

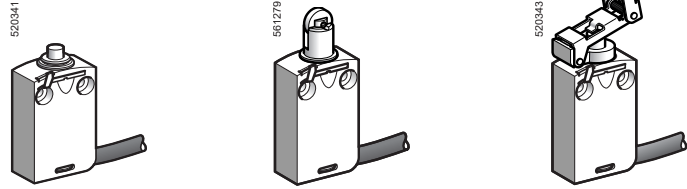
Limit switches

XC Standard range

Miniature design, metal, XCMD

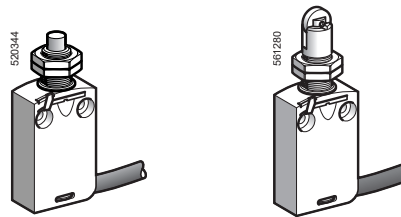
■ XCMD
pre-cabled

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



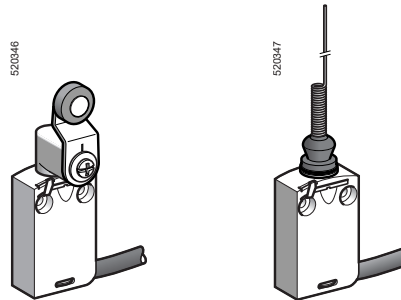
Complete switches: page 28. Variable composition: page 30

□ 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

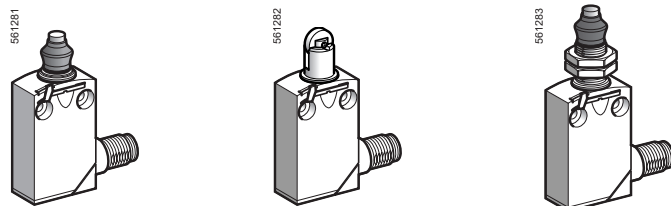


Complete switches: page 29. Variable composition: page 31

■ XCMD
with connector

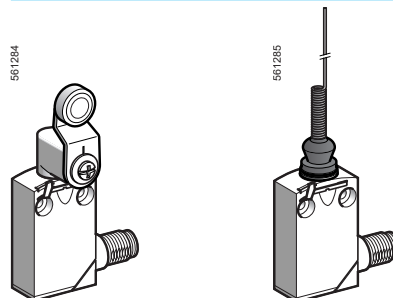
□ With head for linear movement (plunger)
Fixing by the body

Fixing by the head



Complete switches: page 36. Variable composition: page 38

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



Complete switches: page 37. Variable composition: page 39

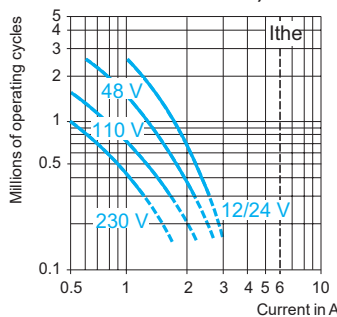
Environment characteristics		
Conformity to standards	Products	CE, IEC 60947-5-1, EN 60947-5-1, UL 508, CSA C22-2 n° 14, EAC
	Machine assemblies	IEC 60204-1, EN 60204-1
Product certifications		UL, CSA (except products with special cables), CCC
Protective treatment		Standard version: "TC"
Ambient air temperature	For operation	- 25...+ 70°C (- 40...+ 70 °C with ZCE106, ZCE026 and ZCE016 heads)
	For storage	- 40...+ 70°C
Vibration resistance		XCMD snap action: 5 gn. XCMD slow break: 25 gn (10...500 Hz) conforming to IEC 60068-2-6
Shock resistance		25 gn (18 ms) conforming to IEC 60068-2-27 except head ZCE08: 15 gn (18 ms)
Electric shock protection		Class I conforming to IEC 61140 and NF C 20-030
Degree of protection		IP 66, IP 67 and IP 68 (1) conforming to IEC 60529; IK 06 conforming to IEC 62262
Materials		Bodies: Zamak, heads: Zamak
Repeat accuracy		0.05 mm on the tripping points, with 1 million operations for head with end plunger

(1) Protection against prolonged immersion: the test conditions are subject to agreement between the manufacturer and the user.

