm 22 4 XCKN2727P20 2-pole NC + NC simultaneous, XCKN2710P20 XCKN2702P20 XCKN2703P20 XCKN2721P20 21 4.8 7.3 (P) → 4.8 <u>7.3 (</u>P) slow break $\odot$ $\Theta$ $\Theta$ 10 14.9(P) 11-12 21-22 0 mm mm 22 12 XCKN2910P20 ⊕ 2.2 5 1/D\ XCKN2903P20 2-pole NC + NC XCKN2902P20 XCKN2921P20 XCKN2927P20 7 → 3.9 (A) 8.9(P) → 3.9 (A) 8.9(P) 8 (A) 18 (P) snap action 2.2 5.1(P) 8 (B) 18 (P) 12 22 5.9 mm 0.8 0.070 Weight (kg) 0.065 0.065 0.065 0.070 **Contact operation** ■ closed (A) (B) = cam displacement NC contact with positive opening open (P) = positive opening point operation **Characteristics** Switch actuation On end By 30° cam Type of actuation | | | $\triangle$ Maximum actuation speed $0.5 \, \text{m/s}$ 0.3 m/s 1 m/s Mechanical durability (in millions of operating cycles) 10 Minimum force or torque 15 N 12 N 6 N For tripping

#### References of complete switches with 1 Pg 11 cable entry

For positive opening

For complete switches with 1 Pg 11 cable entry replace P20 by G11.

Example: XCKN2110P20 becomes XCKN2110G11.

#### Other cable entries

For complete switches with ISO M16 x 1.5 or PF 1/2 (G 1/2) cable entry, please consult our Customer Care Centre.

30 N

20 N

1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm

10 N

#### Other contacts

Cable entry

For complete switches with 2-pole contacts:

NO + NC make before break, slow break,

NO + NO simultaneous, slow break, please consult our Customer Care Centre.

For complete switches with 3-pole contacts:

NC + NO + NO snap action,

NC + NC + NO snap action,

NC + NC + NO break before make, slow break,

NC + NO + NO break before make, slow break, please consult our Customer Care Centre.



XC Basic range Compact design, plastic, XCKN Complete switches with 1 cable entry

	l				1	
Type of head	Rotary (fixing by the body)			Multi-directional		
Type of operator	Thermoplastic roller lever	Variable length thermoplastic roller lever	Thermoplastic roller lever, Ø 50 mm	Variable length thermoplastic roller lever, Ø 50 mm	Spring rod	"Cat's whisker"
Sold and packed in lots of	20	20	20	20	20	20
References of complete switc	hes with 1 IS	O M20 x 1.5 c	able entry			
snap action  2-pole NC + NO	XCKN2118P20 25° 50°(P) 21-22 13-14 16° 70°	XCKN2145P20 25° 50°(P) 21-22 13-14 16° 70°	XCKN2139P20 25° 50°(P) 21-22 13-14 16° 70°	XCKN2149P20 25° 50°(P) 13-14 16° 70°	XCKN2108P20  25° 21-22 13-14 15°	XCKN2106P20  25° 21-22 13-14 15°
2-pole NC + NO break before make, slow break	XCKN2518P20 28° 47°(P) 21-22 21-314 0 38° 70°	28° 47°(P) 21:22 13:14 0 38° 70°	XCKN2539P20 28° 47°(P) 213-14 0 38° 70°	XCKN2549P20 28° 47°(P) 21:22 13:14 0 38° 70°	28° 21-22 13-14 0 40°	28° 21-22 13-14 0 40°
2-pole NC + NC simultaneous, slow break	XCKN2718P20	XCKN2745P20 28° 47°(P) 211-12 21-22 0 90°	XCKN2739P20 28° 47°(P) 21-22 0 90°	XCKN2749P20 28° 47°(P) 21:22 0 90°	28° 122 0	28° 11-12 0
2-pole NC + NC snap action	XCKN2918P20  25° 55° (P)  11-12 21-22 0 70°	XCKN2945P20  25° 55° (P)  11-12 21-22 11-12 21-22 11-12 11-12 11-12 11-12 11-12 11-12	XCKN2939P20 25° 55° (P) 11-12 21-22 11-1	XCKN2949P20 25° 55° (P) 11-12 21-1	XCKN2908P20  25° 11-12 21-22 21-22 11-12 21-22 1-15°	XCKN2906P20  25° 11-12 21-22 11-12 21-22 15°
Weight (kg)	0.085	0.090	0.110	0.115	0.085	0.075
Contact operation	closed open		(A) (B) = cam displa (P) = positive openi	acement ng point	Operation	h positive opening
Characteristics						
Switch actuation	By 30° cam				By any moving pa	rt
Type of actuation					<b>→</b>	
Maximum actuation speed	1.5 m/s 1 m/s (any direction)			n)		
Mechanical durability	10 million operating cycles 5 million operating cycles			cycles		
Minimum force or torque  For tripping  For positive opening	0.1 N.m				0.13 N.m	
To positive opening	0.15 N.m –					
Cable entry	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm					

### References of complete switches with 1 Pg 11 cable entry

For complete switches with 1 Pg 11 cable entry replace P20 by G11. Example: XCKN2118P20 becomes XCKN2118G11.

#### Other cable entries

For complete switches with ISO M16 x 1.5 or PF 1/2 (G 1/2) cable entry, please consult our Customer Care Centre.

#### Other contacts

For complete switches with 2-pole contacts: NO + NC make before break, slow break,

NO + NO simultaneous, slow break, please consult our Customer Care Centre.

For complete switches with 3-pole contacts: NC + NO + NO snap action, NC + NC + NO snap action, NC + NC + NO break before make, slow break,

NC + NO + NO break before make, slow break, please consult our Customer Care Centre.



XC Basic range Compact design, plastic, XCNT Complete switches with 2 cable entries

#### Type of head Plunger (fixing by the body) Type of operator Metal end plunger Plastic roller plunger Plastic roller plunger Thermoplastic roller lever plunger, for lateral cam for traverse cam approach approach horizontal actuation in 1 direction Sold and packed in lots of 10 10 10 10 References of complete switches with 2 ISO M16 x 1.5 cable entries XCNT2110P16 → 1.8 4.6 2-pole NC + NO XCNT2121P16 21 1.8 4.6(P) snap action 3.1(A)7.8(P) 3.1(A)7.8(P) 6.5(A) 15.7(P) 4 22 1.5 5mm 0.9 XCNT2502P16 2-pole NC + NO XCNT2510P16 XCNT2503P16 XCNT2521P16 5 7 → 3.1(A) 5.6(P) → 6.5(A) 11.3(P) break before make, slow break 1.8 3.2(P) 3.1(A) 5.6(P) 21-22 4 22 10.5 mm 3 5mm XCNT2703P16 ⊕ 3 1 5 6(P) XCNT2702P16 2-pole NC + NC simultaneous, XCNT2710P16 XCNT2721P16 7 slow break 1.8 3.2(P) 3.1 5.6(P) 3.1 5.6(P) → 6.5 11.3(P) 11-12 21-22 0 11-12 21-22 11-12 21-22 0 11-12 21-22 22 2 mm Weight (kg) 0.085 0.085 0.085 0.090 (A) (B) = cam displacement **Contact operation** closed NC contact with positive opening open (P) = positive opening point operation **Characteristics** Switch actuation By 30° cam On end Type of actuation | | | | $\triangle$ Maximum actuation speed $0.5\,\mathrm{m/s}$ $0.3 \, \text{m/s}$ 1 m/s Mechanical durability (in millions of operating cycles) 10 15 N 12 N 6 N Minimum force or torque For tripping For positive opening 30 N 20 N 10 N Cable entry 2 entries tapped M16 x 1.5 mm for ISO cable gland, clamping capacity 4 to 8 mm

### References of complete switches with 2 Pg 11 cable entries

For complete switches with 2 Pg 11 cable entries replace P16 by **G11**. Example: XCNT2110P16 becomes **XCNT2110G11**.

#### Complete switches with 1/2" NPT cable entry

For complete switches with 1/2" NPT cable entry use adaptor DE9 RA1012 (compatible with XCNT •••• G11).



Description	Sold in lots of	Unit reference	Weight kg
Adaptor for 1/2" NPT conduit (male Pg 11 / female 1/2" NPT)	10	DE9RA1012	0.050

#### Other contacts

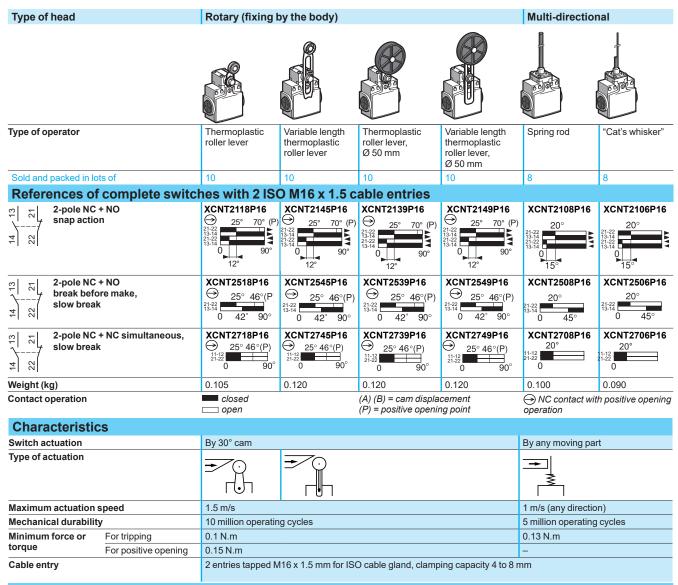
For complete switches with 2-pole contacts:

NO + NC make before break, slow break,

NO + NO simultaneous, slow break, please consult our Customer Care Centre.



XC Basic range Compact design, plastic, XCNT Complete switches with 2 cable entries



#### References of complete switches with 2 Pg 11 cable entries

For complete switches with 2 Pg 11 cable entries replace P16 by G11.

Example: XCNT2118P16 becomes XCNT2118G11

#### Complete switches with 1/2" NPT cable entry

For complete switches with 1/2" NPT cable entry use adaptor DE9 RA1012 (compatible with XCNT •••• G11).



Description	Sold in	Unit	Weight
	lots of	reference	kg
Adaptor for 1/2" NPT conduit (male Pg 11 / female 1/2" NPT)	10	DE9RA1012	0.050

#### Other contacts

For complete switches with 2-pole contacts:

NO + NC make before break, slow break,

NO + NO simultaneous, slow break, please consult our Customer Care Centre.

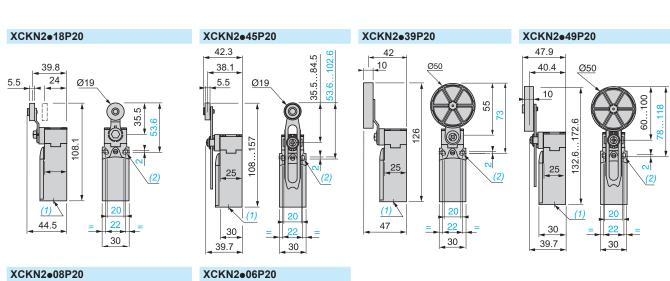
XC Basic range

Compact design, plastic, XCKN
Complete switches with 1 cable entry

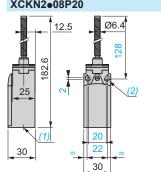
12.5

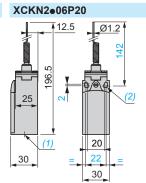
30

#### **Dimensions** XCKN2•10P20 XCKN2•02P20 XCKN2•03P20 Ø11 Ø11 12.5 3.5 85 25 (1) 30 30 30 30 30 30 XCKN2•21P20 XCKN2•27P20 (1) 1 tapped entry for ISOM20 x 1.5 or Pg 11 cable gland. (2) Ø: 2 elongated holes Ø 4.3 x 6.3 on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres. Ø14 Ø14 22 95. 93.



30



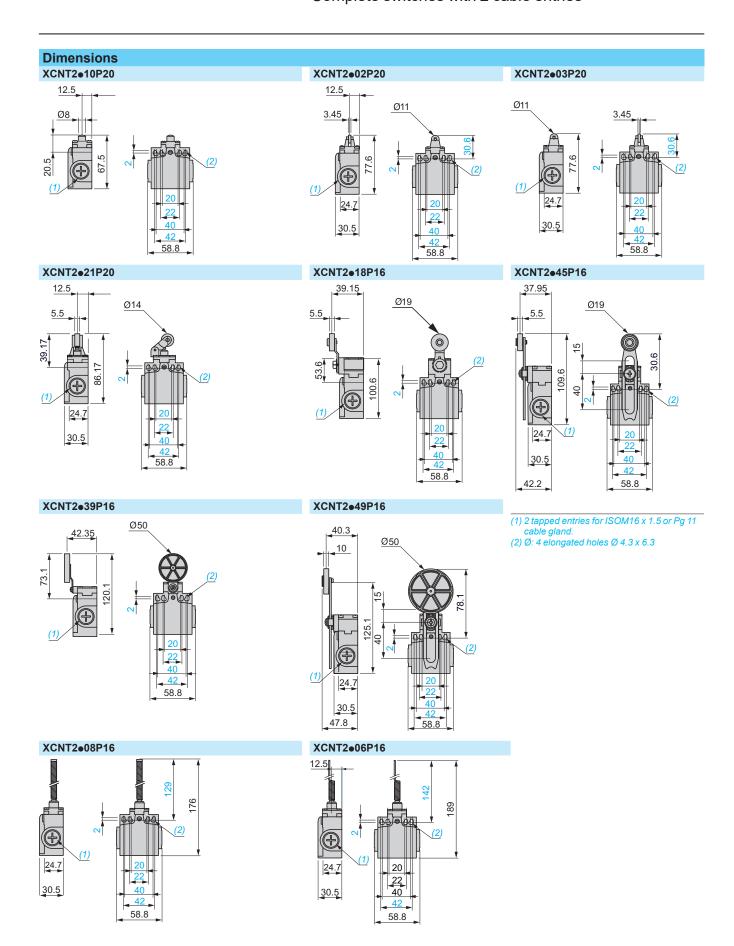


(1) 1 tapped entry for ISOM20 x 1.5 or Pg 11 cable gland. (2) Ø: 2 elongated holes Ø 4.3 x 6.3 on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.

30

30

XC Basic range Compact design, plastic, XCNT Complete switches with 2 cable entries



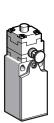
XC Basic range

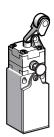
Compact design, plastic, with reset knob, XCNR Complete switches with 1 cable entry

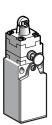
### ■ XCNR

with 1 cable entry

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

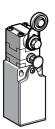






Page 118

#### ☐ With head for rotary movement (lever)



Page 118

XC Basic range
Compact design, plastic, with reset knob, XCNR
Complete switches with 1 cable entry

Conformity to standards	Products	C€, IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14, EAC		
	Machine assemblies	IEC 60204-1, EN 60204-1		
Product certifications		UL, CSA, CCC		
Protective treatment	Version	Standard: "TC"		
Ambient air temperature	For operation	-25+70°C		
	For storage	-40+70°C		
/ibration resistance	Conforming to IEC 60068-2-6	25 gn (10500 Hz)		
Shock resistance	Conforming to IEC 60068-2-27	50 gn (11 ms)		
Electric shock protection		Class II conforming to IEC 61140 and NF C 20030		
Degree of protection		IP 65 conforming to IEC 60529; IK 04 conforming to IEC 62262		
Cable entry		Depending on model: tapped entry, for ISO M20 x 1.5 or Pg 11 cable gland, ISO M16 x 1.5 cable gland or PF 1/2 (G 1/2)		
Materials	Bodies	Plastic		
	Heads	Plastic		
Contact block char	acteristics			
Rated operational character	ristics	∼ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 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	2-pole contact	Ui = 500 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  oltage	2-pole contact	U imp = 6 kV conforming to IEC 60947-1, IEC 60664		
Positive operation		NC contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-1		
Short-circuit protection		10 A cartridge fuse type gG (gl)		

XC Basic range

Compact design, plastic, with reset knob, XCNR Complete switches with 1 cable entry

Type of head	Plunger (fixing by the b	oody)			Rotary (fixing by the body)
Type of operator	Metal end plunger	Plastic roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever plunger, vertical actuation in 1 direction	Thermoplastic roller lever
Sold and packed in lots of	10	10	10	10	10
References of complete switches with 1	ISO M20 x 1.5 c	able entry			
E 2-pole NC + NO snap action	2.5 4.5(P) 2.5 4.5(P) 2.5 4.5(P) 2.5 4.5(P) 2.5 4.5(P) 3.5 5.5mm	XCNR2102P20 4.3(A) 7.8(P) 13-14 13	XCNR2121P20	XCNR2127P20	XCNR2118P20  25° 50°(P)  31-12  31-12  16°  26°
2-pole NC + NO break before make, slow break	XCNR2510P20  21.8 4.2(P) 21.22 0 4 5.5 mm	XCNR2502P20	XCNR2521P20	XCNR2527P20 10(B) 14.9(P) 21-22 13-14 14.1 mm	XCNR2518P20 ⇒ 28° 47°(P) 21-22 13-14 0 38° 70°
2-pole NC + NC simultaneous, slow break	XCNR2710P20 2.8 4.2(P) 2.8 4.2(P) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	XCNR2702P20	XCNR2721P20 → 10 14.9(P) 11-12 0 mm	XCNR2727P20 → 10 14.9(P) 11-12 21-22 0 mm	XCNR2718P20 28° 47°(P) 11-12 11-12 0 90°
2-pole NC + NC snap action	XCNR2910P20 2.2 5.1(P) 2.22 5.1(P) 2.22 5.1(P) 2.23 5.9 mm	XCNR2902P20 3.9 (A) 8.9(P) 11-12 21-22 21-22 1-4 mm	XCNR2921P20  8 (A) 18 (P)  11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 21-	**XCNR2927P20  **B (B) 18 (P)  **In-12	XCNR2918P20 25° 55° (P) 25° 55° (P) 11-12 21-22 21-22 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-12 21-22 11-22
Weight (kg)	0.080	0.080	0.085	0.090	0.100
Contact operation	closed open	(A) (B) = cam displ (P) = positive oper		→ NC contact wi operation	th positive opening
Characteristics					
Switch actuation	On end	By 30° cam			
Type of actuation	<u> </u>	<del>-</del>			
Maximum actuation speed	0.5 m/s	0.3 m/s	1 m/s		1.5 m/s
Mechanical durability	100,000 operating	g cycles			
Minimum force or torque For tripping	15 N	12 N	6 N		0.1 N.m
For positive opening	30 N	20 N	10 N		0.15 N.m
Cable entry	1 entry tapped M2	20 x 1.5 mm for ISO	cable gland, clamp	ing capacity 7 to 13	mm
References of complete switches with 1	Pg 11 cable ent	rv			

For complete switches with 1 Pg 11 cable entry replace P20 by **G11**. Example: XCNR2110P20 becomes **XCNR2110G11**.

#### Other cable entries

For complete switches with ISO M16 x 1.5 or PF 1/2 (G 1/2) cable entry, please consult our Customer Care Centre.

#### **Other contacts**

For complete switches with 2-pole contacts:

NC + NO make before break, slow break, NO + NO simultaneous, slow break, please consult our Customer Care Centre.

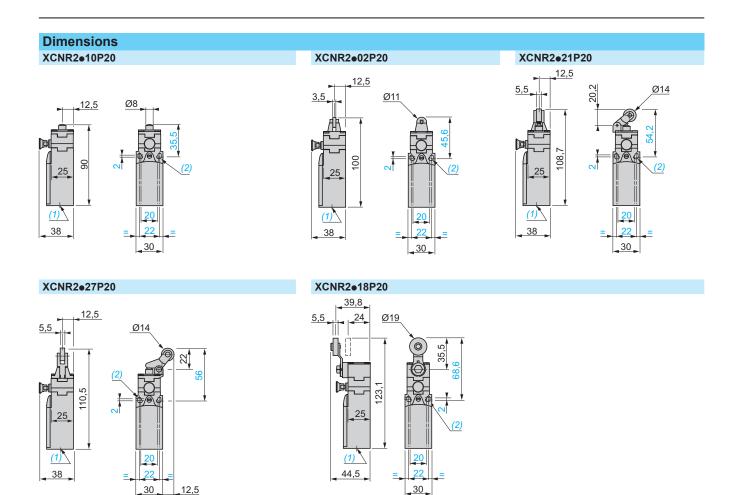
For complete switches with 3-pole contacts:

NC + NO + NO snap action,
NC + NC + NO snap action,
NC + NC + NO snap action,
NC + NC + NO break before make, slow break,
NC + NO + NO break before make, slow break, please consult our Customer Care Centre.



XC Basic range

Compact design, plastic, with reset knob, XCNR Complete switches with 1 cable entry



- (1) 1 tapped entry for ISO M20 x 1.5 or Pg 11 cable gland. (2) Ø: 2 elongated holes Ø 4.3 x 6.3 on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.