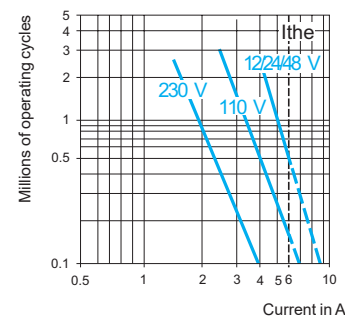
Contact block characteristics		
Rated operational characteristics	Switches with 2 contacts	~ AC-15; B300 (Ue = 240 V, Ie = 1.5 A) --- DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
	Switches with 3 and 4 contacts	~ AC-15; C300 (Ue = 240 V, Ie = 0.75 A) --- DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
	Pre-cabled switches	Ithe = 6 A for 2 contacts, 4 A for 3 contacts, 3 A for 4 contacts
	Switches with M12, 4-pin connector	Ui = 250 V, Ie = 3 A maximum, Ithe = 3 A
	Switches with M12, 5-pin connector	Ui = 60 V, Ie = 4 A maximum, Ithe = 4 A
	Switches with 7/8"-16UN, 5-pin connector	Ui = 250 V, Ie = 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 voltage		U imp = 4 kV conforming to IEC 60947-1, IEC 60664
Positive operation (depending on model)		NC contacts with positive opening operation conforming to IEC 60947-5-1 Appendix K, EN 60947-5-1
Resistance across terminals		≤ 25 mΩ conforming to IEC 60255-7 category 3
Short-circuit protection		6 A cartridge fuse type gG (gl)
Minimum actuation speed (for head with end plunger)		Snap action contact: 0.01 m/minute, slow break contact: 6 m/minute
Electrical durability		<ul style="list-style-type: none"> ■ 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 ~
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)



DC supply ---

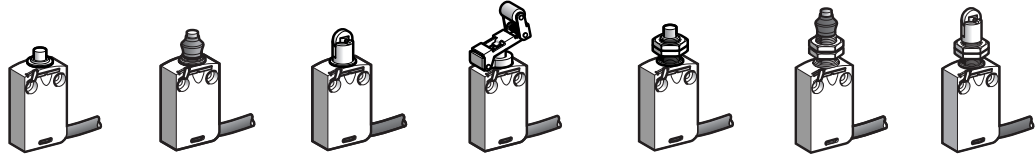
Power broken in W for 5 million operating cycles				
Voltage	V	24	48	120
mm	W	3	2	1

Power broken in W for 5 million operating cycles				
Voltage	V	24	48	120
mm	W	4	3	3

Limit switches

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

Type of head	Plunger (fixing by the body)	Plunger (fixing by the head)
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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
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References

2-pole NC + NO snap action 	XCMD2110L1 	XCMD2111L1 	XCMD2102L1 	XCMD2124L1 	XCMD21F0L1 	XCMD21G1L1 	XCMD21F2L1
	2-pole NC + NO break before make, slow break 	XCMD2510L1 	XCMD2511L1 	XCMD2502L1 	XCMD2524L1 	XCMD25F0L1 	XCMD25G1L1
Weight (kg)	0.180	0.180	0.185	0.200	0.195	0.220	0.205
Contact operation			(A) = cam displacement (P) = positive opening point				

Complementary characteristics not shown under general characteristics (see page 27)

Switch actuation	On end	By 30° cam		On end	By 30° cam	
Type of actuation						
Maximum actuation speed	0.5 m/s				0.1 m/s	
Mechanical durability	10 million operating cycles					
Minimum force or torque	For tripping	8.5 N	7 N	2.5 N	8.5 N	7 N
	For positive opening	42.5 N	35 N	12.5 N	42.5 N	35 N
Cabling	PvR cable, 5 x 0.75 mm ² , length 1 m					

(1) Nitrile for indoor use

Limit switches

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)
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References					
2-pole NC + NO snap action 	XCMD2115L1 	XCMD2116L1 	XCMD2117L1 	XCMD2145L1 	XCMD2106L1
2-pole NC + NO break before make, slow break 	XCMD2515L1 	XCMD2516L1 	XCMD2517L1 	XCMD2545L1 	XCMD2506L1
Weight (kg)	0.220	0.225	0.220	0.230	0.180
Contact operation			(A) = cam displacement (P) = positive opening point		

Complementary characteristics not shown under general characteristics (see page 27)		
Switch actuation	By 30° cam	
Type of actuation		
Maximum actuation speed	1.5 m/s	1 m/s
Mechanical durability	10 million operating cycles	5
Minimum force or torque	For tripping	0.1 N.m
	For positive opening	0.5 N.m
Cabling	PvR cable, 5 x 0.75 mm ² , length 1 m	

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

Limit switches

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 (combined with removable terminal block)							
2-pole NC + NC snap action 	ZCMD29L1 + ZCE10 	ZCMD29L1 + ZCE11 	ZCMD29L1 + ZCE02 	ZCMD29L1 + ZCE24 	ZCMD29L1 + ZCEF0 	ZCMD29L1 + ZCEG1 	ZCMD29L1 + ZCEF2
3-pole NC + NC + NO snap action 	ZCMD39L1 + ZCE10 	ZCMD39L1 + ZCE11 	ZCMD39L1 + ZCE02 	ZCMD39L1 + ZCE24 	ZCMD39L1 + ZCEF0 	ZCMD39L1 + ZCEG1 	ZCMD39L1 + ZCEF2
3-pole NC + NC + NO break before make, slow break 	ZCMD29L1 + ZCE10 	ZCMD37L1 + ZCE11 	ZCMD37L1 + ZCE02 	ZCMD37L1 + ZCE24 	ZCMD37L1 + ZCEF0 	ZCMD37L1 + ZCEG1 	ZCMD37L1 + ZCEF2
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
Weight (kg)	0.160	0.160	0.165	0.180	0.175	0.200	0.185