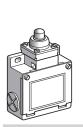
XC Standard range, Classic format Metal, XCKM, XCKL and XCKML

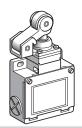
#### ■ XCKM,

with 3 cable entries

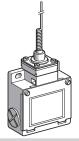
#### ☐ With head for linear movement (plunger)

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







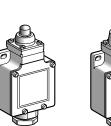


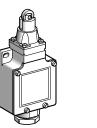
Page 122

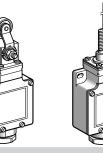
■ XCKL, with 1 cable entry

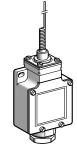
# ☐ With head for linear movement

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







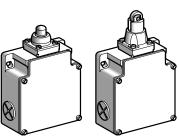


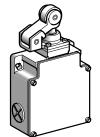
#### ■ XCKML,

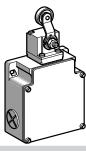
with 3 cable entries and 2 x 2-pole contacts

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

☐ With head for rotary movement







Page 126

<b>Environment chara</b>	cteristics			
Conformity 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 (only for XCKM) BV (only for XCKM and XCKL)		
Protective treatment	Version	Standard: "TC". Special: "TH"		
Ambient air temperature	For operation	-25+70°C		
	For storage	-40+70°C		
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10500 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 05 conforming to IEC 62262		
Repeat accuracy		XCKML 0.1 mm; XCKM and XCKL 0.05 mm on the tripping points, with 1 million operating cycles for head with end plunger		
Cable entry or connector	Depending on model	XCKM: 3 tapped entries for Pg 11 cable gland or tapped ISO M20, or with 1/2" NPT adaptor XCKL: 1 tapped entry incorporating Pg 13.5 cable gland or 1 entry tapped 1/2" NPT XCKML: 3 tapped entries for Pg 13.5 cable gland or tapped ISO M20		
Materials		Bodies: Zamak. Rotary heads: Zamak or plastic, depending on product reference. Other heads: plastic		

# General characteristics (continued)

# **Limit switches**

XC Standard range, Classic format Metal, XCKM, XCKL and XCKML

	acteristics					
Rated operational characteristics	XE2•P	~ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 DC-13; Q300 (Ue = 250 V, Ie = 0.27 A), confor				
	XE3•P	$\sim$ AC-15; B300 (Ue = 240 V, Ie = 1.5 A); Ithe =				
Rated insulation voltage	XE2•P	Ui = 500 V degree of pollution 3 conforming to Ui = 300 V conforming to UL 508, CSA C22-2 n	EC 60947-1 ° 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	XE2•P	U imp = 6 kV conforming to IEC 60947-1, IEC 6	60664			
withstand voltage	XE3•P	U imp = 4 kV conforming to IEC 60947-1, IEC 6				
Positive operation (depending	g on model)	NC contacts with positive opening operation confo	orming to IEC 60947-5-1 Appendix K, EN 60947-5			
Resistance across terminals		≤ 25 mΩ conforming to IEC 60255-7 category 3	3			
Short-circuit	XE2•P	10 A cartridge fuse type gG (gl)				
protection	XE3•P	6 A cartridge fuse type gG (gI)				
Connection	XE2SP21●1	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 2 x	κ 1.5 mm²			
(screw clamp terminals)	XE2NP21●1	Clamping capacity, min: 1 x 0.5 mm <sup>2</sup> , max: 2 x 2	2.5 mm <sup>2</sup>			
	XESP2151L and XENP2151L	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 2 x	( 1.5 mm <sup>2</sup> or 1 x 2.5 mm <sup>2</sup>			
	XE3NP and XE3SP	Clamping capacity, min: 1 x 0.34 mm <sup>2</sup> , max: 1 x	( 1 mm² or 2 x 0.75 mm²			
linimum actuation speed		XE2SP21•1, XESP2151L and XE3SP: 0.01 m	/minute			
•		XE2NP21●1, XENP2151L and XE3NP: 6 m/mi				
Electrical durability		<ul> <li>Conforming to IEC 60947-5-1 Appendix C</li> <li>Utilisation categories AC-15 and DC-13</li> <li>Maximum operating rate: 3600 operating cy</li> <li>Load factor: 0.5</li> </ul>	cles/hour			
		XE2SP21e1, XE2SP2141, XESP2151L	XE2NP21●1, XENP2151L			
	AC supply 50/60 Hz ∼ ← inductive circuit	Selection of the second of the	se 5 4 2 230 V 12/24/48 V 2 110 V 2 1 10			
		0.5 1 2 3 4 5 10 Current in A	0.5 0.5 1 2 3 4 5 10 Current in A			
	DC supply	Power broken in W for 5 million operating cycles.	Power broken in W for 5 million operating cycles.			
		Voltage <b>V 24 48 120</b>	Voltage <b>V 24 48 120</b>			
		m W 10 7 4	m W 13 9 7			
		For XE2SP●151 on $\sim$ or ===, NC and NO contact with reverse polarity.	ts simultaneously loaded to the values shown			
	AC supply	XE3SP••••	XE3NP••••			
	50/60 Hz ~ .mm inductive circuit	5   Ithe	1 230 V 110 V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	DC supply <del></del>	Power broken in W for 5 million operating cycles.	Power broken in W for 5 million operating cycles.			
		Voltage V 24 48 120	Voltage V 24 48 120			

XC Standard range, Classic format Metal, XCKM Complete units with 3 cable entries

Type of head		Plunger (fixing by	the body)		Rotary (fixing by the body)	Multi-directional, (fixing by the body)
Type of operator		Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever (1)	"Cat's whisker" (2)
References of c	omplete un	its with 3 ISO M	20 x 1.5 cable er	tries (3)		
2-pole NC + NO snap action (XE2SP2151)	22   13	XCKM110H29 →  1.8 4.5(P)  1.3 4.5(P)  1.3 4.5(P)  1.3 5.5mm	XCKM102H29 →  3.1(A) 7.8(P)  21-22 13-14 13-14 0	XCKM121H29  4.6 (A) 11.1(P) 13.14 21.22 13.14 0 2.22 mm	XCKM115H29 → 26° 58°(P)  21-22 26° 58°(P) 21-22 13-14 21-22 11-0 11-0	XCKM106H29
2-pole NC + NO break before make, slow break (XE2NP2151)	22   13	0.9 XCKM510H29 → 1.8 3.2(P) 21-22 13-14 0 3 5.5mm	1.5 XCKM502H29 →  3.1(A) 5.6(P)  21-22 13-14 0 5.2 mm	XCKM521H29 →  4.6(A) 8(P)  21.22 13.14 0 7.6 mm	XCKM515H29 →  26° 42°(P)  21-22 13-14 10 36° 70°	30° 21-22 13-14 0 40°
2-pole NC + NC snap action (XE2SP2141)	12 22 21	ZCKM9H29 + ZCKD10 ⊕ 1.8 4.5(P) 1.12	ZCKM9H29 + ZCKD02 → 3.1(A) 7.8(P) 11-12 21-12 0 1.5 mm	ZCKM9H29 + ZCKD21 → 4.6(A) 11.1(P)	ZCKM9H29 + ZCKD15	ZCKM9H29 + ZCKD06
2-pole NC + NC simultaneous, slow break (XE2NP2141)	22 - 11	ZCKM7H29 + ZCKD10 → 11-12 3.2(P) 11-12 1.8 5.5mm	ZCKM7H29 + ZCKD02 → 5.6(P) 11-12 21-22 3.1(A) 9mm	ZCKM7H29 + ZCKD21 → 11-12 8(P) 4.6(A) mm	ZCKM7H29 + ZCKD15 → 42°(P) 21-22 26° 70°	ZCKM7H29 + ZCKD06
3-pole NC + NC + NO snap action (XE3SP2141)	222 21 14 14 13 13	ZCKMD39H29 + ZCKD10 → 1.8 4.5(P) mm 21-22 31-32	ZCKMD39H29 + ZCKD02 $\Longrightarrow$ 3.1(A) 7.8(P) mm 21.22 31.32 31.32 31.32 31.32 13.14	ZCKMD39H29 + ZCKD21 → 4.6(A) 11.1(P) mm 21.22 31.32 31.32 31.32 31.32 31.32 31.32 31.32 31.32 31.32 31.32 31.32	ZCKMD39H29 + ZCKD15 (P)  21-22	ZCKMD39H29 + ZCKD06
3-pole NC + NC + NO break before make, slow break (XE3NP2141)	32 22 21 14 7 13	ZCKMD37H29 + ZCKD10 → 1.8 3.2(P) mm 21.22 13.14 0 3 5.5	ZCKMD37H29 + ZCKD02 → 3.1(A) 3.2(P) mm 21-22 31-32 13-34 0 5.2 5.5	ZCKMD37H29 + ZCKD21 → 4.6 (A) 8 (P) mm 21-22 13-14 0 7.6	ZCKMD37H29 + ZCKD15 → 26° 42°(P) 3132 13-14 0 36° 70°	2CKMD37H29 + 2CKD06 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32
Weight (kg)		0.250	0.255	0.300	0.280	0.250
Contact operation  References of c	omniete	closed open	(A) = cam displacemen (P) = positive opening p		NC contact with pos	sitive opening operation

#### References of complete units with 3 Pg 11 cable entries

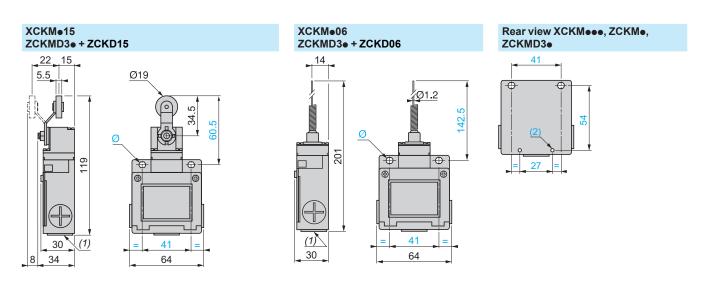
For complete unit	s with 3 Pg 11 cable entire	es, delete <b>nz9</b> from the e	end of the reference. Exa	imple: <b>ACKIVITIUM29</b> be	comes ACKIVITIO.		
Characteristic	cs						
Switch actuation	l	On end	By 30° cam By any moving p				
Type of actuation	1			-		<b>→</b>	
Maximum actuat	Maximum actuation speed		0.5 m/s 1.5 m/s			1 m/s (any direction)	
Mechanical dura (in millions of op		20			15	10	
Minimum force	For tripping	15 N	12 N	8 N	0.1 N.m	0.13 N.m	
or torque	For positive opening	45 N	36 N	24 N	0.25 N.m	-	
Cable entry	Cable entry		3 entries tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm				

- (1) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
  (2) Value taken with actuation by moving part at 100 mm from the fixing.
  (3) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.
  (4) Limited to 15 million operating cycles for switches with contacts XE3●P.



XC Standard range, Classic format Metal, XCKM Complete units with 3 cable entries

XCKM●10 XCKM●02 XCKMe21 ZCKMD3• + ZCKD10 ZCKMD3● + ZCKD02 ZCKMD3• + ZCKD21 Ø10 Ø12 Ø20 54 88 801 Ø (1) 30 (1) <u>(1)</u> 41 64 30 30 65



- (1) 3 tapped entries for ISO M20 x 1.5 or Pg 11 cable gland or with 1/2" NPT conduit adaptor DE9RA1012.
- (2) 2 x Ø 4 H 11, depth 10. Ø: 2 elongated holes Ø 5.2 x 6.2

# Adaptor for 1/2" NPT conduit

#### DE9RA1012



- (1) Tapped entry for 1/2" NPT conduit. (2) Pg 11 threaded sleeve.

XC Standard range, Classic format Metal, XCKL

Complete units incorporating Pg 13.5 cable gland

Type of head		Plunger (fixing by	the body)		Rotary (fixing by the body)	Multi-directional, (fixing by the body)
Type of operator		Metal end plunger	Steel roller plunger	Thermoplastic roller lever plunger, horizontal actuation in 1 direction	Thermoplastic roller lever (1)	"Cat's whisker" (2)
References (3)						
2-pole NC + NO snap action (XE2SP2151)	22 13 22 21	XCKL110 →  1.8 4.5(P)  21-22 21-22 21-23	XCKL102 → 3.1(A) 7.8(P)	XCKL121 → 4.6(A) 11.1(P) 21-22 21-24 21	XCKL115 → 26° 58°(P)	XCKL106
2-pole NC + NO break before make, slow break (XE2NP2151)	22   13	0.9 5.5mm XCKL510 → 1.8 3.2(P)	0 1.5 mm XCKL502 →  3.1(A) 5.6(P)	0 1 2.2 mm XCKL521 → 4.6(A) 8(P)	0 110 70°  XCKL515 →  26° 42°(P)	XCKL506
3-pole NC + NC + NO snap action (XE3SP2141)	22 21 31 4 14 13 2 1	73-74	21:213 0 5.2 mm ZCKLD39 + ZCKD02 ↔	21:21 13:14 0 7.6 mm ZCKLD39 + ZCKD21 →	73-76	20KLD39 + ZCKD06
,	W  W	1.8 4.5(P) mm 21-22 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32	3.1(A) 7.8(P) mm 21-22 31-32 13-14 21-22 13-14	4.6(A) 11.1(P) mm 21-22 31-32 13-14 21-22 13-13 13-14 2.2	26° 58°(P) 21-22 31-32 13-14 21-22 31-32 13-14 0 70°	30° 21-22 31-32 13-14 21-22 31-32 13-14
2-pole NC + NC simultaneous, slow break (XE2NP2141)	22   22 	3.2(P) 1.8 5.5mm	2CKL7 + 2CKD02 → 5.6(P) 11-12 21-22 3.1(A) 9mm	2CKL7 + ZCKD21 → 8(P) 11-12 1-22 4.6(A) mm	2CKL7+ 2CKD15 → 42°(P) 11-12 21-22 23° 70°	2CKL7 + 2CKD06
3-pole NC + NC + NO break before make, slow break (XE3NP2141)	22 27 4 13 21 21 21 21 21 21 21 21 21 21 21 21 21	ZCKLD37 + ZCKD10 →	ZCKLD37 + ZCKD02 → 3.1(A) 3.2(P) mm 21.22 3.13.32 13.44 0 5.2 5.5	ZCKLD37 + ZCKD21 → 4.6 (A) 8(P) mm 31:32 13:14 10 7.6	ZCKLD37 + ZCKD15 ⇒	ZCKLD37 + ZCKD06
Weight (kg)		0.255	0.260	0.305	0.285	0.255
Contact operation		closed open	(A) = cam displacemen (P) = positive opening p	t		sitive opening operation
Characteristics						
Switch actuation		On end	By 30° cam			By any moving part
Type of actuation						<b>→</b>
Maximum actuation speed		0.5 m/s		1.5 m/s		1 m/s (any direction)
Mechanical durability $(4)$ (in millions of operating cy	cles)	20			15	10
Minimum force or torque For tripping		15 N 45 N	12 N 36 N	8 N 24 N	0.1 N.m 0.25 N.m	0.13 N.m
Cable entry				ing capacity 6 to 13.5 mi	<u> </u>	



<sup>(1)</sup> Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.

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

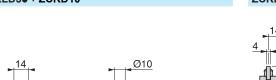
(3) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.

(4) Limited to 15 million operating cycles for switches with contacts XE3•P.

XC Standard range, Classic format Metal, XCKL

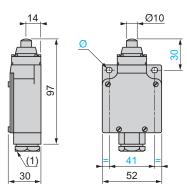
Complete units incorporating Pg 13.5 cable gland

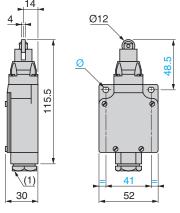
XCKLe10 ZCKLe+ZCKD10 ZCKLD3e+ZCKD10

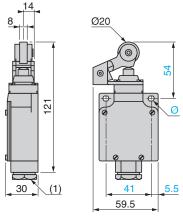


XCKLe02 ZCKL3e + ZCKD02 ZCKLD3e + ZCKD02

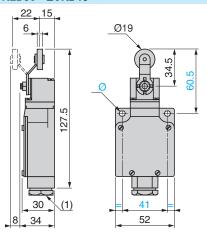




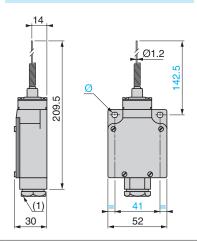


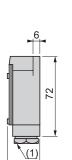


XCKLe15 ZCKLe+ZCKD15 ZCKLD3e+ZCKD15



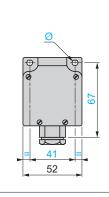
XCKLe06 ZCKLe+ZCKD06 ZCKLD3e+ZCKD06





30

**Body fixings** 



(1) Incorporated Pg 13.5 cable gland

Ø: 2 elongated holes Ø 5.2 x 6.2

XC Standard range, Classic format Metal, 2 x 2-pole contacts, XCKML Complete switches with 3 cable entries

<sup>(1)</sup> Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.

#### Note: replacement parts

The heads of limit switches XCKML are the same as those for XCKM and XCKL (see heads ZCKD10, ZCKD02, ZCKD21 and ZCKD15 on page 128).

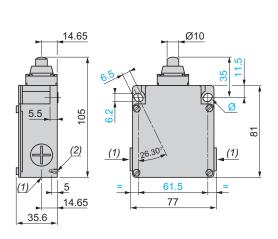


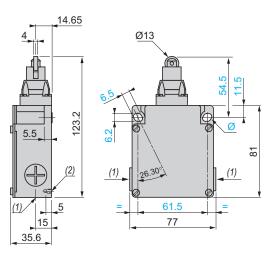
<sup>(2)</sup> Switches available with other 2-pole slow break contact blocks: NO + NC make before break, NC + NC simultaneous (with positive opening operation), NO + NO simultaneous. Please consult our Customer Care Centre.

XC Standard range, Classic format Metal, 2 x 2-pole contacts, XCKML Complete switches with 3 cable entries

# XCKML110H29, XCKML510H29, XCKML110, XCKML510

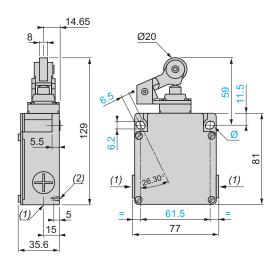
#### XCKML102H29, XCKML502H29, XCKML102, XCKML502

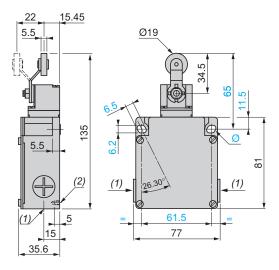




# $\begin{array}{l} \mathsf{XCKML121H29}, \mathsf{XCKML521H29}, \mathsf{XCKML121}, \\ \mathsf{XCKML521} \end{array}$

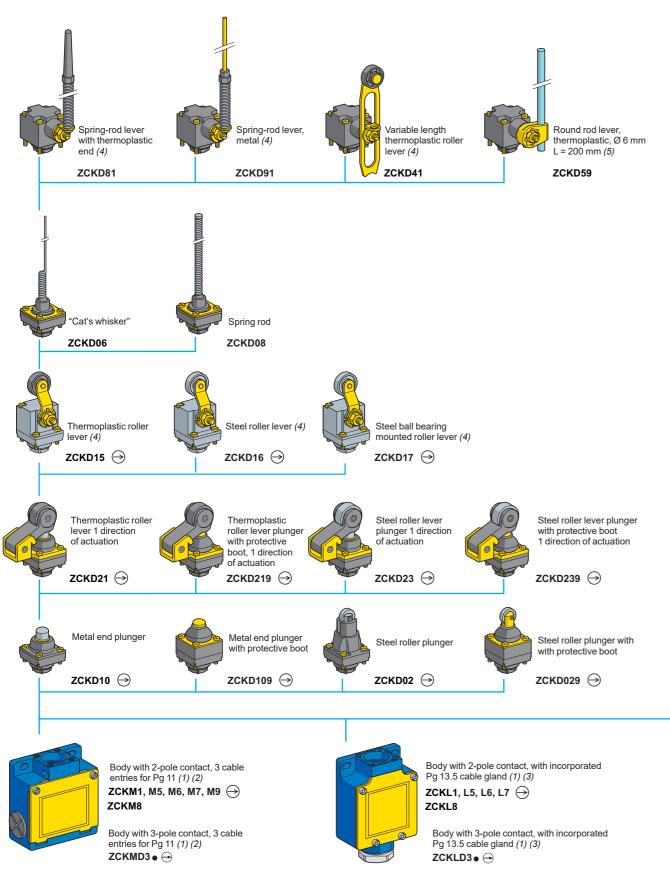
#### XCKML115H29, XCKML515H29, XCKML115, XCKML515





- (1) XCKML•••H29: 3 entries tapped M20 x 1.5. XCKML•••: 3 tapped entries for n° 13 cable gland.
- (2) 2 centring holes Ø 3.9  $\pm$  0.2, for cover fixing holes alignment.
- Ø 2 elongated holes 6.2 x 6.5, inclined at 26° 30' to the vertical axis, for M5 screws.

XC Standard range, Classic format Metal, XCKM and XCKL Variable composition



: head assuring positive opening operation.

For actuation from left AND right or from left OR right

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

ZCKD05 👄

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

128

 (1) For further information, see page 130.
 (2) For 3 cable entries tapped ISO M20 x 1.5, add H29 to the reference. Example: ZCKM1 becomes ZCKM1H29. For one cable entry with 1/2" NPT adaptor, add H7 to the reference. Example: ZCKM1 becomes ZCKM1H7. (3) For one cable entry tapped 1/2" NPT, add H7 to the reference. Example: ZCKL1 becomes ZCKL1H7.







Round rod lever.

L = 200 mm (5)

ZCKY59

thermoplastic, Ø 6 mm

Variable length

elastomer

roller lever.

ZCKY49

Steel ball bearing

mounted roller

ZCKY34 →

lever (4)

Ø 50 mm (4)

Elastomer

roller lever,

Ø 50 mm (4)

ZCKY39

Round rod lever.

L = 125 mm (5)

Spring-rod lever,

metal (4)

ZCKY91

Variable

length steel

roller lever

ZCKY43

Steel roller

ZCKY33 →

lever (4)

ZCKY55

glass fibre, Ø 3 mm

Square rod lever,

steel, Ø 3 mm

L = 125 mm (5)

Spring-rod lever with thermoplastic

end (4)

ZCKY81

lever, (4)

ZCKY41

Variable length

thermoplastic roller

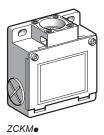
Thermoplastic roller

lever (4)

ZCKY31 →

ZCKY54

XC Standard range, Classic format Metal, XCKM and XCKL Adaptable sub-assemblies



<b>Bodies with 2-pole c</b>	ontact				
With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
For limit switches XCKM					
NC + NO	21	$\ominus$	Pg 11	ZCKM1	0.210
snap action (XE2SP2151)	\ <del>/</del>	O	ISO M20 x 1.5	ZCKM1H29	0.210
(AE23F2131)	22		1/2" NPT <i>(2)</i>	ZCKM1H7	0.210
NC + NO	13	$\Theta$	Pg 11	ZCKM5	0.210
break before make, slow break	\\ <del>/</del>	O	ISO M20 x 1.5	ZCKM5H29	0.210
(XE2NP2151)	75 22		1/2" NPT (2)	ZCKM5H7	0.210
NO + NC	13	$\Theta$	Pg 11	ZCKM6	0.210
make before break, slow break	7-5	O	ISO M20 x 1.5	ZCKM6H29	0.210
(XE2NP2161)	22 4		1/2" NPT <i>(2)</i>	ZCKM6H7	0.210
NC + NC	12   1	$\Theta$	Pg 11	ZCKM7	0.210
simultaneous,	~[, ~], <i>_J</i>		ISO M20 x 1.5	ZCKM7H29	0.210
slow break (XE2NP2141)	22   12		1/2" NPT (2)	ZCKM7H7	0.210
NO + NO	23	-	Pg 11	ZCKM8	0.210
simultaneous, slow break	\(\)		ISO M20 x 1.5	ZCKM8H29	0.210
(XE2NP2131)	4 2		1/2" NPT <i>(2)</i>	ZCKM8H7	0.210
NC + NC	1   1   1	$\Theta$	Pg 11	ZCKM9	0.210
snap action (XE2SP2141)	2 2 2	O	ISO M20 x 1.5	ZCKM9H29	0.210
For limit switches XCKL					
NC + NO	13	$\Theta$	Pg 13.5	ZCKL1 (3)	0.210
snap action (XE2SP2151)	4 8 2	\ <del></del> 7	1/2" NPT	ZCKL1H7	0.210
NC + NO	13	$\Theta$	Pg 13.5	ZCKL5 (3)	0.210
break before make, slow break (XE2NP2151)	4 8 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		1/2" NPT	ZCKL5H7	0.210
NO + NC	13   13	$\Theta$	Pg 13.5	ZCKL6 (3)	0.210
make before break, slow break (XE2NP2161)	2 4 2 4	O	1/2" NPT	ZCKL6H7	0.210

 $\Theta$ 

Pg 13.5

1/2" NPT

Pg 13.5

1/2" NPT

**ZCKL7** (3)

ZCKL7H7

**ZCKL8** (3)

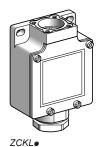
ZCKL8H7

0.210

0.210

0.210

0.210



12 7

2 2

(XE2NP2161) NC + NC

simultaneous,

slow break (XE2NP2141)

simultaneous,

slow break (XE2NP2131)

NO + NO

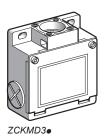


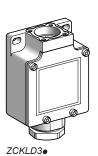
<sup>(1) :</sup> NC contact with positive opening operation.

<sup>(2) 3</sup> tapped entries, one with metal adaptor for 1/2" NPT (USASB2-1) conduit.

<sup>(3)</sup> Pg 13.5 cable gland included with switch.

XC Standard range, Classic format Metal, XCKM and XCKL Adaptable sub-assemblies





<b>Bodies with 3-pol</b>	e contact				
With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
For limit switches XCI	<b>KM</b>				
NC + NO + NO	13 33	$\Theta$	Pg 11	ZCKMD31	0.210
snap action	7	$\circ$	ISO M20 x 1.5	ZCKMD31H29	0.210
XE3SP2151)	25   44   14		1/2" NPT (2)	ZCKMD31H7	0.210
NC + NC + NO		$\Theta$	Pg 11	ZCKMD39	0.210
snap action	//\	$\circ$	ISO M20 x 1.5	ZCKMD39H29	0.210
XE3SP2141)	<sup>4</sup> 22 33		1/2" NPT (2)	ZCKMD39H7	0.210
IC + NC + NO	13 21	$\ominus$	Pg 11	ZCKMD37	0.210
oreak before make,	777	$\circ$	ISO M20 x 1.5	ZCKMD37H29	0.210
slow break XE3NP2141)	<sup>32</sup> <sup>32</sup> <sup>4</sup> <sup>1</sup>		1/2" NPT (2)	ZCKMD37H7	0.210
NC + NO + NO	13 33	$\Theta$	Pg 11	ZCKMD35	0.210
eak before make, ow break	7	Ŭ	ISO M20 x 1.5	ZCKMD35H29	0.210
XE3NP2151)	14   34   14   14   14   14   14   14		1/2" NPT (2)	ZCKMD35H7	0.210
For limit switches XCF	<b>KL</b>				
NC + NO + NO	13 33 21	$\Theta$	Pg 13.5	ZCKLD31 (3)	0.210
snap action (XE3SP2151)	22 42 4	O	1/2" NPT	ZCKLD31H7	0.210
NC + NC + NO	21   13	$\ominus$	Pg 13.5	ZCKLD39 (3)	0.210
snap action (XE3SP2141)	77\	O	1/2" NPT	ZCKLD39H7	0.210
,,,,	32   14   14				
NC + NC + NO	21 21 13	$\Theta$	Pg 13.5	ZCKLD37 (3)	0.210
oreak before make, slow break (XE3NP2141)	2 2 4	Ŭ	1/2" NPT	ZCKLD37H7	0.210
NC + NO + NO	13   33   51	$\Theta$	Pg 13.5	ZCKLD35 (3)	0.210
break before make, slow break (XE3NP2151)	2 2 4	$\circ$	1/2" NPT	ZCKLD35H7	0.210

 $<sup>(1) \</sup>bigoplus$ : NC contact with positive opening operation.