References (combined with fixed terminal block)							
4-pole 2 NC + 2 NO snap action 	ZCMD41L1 + ZCE10 	ZCMD41L1 + ZCE11 	ZCMD41L1 + ZCE02 	ZCMD41L1 + ZCE24 	ZCMD41L1 + ZCEF0 	ZCMD41L1 + ZCEG1 	ZCMD41L1 + ZCEF2
Weight (kg)	0.160	0.160	0.165	0.180	0.175	0.200	0.185
Contact operation	closed open		(A) = cam displacement (P) = positive opening point			NC contact with positive opening operation	

Complementary characteristics not shown under general characteristics (see page 27)					
Switch actuation	On end		By 30° cam		By 30° cam
Type of actuation					
Maximum actuation speed	0.5 m/s				0.1m/s
Mechanical durability	10 million operating cycles				
Minimum force or torque	For tripping	8.5 N	7 N	2.5 N	8.5 N
	For positive opening	42.5 N	35 N	12.5 N	42.5 N
Cabling	PvR cable, 5 x 0.75 mm ² length 1 m for 2-pole contact versions, 7 x 0.5 mm ² length 1 m for 3-pole contact versions, 9 x 0.34 mm ² length 1 m for 4-pole contact versions. For other lengths, see page 48.				

(1) Nitrile for indoor use

Limit switches

XC Standard range
Miniature design, metal, XCMD
Modular 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 (combined with removable terminal block)					
2-pole NC + NC snap action 	ZCMD29L1 + ZCE01 + ZCY15 ⊖ 	ZCMD29L1 + ZCE01 + ZCY16 ⊖ 	ZCMD29L1 + ZCE01 + ZCY17 ⊖ 	ZCMD29L1 + ZCE01 + ZCY45 ⊖ 	ZCMD29L1 + ZCE06
3-pole NC + NC + NO snap action 	ZCMD39L1 + ZCE01 + ZCY15 ⊖ 	ZCMD39L1 + ZCE01 + ZCY16 ⊖ 	ZCMD39L1 + ZCE01 + ZCY17 ⊖ 	ZCMD39L1 + ZCE01 + ZCY45 ⊖ 	ZCMD39L1 + ZCE06
3-pole NC + NC + NO break before make, slow break 	ZCMD37L1 + ZCE01 + ZCY15 ⊖ 	ZCMD37L1 + ZCE01 + ZCY16 ⊖ 	ZCMD37L1 + ZCE01 + ZCY17 ⊖ 	ZCMD37L1 + ZCE01 + ZCY45 ⊖ 	ZCMD37L1 + ZCE06
Weight (kg) 4-pole 2 NC + 2 NO snap action 	0.220	0.225	0.220	0.230	0.180
Weight (kg)	0.200	0.205	0.200	0.210	0.160

References (combined with fixed terminal block)					
4-pole 2 NC + 2 NO snap action 	ZCMD41L1 + ZCE01 + ZCY15 ⊖ 	ZCMD41L1 + ZCE01 + ZCY16 ⊖ 	ZCMD41L1 + ZCE01 + ZCY17 ⊖ 	ZCMD41L1 + ZCE01 + ZCY45 ⊖ 	ZCMD41L1 + ZCE06
Weight (kg)	0.200	0.205	0.200	0.210	0.160
Contact operation			(A) = cam displacement (P) = positive opening point		

Complementary characteristics not shown under general characteristics (see page 27)		
Switch actuation	By 30° cam	
Type of actuation		
Maximum actuation speed	1.5 m/s	
Mechanical durability	10 million operating cycles	
Minimum force or torque	For tripping	0.1 N.m
	For positive opening	0.5 N.m
Cabling	PvR cable, 5 x 0.75 mm ² length 1 m for 2-pole contact versions, 7 x 0.5 mm ² length 1 m for 3-pole contact versions, 9 x 0.34 mm ² length 1 m for 4-pole contact versions. For other lengths, see page 48.	