<sup>(2) 3</sup> tapped entries, one with metal adaptor for 1/2" NPT (USASB2-1) conduit.

<sup>(3)</sup> Pg 13.5 cable gland included with switch.

XC Standard range, Classic format Metal, XCKM and XCKL Adaptable sub-assemblies









(1) (1) : NC contact with positive opening operation or sub-assembly assuring positive opening operation.

<b>Accessory for limit switch</b>	nes XCKM		
Description	Sold in lots of	Unit reference	Weight kg
Tap-off terminal for cabling continuity	1	XCKZ09	0.010

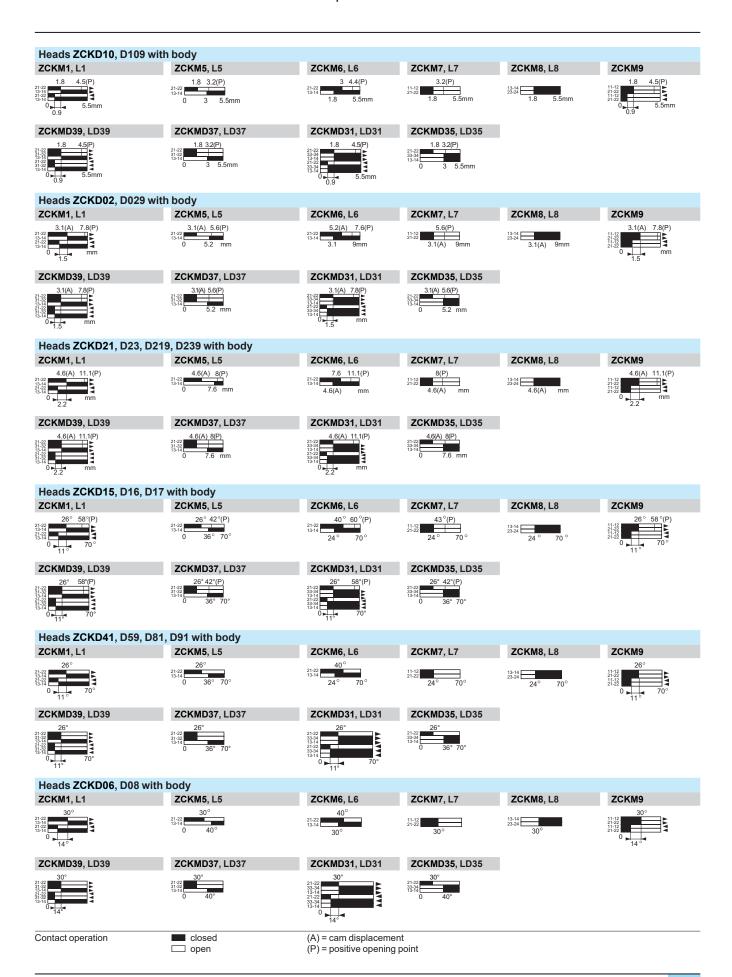


Other versions Gold flashed contacts.

Please consult our Customer Care Centre.



XC Standard range, Classic format Metal, XCKM and XCKL Adaptable sub-assemblies

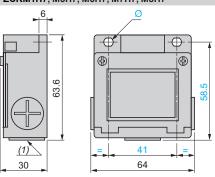


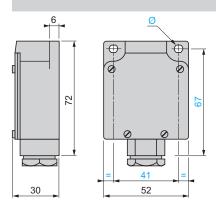
XC Standard range, Classic format Metal, XCKM and XCKL Adaptable sub-assemblies

#### **Bodies with contacts**

ZCKM1, M5, M6, M7, M8, M9, MD3•, MD3H•29, MD3•H7 ZCKM1H29, M5H29, M6H29, M7H29, M8H29, M9H29 ZCKM1H7, M5H7, M6H7, M7H7, M8H7

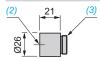
ZCKL1, L5, L6, L7, L8, LD3● (with incorporated Pg 13.5 cable gland)
ZCKL1H7, L5H7, L6H7, L7H7, L8H7, LD3●H7 (with 1/2" NPT cable entry)





# Adaptor for 1/2" NPT conduit

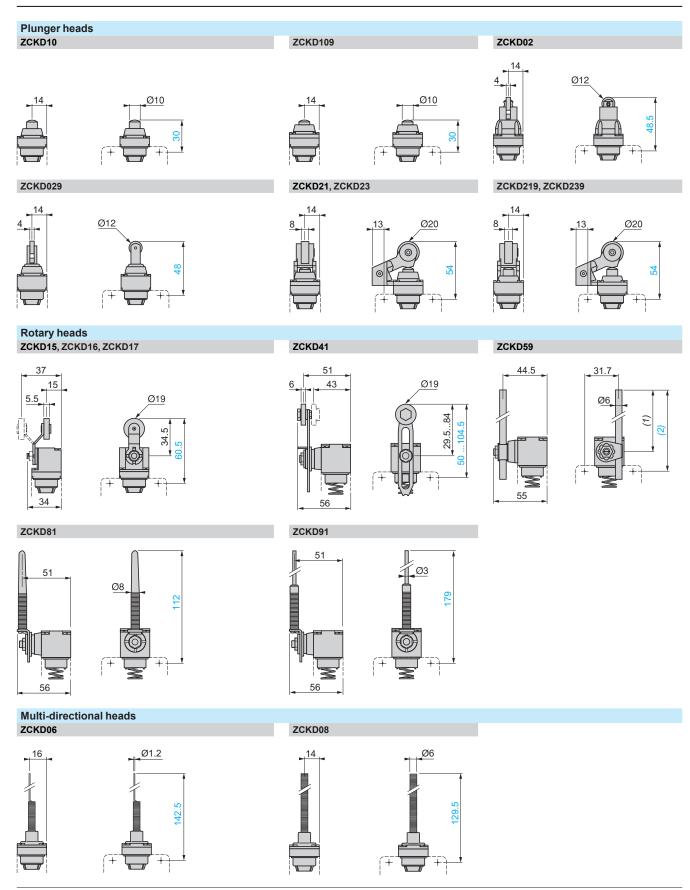
#### DE9RA1012



(1) 3 tapped entries for ISO M20 x 1.5 or Pg 11 cable gland.

Ø: 2 elongated holes Ø 5.2 x 6.2 (2) Tapped entry for 1/2" NPT conduit. (3) Pg 11 threaded sleeve.

XC Standard range, Classic format Metal, XCKM and XCKL Adaptable sub-assemblies



(1) 190 max.

(2) 215.5 max.

Note: operating lever spindle threaded M6.

XC Standard range, format EN 50041 Plastic, double insulated, XCKS

# Complete switch with 2 contacts (NO + NC) and 1 cable entry

■ The XCKS limit switches range, with 2 integrated contacts, offers "all-in-one", ready to use products.

# $\hfill \square$ XCKS, with head for linear (plunger) and rotary (lever) movement



□ ZCKD: complete head with linear or rotary actuator □ ZCKS: bodies with 2, 3 or 4 contacts

# Variable composition switch with 2, 3 or 4 contacts and 1 cable entry

■ The variable composition range expands the offer up to 4 contacts and choice among 18 different actuators.











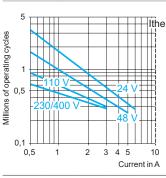
<b>Environment chara</b>	ecteristics	
Conformity to standards	Products	CE, EN/IEC 60947-5-1, UL 508, CSA C22-2 n°14, CCC, EAC
	Machine assemblies	EN/IEC 60204-1
Product certifications		UL, CSA, CCC, EAC
Protective treatment	Version	Standard "TC", special "TH"
Ambient air temperature	For operation	- 25+ 70 °C
	For storage	-40+70 °C
Vibration resistance	Conforming to EN/IEC 60068-2-6	25 gn (10500 Hz)
Shock resistance	Conforming to EN/IEC 60068-2-27	XCKS1••: 40 gn (11 ms) XCKS5••: 50 gn (11 ms)
Electric shock protection	Conforming to EN/IEC 61140	Class II
Degree of protection	Conforming to EN/IEC 60529	XCKS1●●, XCKS5●●: IP 66 and IP 67 ZCKS: IP 65
	Conforming to EN 62262	XCKS100, XCKS500: IK 05 ZCKS: IK 03
Cable entry	Depending on model	Tapped entry for cable gland:  ■ Pg 13.5  ■ ISO M20 x 1.5  ■ 1/2" NPT
Materials		Bodies and heads: plastic

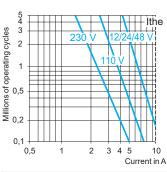


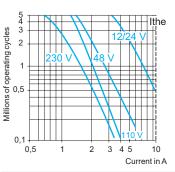
XC Standard range, format EN 50041 Plastic, double insulated, XCKS

Type of contacts	Conforming to EN/IEC 60947-5-1	Type Zb, electrically separate double break contacts			
Positive operation (depend		NC contacts with positive opening opera	ation conforming to EN/IEC 60947-5-1 Appendix K		
Rated operational characteristics	XCKS1●●, XCKS5●● XE2●P●, XESP●	~ AC-15 ; A300 (Ue = 240 V, le = 3 A) DC-13 ; Q300 (Ue = 250 V, le = 0.2	) ; Ithe = 10 A 27 A), conforming to EN/IEC 60947-5-1 Appendix A		
	XE3•P•	~ AC-15 ; B300 (Ue = 240 V, le = 1.5 DC-13 ; R300 (Ue = 250 V, le = 0.1	A); Ithe = 6 A A), conforming to EN/IEC 60947-5-1 Appendix A		
Rated insulation voltage	XCKS1●●, XCKS5●● XE2●P●, XESP●	Ui = 500 V degree of pollution 3 confo	orming to EN/IEC 60947-5-1		
	XE3•P•	Ui = 300 V conforming to UL 508 and 0	CSA C22-2 n° 14		
Rated impulse withstand voltage	XCKS1●●, XCKS5●● XE2●P●, XESP●	U imp = 6 kV conforming to EN/IEC 60	947-1, IEC 60664		
	XE3•P•	U imp = 4 kV conforming to EN/IEC 60947-1, IEC 60664			
Short-circuit protection	XCKS1●●, XCKS5●● XE2●P●, XESP●	10 A cartridge fuse type gG (gI)			
	XE3•P•	6 A cartridge fuse type gG (gI)			
Resistance across termina	ls	≤ 25 mΩ conforming to EN/IEC 60255	-7 category 3		
Connection screw clamp terminals)	XCKS1.e., XCKS5.e. XE2SP21.e1	Clamping capacity, min: 1 x 0.34 mm²/AWG 22, max: 2 x 1.5 mm²/AWG 16			
	XE2NP21●1	Clamping capacity, min: 1 x 0.5 mm <sup>2</sup> /	AWG 20, max: 2 x 2.5 mm <sup>2</sup> / AWG 14		
	XESP●	Clamping capacity, min: 1 x 0.75 mm <sup>2</sup>	<sup>2</sup> /AWG 20, max: 2 x 1.5 mm <sup>2</sup> /AWG 16		
	XE3•P•	Clamping capacity, min: 1 x 0.34 mm²/AWG 22, max: 1 x 1 mm²/AWG 18 or 2 x 0.75 mm²/AWG 20			
Minimum actuation speed		Snap action contacts (XCKS1•, XE•	,		
		Slow break contacts (XCKS5•, XE2N	NP● and XE3NP●): 6 m/minute		
Electrical durability	XCKS1•• + LC1D38 / ~ 230 V	15 million operating cycles			
	XCKS5●● + LC1D38 / ~ 230 V	V 20 million operating cycles			
	ZCKS	■ Conforming to IEC 60947-5-1 App ■ Utilisation categories AC-15 and D ■ Maximum operating rate: 3600 ope ■ Load factor: 0.5	OC-13		
XE2S	P21e1, XE2SP2141	XE2NP21●1	XESP3021		

AC supply 50/60 Hz ∼ m inductive circuit







DC supply ===

Power broken in W for 5 million operating cycles. Voltage 24 48 120 W 10 4

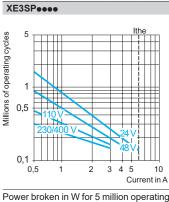
Power broken in W for 5 million operating cycles. Voltage 24 48 120 W 13 9

Power broken in W for 5 million operating cycles.

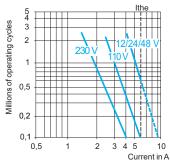
120 Voltage 24 48 W 10 4

For XE2S Pullet151 on  $\sim$  or  $\overline{\phantom{a}}$ , NC and NO contacts simultaneously loaded to the values shown with reverse polarity.

AC supply 50/60 Hz  $\sim$ m inductive circuit



#### XE3NP•



DC supply ....

Power br cycles.	oken i	n W for	5 millior	operating
Voltage	٧	24	48	120
m	w	3	2	1

Power broken in W for 5 million operating	
cycles.	

Power brocycles.	Power broken in W for 5 million operating cycles.							
Voltage	٧	24	48	120				
m	W	4	3	2				

XC Standard range, format EN 50041 Plastic, double insulated, XCKS Complete switches with 1 cable entry

Type of head Plunger (fixing by the body) Rotary (fixing by the body) Form conforming В С D to EN 50041 (1) Type of operator Metal end Steel roller Thermoplastic or Variable length Variable length Round thermoplastic Elastomer plunger plunger steel roller lever roller lever. thermoplastic or elastomer roller rod lever. Ø 6 mm steel roller lever (2) Ø 50 mm (2) lever, Ø 50 mm (3)(4)(2)Positive operation  $\Theta$  $\Theta$  $\Theta$  $\Theta$ References of complete switches with 1 ISO M20 x 1.5 cable entry 2-pole NC + NO XCKS139H29 XCKS101H29 XCKS102H29 XCKS131H29 XCKS141H29 XCKS149H29 XCKS159H29 snap action (thermoplastic) (thermoplastic) XCKS133H29 XCKS143H29 4 (steel) (steel) 2-pole NC + NO XCKS501H29 XCKS502H29 XCKS531H29 XCKS539H29 XCKS541H29 XCKS549H29 XCKS559H29 break before (thermoplastic) (thermoplastic) XCKS533H29 XCKS543H29 make, slow break (steel) (steel) Weight (kg) 0.125 0.135 0.160 0.175 0.165 0.180 0.170 **Contact operation** closed (A) = cam displacement NC contact with positive opening operation (P) = positive opening point open

#### References of complete switches with 1 Pg 13.5 cable entry

For an entry tapped for a Pg 13.5 cable gland, delete H29 from the end of the reference. (Except XCKS133H29, XCKS143H29, XCKS533H29 and XCKS543H29). Example: XCKS101H29 becomes XCKS101.

#### References of complete switches with 1/2" NPT cable entry

For an entry tapped for a 1/2" NPT cable gland, replace H29 at the end of the reference by H7. (Except XCKS133H29, XCKS143H29, XCKS501H29, XCKS533H29, XCKS539H29, XCKS543H29, XCKS549H29 and XCKS559H29). Example: XCKS101H29 becomes XCKS101H7.

Charac	teristics							
Switch actu	uation	On end	By 30° cam	0° cam				
Type of act	uation	<u> </u>						
Maximum a	actuation speed	0.5 m/s		1.5 m/s 1 m/s			1 m/s	
Mechanica (in millions of cycles)		25	15	20				
Minimum	For tripping	15 N	12 N	0.10 N.m				
force or torque	For positive opening	30 N	20 N	0.15 N.m	_	0.15 N.m	_	-
Cable entry	1	1 entry tapped M2	20 x 1.5 mm for ISC	cable gland, clam	ping capacity 7 to	13 mm		

- (1) Form conforming to EN 50041, see page 25.
  (2) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
- (3) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting.
- (4) Value taken with actuation by moving part at 100 mm from the fixing



XC Standard range, format EN 50041 Plastic, double insulated, XCKS Variable composition switches with 1 cable entry



Note: ZCKD heads can only be used with ZCKS bodies.

References of variable composition switches (ZCKS bodies and ZCKD heads) with 1 ISO M20 x 1.5 cable entry (3)									
Form conforming to EN 50041 (1)	В	С	А	А	A	А	D		
Type of operator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever (2)	Elastomer roller lever, Ø 50 mm (2)	Variable length thermoplastic roller lever (2)	Variable length elastomer roller lever, Ø 50 mm (2)	Round thermoplasti rod lever, Ø 6 mm (4) (5)		
Positive operation	$\Theta$	$\Theta$	$\Theta$	_	$\Theta$	_	_		
2-pole NC + NC snap action	ZCKS9H29 + ZCKD01	ZCKS9H29 + ZCKD02	ZCKS9H29 + ZCKD31	ZCKS9H29 + ZCKD39	ZCKS9H29 + ZCKD41	ZCKS9H29 + ZCKD49	ZCKS9H29 + ZCKD59		
전 (XE2SP2141)	1,8 4,5(P) 11-12 21-22 11-1	3,1(A) 7,8(P) 11-12 21-22 11-12 21-22 0 mm	23° 58°(P) 11-12 21-22 11-12 21-22 0 80°	23° 11-12 21-22 11-12 21-22 0 80°	23° 58°(P) 11-12 21-22 11-12 21-22 0 80°	23° 11-12 21-22 11-12 21-22 0 80°	23° 11-12 21-22 11-12 21-22 0 80°		
2-pole NC + NC simultaneous,	ZCKS7H29 + ZCKD01	ZCKS7H29 + ZCKD02	ZCKS7H29 + ZCKD31	ZCKS7H29 + ZCKD39	ZCKS7H29 + ZCKD41	ZCKS7H29 + ZCKD49	ZCKS7H29 + ZCKD59		
2 2 (XE2NP2141)	3,2 (P) 21-22 0 1,8 5,5 mm	5,6(P) 11-12 21-22 0 3,1(A)	42°(P) 11-12 21-22 0 23° 80°	11-12 21-22 0 23° 80°	11-12 21-22 0 23° 80°	11-12 21-22 0 23° 80°	11-12 21-22 0 23° 80°		
	ZCKSD39H29 + ZCKD01	ZCKSD39H29 + ZCKD02	ZCKSD39H29 + ZCKD31	ZCKSD39H29 + ZCKD39	ZCKSD39H29 + ZCKD41	ZCKSD39H29 + ZCKD49	ZCKSD39H29 + ZCKD59		
Snap action (XE3SP2141)	1,8 4,5(P) 21-22 13-32 13-32 13-32 13-34 0 0,9 5,5	3,1(A) 7,8(P) 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32 31-32	23° 58°(P) 21-22 31-32 31-32 21-22 31-32 31-32 13-14 80°	23° 21-22 23-32 13-132 21-22 21-32 31-32 13-14 80°	23° 58°(P) 21-22 31-32 13-14 21-22 31-32 13-14 10 80°	23° 21-22 31-32 13-14 21-22 31-32 13-14 10 80°	23° 21-22 31-32 31-32 31-32 13-14 0 11° 80°		
∑ Z Z Z S S S S S S S S S S S S S S S S	ZCKSD37H29 + ZCKD01	ZCKSD37H29 + ZCKD02	ZCKSD37H29 + ZCKD31	ZCKSD37H29 + ZCKD39	ZCKSD37H29 + ZCKD41	ZCKSD37H29 + ZCKD49	ZCKSD37H29 + ZCKD59		
break before make, slow break (XE3NP2141)	1,8 3,2(P) 21-22 31-32 13-14 0 3 5,5 mm	3,1(A) 5,6(P) 21-22 31-32 13-14 0 5,2 mm	23° 42°(P) 21-22 31-32 13-14 0 33° 80°	23° 21-32 31-32 13-14 0 33° 80°	23° 42°(P) 21-22 31-32 13-14 0 33° 80°	23° 21-32 31-32 13-14 0 33° 80°	23° 21-32 13-14 0 33° 80°		
Weight (kg)	0.095	0.105	0.145	0.150	0.155	0.155	0.150		
Contact operation	closed open		(A) = cam displace (P) = positive oper		ONC contact wit	h positive opening	operation		

#### References of variable composition switches (ZCKS bodies and ZCKD heads) with 1 Pg 13.5 cable entry

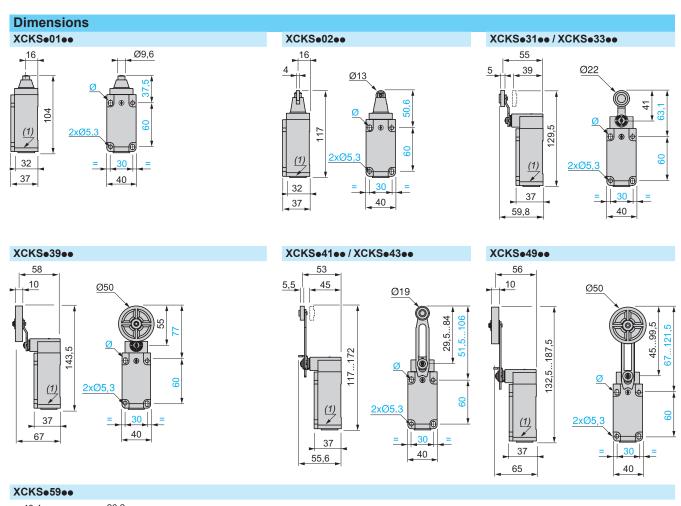
For ZCKS bodies with 1 Pg 13.5 cable entry, delete H29 from the end of the reference. Example: ZCKS1H29 becomes ZCKS1.

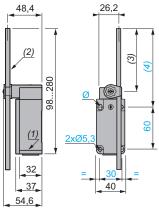
Charac	teristics							
Switch acti	uation	On end	By 30° cam	30° cam				By any moving part
Type of act	tuation	<u> </u>		or				
Maximum a	actuation speed	0.5 m/s		1.5 m/s 1 m/s			1 m/s	
	of operating	25	15	20				
Minimum	For tripping	15 N	12 N	0.15 N.m				
force or torque	For positive opening	45 N	36 N	0.3 N.m	-	0.3 N.m	-	-
Cable entry  1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm								

- (1) Form conforming to EN 50041, see page 25.
- (2) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
  (3) Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.
  (4) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever 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.



XC Standard range, format EN 50041 Plastic, double insulated, XCKS Complete switches with 1 cable entry



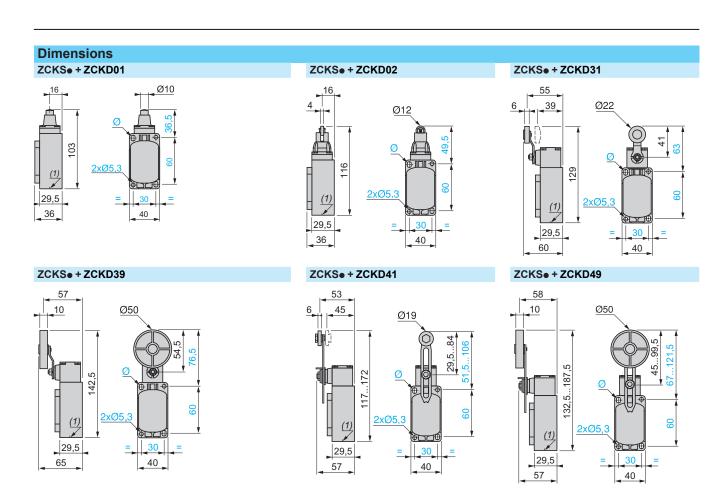


- (1) 1 tapped entry for ISO M20 x 1.5 or Pg 13.5 or 1/2" NPT cable gland. (2) Ø 6 rode, lenght 200 mm. (3) 190 max.

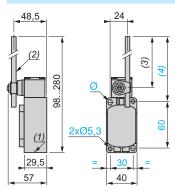
- (4) 212 max. Ø : 2 elongated holes 5.3 x 7.3 mm.