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

Limit switches

XC Standard range

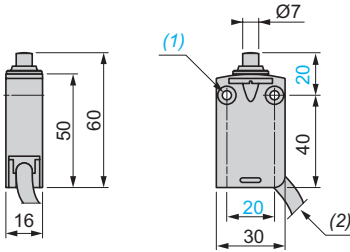
Miniature design, metal, XCMD

Complete units

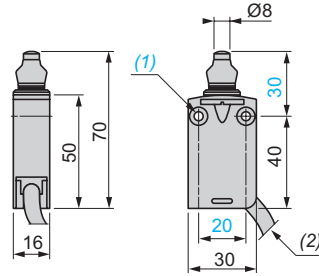
Pre-cabled

Dimensions

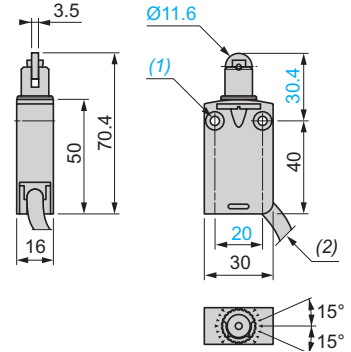
XCMD2•10L1



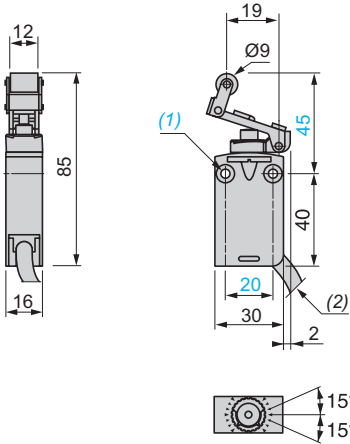
XCMD2•11L1



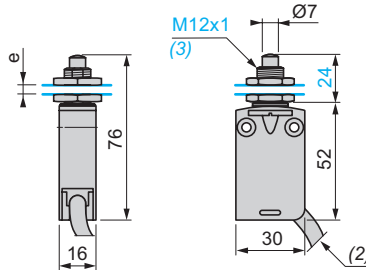
XCMD2•02L1



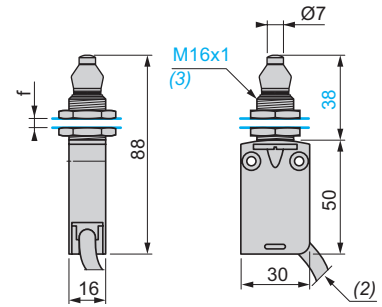
XCMD2•24L1



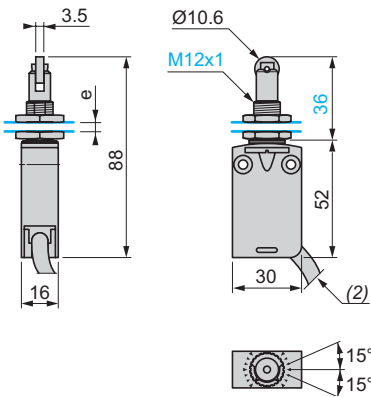
XCMD2•F0L1



XCMD2•G1L1



XCMD2•F2L1



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

(2) External diameter of cable 7.5 mm

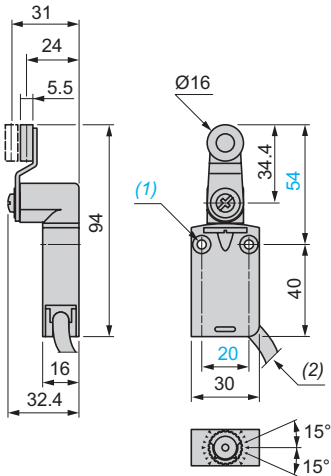
(3) Fixing nut thickness 3.5 mm

e: 8 mm max, panel cut-out \varnothing 12.5 mm

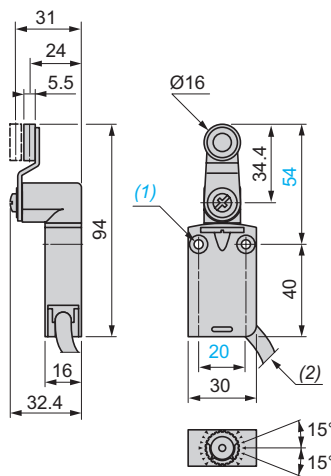
f: 8 mm max, panel cut-out \varnothing 16.5 mm

Dimensions (continued)

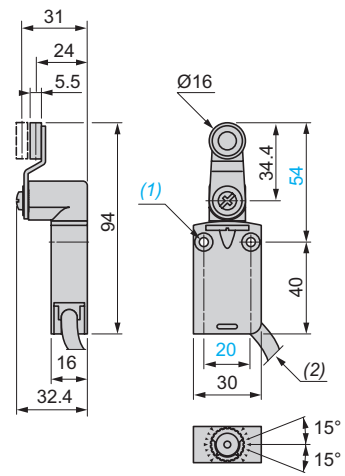
XCMD2●15L1



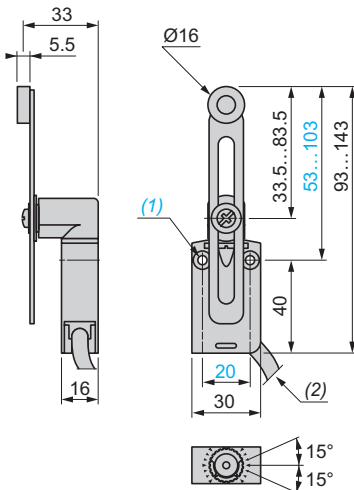
XCMD2●16L1



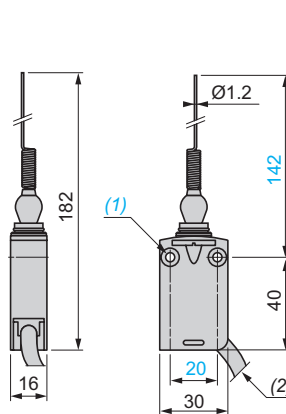
XCMD2●17L1



XCMD2●45L1

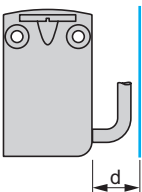


XCMD2●06L1



Mounting: distance required for connection

XCMD2●●●L1



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

Limit switches

XC Standard range

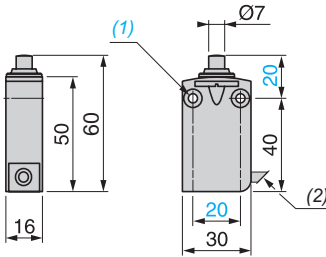
Miniature design, metal, XCMD

Modular units

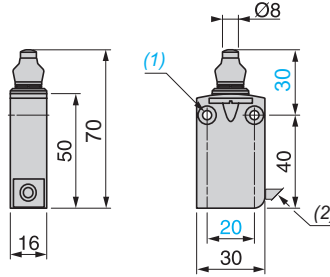
Pre-cabled

Dimensions

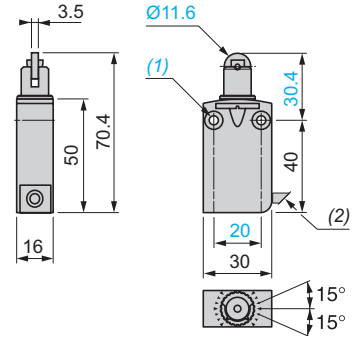
ZCMD●●L1 + ZCE10,
ZCMD4DL1 + ZCE10,
ZCMD41L1 + ZCE10



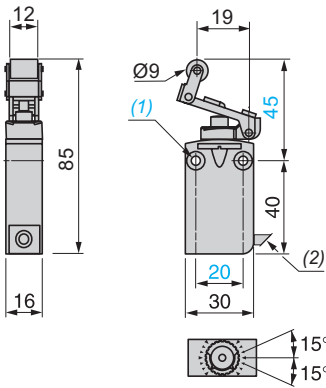
ZCMD●●L1 + ZCE11,
ZCMD4DL1 + ZCE11,
ZCMD41L1 + ZCE11



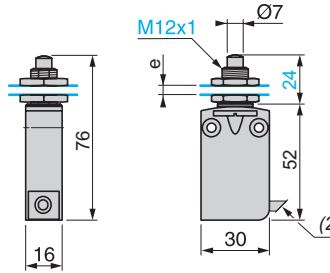
ZCMD●●L1 + ZCE02,
ZCMD4DL1 + ZCE02,
ZCMD41L1 + ZCE02



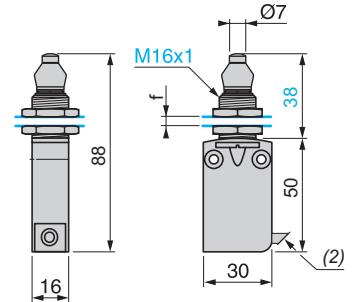
ZCMD●●L1 + ZCE24,
ZCMD4DL1 + ZCE24,
ZCMD41L1 + ZCE24



ZCMD●●L1 + ZCEF0,
ZCMD4DL1 + ZCEF0,
ZCMD41L1 + ZCEF0



ZCMD●●L1 + ZCEG1,
ZCMD4DL1 + ZCEG1,
ZCMD41L1 + ZCEG1



(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.