XC Standard range, format EN 50041 Plastic, double insulated, XCKS Variable composition switches with 1 cable entry

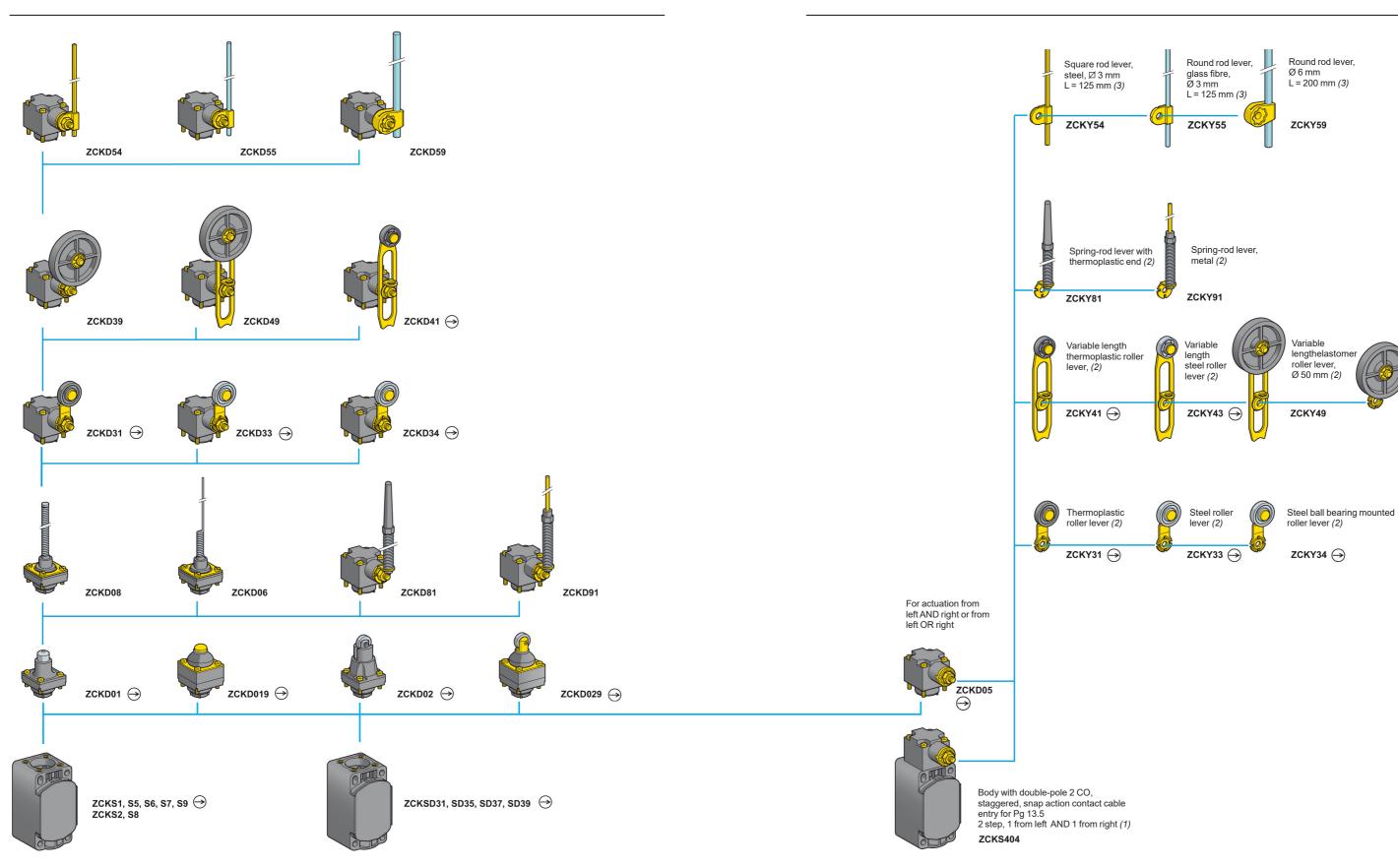


#### ZCKS• + ZCKD59



- (1) 1 tapped entry for ISO M20 x 1.5 or Pg 13.5 or 1/2" NPT cable gland.
- (2) Ø 6 rode, lenght 200 mm.
- (3) 190 max.
- (4) 212 max. Ø : 2 elongated holes 5.3 x 7.3 mm.

XC Standard range, format EN 50041 Plastic, double insulated, XCKS Variable composition



(1) For further details see page 147. For a cable entry tapped ISO M20 x 1.5, add H29 to the reference.

Example: ZCKS1 becomes ZCKS1H29.

Note: ZCKD heads can only be used with ZCKS bodies.

Elastomer

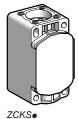
roller lever,

ZCKY39

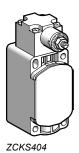
Ø 50 mm (2)

<sup>(2)</sup> Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
(3) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting.

XC Standard range, format EN 50041 Plastic, double insulated, XCKS Variable composition switches



	2-pole contact	0.1	Decition of	0.1.1	D. (	147.1.1.4
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
1 step	NC + NO snap action	Z 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	$\Theta$	Pg 13.5	ZCKS1	0.080
	(XE2SP2151)	75 22		ISO M20 x 1.5	ZCKS1H29	0.080
	2 CO simultaneous,	2   2   3	_ <del>/</del>	Pg 13.5	ZCKS2	0.080
	snap action (XESP3021)	4       2       2       4       2       2       2       2       2       2       2       2       2       3       4       4       5       6       6       7       8       8       9       8       9       9       8       9       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10 <td></td> <td>ISO M20 x 1.5</td> <td>ZCKS2H29</td> <td>0.080</td>		ISO M20 x 1.5	ZCKS2H29	0.080
	NC + NO break before make,	2 2 2	$\Theta$	Pg 13.5	ZCKS5	0.080
	slow break (XE2NP2151)	4 2 2		ISO M20 x 1.5	ZCKS5H29	0.080
	NO + NC make before break,	2√7 − ₹ 2	$\Theta$	Pg 13.5	ZCKS6	0.080
	slow break (XE2NP2161)	<sup>22</sup> 4 22		ISO M20 x 1.5	ZCKS6H29	0.080
	NC + NC simultaneous,	£[2]	$\Theta$	Pg 13.5	ZCKS7	0.080
	slow break (XE2NP2141)	52 22		ISO M20 x 1.5	ZCKS7H29	0.080
	NO + NO simultaneous,		-	Pg 13.5	ZCKS8	0.080
	slow break (XE2NP2131)	4 2		ISO M20 x 1.5	ZCKS8H29	0.080
	NC + NC snap action	=	$\Theta$	Pg 13.5	ZCKS9	0.080
	(XE2SP2141)	[2]		ISO M20 x 1.5	ZCKS9H29	0.080



Bodies with do	Bodies with double-pole contact and spring return rotary head									
Without operating lever										
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg				
2 step 1 from left and	2 CO staggered snap action	2   2   13	_	Pg 13.5	ZCKS404	0.150				
1 from right		22 24 25 25		ISO M20 x 1.5	ZCKS404H29	0.150				

<b>Bodies with 3-po</b>	le contact and 1	cable entry				
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
-	NC + NO + NO snap action	2   8   2	$\Theta$	Pg 13.5	ZCKSD31	0.080
	(XE3SP2151)	22 4 4		ISO M20 x 1.5	ZCKSD31H29	0.080
	NC + NC + NO snap action	2 2 3	$\Theta$	Pg 13.5	ZCKSD39	0.080
	(XE3SP2141)	<sup>4</sup> 25 32		ISO M20 x 1.5	ZCKSD39H29	0.080
	NC + NC + NO break before make,	2 2 3	$\Theta$	Pg 13.5	ZCKSD37	0.080
	slow break (XE3NP2141)	32   32   44		ISO M20 x 1.5	ZCKSD37H29	0.080
	NC + NO + NO break before make,	7-77	$\Theta$	Pg 13.5	ZCKSD35	0.080
	slow break (XE3NP2151)	22 4 4		ISO M20 x 1.5	ZCKSD35H29	0.080

<sup>(1)</sup>  $\bigcirc$ : NC contact with positive opening operation or head assuring positive opening operation.

XC Standard range, format EN 50041 Plastic, double insulated, XCKS Variable composition switches



XE2SP21•



XE2NP21•



XESP3021



XE3•P21••



*DE9RA*●•12

Contact blocks fo	r ZCKS•• bodies	;			
Type of contact	Scheme	For body	Positive operation (1)	Reference	Weight kg
2-pole contact			• ` ` ` `		
NC + NO snap action	22   13	ZCKS1	$\Theta$	XE2SP2151	0.020
NC + NO break before make, slow break	22 13	ZCKS5	$\Theta$	XE2NP2151	0.020
2 CO simultaneous snap action	14 13 13 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ZCKS2	-	XESP3021	0.045
NO + NC make before break, slow break	22 4 14 13	ZCKS6	$\Theta$	XE2NP2161	0.020
NC + NC simultaneous, slow break	22 21	ZCKS7	$\Theta$	XE2NP2141	0.020
NO + NO simultaneous, slow break	41 24 - 7 23   13	ZCKS8	-	XE2NP2131	0.020
NC + NC snap action	22 - 7	ZCKS9	$\Theta$	XE2SP2141	0.020
3-pole contact					
NC + NO + NO snap action	22 4 4 13 33 2 13 2	ZCKSD31	$\Theta$	XE3SP2151	0.035
NC + NC + NO snap action	32 31 14 14 13	ZCKSD39	$\ominus$	XE3SP2141	0.035
NC + NC + NO break before make, slow break	22 32 4 - 21 31 13 13 31	ZCKSD37	$\Theta$	XE3NP2141	0.035
NC + NO + NO break before make, slow break	22 34 14 14 13 13	ZCKSD35	$\Theta$	XE3NP2151	0.035

Accessories for ZCKS●● and 2	KCKS••		
Description	Minimum order quantity	Reference	Weight kg
Adaptator for 1/2" NPT conduit (male Pg 13.5 / female 1/2" NPT)	10	DE9RA1212	0.035
Adaptator for 1/2" NPT conduit (male M20 x 1.5 / female 1/2" NPT)	5	DE9RA2012	0.050

(1)  $\Theta$ : NC contact with positive opening operation or sub-assembly assuring positive opening operation.

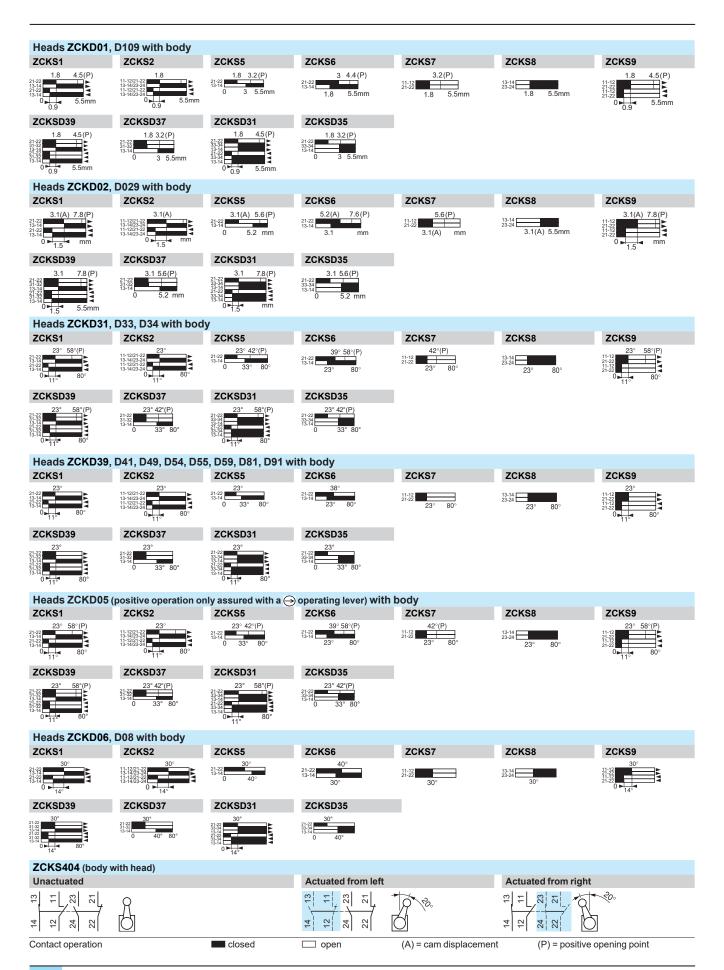
Other versions

Gold flashed contacts.

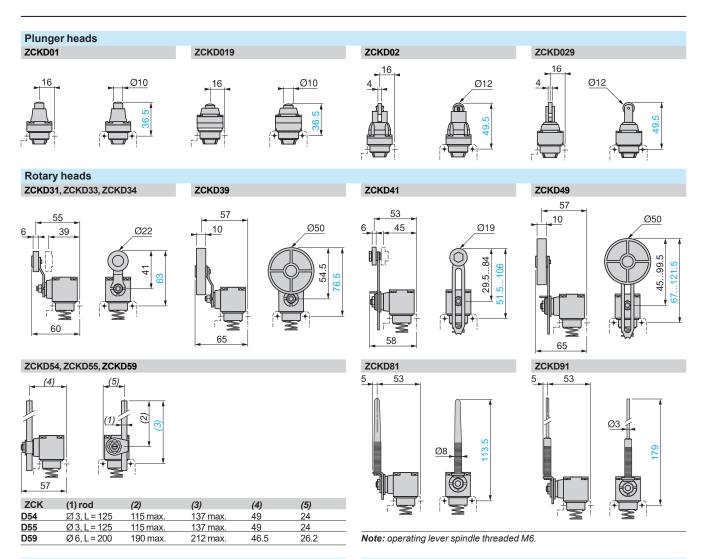
Please consult our Customer Care Centre.



XC Standard range, format EN 50041 Plastic, double insulated, XCKS Variable composition switches



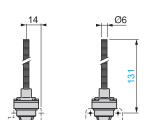
XC Standard range, format EN 50041 Plastic, double insulated, XCKS Variable composition switches





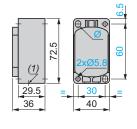
ZCKD06

ZCKD08

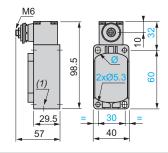


#### **Bodies with contacts**

ZCKS1, S2, S5, S6, S7, S8, S9 ZCKS1H29, S2H29, S5H29, S6H29, S7H29, S8H29, S9H29 ZCKSD3•, SD3•H29



# ZCKS404, S404H29

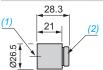


(1) 1 tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland.

Ø: 2 elongated holes 5.3 x 7.3.

#### Adaptators for 1/2" NPT conduit

**DE9RA1212** (Pg 13.5)



# DE9RA2012 (M20) 28.3 (1) (3)

- (1) Tapped entry for 1/2" NPT conduit.
- (2) Pg 13.5 threaded sleeve.
- (3) M20 x 1.5 threaded sleeve.

# Presentation, general characteristics

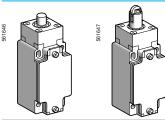
# **Limit switches**

XC Standard range Industrial format EN 50041 Metal, XCKJ Conforming to CENELEC EN 50041

# ■ XCKJ

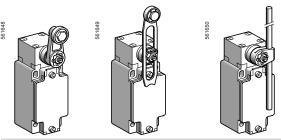
fixed body with 1 cable entry

# ☐ With head for linear movement (plunger)



Page 150

# ☐ With head for rotary movement (lever)

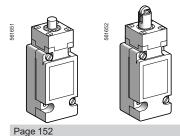


Page 150

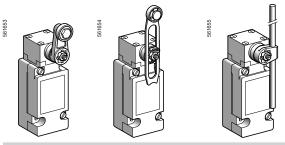
# ■ XCKJ

plug-in body with 1 cable entry

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



# ☐ With head for rotary movement (lever)



Page 152

<b>Environment chara</b>	cteristics	
Conformity to standards	Products	C€, IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14, EAC
	Machine assemblies	IEC 60204-1, EN 60204-1
Product certifications		UL, CSA, CCC, BV
Protective treatment	Version	Standard: "TC", special: "TH"
Ambient air temperature	For operation	- 25+ 70°C, special sub-assemblies for use at - 40°C or + 120°C
	For storage	-40+70°C
Vibration resistance	Conforming to IEC 60068-2-6	25 gn (10500 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 IEC 62262
Repeat accuracy		0.01 mm on the tripping points, with 1 million operating cycles for head with end plunger
Cable entry or	Depending on model	Tapped entry for Pg 13.5 cable gland, tapped ISO M20 x 1.5 or tapped 1/2" NPT, or M12
connector		connector
Materials		Bodies and heads in Zamak



# General characteristics (continued)

# **Limit switches**

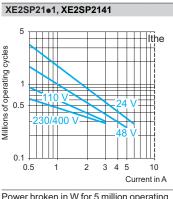
XC Standard range Industrial format EN 50041 Metal, XCKJ Conforming to CENELEC EN 50041

Rated operational	XE2●P	$\sim$ AC-15; A300 (Ue = 240 V, Ie = 3 A); Ithe = 10 A			
characteristics	7.220	== 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	XE2●P	U imp = 6 kV conforming to IEC 60947-1, IEC 60664			
voltage	XE3•P	U imp = 4 kV conforming to IEC 60947-1, IEC 60664			
Positive operation (depending	ng on model)	NC contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-1			
Resistance across terminals	s	≤ 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 (gI)			
Connection	XE2SP21●1	Clamping capacity, min:1 x 0.34 mm², max: 2 x 1.5 mm²			
screw clamp terminals)	XE2NP21●1	Clamping capacity, min:1 x 0.5 mm <sup>2</sup> , max: 2 x 2.5 mm <sup>2</sup>			
	XCKJ plug-in and XESP20●1	Clamping capacity, min:1 x 0.75 mm², max: 2 x 1.5 mm²			
	XE3NP and XE3SP	Clamping capacity, min: 1 x 0.34 mm², max: 1 x 1 mm² or 2 x 0.75 mm²			
Minimum actuation speed		XE2SP21●1 and XE3SP: 0.01 m/minute			
		XE2NP21●1 and XE3NP: 6 m/minute			

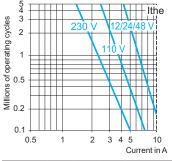
- Utilisation categories AC-15 and DC-13
   Maximum operating rate: 3600 operating cycles/hour

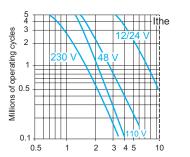
XE2NP21e1

AC supply 50/60 Hz  $\sim$ m inductive circuit









XCKJ plug-in, XESP20●1

DC supply ===

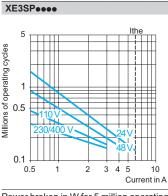
Power cycles.		in W for 5	million o	perating
Voltage	e <b>V</b>	24	48	120
m	W	10	7	4

Power broken in W for 5 million operating cycles. Voltage 24 48 120 w 13 9

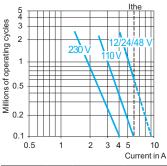
Power broken in W for 5 million operating cycles Voltage 24 48 120 W 10 4

For XE2SP●151 on ~ or ==, NC and NO contacts simultaneously loaded to the values shown with reverse polarity.

AC supply 50/60 Hz ∼ m inductive circuit



# XE3NP••

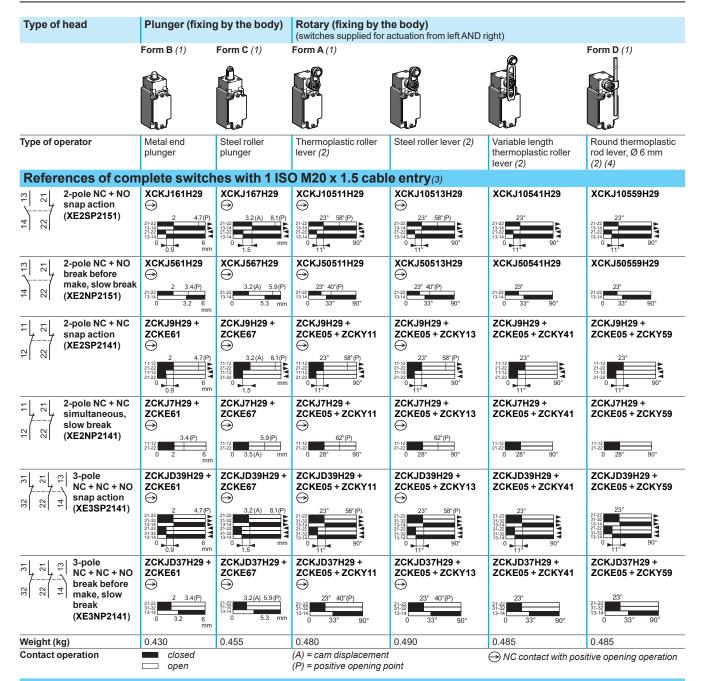


DC supply ===

Power b	Power broken in W for 5 million operating							
cycles.								
Voltage	٧	24	48	120				
m	w	3	2	1				

Power br cycles.	oken i	n W foi	r 5 milli	ion operating	
Voltage	٧	24	48	120	
m	w	4	3	2	

XC Standard range Industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete fixed body switches with 1 cable entry



#### References of complete switches with 1 Pg 13.5 cable entry (2)

For complete switches with entry for Pg 13.5 cable gland, delete H29 from the end of the reference. Example: XCKJ161H29 becomes XCKJ161.

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

For complete switches with entry for 1/2" NPT (USAS B2-1) conduit, replace H29 at the end of the reference by H7. Example: XCKJ161H29 becomes XCKJ161H7.



<sup>(1)</sup> Form conforming to EN 50041, see page 25.

<sup>(2)</sup> Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever or its mounting.

<sup>(3)</sup> Switches with gold contacts or eyelet type connections: please consult our Customer Care Centre.

<sup>(4)</sup> Value taken with actuation by moving part at 100 mm from the fixing.

XC Standard range Industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete fixed body switches with 1 cable entry

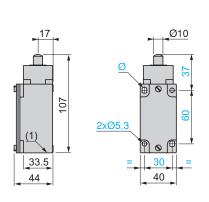
Charac	teristics				
Switch actu	uation	On end	By 30° cam		By any moving part
Type of act	uation	₩ C			
Maximum a	ctuation speed	0.5 m/s	1 m/s	1.5 m/s	
Mechanica (in millions of cycles)	I durability (1) of operating	30	25	30	
Minimum	For tripping	20 N	16 N	0.25 N.m	
force or torque	For positive opening	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					

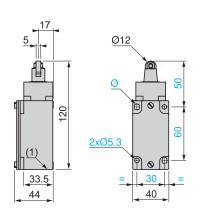
<sup>(1)</sup> Limited to 15 million operating cycles for switches with contacts XE3•P.

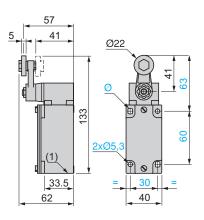
#### **Dimensions** XCKJe61H29 ZCKJe + ZCKE61

#### XCKJe67H29 ZCKJe + ZCKE67

#### XCKJe051eH29 ZCKJe + ZCKE05 + ZCKY11 or Y13

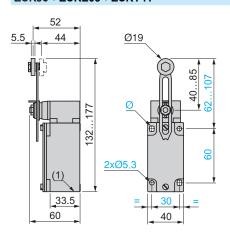


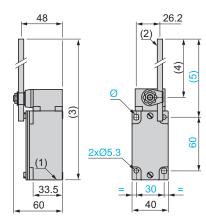




#### XCKJ • 0541H29 ZCKJe + ZCKE05 + ZCKY41

# XCKJ • 0559H29 ZCKJ• + ZCKE05 + ZCKY59





- (1) 1 tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland or tapped 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.

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete switches, plug-in body With 1 cable entry

Type of head	Plunger (fixing	by the body)	Rotary (fixing I	ov the hedy)		
Type of flead	Fluinger (lixing	by tile body)		for actuation from	left AND right)	
	Form B (1)	Form C (1)	Form A (1)		<i>,</i>	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) (4)
References of complete switc	hes with 1 IS	O M20 x 1.5 c	able entry(3)			
Single-pole CO	XCKJ1161H29	XCKJ1167H29	XCKJ110511H29	XCKJ110513H29	XCKJ110541H29	XCKJ110559H29
snap action	11-12 13-14 13-14 13-14 0 0.9 6mm	3.2(A) 11-12 13-14 1	23°	23° 11-12 13-14 13-14 11-17 13-14 90°	23° 11-12 13-14 13-14 90°	23° 11-12 13-14 13-14 13-14 90°
Weight (kg)	0.430	0.455	0.480	0.490	0.485	0.485
Contact operation	closed	□ open		(A) = cam displace	ment	

#### References of complete switches with 1 Pg 13.5 cable entry (3)

For complete switches with entry for Pg 13.5 cable gland, delete *H29* from the end of the reference. Example: *XCKJ1161H29* becomes *XCKJ1161*.