Limit switches

XC Standard range

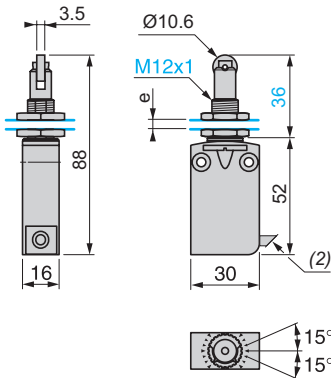
Miniature design, metal, XCMD

Modular units

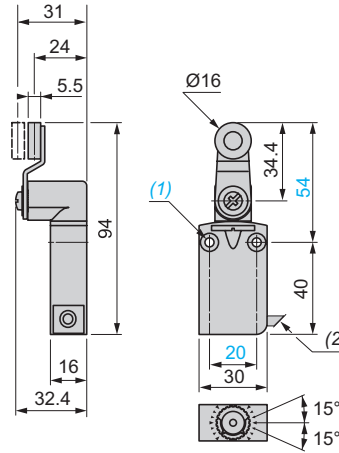
Pre-cabled

Dimensions (continued)

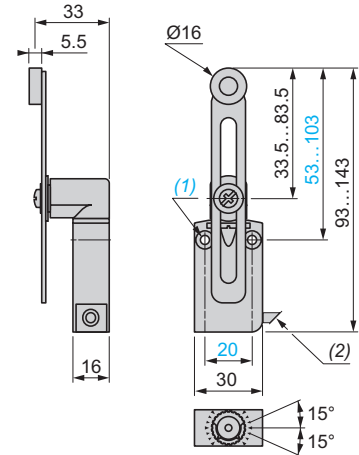
ZCMD●●L1 + ZCEF2,
ZCMD4DL1 + ZCEF2,
ZCMD41L1 + ZCEF2



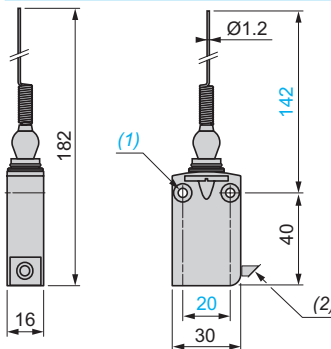
ZCMD●●L1 + ZCE01 + ZCY15/16/17,
ZCMD4DL1 + ZCE01 + ZCY15/16/17,
ZCMD41L1 + ZCE01 +
ZCY15/16/17



ZCMD●●L1 + ZCE01 + ZCY45,
ZCMD4DL1 + ZCE01 + ZCY45,
ZCMD41L1 + ZCE01 + ZCY45



ZCMD●●L1 + ZCE06,
ZCMD4DL1 + ZCE06,
ZCMD41L1 + ZCE06



(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.


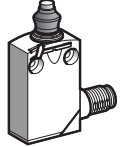
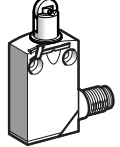
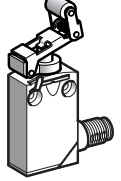
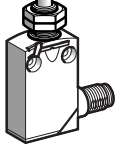
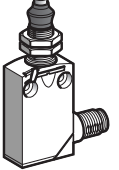
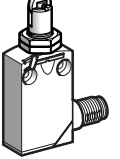
Limit switches


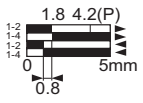
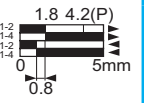
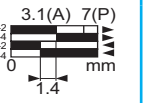
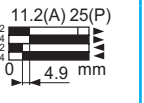
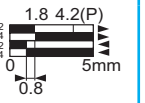
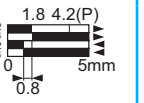
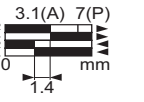

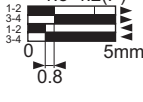
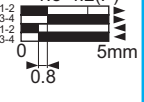
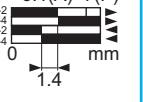
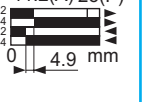
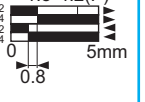

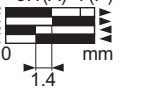



XC Standard range



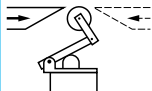


Miniature design miniature, metal, XCMD

Complete units

Connector

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

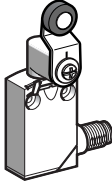
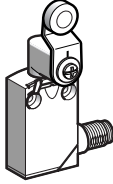
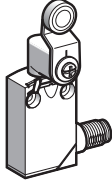
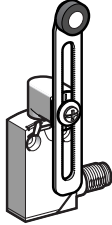
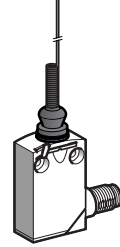
References							
 <p>Single-pole CO snap action + integral M12 4-pin connector</p>	XCMD2110M12	XCMD2111M12	XCMD2102M12	XCMD2124M12	XCMD21F0M12	XCMD21G1M12	XCMD21F2M12
							
 <p>2-pole NC + NO snap action + integral M12 5-pin connector</p>	XCMD2110C12	XCMD2111C12	XCMD2102C12	XCMD2124C12	XCMD21F0C12	XCMD21G1C12	XCMD21F2C12
							
Weight (kg)	0.085	0.085	0.090	0.105	0.100	0.125	0.110
Contact operation	 closed  open		(A) = cam displacement (P) = positive opening point		 NC contact with positive opening operation		


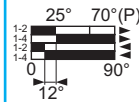
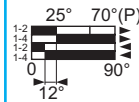
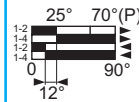
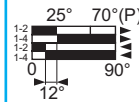
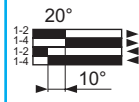

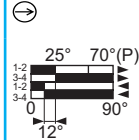
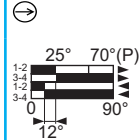
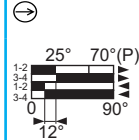
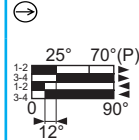
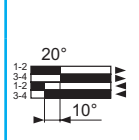



Complementary characteristics not shown under general characteristics (see page 27)						
Switch actuation	On end	By 30° cam		On end	By 30° cam	
Type of actuation						
Maximum actuation speed	0.5 m/s				0.1 m/s	
Mechanical durability	10 million operating cycles					
Minimum force or torque	For tripping	8.5 N	7 N	2.5 N	8.5 N	7 N
	For positive opening	42.5 N	35 N	12.5 N	42.5 N	35 N
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 ⊖ symbol because they are single-pole CO.					

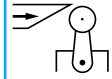


(1) Nitrile for indoor use.

Limit switches

XC Standard range
Miniature design miniature, metal, XCMD
Complete 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	XCMD2115M12	XCMD2116M12	XCMD2117M12	XCMD2145M12	XCMD2106M12
 <p>Single-pole CO snap action With integral M12 4-pin connector</p>					
 <p>2-pole NC + NO snap action With integral M12 5-pin connector</p>					
Weight (kg)	0.125	0.130	0.125	0.135	0.085
Contact operation	 closed  open		(A) = cam displacement (P) = positive opening point	 NC contact with positive opening operation	

Complementary characteristics not shown under general characteristics (see page 27)		
Switch actuation	By 30° cam	By any moving part
Type of actuation		
Maximum actuation speed	1.5 m/s	1 m/s
Mechanical durability	10 million operating cycles	5
Minimum force or torque	For tripping	0.1 N.m
	For positive opening	0.5 N.m
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  symbol because they are single-pole CO.	

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

Limit switches

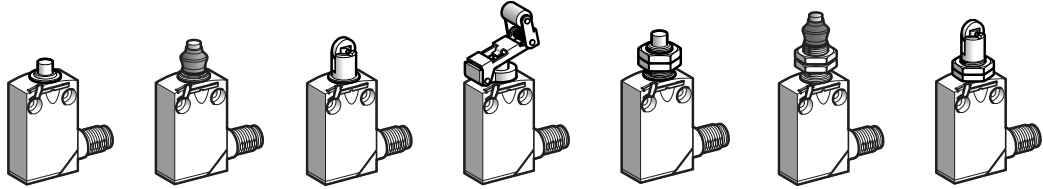
XC Standard range

Miniature design miniature, metal, XCMD

Modular units

Connector

Type of head	Plunger (fixing by the body)				Plunger (fixing by the body)		
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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
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References

	Single-pole CO snap action + integral M12 4-pin connector	ZCMD21M12 + ZCE10 ⊖	ZCMD21M12 + ZCE11 ⊖	ZCMD21M12 + ZCE02 ⊖	ZCMD21M12 + ZCE24 ⊖	ZCMD21M12 + ZCEF0 ⊖	ZCMD21M12 + ZCEG1 ⊖	ZCMD21M12 + ZCEF2 ⊖
	2-pole NC + NO snap action + integral M12 5-pin connector	ZCMD21C12 + ZCE10 ⊖	ZCMD21C12 + ZCE11 ⊖	ZCMD21C12 + ZCE02 ⊖	ZCMD21C12 + ZCE24 ⊖	ZCMD21C12 + ZCEF0 ⊖	ZCMD21C12 + ZCEG1 ⊖	ZCMD21C12 + ZCEF2 ⊖
	2-pole NC + NC snap action + integral M12 5-pin connector	ZCMD29C12 + ZCE10 ⊖	ZCMD29C12 + ZCE11 ⊖	ZCMD29C12 + ZCE02 ⊖	ZCMD29C12 + ZCE24 ⊖	ZCMD29C12 + ZCEF0 ⊖	ZCMD29C12 + ZCEG1 ⊖	ZCMD29C12 + ZCEF2 ⊖
Weight (kg)		0.085	0.085	0.090	0.105	0.100	0.125	0.110
	2-pole NC + NO snap action + M12 5-pin connector on 0.8 m flying lead	ZCMD21L08R12 + ZCE10 ⊖	ZCMD21L08R12 + ZCE11 ⊖	ZCMD21L08R12 + ZCE02 ⊖	ZCMD21L08R12 + ZCE24 ⊖	ZCMD21L08R12 + ZCEF0 ⊖	ZCMD21L08R12 + ZCEG1 ⊖	ZCMD21L08R12 + ZCEF2 ⊖
	2-pole NC + NO snap action + 7/8"-16 UN 5-pin connector on 0.8 m flying lead	ZCMD21L08U78 + ZCE10 ⊖	ZCMD21L08U78 + ZCE11 ⊖	ZCMD21L08U78 + ZCE02 ⊖	ZCMD21L08U78 + ZCE24 ⊖	ZCMD21L08U78 + ZCEF0 ⊖	ZCMD21L08U78 + ZCEG1 ⊖	ZCMD21L08U78 + ZCEF2 ⊖
Weight (kg)		0.150	0.150	0.155	0.170	0.165	0.190	0.175
Contact operation		(A) = cam displacement (P) = positive opening point				⊖ NC contact with positive opening operation		