# References of complete switches with 1 entry for 1/2" NPT conduit (3)

For complete switches with entry for 1/2" NPT (USAS B2-1) conduit, replace *H29* at the end of the reference by *H7*. Example: XCKJ1161H29 becomes XCKJ1161H7.

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 tripping force or torque	20 N	16 N	0.25 N.m		
Cable entry	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 25.
  (2) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever or its mounting.
  (3) Switches with gold contacts: please consult our Customer Care Centre.
- (4) Value taken with actuation by moving part at 100 mm from the fixing.



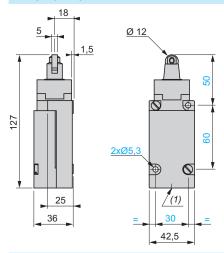
XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete switches, plug-in body With 1 cable entry

# **Dimensions**

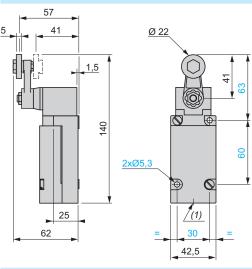
#### XCKJ1161H29

# 2xØ5,3 2xØ5,3 2xØ5,3 30 =

#### XCKJ1167H29

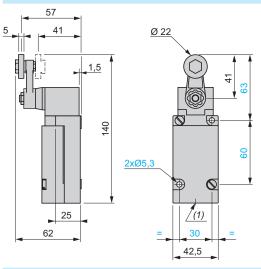


# XCKJ110511H29



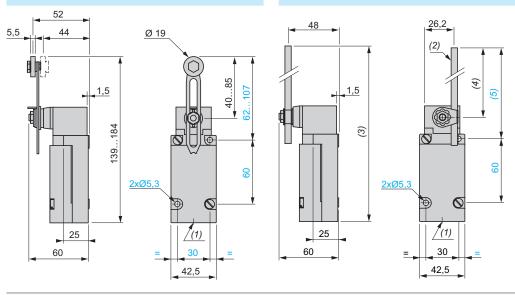
42,5

# XCKJ110513H29



#### XCKJ110541H29

#### XCKJ110559H29



- (1) 1 tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland or for 1/2" NPT conduit.
- (2) Ø 6 rod, length 200 mm.
- (3) 289 max.
- (4) 190 max.
- (5) 212 max.



XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete switches, fixed body M12 connector

Type of head		Plunger (fixing	by the body)	Rotary (fixing I (switches supplied	by the body) If 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)							
© Snap action	C + NO on (XE2SP2151)	XCKJ161D	XCKJ167D	XCKJ10511D	XCKJ10513D	XCKJ10541D	XCKJ10559D
<del>2</del> 2		2 4.7(P) 21-22 13-14 0 6mm 0.9	3.2(A) 8.1(P) 21-22 13-14 1-21 15-14 0 mm	23° 58°(P) 21-21 21-22 13-14 21-22 13-14 11° 90°	23° 58°(P) 21-21 21-22 13-14 21-22 13-14 11°	21-22 13-14 21-22 13-14 90°	23° 13-14 13
Weight (kg)		0.430	0.455	0.480	0.490	0.485	0.485
Contact operation		closed open		(A) = cam displace (P) = positive open			
Characteristic	cs						
Switch actuation		On end	By 30° cam				By any moving part
Type of actuation		<u>₩</u>	<del>-</del>	<del>-</del> 0			
Maximum actuation speed		0.5 m/s	1 m/s	1.5 m/s		•	•
Mechanical durabilit (in millions of operatin		30	25	30			
Minimum force or	For tripping	20 N	16 N	0.25 N.m			
torque	For positive opening	50 N	40 N	0.50 N.m		-	_
Connection M12 connector, Ui = 60 V, Ie = 4 A (see suitable pre-wired female connectors below).							
(1) Form conforming to	0 EN 50041 can nage 26	-					

- (1) Form conforming to EN 50041, see page 25.

  (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 our Customer Care Centre.

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 $L = 2 \text{ m}$ (4 x 0.34 mm <sup>2</sup> + 1 x 0.5 mm <sup>2</sup> )		XZCP1164L2	XZCP1264L2					
	L = 5 m	XZCP1164L5	XZCP1264L5					
	L = 10 m	XZCP1164L10	XZCP1264L10					
Weight (kg)	L = 2 m	0.115	•					
	L = 5 m	0.270						
	L = 10 m	0.520						



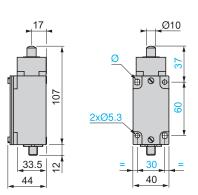
# Dimensions, connections

# **Limit switches**

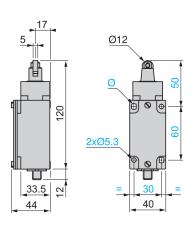
XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete switches, fixed body M12 connector

# **Dimensions**

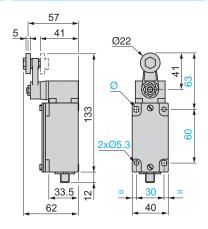
# XCKJ161D



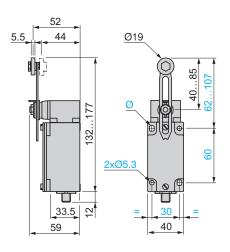
#### XCKJ167D



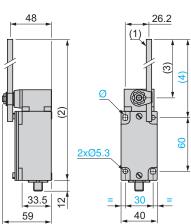
#### XCKJ1051●D



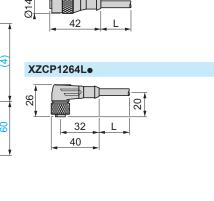
# XCKJ10541D



# XCKJ10559D



# XZCP1164Le

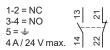


- (1) Ø 6 rod, length 200 mm.
- (3) 190 max.
- (4) 212 max. Ø: 2 elongated holes Ø 5.3 x 7.3.
- L: Cable length 2, 5 or 10 m.

# **Connections**

#### Limit switch XCKJ





#### Pre-wired female connector XZCP1•64L•



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

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete switches, fixed body 7/8"-16UN connector

Plunger   Plu								
Type of operator    Metal end plunger   Steel roller   Thermoplastic roller lever (2)   Steel roller   Itever (2)	Type of head		Plunger (fixing	by the body)	Rotary (fixing switches supplied	<b>by the body)</b> d for actuation from	left AND right)	
Plunger roller lever (2) lever (2) thermoplastic roller lever (2) thermoplastic roller lever (2) dever, Ø 6 mm (2) (3) (3) (2) (3) (3) (4) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4			Form B (1)	Form C (1)	Form A (1)			Form <b>D</b> (1)
Plunger roller lever (2) lever (2) thermoplastic roller lever (2) thermoplastic roller lever (2) dever, Ø 6 mm (2) (3) (3) (2) (3) (3) (4) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4								
2-pole NC + NO snap action (XE2SP2151)  Weight (kg)  0.430  0.455  0.480  0.490  0.485  0.485  Contact operation  Characteristics  Switch actuation  Type of actuation  Maximum actuation speed  0.5 m/s  Mechanical durability (in millions of operating cycles)  Millions of operating cycles)  Millions of operating cycles  Millions of operating cycles  For positive opening  50 N  40 N  0.25 N.m  Connection  XCKJ10513A  XCKJ10514A  XCKJ10513A  XCKJ10514A  XCKJ10513A  XCKJ10514A  XCKJ1051	Type of operator		Metal end plunger				thermoplastic	thermoplastic rod lever, Ø 6 mm
weight (kg)  O.430  O.455  O.480  O.490  O.485  O.485  O.485  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.485  O.485  O.480  O.490  O.490  O.490  O.490  O.490  O.490  O.490  O.490  O.485  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.485  O.480  O.490  O.490  O.490  O.490  O.490  O.485  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.485  O.480  O.490  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.485  O.480  O.490  O.490  O.485  O.485  O.485  O.485  O.485  O.480  O.490  O.490  O.485  O.480  O.490  O.4	References (4	4)						
Weight (kg)  O.430  O.455  O.480  O.490  O.485  O.485  O.485  O.485  O.485  O.485  O.486  O.490  O.490  O.490  O.485  O.485  O.485  O.485  O.485  O.486  O.490  O.490  O.490  O.485  O.485  O.485  O.485  O.486  O.490  O.490  O.490  O.485  O.485  O.485  O.485  O.486  O.490  O.490  O.490  O.490  O.490  O.485  O.485  O.485  O.485  O.485  O.486  O.487  O.485  O.485  O.485  O.486  O.485  O.4	snap act		$\Theta$	$\Theta$	$\Theta$	$\Theta$		
Contact operation  Characteristics  Switch actuation Type of actuation  Maximum actuation speed  (in millions of operating cycles)  Minimum force or torque  For positive opening  Tobe (A) = cam displacement (P) = positive opening point  A) NC contact with positive opening operation  By any moving part  By any moving part  1.5 m/s  1.5 m/s  30  25  30  Minimum force or torque  For positive opening  50 N  40 N  0.25 N.m	+			15-14 13-14 10 1.5 mm	13-14 21-22 13-14 90°	13-14 21-22 13-14 90°	0 90°	13-14 21-22 13-14 0 90°
Contact operation    Closed open	Weight (kg)		0.430	0.455	0.480	0.490	0.485	0.485
Switch actuation Type of actuation  Maximum actuation speed  0.5 m/s  1 m/s  1.5 m/s  Mechanical durability (in millions of operating cycles)  Minimum force or torque For positive opening  50 N  40 N  0.50 N.m  -  7/8"-16UN connector, Ui = 250 V; le = 6 A (see suitable pre-wired female connectors below).	Contact operation							h positive opening
Maximum actuation speed   0.5 m/s   1 m/s   1.5 m/s	Characteristi	cs						
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 For positive opening         20 N         16 N         0.25 N.m           Connection         7/8"-16UN connector, Ui = 250 V; le = 6 A (see suitable pre-wired female connectors below).	Switch actuation		On end	By 30° cam				By any moving part
Mechanical durability         30         25         30           (in millions of operating cycles)         20 N         16 N         0.25 N.m           Minimum force or torque         For positive opening         50 N         40 N         0.50 N.m         —         —           Connection         7/8"-16UN connector, Ui = 250 V; le = 6 A (see suitable pre-wired female connectors below).	Type of actuation		<u> </u>		<del>-</del> 0			
Minimum force or torque         For positive opening         50 N         40 N         0.25 N.m         -	Maximum actuation speed		0.5 m/s	1 m/s	1.5 m/s			
For positive opening 50 N 40 N 0.50 N.m			30	25	30			
Connection 7/8"-16UN connector, Ui = 250 V; le = 6 A (see suitable pre-wired female connectors below).	Minimum force	For tripping	20 N	16 N	0.25 N.m			
	or torque	For positive opening		-	1		-	-
					nnectors below).			

- (1) Form conforming to EN 50041, see page 25.

  (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 our Customer Care Centre.

References of suit	table pre-wi	red female connectors			
Type of connector		7/8"-16UN straight, 5-pin, 4 A/250 V max.			
With cable, Ø 5.9 mm $L = 2 \text{ m}$ $(5 \times 0.34 \text{ mm}^2)$		XZCP1764L2			
	L = 5 m	XZCP1764L5			
	L = 10 m	XZCP1764L10			
Weight (kg)	L = 2 m	0.185			
	L = 5 m	0.460			
	L = 10 m	0.900			



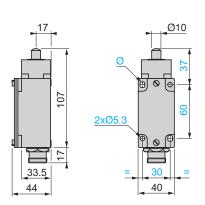
# Dimensions, connections

# **Limit switches**

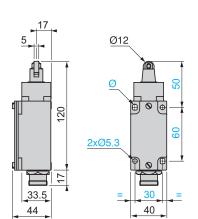
XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Complete switches, fixed body 7/8"-16UN connector

#### **Dimensions**

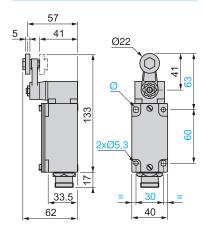
XCKJ161A



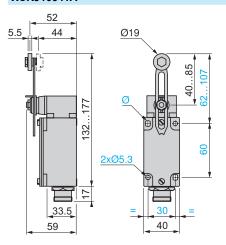
#### XCKJ167A



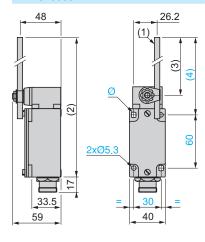
#### XCKJ1051⊕A



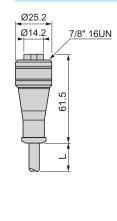
# XCKJ10541A



# XCKJ10559A



# XZCP1764L●



- (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 XCKJ



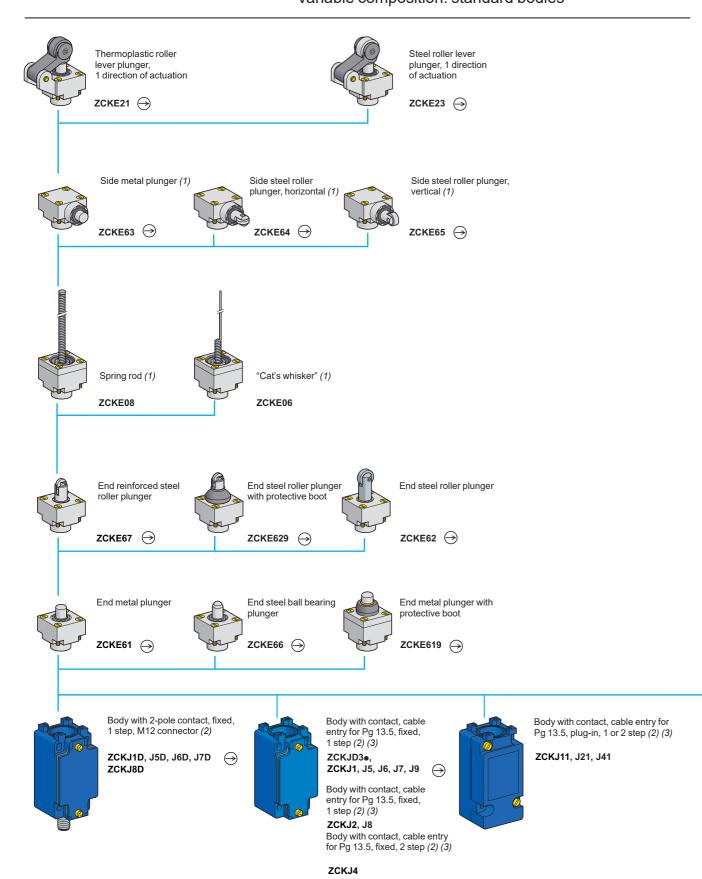
- 1 = 21
- 2 = 22 3 = ⊥
- 4 = 14

# Pre-wired female connector XZCP1764Le

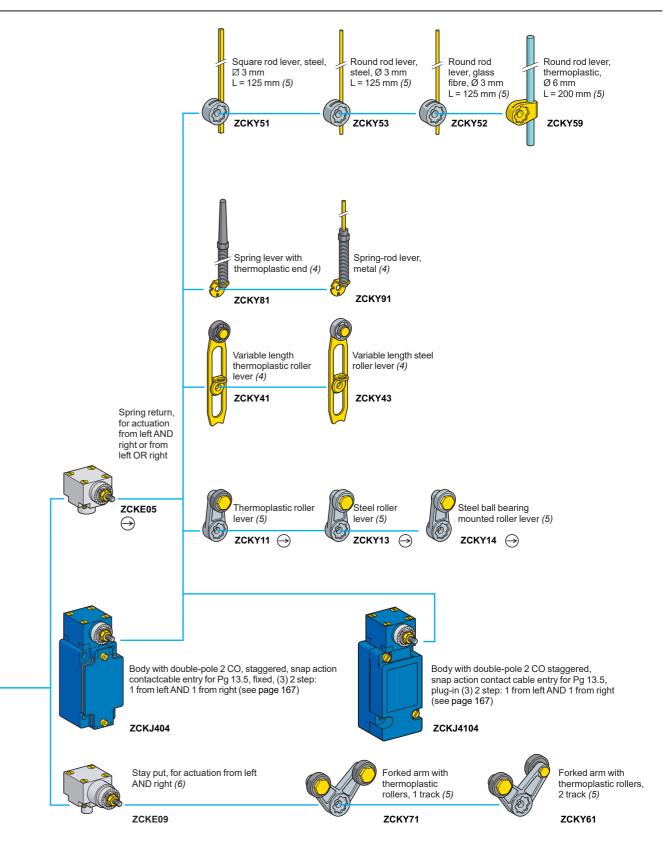


- 1 = black
- 2 = blue
- 3 = yellow/green ±
- 4 = brown
- 5 = white

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body Variable composition: standard bodies



- (1) Cannot be used with bodies ZCKJ4 and ZCKJ41.
- (2) For further information, see page 163.
- (3) For a cable entry tapped ISO M20 x 1.5, add **H29** to the reference. Example: ZCKJ1 becomes **ZCKJ1H29**. For a cable entry tapped 1/2" NPT, add **H7** to the reference. Example: ZCKJ1 becomes **ZCKJ1H7**.

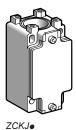


- : head assuring positive opening operation.
- (4) Adjustable throughout 360° in 5° steps, or in 90° steps by reversing the notched washer.
- (5) Adjustable throughout 360° in 5° steps, or in 45° steps by reversing the lever mounting.



XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

Adaptable sub-assemblies: standard bodies



Type	vith 2-pole contact With contact	Scheme	Positive	Cable entry	Reference	Weight
туре	block	Scrienie	operation (1)	Cable entry		kg
1 step	1 NC + 1 NO	13	$\Theta$	Pg 13.5	ZCKJ1	0.310
	snap action (XE2SP2151)	\ <del>/</del>		ISO M20 x 1.5	ZCKJ1H29	0.310
	(XL23F2131)	22		1/2" NPT	ZCKJ1H7	0.310
	2 CO	13 23 21	_	Pg 13.5	ZCKJ2	0.310
	simultaneous, snap action	\ <del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>	<del>t</del>	ISO M20 x 1.5		0.310
	(XESP2021)	14 24 22 22		1/2" NPT	ZCKJ2H7	0.310
	1 NC + 1 NO	13	$\Theta$	Pg 13.5	ZCKJ5	0.310
	break before make, slow break	\}		ISO M20 x 1.5	ZCKJ5H29	0.310
	(XE2NP2151)	72 22		1/2" NPT	ZCKJ5H7	0.310
	1 NO + 1 NC	13	$\Theta$	Pg 13.5	ZCKJ6	0.310
	make before break, slow break	` <del>`</del> }-₹'		ISO M20 x 1.5		0.310
	(XE2NP2161)	4     2		1/2" NPT	ZCKJ6H7	0.310
	2 NC	11	$\Theta$	Pg 13.5	ZCKJ7	0.310
	simultaneous,	` <i>''</i>		ISO M20 x 1.5	ZCKJ7H29	0.310
	slow break (XE2NP2141)	22 22		1/2" NPT	ZCKJ7H7	0.310
	2 NO	23   13	_	Pg 13.5	ZCKJ8	0.310
	simultaneous,	//		ISO M20 x 1.5	ZCKJ8H29	0.310
	slow break (XE2NP2131)	4 4		1/2" NPT	ZCKJ8H7	0.310
	2 NC	11   11	$\Theta$	Pg 13.5	ZCKJ9	0.310
	snap action (XE2SP2141)	77		ISO M20 x 1.5	ZCKJ9H29	0.310
	(XLZOI Z141)	12 22 22		1/2" NPT	ZCKJ9H7	0.310
2 step	2 CO	13 23 23	_	Pg 13.5	ZCKJ4	0.310
	staggered	7-1	<del>/</del>	ISO M20 x 1.5	ZCKJ4H29	0.310
	snap action (XESP2031)	4 2 2 2		1/2" NPT	ZCKJ4H7	0.310
Fixed bodies v	vith 3-pole contac	t				
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
-	1 NC + 2 NO	13   33   14	$\Theta$	Pg 13.5	ZCKJD31	0.310
	snap action	7-4\	0	ISO M20 x 1.5	ZCKJD31H29	0.310
	(XE3SP2151)	2 8 4		1/2" NPT	ZCKJD31H7	0.310
	2 NC + 1 NO	21   13	$\overline{\Theta}$	Pg 13.5	ZCKJD39	0.310
	snap action	77\		ISO M20 x 1.5	ZCKJD39H29	0.310
	(XE3SP2141)	32 22 44		1/2" NPT	ZCKJD39H7	0.310
	2 NC + 1 NO	13   13	$\overline{\Theta}$	Pg 13.5	ZCKJD37	0.310
	break before make,	771	-	ISO M20 x 1.5	ZCKJD37H29	0.310
	slow break (XE3NP2141)	22   24		1/2" NPT	ZCKJD37H7	0.310
	1 NC + 2 NO	13 33	$\Theta$	Pg 13.5	ZCKJD35	0.310
	break before make,	₩ . 1 . 1		ISO M20 x 1.5	ZCKJD35H29	0.310

ZCKJD35H7

1/2" NPT

0.310

slow break

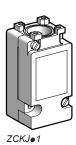
(XE3NP2151)



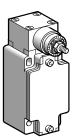
<sup>(1) :</sup> NC contact with positive opening operation.

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

Adaptable sub-assemblies: standard bodies

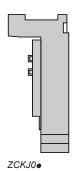


Plug-in bodies w	rith contact					
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
1 step	Single-pole 1 CO	[] []	-	Pg 13.5	ZCKJ11	0.300
Ē	snap action	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		ISO M20 x 1.5	ZCKJ11H29	0.300
		4 2		1/2" NPT	ZCKJ11H7	0.300
	Double-pole 2 CO simultaneous, snap action	12   14   13   14   15   15   17   17   18   17   18   18   18   18	-	Pg 13.5	ZCKJ21	0.300
				ISO M20 x 1.5	ZCKJ21H29	0.300
				1/2" NPT	ZCKJ21H7	0.300
2 step	Double-pole 2 CO	13 23 11 21	_ <i>+</i>	Pg 13.5	ZCKJ41	0.300
	staggered, snap action	7-1		ISO M20 x 1.5	ZCKJ41H29	0.300
	Shap action	14 14 24 25 25 25 25 A 25 A 25 A 25 A 25 A 2		1/2" NPT	ZCKJ41H7	0.300





<b>Bodies with cont</b>	act, with rotary	head (withou	t operating leve	er)		
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
Fixed body						
2 step	Double-pole 2 CO	23   11   23   24	_	Pg 13.5	ZCKJ404	0.455
1 from left AND 1 from right (see page 167)	staggered, snap action		7	ISO M20 x 1.5	ZCKJ404H29	0.455
r nomingin (odd pago 107)	Thomagnit (see page 101) shap action 4	4 2 2 2		1/2" NPT	ZCKJ404H7	0.455
Plug-in body						
2 step	Double-pole 2 CO	23   11   23   21	_	Pg 13.5	ZCKJ4104	0.465
1 from left AND 1 from right (see page 167)	staggered, e page 167) snap action	4 5 4 2	#	ISO M20 x 1.5	ZCKJ4104H29	0.465
1 from right (see page 167)				1/2" NPT	ZCKJ4104H7	0.465

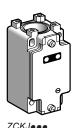


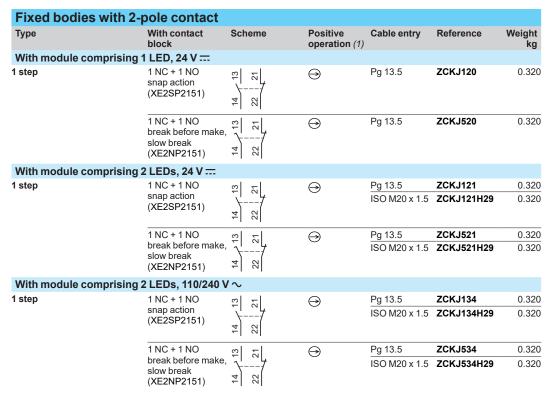
Description	For use with	Contacts	Reference	Weight kg
Single-pole 1 CO with positive opening operation	ZCKJ11	Silver	ZCKJ01	0.150
Double-pole 2 CO with positive opening operation	ZCKJ21	Silver	ZCKJ02	0.160
Double-pole 2 CO staggered	ZCKJ41	Silver	ZCKJ04	0.160

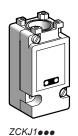
<sup>(1) :</sup> NC contact with positive opening operation.



XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body. Adaptable sub-assemblies: bodies with indicator light module







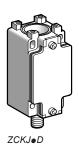
Plug-in bodies wit	h single-pole o	contact				
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
With module comprising	ng 2 LEDs, 24 V					
1 step	CO	E   13	-	Pg 13.5	ZCKJ1121	0.340
	snap action	4 5		ISO M20 x 1.5	ZCKJ1121H29	0.340
With module comprising	ng 2 LEDs, 110/240	) V ~				
1 step	CO	[1   13	-	Pg 13.5	ZCKJ1134	0.340
	snap action	4 5		ISO M20 x 1.5	ZCKJ1134H29	0.340

(1)  $\bigcirc$ : NC contact with positive opening operation.

Indicator light module characteristics					
Type of indicator	1 LED or 2 LEDs	2 LEDs			
Rated insulation voltage	50 V ==, conforming to IEC 60947-1	250 V ∼, conforming to IEC 60947-1			
Current consumption	7 mA per LED	9 mA per LED			
Rated operational voltage	24 V ===	110/240 V ∼			
Voltage limits	2030 V == (including ripple)	95264 V ∼			
Service life	100 000 hours	100 000 hours			
Reverse polarity protection	Yes	_			



XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body. Adaptable sub-assemblies: bodies with M12 connector



rixed bodies	with 2-pole contact				
Туре	With contact block	Scheme	Positive operation (1)	Reference	Weight kg
1 step	1 NC + 1 NO snap action (XE2SP2151)	22   413   13	$\Theta$	ZCKJ1D	0.320
	1 NC + 1 NO break before make, slow break (XE2NP2151)	22 - 21   13	$\Theta$	ZCKJ5D	0.320
	1 NO + 1 NC make before break, slow break (XE2NP2161)	22 14 - 4 13   13	$\Theta$	ZCKJ6D	0.320
	2 NC simultaneous, slow break (XE2NP2141)	22   21   11	$\Theta$	ZCKJ7D	0.320
	2 NO simultaneous, slow break (XE2NP2131)	24 - 23	-	ZCKJ8D	0.320



Female pre-wired connectors		
Description	Cable length	Reference Weigl k
Female pre-wired connectors, M12, straight $\emptyset$ 5,0 mm cable Conductor c.s.a: $5 \times 0.34 \text{ mm}^2$ Nominal current: $4 \text{ A}$ Nominal voltage: $\sim 30 \text{ V}$ , $= 36 \text{ V}$	1 m	<b>XZCP1164L2</b> 0.1
	5 m	<b>XZCP1164L5</b> 0.2
	10 m	<b>XZCP1164L10</b> 0.5

(1) NC contact with positive opening operation.

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

Adaptable sub-assemblies: contact blocks









Contact blocks					
Type of contact	Scheme	For bodies	Positive operation (1)	Reference	Weight kg
2-pole contact					
1 NC + 1 NO snap action	22   13   14   15   15   15   15   15   15   15	ZCKJ1 ZCKJ1D	$\Theta$	XE2SP2151	0.020
1 NC + 1 NO break before make, slow break	22 21 21	ZCKJ5 ZCKJ5D	$\Theta$	XE2NP2151	0.020
2 CO simultaneous snap action	22 24 23 24 13	ZCKJ2	-	XESP2021	0.045
2 CO staggered, snap action	22 24 23 24 13	ZCKJ4	-	XESP2031	0.045
1 NO + 1 NC make before break, slow break	22 4- 13 13 13	ZCKJ6 ZCKJ6D	$\Theta$	XE2NP2161	0.020
2 NC simultaneous, slow break	12 22 21 11	ZCKJ7 ZCKJ7D	$\Theta$	XE2NP2141	0.020
2 NO simultaneous, slow break	24 13   24   13   23	ZCKJ8 ZCKJ8D	-	XE2NP2131	0.020
2 NC snap action	12   22   21   21	ZCKJ9	$\Theta$	XE2SP2141	0.020
3-pole contact					
1 NC + 2 NO snap action	22 4 - 4 13   33   21	ZCKJD31	$\Theta$	XE3SP2151	0.035
2 NC + 1 NO snap action	25 27 4 13 13 13	ZCKJD39	$\Theta$	XE3SP2141	0.035
2 NC + 1 NO break before make, slow break	32 31	ZCKJD37	$\Theta$	XE3NP2141	0.035
1 NC + 2 NO break before make, slow break	22 4 7 33 13 13 13 12	ZCKJD35	$\Theta$	XE3NP2151	0.035

<sup>(1) :</sup> NC contact with positive opening operation.



XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

Adaptable sub-assemblies: add-ons









Covers + indica	ator light module			
For use with	Number and type of	of indicators Voltage	Reference	Weight kg
Fixed body	1 LED	24 V	ZCKZ020	0.060
	2 LEDs	24 V	ZCKZ021	0.060
	2 LEDs	110/240 V ∼	ZCKZ034	0.060
Plug-in body	2 LEDs	24 V	ZCKJ0121	0.200
	2 LEDs	110/240 V ∼	ZCKJ0134	0.200

Indicator light	modules			
For use with	Number and type o	f indicators Voltage	Reference	Weight kg
Fixed body	1 LED	24 V	ZCKJ902	0.030
	2 LEDs	24 V	ZCKJ906	0.030
	2 LEDs	110/240 V ∼	ZCKJ904	0.030

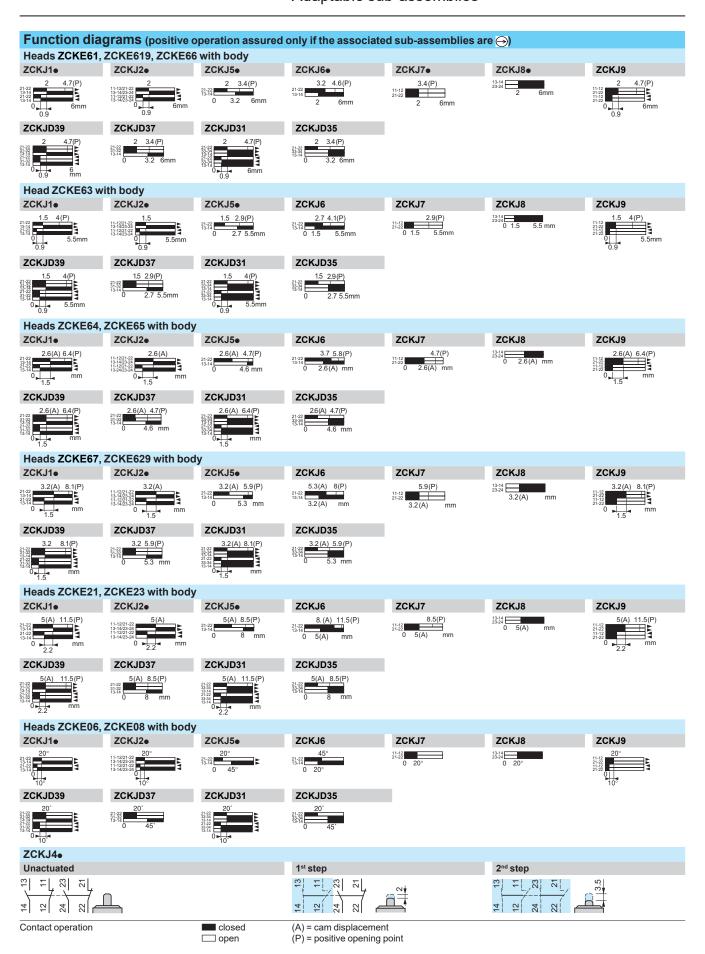
Module with re	sistor for machine diagnostics		
For use with	Resistor value	Reference	Weight kg
Fixed body (ZCKJ1 only)	15 kΩ, 1/4 W	ZCKJ82A	0.030

Other versions Covers + indicator light module for other supply voltages.

Please consult our Customer Care Centre.

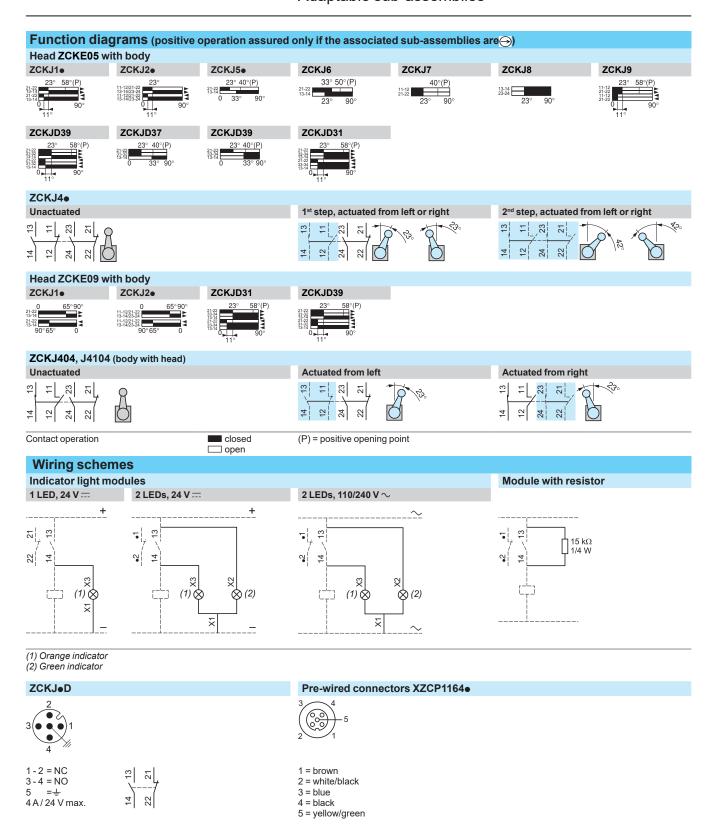


XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body Adaptable sub-assemblies





XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body Adaptable sub-assemblies



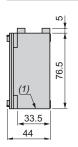
### **Dimensions**

# **Limit switches**

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body Adaptable sub-assemblies

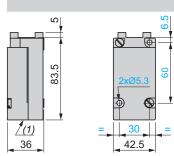
#### **Bodies**

ZCKJ1, J2, J5, J4, Je2e, Je3e, J6, J7, J8, J9 ZCKJ1H29, J2H29, J5H29, J4H29, Je2eH29, Je3eH29, J6H29, J7H29, J8H29, J9H29 ZCKJ1H7, J2H7, J5H7, J4H7, Je2eH7, Je3eH7, J6H7, J7H7, J8H7, J9H7

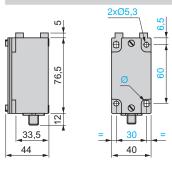




ZCKJ11, J21, J41, J11•• ZCKJ11H29, J21H29, J41H29, J11••H29 ZCKJ11H7, J21H7, J41H7, J11••H7

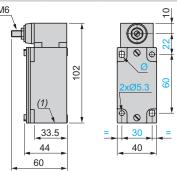


ZCKJ1D, J5D, J6D, J7D, J8D

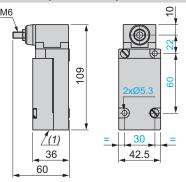


### Bodies with rotary head mounted

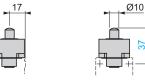
#### ZCKJ404, ZCKJ404H29, ZCKJ404H7



#### ZCKJ4104, ZCKJ4104H29, ZCKJ4104H7



### Plunger heads ZCKE61



### ZCKE619





### ZCKE63





### ZCKE64





#### ZCKE65



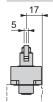


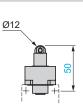
# ZCKE66





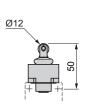
### ZCKE62, ZCKE67



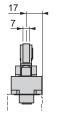


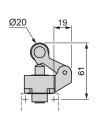
#### **ZCKE629**





#### ZCKE21, ZCKE23





- (1) 1 tapped entry for ISO M20 x 1.5 or Pg 13.5 cable gland or tapped 1/2" NPT.
- Ø: 2 elongated holes Ø 5.3 x 7.3.

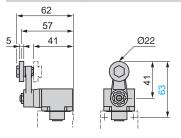


# **Dimensions** (continued)

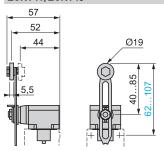
# **Limit switches**

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body Adaptable sub-assemblies

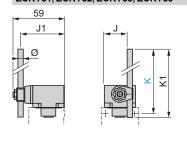
### Rotary head ZCKE05 with operating lever ZCKY11, ZCKY13, ZCKY14



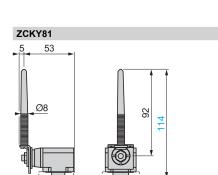
### ZCKY41, ZCKY43

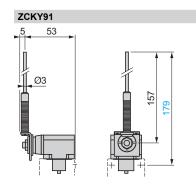


#### ZCKY51, ZCKY52, ZCKY53, ZCKY59



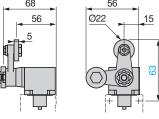
	J	J1	K max.	K1	Ø
ZCKY51	20	49	137	123	<b>Ø</b> 3
ZCKY52	20	49	137	125	Ø3
ZCKY53	20	49	137	125	Ø3
ZCKY59	26.2	48	212	200	Ø6



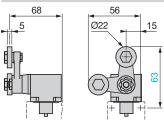


### Rotary head ZCKE09 with operating lever



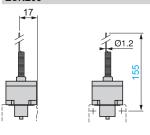


### ZCKY71

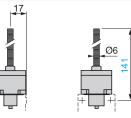


### Multi-directional heads

ZCKE06

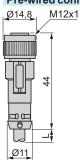


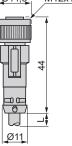
### ZCKE08



### Note: operating lever spindle threaded M6.

### Pre-wired connectors XZCP1164Le



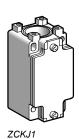


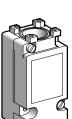
L = 2, 5 or 10 m.

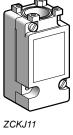


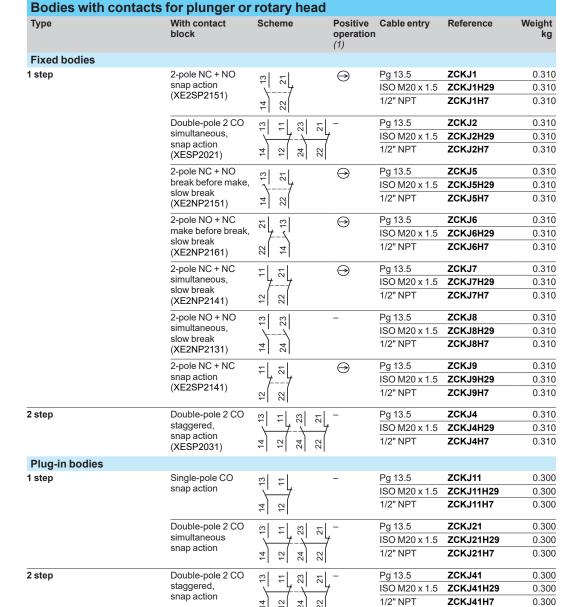
XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

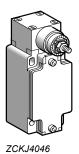
Adaptable sub-assemblies for low temperature applications (-40°C)











		. [ . ] [					
<b>Bodies with contacts</b>	odies with contacts With spring return rotary head (without operating lever)						
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg	
Fixed body							
2 step	Double-pole 2 CO	27   13   27   13	-	Pg 13.5	ZCKJ4046	0.455	
1 from the left AND	staggered,		<u>'</u>	ISO M20 x 1.5	ZCKJ4046H29	0.455	
1 from the right	snap action	41       22       42       22       23       24		1/2" NPT	ZCKJ4046H7	0.455	
Plug-in body							
2 step	Double-pole 2 CO	13   11   13   14   13	-	Pg 13.5	ZCKJ41046	0.465	
1 from the left AND	staggered,		•	ISO M20 x 1.5	ZCKJ41046H29	0.465	
1 from the right	snap action	14       24       25       27       28       29       20		1/2" NPT	ZCKJ41046H7	0.465	

<sup>(1) ⊕:</sup> head assuring positive opening operation.



XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

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







ZCKE636



ZCKE626



ZCKE676



ZCKE646



ZCKE656



ZCKE216



ZCKE236



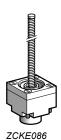
ZCKE056



ZCKE096



ZCKE066



Plunger	heads					
Type of oper	rator	Compatible bodies	Maximum actuation speed	Positive operation (1)	Reference	Weight kg
For actuati	ion on end					
End plunger metal		ZCKJ∙, ZCKJ••	0.5 m/s	$\Theta$	ZCKE616	0.140
Side plunger metal		ZCKJe, ZCKJee, except ZCKJ4 and J41	0.5 m/s	$\Theta$	ZCKE636	0.200
For actuati	ion by 30° can	n				
Roller plunge steel	er	ZCKJ∙, ZCKJ••	1 m/s	$\Theta$	ZCKE626	0.155
End reinforce plunger steel	ed roller	ZCKJ•, ZCKJ••	1 m/s	$\Theta$	ZCKE676	0.155
Side roller plunger steel	Horizontal	ZCKJe, ZCKJee, except ZCKJ4 and J41	0.6 m/s	$\Theta$	ZCKE646	0.205
	Vertical	ZCKJe, ZCKJee, except ZCKJ4 and J41	0.6 m/s	$\Theta$	ZCKE656	0.205
Roller lever plunger (1 direction of actuation)	Thermoplastic	ZCKJe, ZCKJee	1.5 m/s	$\Theta$	ZCKE216	0.185
	Steel	ZCKJe, ZCKJee	1.5 m/s	$\Theta$	ZCKE236	0.195

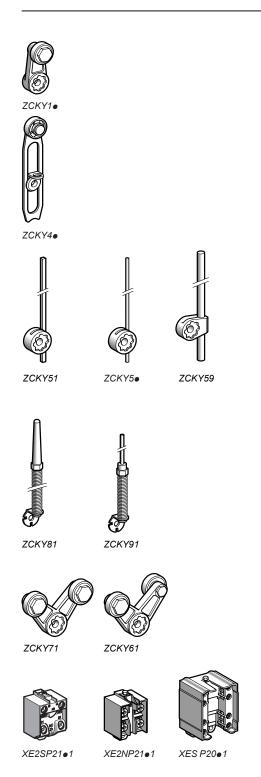
Rotary heads (with	out operating	lever)			
Туре	Compatible bodies	Maximum actuation speed	Positive operation (1)	Reference	Weight kg
Spring return, for actuation from left AND right or from left OR right (see page 25)	ZCKJ⊕, ZCKJ⊕⊕	1.5 m/s by 30° cam	$\Theta$	ZCKE056	0.165
Stay put, for actuation from left AND right (see page 25)	ZCKJ1, J11 ZCKJ2, J21	0.5 m/s	-	ZCKE096	0.190

Multi-directional he	eads				
Type of operator	Compatible bodies	Maximum actuation speed		Reference	Weight kg
For actuation by any mo	oving part				
"Cat's whisker"	ZCKJe, ZCKJee, except ZCKJ4 and ZCKJ41	1 m/s in any direction	-	ZCKE066	0.115
Spring rod	ZCKJe, ZCKJee, except ZCKJ4 and ZCKJ41	0.5 m/s in any direction	-	ZCKE086	0.125

<sup>(1)</sup>  $\Longrightarrow$ : head assuring positive opening operation.

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

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



Operating levers for	or rotary hea	ads			
Description			Positive operation (1)	Reference	Weight kg
For actuation by 30° ca	m				
Roller lever (2)	Thermoplastic		$\Theta$	ZCKY11	0.025
	Steel		$\Theta$	ZCKY13	0.035
	Steel, ball bearing	ng mounted	$\Theta$	ZCKY14	0.030
Variable length roller lever (3)	Thermoplastic		_	ZCKY41	0.030
	Steel		_	ZCKY43	0.040
For actuation by any m	oving part				
Square rod (2)	☑ 3 mm steel, L = 125 mm		-	ZCKY51	0.025
Round rod (2)	Ø 3 mm steel, L = 125 mm		-	ZCKY53	0.025
	Ø 3 mm glass fib L = 125 mm	re,	-	ZCKY52	0.020
	Ø 6 mm thermop L = 200 mm	olastic,	-	ZCKY59	0.030
Spring lever (3)			-	ZCKY81	0.020
Spring-metal rod lever (3)			_	ZCKY91	0.025
For actuation by specif	ic cam (only for	operation w	vith head ZC	KE096)	
Forked arm with rollers (2)	1 track		-	ZCKY71	0.035
thermoplastic	2 track		-	ZCKY61	0.035
2-pole and double-	pole contac				
Type of contact	Scheme	For body	Positive operation (1)	Reference	Weight kg
NC + NO snap action	22   23   24   24	ZCKJ1	$\Theta$	XE2SP2151	0.020
NC + NO break before make, slow break	22   23   24   23	ZCKJ5	$\Theta$	XE2NP2151	0.020
2 CO simultaneous, snap action	25 24 13 13 13 13 15 15 15 15 15 15 15 15 15 15 15 15 15	ZCKJ2	-	XESP2021	0.045
2 CO staggered, snap action	25 24 13 25 23 25 25 25 25 25 25 25 25 25 25 25 25 25	ZCKJ4	-	XESP2031	0.045
NC + NO make before break, slow break	22 14 14 - 7 13	ZCKJ6	$\Theta$	XE2NP2161	0.020
NC + NC simultaneous, slow break	22   27   11	ZCKJ7	$\Theta$	XE2NP2141	0.020
NO + NO simultaneous, slow break	4 4 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ZCKJ8	-	XE2NP2131	0.020
NC + NC snap action	25   25	ZCKJ9	$\Theta$	XE2SP2141	0.020

<sup>(1) :</sup> NC contact with positive opening operation or sub-assembly assuring positive opening



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

Scheme

Bodies with contacts For plunger or rotary head With contact

block

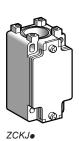
XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

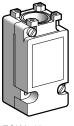
Adaptable sub-assemblies for high temperature applications (+ 120°C)

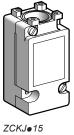
operation

Positive Cable entry

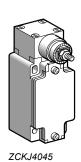
Weight







	DIOUN		(1)			.v9
Fixed bodies						
1 step	2-pole NC + NO	13	$\ominus$	Pg 13.5	ZCKJ1	0.310
	snap action	~I ~L		ISO M20 x 1.5	ZCKJ1H29	0.310
	(XE2SP2151)	4 22		1/2" NPT	ZCKJ1H7	0.310
	Double-pole 2 CO	11 13 223 221	_	Pg 13.5	ZCKJ25	0.310
	simultaneous,	7-1-1	†	ISO M20 x 1.5	ZCKJ25H29	0.310
	snap action (XESP20215)	4 2 2 2		1/2" NPT	ZCKJ25H7	0.310
	2-pole NC + NO	13	$\Theta$	Pg 13.5	ZCKJ5	0.310
	break before make,	, \		ISO M20 x 1.5	ZCKJ5H29	0.310
	slow break (XE2NP2151)	45 22		1/2" NPT	ZCKJ5H7	0.310
	2-pole NO + NC	13   13	$\rightarrow$	Pg 13.5	ZCKJ6	0.310
	make before break,	, ~L <u>~</u> I	$\circ$	ISO M20 x 1.5	ZCKJ6H29	0.310
	slow break (XE2NP2161)	22 4		1/2" NPT	ZCKJ6H7	0.310
	2-pole NC + NC	<u> </u>	$\rightarrow$	Pg 13.5	ZCKJ7	0.310
	simultaneous,	~ L ~ L	0	ISO M20 x 1.5	ZCKJ7H29	0.310
	slow break (XE2NP2141)	22   25		1/2" NPT	ZCKJ7H7	0.310
	2-pole NO + NO	[3   13	_	Pg 13.5	ZCKJ8	0.310
	simultaneous,	77		ISO M20 x 1.5	ZCKJ8H29	0.310
	slow break (XE2NP2131)	4 4		1/2" NPT	ZCKJ8H7	0.310
	2-pole NC + NC	12   2	$\rightarrow$	Pg 13.5	ZCKJ9	0.310
	snap action	` \\	_	ISO M20 x 1.5	ZCKJ9H29	0.310
	(XE2SP2141)	22   23		1/2" NPT	ZCKJ9H7	0.310
2 step	Double-pole 2 CO	13 23 21	_	Pg 13.5	ZCKJ45	0.310
	staggered,	-1 -1 41 41	†	ISO M20 x 1.5	ZCKJ45H29	0.310
	snap action (XESP20315)	4 2 2 2 2		1/2" NPT	ZCKJ45H7	0.310
Plug-in bodies						
1 step	Single-pole CO	13	_	Pg 13.5	ZCKJ115	0.300
	snap action	· · · · ·		ISO M20 x 1.5	ZCKJ115H29	0.300
		4 5		1/2" NPT	ZCKJ115H7	0.300
	Double-pole 2 CO	11 13	-	Pg 13.5	ZCKJ215	0.300
	simultaneous,	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	†	ISO M20 x 1.5	ZCKJ215H29	0.300
	snap action	2       4       4       2       4       2       4       2       2       2       2       2       2       3       4       4       5       6       6       7       8       8       9       9       9       10		1/2" NPT	ZCKJ215H7	0.300
2 step	Double-pole 2 CO	13 23 21	-	Pg 13.5	ZCKJ415	0.300
	staggered, snap action	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<i>†</i>		ZCKJ415H29	0.300
	σιιαρ αυμυπ	24       24       25       24       25       27       28       29       20       21       22       23       24       25       26       27       28       29       20       20       21       22       23       24       25       26       27       28       29       20       20       20       21       22       23       24       25       26       27       28       29       20       20       20       21       22       23       24       25       26       27       28       29       20       20       20       21       22       23       24       25       26       27       28       29       20 <td></td> <td>1/2" NPT</td> <td>ZCKJ415H7</td> <td>0.300</td>		1/2" NPT	ZCKJ415H7	0.300



	snap action	4 T T T T T T T T T T T T T T T T T T T		1/2" NPT	ZCKJ415H7	0.300
<b>Bodies with contacts</b>	With spring i	eturn rotary	head (wi	thout operati	ng lever)	
Туре	With contact block	Scheme	Positive operation (1)	Cable entry	Reference	Weight kg
Fixed body						
2 step	Double-pole 2 CO	23   11   3	-	Pg 13.5	ZCKJ4045	0.455
1 from the left <b>AND</b> 1 from the right	staggered, snap action			ISO M20 x 1.5	ZCKJ4045H29	0.455
i iloin the right	Shap action	41       22       24       25       26		1/2" NPT	ZCKJ4045H7	0.455
Plug-in body						
2 step	Double-pole 2 CO	13   13   13   14   13	-	Pg 13.5	ZCKJ41045	0.465
1 from the left AND	staggered,			ISO M20 x 1.5	ZCKJ41045H29	0.465
1 from the right	snap action	24       22       22       22		1/2" NPT	ZCKJ41045H7	0.465

<sup>(1)</sup>  $\bigcirc$ : head assuring positive opening operation.



XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

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





ZCKE615 ZCKE635





ZCKE665

ZCKE625





ZCKE675

ZCKE645







ZCKE655

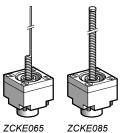
ZCKE235





ZCKE055

ZCKE095



ZCKE085

Plunger heads						
Type of operator		Compatible bodies	Maximum actuation speed	Positive operation (1)	Reference	Weight kg
For actuation on end						
End plunger	Metal	ZCKJ1, J2, J4, ZCKJ115, J215, J415, ZCKJ5, J6, J7, J8, J9	0.5 m/s	$\Theta$	ZCKE615	0.140
Side plunger	Metal	ZCKJ1, J2, ZCKJ115, J215, ZCKJ5, J6, J7, J8, J9	0.5 m/s	$\Theta$	ZCKE635	0.200
For actuation by 30° cam						
End ball bearing plunger	Steel	ZCKJ1, J2, J4, ZCKJ115, J215, J415, ZCKJ5, J6, J7, J8, J9	0.1 m/s	$\Theta$	ZCKE665	0.150
End roller plunger	Steel	ZCKJ1, J2, J4, ZCKJ115, J215, J415, ZCKJ5, J6, J7, J8, J9	1 m/s	$\Theta$	ZCKE625	0.155
End reinforced roller plunger	Steel	ZCKJ1, J2, J4, ZCKJ115, J215, J415, ZCKJ5, J6, J7, J8, J9	1 m/s	$\Theta$	ZCKE675	0.155
Side roller plunger	Steel Horizontal	ZCKJ1, J2, ZCKJ115, J215, ZCKJ5, J6, J7, J8, J9	0.6 m/s	$\Theta$	ZCKE645	0.205
	Steel Vertical	ZCKJ1, J2, ZCKJ115, J215, ZCKJ5, J6, J7, J8, J9	0.6 m/s	$\Theta$	ZCKE655	0.205
Roller lever plunger (1 direction of actuation)	Steel	ZCKJ1, J2, J4, ZCKJ115, J215, J415, ZCKJ5, J6, J7, J8, J9	1.5 m/s	$\Theta$	ZCKE235	0.195
	Thermoplastic	ZCKJ1, J2, J4, ZCKJ115, J215, J415, ZCKJ5, J6, J7, J8, J9	1.5 m/s	$\Theta$	ZCKE215	0.185

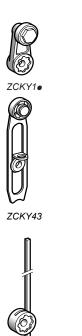
J	Rotary fleads (without operating lever)					
	Туре	Compatible bodies	Maximum actuation	Positive operation	Reference	Weight
			speed	(1)		kg
	Spring return, for actuation from left AND right or from left OR right (see page 25)	ZCKJ1, J2, J4, ZCKJ115, J215, ZCKJ415, ZCKJ5, J6, J7, J8, J9	1.5 m/s by 30° cam	$\Theta$	ZCKE055	0.165
,	Stay put, actuation from left AND right (see page 25)	ZCKJ1, J2, ZCKJ115, J215	0.5 m/s	-	ZCKE095	0.190

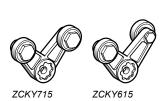
Multi-directional heads					
Type of operator	Compatible bodies	Maximum actuation speed	Positive operation (1)	Reference	Weight kg
For actuation by any moving part					
"Cat's whisker"	ZCKJ1, J2, ZCKJ115, J215, ZCKJ5, J6, J7, J8, J9	1 m/s in any direction	-	ZCKE065	0.115
Spring rod	ZCKJ1, J2, ZCKJ115, J215, ZCKJ5, J6, J7, J8, J9	0.5 m/s in any direction	-	ZCKE085	0.125

(1) →: head assuring positive opening operation.

XC Standard range, industrial format EN 50041 Metal, conforming to CENELEC EN 50041, XCKJ Fixed or plug-in body

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





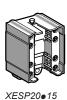
ZCKY5•



XE2SP21•1

ZCKY51





Operating lev	ers for rotary heads			
Description		Positive operation (1)	Reference	Weight kg
For actuation by	30° cam			
Roller lever (2)	Thermoplastic	$\Theta$	ZCKY115	0.025
	Steel	$\Theta$	ZCKY13	0.035
	Steel, ball bearing mounted	$\Theta$	ZCKY14	0.030
Variable length roller lever (3)	Thermoplastic	_	ZCKY415	0.030
	Steel	_	ZCKY43	0.040
For actuation by	any moving part			
Square rod (2)	☑ 3 mm steel, L = 125 mm	-	ZCKY51	0.025
Round rod (2)	Ø 3 mm steel, L = 125 mm	-	ZCKY53	0.025
	Ø 3 mm glass fibre, L = 125 mm	-	ZCKY52	0.020
For actuation by	specific cam (only for operati	on with hea	d ZCKE095)	
Forked arm with rollers (2)	1 track	-	ZCKY715	0.035
thermoplastic	2 track	-	ZCKY615	0.035

2-pole and do	uble-pole co	ontact bloc	cks		
Type of contact	Scheme	For bodies	Positive operation (1)	Reference	Weight kg
NC + NO snap action	22   13	ZCKJ1	$\Theta$	XE2SP2151	0.020
NC + NO break before make, slow break	22 21 3	ZCKJ5	$\Theta$	XE2NP2151	0.020
2 CO simultaneous, snap action	14 13 14 13 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ZCKJ25	_	XESP20215	0.045
2 CO staggered, snap action	14 13 14 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	ZCKJ45	_	XESP20315	0.045
NC + NO make before break, slow break	27 4 7 7 13	ZCKJ6	$\Theta$	XE2NP2161	0.020
NC + NC simultaneous, slow break	12 11 22 - 21 11	ZCKJ7	$\Theta$	XE2NP2141	0.020
NO + NO simultaneous, slow break	24 - 23	ZCKJ8	_	XE2NP2131	0.020
NC + NC snap action	22 - 21	ZCKJ9	$\Theta$	XE2SP2141	0.020

<sup>(1) ⊕:</sup> NC contact with positive opening operation or sub-assembly assuring positive opening operation

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

# XC Standard range Product reference index

DEGRA1012	22510AM4 5 22510L1 2 22510L1 2 22515AM4 5 22515L1 2 22515L1 2 22516L1 2 22517L1 2 22524L1 2 22524L1 2 225F0L1 2 225F0L1 2 225F0L1 2 225G1L1 2 2102L2 7 212102L3 7 212102L6 7 212102L8 7 22102L8 7 22102L9 7 22102LA1 7	XCMD2506L1 XCMD2510AM XCMD2511L1 XCMD2515AM XCMD2515L1 XCMD2516L1 XCMD2516L1 XCMD2517L1 XCMD254L1 XCMD254L1 XCMD254L1 XCMD25F2L1 XCMD25G1L1 XCMD25G1L1 XCMD2L2 XCMH2102L2 XCMH2102L3
T12	22510L1 2 22510L1 2 22511L1 2 22515AM4 5 22515L1 2 22516L1 2 22517L1 2 22524L1 2 22545L1 2 22545L1 2 22561L1 2 22561L1 2 22102L2 7 22102L5 7 22102L6 7 22102L8 7 22102L8 7 22102LA1 7	XCMD2510L1 XCMD2511L1 XCMD2515AM XCMD2515L1 XCMD2516L1 XCMD2517L1 XCMD2524L1 XCMD2545L1 XCMD25F0L1 XCMD25F0L1 XCMD25G1L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2
DE9RA1212	22511L1 2 22515AM4 5 22515AM4 5 22515L1 2 22516L1 2 22517L1 2 22524L1 2 22545L1 2 22570L1 2 2257	XCMD2511L1 XCMD2515AM XCMD2515L1 XCMD2516L1 XCMD2517L1 XCMD2524L1 XCMD2545L1 XCMD25F0L1 XCMD25F0L1 XCMD25G1L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2
DE9RA1212	22515AM4 5 22515L1 2 22516L1 2 22517L1 2 22524L1 2 22545L1 2 22545L1 2 22570L1 2 22570L1 2 22570L1 2 22570L1 2 22570L1 2 22570L1 2 22501L1 2 2102L2 7 2102L2 7 2102L3 7 2102L6 7 2102L6 7 2102L8 7 2102L8 7 2102L9 7 2102LA1 7	XCMD2515AM XCMD2515L1 XCMD2516L1 XCMD2517L1 XCMD2524L1 XCMD2545L1 XCMD25F0L1 XCMD25F0L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
DE9RA2012	22515L1 2 22516L1 2 22516L1 2 22517L1 2 22524L1 2 22545L1 2 225F0L1 2 225F0L1 2 225F0L1 2 225F0L1 2 225G1L1 2 2102L2 7 2102L3 7 2102L6 7 2102L6 7 2102L8 7 2102L8 7 2102L8 7 2102L8 7 2102L9 7	XCMD2515L1 XCMD2516L1 XCMD2517L1 XCMD2524L1 XCMD2545L1 XCMD25F0L1 XCMD25F0L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
XCKJ50513H29	22517L1 2 22524L1 2 22545L1 2 225F0L1 2 225F0L1 2 225F0L1 2 225G1L1 2 2102L1 7 2102L2 7 2102L3 7 2102L5 7 2102L6 7 2102L7 7 2102L8 7 2102L8 7 2102L9 7 2102LA1 7	XCMD2517L1 XCMD2524L1 XCMD2545L1 XCMD25F0L1 XCMD25F2L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
XALZ09         100         XCKJ50541H29         150         XCKN2745P20         111         XCKS543H29         138         XCMD           XCKD2101G11         100         XCKJ50559H29         150         XCKN2749P20         111         XCKS549H29         138         XCMD           XCKD2101M12         100         XCKJ567H29         150         XCKN2902P20         110         XCKS559H29         138         XCMD           XCKD2102M12         92         XCKL102         124         XCKN2903P20         111         XCKT2101P16         100         XCMD           XCKD2102W12         92         XCKL106         124         XCKN2908P20         111         XCKT210P16         100         XCMD           XCKD210P16         88         XCKL106         124         XCKN2908P20         111         XCKT210P16         94         XCML           XCKD210P16         89         XCKL115         124         XCKN2910P20         110         XCKT210P16         94         XCML           XCKD2110M12         92         XCKL121         124         XCKN2918P20         111         XCKT211P16         94         XCML           XCKD2110M12         92         XCKL506         124         XCKN294P20         111	22524L1 2 22545L1 2 225F0L1 2 225F2L1 2 225G1L1 2 12102L1 7 12102L2 7 12102L3 7 12102L5 7 12102L6 7 12102L7 7 12102L8 7 12102L8 7 12102L9 7 12102L9 7	XCMD2524L1 XCMD2545L1 XCMD25F0L1 XCMD25F2L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
XCKD2101G11         100         XCKJ50555H29         150         XCKN2749P20         111         XCKS549H29         138         XCMD           XCKD2101M12         100         XCKJ561H29         150         XCKN2902P20         110         XCKS559H29         138         XCMD           XCKD2101P16         100         XCKJ567H29         150         XCKN2903P20         110         XCKT2101G11         100         XCMD           XCKD2102P16         88         XCKL102         124         XCKN2906P20         111         XCKT210P16         100         XCMD           XCKD210SP16         88         XCKL106         124         XCKN2908P20         111         XCKT210EP16         94         XCMD           XCKD210GM12         93         XCKL116         124         XCKN2910P20         110         XCKT2110EP16         94         XCMD           XCKD210GM12         93         XCKL115         124         XCKN291BP20         111         XCKT2110P16         94         XCML           XCKD2110M12         92         XCKL121         124         XCKN292P120         110         XCKT211P16         94         XCML           XCKD211M12         92         XCKL506         124         XCKN292P120         110 </th <th>22545L1 2 225F0L1 2 225F2L1 2 225G1L1 2 12102L1 7 12102L2 7 12102L3 7 12102L5 7 12102L6 7 12102L7 7 12102L8 7 12102L8 7 12102L9 7 12102L9 7</th> <th>XCMD2545L1 XCMD25F0L1 XCMD25F2L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3</th>	22545L1 2 225F0L1 2 225F2L1 2 225G1L1 2 12102L1 7 12102L2 7 12102L3 7 12102L5 7 12102L6 7 12102L7 7 12102L8 7 12102L8 7 12102L9 7 12102L9 7	XCMD2545L1 XCMD25F0L1 XCMD25F2L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
XCKD2101M12         100         XCKJ561H29         150         XCKN2902P20         110         XCKS559H29         138         XCMD           XCKD2101P16         100         XCKJ567H29         150         XCKN2903P20         110         XCKT2101G11         100         XCMD           XCKD210ZM12         92         XCKL102         124         XCKN2908P20         111         XCKT2101P16         100         XCMD           XCKD2102P16         88         XCKL106         124         XCKN2908P20         111         XCKT210P16         94         XCML           XCKD2106M12         93         XCKL110         124         XCKN2910P20         110         XCKT210P16         94         XCML           XCKD2106P16         89         XCKL115         124         XCKN2918P20         111         XCKT2110P16         94         XCML           XCKD2110M12         92         XCKL502         124         XCKN293P2D0         110         XCKT211P16         94         XCML           XCKD211BM12         92         XCKL506         124         XCKN293P2D0         111         XCKT213P16         95         XCML           XCKD211BM16         88         XCKL510         124         XCKN2949P20         111	225F0L1 2 225F2L1 2 225G1L1 2 12102L1 7 12102L2 7 12102L3 7 12102L5 7 12102L6 7 12102L7 7 12102L8 7 12102L9 7 12102L9 7 12102L9 7	XCMD25F0L1 XCMD25F2L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
XCKD2101P16         100         XCKJ567H29         150         XCKN2903P20         110         XCKT2101G11         100         XCMD           XCKD2102M12         92         XCKL102         124         XCKN2906P20         111         XCKT2101P16         100         XCMD           XCKD2102P16         88         XCKL106         124         XCKN2908P20         111         XCKT2102P16         94         XCMH           XCKD2106M12         93         XCKL110         124         XCKN2910P20         110         XCKT2106P16         94         XCMH           XCKD2106M12         93         XCKL115         124         XCKN2910P20         111         XCKT2110P16         94         XCMH           XCKD2110M12         92         XCKL151         124         XCKN2918P20         110         XCKT211P16         94         XCMH           XCKD2110M12         92         XCKL506         124         XCKN293P20         110         XCKT211P16         94         XCMH           XCKD211BM12         93         XCKL515         124         XCKN294P20         111         XCKT214P16         95         XCMH           XCKD211BM12         93         XCKL515         124         XCKP210G161         100         <	225F2L1 2 225G1L1 2 12102L1 7 12102L2 7 12102L3 7 12102L5 7 12102L6 7 12102L7 7 12102L8 7 12102L9 7 12102L9 7 12102LA1 7	XCMD25F2L1 XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
XCKD2102M12         92         XCKL102         124         XCKN2906P20         111         XCKT2101P16         100         XCMD           XCKD2102P16         88         XCKL106         124         XCKN2908P20         111         XCKT2102P16         94         XCMH           XCKD2106M12         93         XCKL110         124         XCKN2910P20         110         XCKT2106P16         94         XCMH           XCKD2106P16         89         XCKL115         124         XCKN2918P20         111         XCKT2110P16         94         XCMH           XCKD2110M12         92         XCKL121         124         XCKN291P20         110         XCKT2111P16         94         XCMH           XCKD2110M12         92         XCKL506         124         XCKN293P20         110         XCKT2118P16         95         XCMH           XCKD2111M12         92         XCKL506         124         XCKN293P20         111         XCKT2121P16         94         XCMH           XCKD2118M12         93         XCKL515         124         XCKN294P20         111         XCKT2145P16         95         XCMH           XCKD2118P16         89         XCKL521         124         XCKP2101G11         100         X	225G1L1 2 12102L1 7 12102L2 7 12102L3 7 12102L5 7 12102L6 7 12102L7 7 12102L8 7 12102L9 7 12102LA1 7	XCMD25G1L1 XCMH2102L1 XCMH2102L2 XCMH2102L3
XCKD2102P16         88         XCKL106         124         XCKN2908P20         111         XCKT2102P16         94         XCML           XCKD2106M12         93         XCKL110         124         XCKN2910P20         110         XCKT2106P16         94         XCML           XCKD2106P16         89         XCKL115         124         XCKN2918P20         111         XCKT2110P16         94         XCML           XCKD2110M12         92         XCKL211         124         XCKN2921P20         110         XCKT2111P16         94         XCML           XCKD2110M12         92         XCKL506         124         XCKN292P20         110         XCKT2118P16         95         XCML           XCKD2111M12         92         XCKL506         124         XCKN2949P20         111         XCKT212P16         94         XCML           XCKD2118M12         93         XCKL515         124         XCKN2949P20         111         XCKT2145P16         95         XCML           XCKD2118P16         89         XCKL521         124         XCKP210F16         100         XCKT214P16         95         XCML           XCKD212P16         89         XCKM104P29         122         XCKP210P16         100         X	2102L1   7  2102L2   7  2102L3   7  2102L5   7  2102L6   7  2102L7   7  2102L8   7  2102L9   7  2102LA1   7	XCMH2102L1 XCMH2102L2 XCMH2102L3
XCKD2106M12         93         XCKL110         124         XCKN2910P20         110         XCKT2106P16         94         XCML           XCKD2106P16         89         XCKL115         124         XCKN2918P20         111         XCKT2110P16         94         XCML           XCKD2110M12         92         XCKL121         124         XCKN2921P20         110         XCKT2111P16         94         XCML           XCKD2110P16         88         XCKL502         124         XCKN2927P20         110         XCKT2118P16         95         XCML           XCKD2111M12         92         XCKL506         124         XCKN2939P20         111         XCKT213P16         94         XCML           XCKD2118M12         93         XCKL515         124         XCKN2945P20         111         XCKT2145P16         95         XCML           XCKD2118P16         89         XCKL515         124         XCKN2949P20         111         XCKT2145P16         95         XCML           XCKD2118P16         89         XCKL521         124         XCKP2101G11         100         XCKT21H2P16         95         XCML           XCKD2121M12         92         XCKM106H29         122         XCKP2101M12         100	2102L2	XCMH2102L2 XCMH2102L3
XCKD2106P16         89         XCKL115         124         XCKN2918P20         111         XCKT2110P16         94         XCMH           XCKD2110M12         92         XCKL121         124         XCKN2921P20         110         XCKT2111P16         94         XCMH           XCKD2110P16         88         XCKL502         124         XCKN292PP20         110         XCKT2118P16         95         XCMH           XCKD2111M12         92         XCKL506         124         XCKN293PP20         111         XCKT2112P16         94         XCMH           XCKD2111P16         88         XCKL510         124         XCKN294SP20         111         XCKT213PP16         95         XCMH           XCKD2118M12         93         XCKL515         124         XCKN294SP20         111         XCKT214SP16         95         XCMH           XCKD2118P16         89         XCKL521         124         XCKP210IG11         100         XCKT21H0P16         95         XCMH           XCKD2121M12         92         XCKM102H29         122         XCKP210IM12         100         XCKT21H2P16         95         XCMH           XCKD2127M12         92         XCKM110H29         122         XCKP210P16         80	2102L3	XCMH2102L3
XCKD2110M12         92         XCKL121         124         XCKN2921P20         110         XCKT2111P16         94         XCMH           XCKD2110P16         88         XCKL502         124         XCKN2927P20         110         XCKT2118P16         95         XCMH           XCKD2111M12         92         XCKL506         124         XCKN2939P20         111         XCKT211P16         94         XCMH           XCKD2111P16         88         XCKL510         124         XCKN2945P20         111         XCKT2139P16         95         XCMH           XCKD2118M12         93         XCKL515         124         XCKN2949P20         111         XCKT2145P16         95         XCMH           XCKD2118P16         89         XCKL521         124         XCKP2101G11         100         XCKT21H2P16         95         XCMH           XCKD2121M12         92         XCKM106H29         122         XCKP2101M12         100         XCKT2501G11         100         XCMT2501G11         100         XCMH           XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501F16         100         XCMH           XCKD2128M12         92         XCKM110H29         122	2102L5	
XCKD2110P16         88         XCKL502         124         XCKN2927P20         110         XCKT2118P16         95         XCMH           XCKD2111M12         92         XCKL506         124         XCKN293P20         111         XCKT211P16         94         XCMH           XCKD2111P16         88         XCKL510         124         XCKN2945P20         111         XCKT213PP16         95         XCMH           XCKD2118M12         93         XCKL515         124         XCKN2949P20         111         XCKT2145P16         95         XCMH           XCKD2118P16         89         XCKL521         124         XCKP2101G11         100         XCKT21H2P16         95         XCMH           XCKD212IM12         92         XCKM106H29         122         XCKP2101M12         100         XCKT2501G11         100         XCMH           XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501G11         100         XCMH           XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCK209         132         XCMH           XCKD2128P16         88         XCKM12H29         122         XCKP210P16         83	2102L6	
XCKD2111P16         88         XCKL510         124         XCKN2945P20         111         XCKT2139P16         95         XCMH           XCKD2118M12         93         XCKL515         124         XCKN2949P20         111         XCKT2145P16         95         XCMH           XCKD2118P16         89         XCKL521         124         XCKP2101G11         100         XCKT21H0P16         95         XCMH           XCKD2121M12         92         XCKM102H29         122         XCKP2101M12         100         XCKT21H2P16         95         XCMH           XCKD2121P16         88         XCKM106H29         122         XCKP2101P16         100         XCKT2501G11         100         XCMH           XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501P16         100         XCMH           XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCKZ09         132         XCMH           XCKD2128M12         92         XCKM121H29         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110M12         86 <td>12102L8 7 12102L9 7 12102LA1 7</td> <td>XCMH2102L6</td>	12102L8 7 12102L9 7 12102LA1 7	XCMH2102L6
XCKD2118M12         93         XCKL515         124         XCKN2949P20         111         XCKT2145P16         95         XCMM           XCKD2118P16         89         XCKL521         124         XCKP2101G11         100         XCKT21H0P16         95         XCMM           XCKD2121M12         92         XCKM102H29         122         XCKP2101M12         100         XCKT21H2P16         95         XCMM           XCKD2121P16         88         XCKM106H29         122         XCKP2101P16         100         XCKT2501G11         100         XCMM           XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501P16         100         XCMM           XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCKZ09         132         XCMH           XCKD2128M12         92         XCKM121H2P9         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101C12         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110M12         86<	12102L9 7 12102LA1 7	XCMH2102L7
XCKD2118P16         89         XCKL521         124         XCKP2101G11         100         XCKT21H0P16         95         XCMH           XCKD2121M12         92         XCKM102H29         122         XCKP2101M12         100         XCKT21H2P16         95         XCMH           XCKD2121P16         88         XCKM106H29         122         XCKP2101P16         100         XCKT2501G11         100         XCMH           XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501P16         100         XCMH           XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCKZ09         132         XCMH           XCKD2128M12         92         XCKM121H29         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101C12         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110M12         86         XCMD2101L1         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86<	1 <b>2102LA1</b> 7	XCMH2102L8
XCKD2121M12         92         XCKM102H29         122         XCKP2101M12         100         XCKT21H2P16         95         XCMH           XCKD2121P16         88         XCKM106H29         122         XCKP2101P16         100         XCKT2501G11         100         XCMH           XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501P16         100         XCMH           XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCKZ09         132         XCMH           XCKD2128M12         92         XCKM121H29         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101L1         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110P16         82         XCMD2101M12         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM515H29         122         XCKP2118M12         8		XCMH2102L9
XCKD2121P16         88         XCKM106H29         122         XCKP2101P16         100         XCKT2501G11         100         XCMH           XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501P16         100         XCMH           XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCKZ09         132         XCMH           XCKD2128M12         92         XCKM121H29         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101L1         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110P16         82         XCMD2101M12         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM521H29         122         XCKP2111P16         82         XCMD2102C12         36         XCMH           XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87	2103L1 7	XCMH2102LA
XCKD2127M12         92         XCKM110H29         122         XCKP2102M12         86         XCKT2501P16         100         XCMH           XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCKZ09         132         XCMH           XCKD2128M12         92         XCKM121H29         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101L1         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110P16         82         XCMD2101M12         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM515H29         122         XCKP2111P16         82         XCMD2102C12         36         XCMH           XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87         XCMD2102L1         28         XCMH           XCKD2149M12         93         XCKML102         126         XCKP2118P16         83		XCMH2103L1
XCKD2127P16         88         XCKM115H29         122         XCKP2102P16         82         XCKZ09         132         XCMH           XCKD2128M12         92         XCKM121H29         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101L1         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110P16         82         XCMD2101M12         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM515H29         122         XCKP2111P16         82         XCMD2102C12         36         XCMH           XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87         XCMD2102L1         28         XCMH           XCKD2149M12         93         XCKML102         126         XCKP2118P16         83         XCMD2102M12         36         XCMH		XCMH2103L2
XCKD2128M12         92         XCKM121H29         122         XCKP2106P16         83         XCMD2101C12         49         XCMH           XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101L1         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110P16         82         XCMD2101M12         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM515H29         122         XCKP2111P16         82         XCMD2102C12         36         XCMH           XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87         XCMD2102L1         28         XCMH           XCKD2149M12         93         XCKML102         126         XCKP2118P16         83         XCMD2102M12         36         XCMH		XCMH2103L3 XCMH2103L5
XCKD2128P16         88         XCKM502H29         122         XCKP2110M12         86         XCMD2101L1         49         XCMH           XCKD2139M12         93         XCKM506H29         122         XCKP2110P16         82         XCMD2101M12         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM515H29         122         XCKP2111P16         82         XCMD2102C12         36         XCMH           XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87         XCMD2102L1         28         XCMH           XCKD2149M12         93         XCKML102         126         XCKP2118P16         83         XCMD2102M12         36         XCMH		XCMH2103L8
XCKD2139M12         93         XCKM506H29         122         XCKP2110P16         82         XCMD2101M12         49         XCMH           XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM515H29         122         XCKP2111P16         82         XCMD2102C12         36         XCMH           XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87         XCMD2102L1         28         XCMH           XCKD2149M12         93         XCKML102         126         XCKP2118P16         83         XCMD2102M12         36         XCMH		XCMH2106L1
XCKD2139P16         89         XCKM510H29         122         XCKP2111M12         86         XCMD2102AM4         54         XCMH           XCKD2145M12         93         XCKM515H29         122         XCKP2111P16         82         XCMD2102C12         36         XCMH           XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87         XCMD2102L1         28         XCMH           XCKD2149M12         93         XCKML102         126         XCKP2118P16         83         XCMD2102M12         36         XCMH		XCMH2106L2
XCKD2145P16         89         XCKM521H29         122         XCKP2118M12         87         XCMD2102L1         28         XCMH           XCKD2149M12         93         XCKML102         126         XCKP2118P16         83         XCMD2102M12         36         XCMH		XCMH2107L1
XCKD2149M12 93 XCKML102 126 XCKP2118P16 83 XCMD2102M12 36 XCMH	12107L2 7	XCMH2107L2
	1 <b>2107L3</b> 7	XCMH2107L3
		XCMH2110L1
		XCMH2110L2
		XCMH2110L3
		XCMH2110LA
		XCMH2115L1 XCMH2115L1L
		XCMH2115L12
		XCMH2115L2L
		XCMH2115L3
XCKD2506P16 89 XCKML502H29 126 XCKP2145M12 87 XCMD2111L1 28 XCMH	12115L3L0 7	XCMH2115L3L
XCKD2510P16 88 XCKML510 126 XCKP2145P16 83 XCMD2111M12 36 XCMH	1 <b>2115L8</b> 7	XCMH2115L8
	12115LA1 7	XCMH2115LA
		XCMH211AL0
		XCMH211AL1
		XCMH2121L1
		XCMH2121L1F XCMH2121L2
		XCMH2121L5
		XCMH2121L5
		XCMH2145L2
		XCMH2159L1
XCKJ10511A 156 XCKN2118P20 111 XCKP2510P16 82 XCMD2124C12 36 XCMH	12159L2 7	XCMH2159L2
XCKJ10511D 154 XCKN2121P20 110 XCKP2511P16 82 XCMD2124L1 28 XCMH	121F0L1 7	XCMH21F0L1
XCKJ10511H29 150 XCKN2127P20 110 XCKP2518P16 83 XCMD2124M12 36 XCMH	121F0L2 7	XCMH21F0L2
		XCMH21F2L1
		XCMH21F2L2
		XCMH2902L1
		XCMH2902L5
		XCMH2903L1
		XCMH2910L1 XCMH2910L2
		XCMH2910L3
		XCMN2102L1
VALUE		XCMN2103L1
VOLUME TO VOLUME		XCMN2106L1
VOIC MAREAUTON AND VOICEMENTS OF THE VOICEMENT AND VOICEMENT OF THE VOICEM		XCMN2107L1
XCKJ110559H29 152 XCKN2545P20 111 XCKS139H29 138 XCMD2501L1 49 XCMN	/	XCMN2110L1
XCKJ1161H29 152 XCKN2549P20 111 XCKS141H29 138 XCMD2502AM4 54 XCMN		
XCKJ1167H29 152 XCKN2702P20 110 XCKS143H29 138 XCMD2502L1 28 XCMN	<b>12110L1</b> 7	XCMN2115L1



# XC Standard range Product reference index

XCMN2145L1	79	XCPR2121P20	104	XE3SP2151	101	ZCE016	58	ZCEF2	30
XCMN2159L1	79	XCPR2127P20	104	7.200. 2.10.	132	ZCE02	57		38
XCMN21F0L1	78	XCPR2502P20	104		145	LOLUL	60		57
XCMN21F2L1	78	XCPR2510P20	104		164		62		58
XCMN21F3L1	78	XCPR2518P20	104	XESP2021	164		62		60 62
XCMV2102D44	53	XCPR2519P20	104		172		82	70504	
XCMV2102D44 XCMV2102M12	55	XCPR2521P20	104	XESP20215	175		86 88	ZCEG1	30 38
	53	XCPR2527P20	104	XESP2031	164		92		57
XCMV2110D44		XCPR2902P20	104		172		94		58
XCMV2110M12	55	XCPR2902P20 XCPR2910P20	104	XESP20315	175	ZCE026	57		60
XCMV2115D44	53			XESP3021	145		58		62
XCMV2115M12	55	XCPR2918P20	104				60	ZCEH0	83
XCMV2502D44	53	XCPR2921P20	104	XZCP1164L10	40 154		62		87 89
XCMV2502M12	55	XCPR2927P20	104		163	ZCE05	49 10		93
XCMV2510D44	53	XCTR2102P16	106	XZCP1164L2	40	70500			95
XCMV2510M12	55	XCTR2110P16	106	ALOI ITOTLE	154	ZCE06	30 39	ZCEH2	83
XCMV2515D44	53	XCTR2118P16	106		163		57		87
XCMV2515M12	55	XCTR2121P16	106	XZCP1164L5	40		58		89
XCMZ06	49	XCTR2502P16	106		154		60		93 95
XCMZ07	49	XCTR2510P16	106		163		62 83	ZCKD01	139
	100	XCTR2518P16	106	XZCP1169L10	40		87		
XCNR2102P20	118	XCTR2521P16	106	XZCP1169L2	40		89	ZCKD02	122 124
XCNR2110P20	118	XE2NP2131	101	XZCP1169L5	40		93		139
XCNR2118P20	118		132				94	ZCKD06	122
XCNR2121P20	118		145	XZCP1264L10	40 154	ZCE10	30	_0,,500	124
XCNR2127P20	118		164 172	V70D406***			38 57	ZCKD10	122
XCNR2502P20	118		172	XZCP1264L2	40 154		57 58		124
XCNR2510P20	118	XE2NP2141	101				60	ZCKD15	122
XCNR2518P20	118	ALZINI Z 141	132	XZCP1264L5	40 151		62		124
XCNR2521P20	118		145		154		82	ZCKD21	122
XCNR2527P20	118		164	XZCP1764L10	156		86		124
XCNR2718P20	118		172	XZCP1764L2	156		88 92	ZCKD31	139
XCNR2727P20	118		175	XZCP1764L5	156		94	ZCKD39	139
XCNR2918P20	118	XE2NP2151	101	XZCP1771L10	40	ZCE106	57	ZCKD41	139
XCNR2927P20	118		132 145	XZCP1771L2	40	202.00	58	ZCKD49	139
XCNT2102P16	112		164				60	ZCKD59	139
XCNT2103P16	112		172	XZCP1771L5	40		62		150
XCNT2106P16	113		175	-		ZCE11	30	ZCKE05	
XCNT2108P16	113	XE2NP2161	101	Z			38	ZCKE055	174
XCNT2100F10 XCNT2110P16	112		132	ZCD21	98		57 58	ZCKE056	171
	113		145 164	ZCD25	98		60	ZCKE065	174
XCNT2118P16			172	ZCD26	98		62	ZCKE066	171
XCNT2121P16 XCNT2139P16	112 113		175	ZCD27	88		82	ZCKE085	174
		XE2NP3131	101		89		86 88	ZCKE086	171
XCNT2145P16	113	XE2NP3141	101		98		92	ZCKE095	174
XCNT2149P16	113	XE2NP3151	101	ZCD28	98		94	ZCKE096	171
XCNT2502P16	112	XE2NP3161	101	ZCD29	88	ZCE21	82	ZCKE215	174
XCNT2503P16	112	XE2SP2141	101		89 98		86		171
XCNT2506P16	113		132	ZCD29M12	92		88	ZCKE216	
XCNT2508P16	113		145	LODESIVI IZ	92 93		92 94	ZCKE235	174
XCNT2510P16	112		164	ZCD31	98	7CE24		ZCKE236	171
XCNT2518P16	113		172 175	ZCD35	98	ZCE24	30 38	ZCKE61	150
XCNT2521P16	112	VE20D2454	175				57	ZCKE615	174
XCNT2539P16	113	XE2SP2151	101 132	ZCD37	88 89		58	ZCKE616	171
XCNT2545P16	113		145		98		60	ZCKE625	174
XCNT2549P16	113		164	ZCD39	88		62 82	ZCKE626	171
XCNT2702P16	112		172		89		86	ZCKE635	174
XCNT2703P16	112		175		98		88		
XCNT2706P16	113	XE2SP3151	101	ZCDEP16	88		92	ZCKE636	171
XCNT2708P16	113	XE3NP2141	101		89		94	ZCKE645	174
XCNT2710P16	112		132	ZCDEP16ZCE06	89	ZCE28	82	ZCKE646	171
XCNT2718P16	113		145 164	ZCE01	31		86	ZCKE655	174
XCNT2721P16	112	V=415-1-1	164		39		88 92	ZCKE656	171
XCNT2739P16	113	XE3NP2151	101		57	70550		ZCKE665	174
XCNT2745P16	113		132 145		58 60	ZCEF0	30 38	ZCKE67	150
XCNT2749P16	113		164		62		57	ZCKE675	174
XCPR2102P20	104	XE3SP2141	101		83		58		
	104	AEJJF2141	132		87		60	ZCKE676	171
XCPR/110P/0	107				89		62	ZCKJ01	161
XCPR2110P20 XCPR2118P20	104		145						
XCPR2118P20 XCPR2118P20 XCPR2119P20	104 104		145 164		93 95			ZCKJ0121	165

# XC Standard range Product reference index

ZCKJ02	161
ZCKJ04	161
ZCKJ1	160
	170
	173
ZCKJ11	161 170
ZCKJ1121	162
ZCKJ1121H29 ZCKJ1134	162 162
ZCKJ1134 ZCKJ1134H29	162
ZCKJ1154H29 ZCKJ115	173
ZCKJ115 ZCKJ115H29	173
ZCKJ115H29 ZCKJ115H7	173
ZCKJ115117 ZCKJ11H29	161
ZCKJTIHZ9	170
ZCKJ11H7	161
	170
ZCKJ120	162
ZCKJ121	162
ZCKJ121H29	162
ZCKJ134	162
ZCKJ134H29	162
ZCKJ1D	163
ZCKJ1H29	160
	170 173
ZCKJ1H7	160
20131117	170
	173
ZCKJ2	160
	170
ZCKJ21	161 170
ZCKJ215	173
ZCKJ215H29	173
ZCKJ215H7	173
ZCKJ21H29	161
	170
ZCKJ21H7	161
701/105	170
ZCKJ25 ZCKJ25H29	173 173
ZCKJ25H29 ZCKJ25H7	
ZCKJ2H29	173 160
ZCRJZNZJ	170
ZCKJ2H7	160
	170
ZCKJ4	160
ZCKJ404	170 161
ZCKJ4045 ZCKJ4045H29	173 173
ZCKJ4045H29 ZCKJ4045H7	173
ZCKJ4045H7 ZCKJ4046	173
ZCKJ4046 ZCKJ4046H29	170
ZCKJ4046H29 ZCKJ4046H7	170
ZCKJ4046H7 ZCKJ404H29	
ZCKJ404H29 ZCKJ404H7	161 161
ZCKJ404H7 ZCKJ41	161
201041	170
ZCKJ4104	161
ZCKJ41045	173
ZCKJ41045H29	173
ZCKJ41045H7	173
ZCKJ41046	170
ZCKJ41046H29	170
ZCKJ41046H7	170

ZCKJ4104H29	161
ZCKJ4104H7	161
ZCKJ415	173
ZCKJ415H29	173
ZCKJ415H7	173
ZCKJ41H29	161
	170
ZCKJ41H7	161 170
ZCKJ45	173
ZCKJ45H29	173
ZCKJ45H7	173
ZCKJ4H29	160
	170
ZCKJ4H7	160
=====	170
ZCKJ5	160 170
	173
ZCKJ520	162
ZCKJ521	162
ZCKJ521H29	162
ZCKJ534	162
ZCKJ534H29	162
ZCKJ5D	163
ZCKJ5H29	160
	170 173
ZCKJ5H7	160
201100111	170
	173
ZCKJ6	160 170
	170
ZCKJ6D	163
ZCKJ6H29	160
	170
70K 10117	173
ZCKJ6H7	160 170
	173
ZCKJ7	160
	170 173
ZCKJ7D	163
ZCKJ7H29	150
	160
	17 173
ZCKJ7H7	160
2010/11/	170
	173
ZCKJ8	160
	170 173
ZCKJ82A	165
ZCKJ8D	163
ZCKJ8H29	160
	170
701/10117	173
ZCKJ8H7	160 170
	173
ZCKJ9	160
	170
ZCKJ902	173 165
ZCKJ902 ZCKJ904	165
ZCKJ904 ZCKJ906	165
	700

ZCKJ9H29	150 160
	170 173
ZCKJ9H7	160
	170
ZCKJD31	173 160
ZCKJD31H29	160
ZCKJD31H7	160
ZCKJD35	160
ZCKJD35H29	160
ZCKJD35H7	160
ZCKJD37	160
ZCKJD37H29	150
ZCKJD37H7	160
ZCKJD37117 ZCKJD39	160
ZCKJD39H29	150
LONODOUTILU	160
ZCKJD39H7	160
ZCKL1	130
ZCKL1H7	130
ZCKL5	130
ZCKL5H7	130
ZCKL6	130
ZCKL6H7	130
ZCKL7	124 130
ZCKL7H7	130
ZCKL8	130
ZCKL8H7	130
ZCKLD31	131
ZCKLD31H7	131
ZCKLD35	131
ZCKLD35H7	131
ZCKLD37	124 131
ZCKLD37H7	131
ZCKLD39	124
ZCKLD39H7	131
ZCKED39117 ZCKM1	130
ZCKM1H29	130
ZCKM1H7	130
ZCKM5	130
ZCKM5H29	130
ZCKM5H7	130
ZCKM6	130
ZCKM6H29	130
ZCKM6H7	130
ZCKM7	130
ZCKM7H29	122 130
ZCKM7H7	130
ZCKM8	130
ZCKM8H29	130
ZCKM8H7	130
ZCKM9	130
ZCKM9H29	122
ZCKMD31	130
ZCKMD31H29	131
ZCKMD31H7	131
7CKMD2E	121

ZCKMD35H29	131
ZCKMD35H7	131
ZCKMD37	131
ZCKMD37H29	122 131
ZCKMD37H7	131
ZCKMD37117	131
ZCKMD39H29	122
ZORWIDSSTIZS	131
ZCKMD39H7	131
ZCKS1	144
ZCKS1H29	144
ZCKS2	144
ZCKS2H29	144
ZCKS404	144
ZCKS404H29	144
ZCKS5	144
ZCKS5H29	144
ZCKS6	144
ZCKS6H29	144
ZCKS7	144
ZCKS7H29	139 144
ZCKS8	144
ZCKS8H29	144
ZCKS9	144
ZCKS9H29	139
201031123	144
ZCKSD31	144
ZCKSD31H29	144
ZCKSD35	144
ZCKSD35H29	144
ZCKSD37	144
ZCKSD37H29	139
	144
ZCKSD39	144
ZCKSD39H29	139 144
ZCKY11	150
201111	172
ZCKY115	175
ZCKY13	150
	172 175
ZCKY14	173
20K1 14	175
ZCKY41	150
	172
ZCKY415	175
ZCKY43	172 175
ZCKY51	173
ZCK151	175
ZCKY52	172
	175
ZCKY53	172
7010/50	175
ZCKY59	150 172
ZCKY61	172
ZCKY615	175
ZCKY71	172
ZCKY715	175
ZCKY81	172
ZCKY91	172
ZCKZ020	165
ZCKZ021	165

ZCKZ034	165
ZCMC21E1	48
ZCMC21E10	48
ZCMC21E2	48
ZCMC21E3	48
ZCMC21E5	48
ZCMC21E7	48
ZCMC21L1	48
ZCMC21L10	48
ZCMC21L2	48
ZCMC21L3	48
ZCMC21L5	48
ZCMC21L7	48
ZCMC21T1	48
ZCMC21T2	48
ZCMC21T5	48
ZCMC25L1	48
ZCMC25L10	48
ZCMC25L2	48
ZCMC25L3	48
ZCMC25L5	48
ZCMC25L7	48
ZCMC25T06	48
ZCMC29L1	48
ZCMC29L10	48
ZCMC29L2	48
ZCMC29L3	48
ZCMC29L5	48
ZCMC29L7	48
ZCMC37L1	48
ZCMC37L2	48
ZCMC37L5	48
ZCMC39L1	48
ZCMC39L2	48
ZCMC39L5 ZCMC4DL1	48
ZCMC4DL1 ZCMC4DL2	48
ZCMC4DL5	48
ZCMD21	46
ZCMD21AM4	58
ZCMD21C12	38
ZOMBZTOTZ	39
ZCMD21L08R12	38
	39
ZCMD21L08U78	38
70MD04L4	39
ZCMD21L1 ZCMD21L2	47 47
ZCMD21L2 ZCMD21L5	
ZCMD21L5 ZCMD21M12	47 38
ZCIVID2 IVI IZ	39
ZCMD25	46
ZCMD25AM4	58
ZCMD25L1	47
ZCMD25L2	47
ZCMD25L5	47
ZCMD29	46
ZCMD29AM4	58
ZCMD29C12	38
	39
ZCMD29L1	30
	31 47
ZCMD29L2	47
	71

ZCMD37

46

ZCKMD35

131

XC Standard range Product reference index

70MD27L4		70725044	
ZCMD37L1	30 31	ZCT25G11 ZCT25N12	99
	47	ZC125N12 ZCT25P16	99 94
ZCMD37L2	47	20125716	94 95
ZCMD37L5	47		99
ZCMD39	46	ZCT26G11	99
ZCMD39L1	30	ZCT26N12	99
	31 47	ZCT26P16	94
ZCMD39L2	47		95 99
ZCMD39L2 ZCMD39L5	47	ZCT27G11	99
ZCMD39L3 ZCMD41L1	30	ZCT27N12	99
ZCIVID41L1	31	ZCT27P16	94
	47	2012/110	95
ZCMD41L2	47		99
ZCMD41L5	47	ZCT28G11	99
ZCMD4D	46	ZCT28N12	99
ZCMD4DL1	30	ZCT28P16	94
	31 47		95 99
ZCMD4DL2	47	ZCY15	31
ZCMD4DL5	47	20110	39
ZCMD4DL3	46		57
ZCMD61C12	49		58 60
ZCMD61C12 ZCMD61M12	49		62
ZCMD65	46	ZCY16	31
ZCMD69	46		39 57
ZCMD69C12	49		57 58
ZCMD77	46		60
ZCMD79	46		62
ZCMD81L1	47	ZCY17	31 39
ZCMD81L2	47		57
ZCMD81L5	47		58
ZCMV21D44	57		60 62
ZCMV21M12	60	ZCY18	83
ZCMV21v	60		87
ZCMV25D44	57		89 93
ZCMV25M12	60		95
ZCMV29D44	57	ZCY39	83
ZCMV29M12	60		87
ZCMV41L03	62		89 93
ZCP21	98		95
ZCP21D44	98	ZCY45	31
ZCP25	98		39 83
ZCP26	98		87
ZCP27	82		89
	83 98		93 94
ZCP28	98		95
ZCP29	82		57 58
201 23	83		58 60
	98		62
ZCP29M12	86	ZCY49	83
70004	87		87 89
ZCP31 ZCP35	98 98		93
	82		
ZCP37	82 83		
	98		
ZCP39	82		
	83 98		
ZCPED44	98		
ZCPED44 ZCPEP16	82		
201 LI 10	83		
ZCT21G11	99		
ZCT21N12	99		
70T04D46			

ZCT21P16

### **Schneider Electric Industries SAS**

Head Office 35, rue Joseph Monier F-92500 Rueil-Malmaison France

### www.tesensors.com

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Design: Schneider Electric Photos: Schneider Electric