Complementary characteristics not shown under general characteristics (see page 27)

Switch actuation	On end	By 30° cam		On end	By 30° cam
Type of actuation					
Maximum actuation speed	0.5 m/s				0.1 m/s
Mechanical durability	10 million operating cycles				
Minimum force or torque	For tripping	8.5 N	7 N	2.5 N	8.5 N
	For positive opening	42.5 N	35 N	12.5 N	35 N
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 ⊖ symbol because they are single-pole CO.				

(1) Nitrile for indoor use.

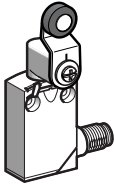
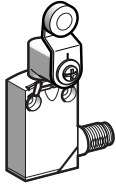
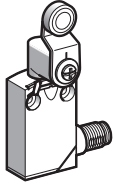
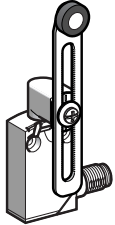
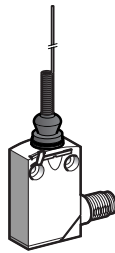
Limit switches








XC Standard range

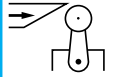

Miniature design miniature, metal, XCMD

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 ⊖	ZCMD21M12 + ZCE01 + ZCY16 ⊖	ZCMD21M12 + ZCE01 + ZCY17 ⊖	ZCMD21M12 + ZCE01 + ZCY45 ⊖	ZCMD21M12 + ZCE06
 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
 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
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 ⊖	ZCMD21L08R12 + ZCE01 + ZCY16 ⊖	ZCMD21L08R12 + ZCE01 + ZCY17 ⊖	ZCMD21L08R12 + ZCE01 + ZCY45 ⊖	ZCMD21L08R12 + ZCE06
 2-pole NC + NO snap action With 7/8"-16 UN 5-pin connector on 0.8 m flying lead	ZCMD21L08U78 + ZCE01 + ZCY15 ⊖	ZCMD21L08U78 + ZCE01 + ZCY16 ⊖	ZCMD21L08U78 + ZCE01 + ZCY17 ⊖	ZCMD21L08U78 + ZCE01 + ZCY45 ⊖	ZCMD21L08U78 + ZCE06
Weight (kg)	0.200	0.205	0.200	0.210	0.160
Contact operation	 closed  open		(A) = cam displacement (P) = positive opening point	⊖ NC contact with positive opening operation	

Complementary characteristics not shown under general characteristics (see page 27)		
Switch actuation	By 30° cam	
Type of actuation		
Maximum actuation speed	1.5 m/s	
Mechanical durability	10 million operating cycles	
Minimum force or torque	For tripping	0.1 N.m
	For positive opening	0.5 N.m
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 ⊖ symbol because they are single-pole CO.	

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

Limit switches

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

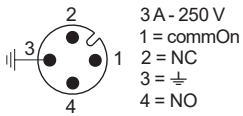
References of suitable pre-wired female connectors

Type of connector		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

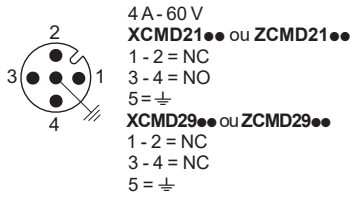
Connections

XCMD with connector

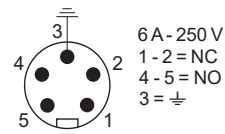
4-pin, M12



5-pin, M12

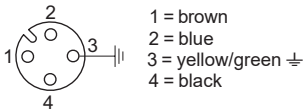


5-pin, 7/8"-16 UN

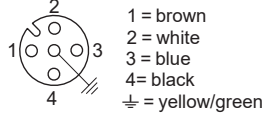


XZCP pre-wired female connectors

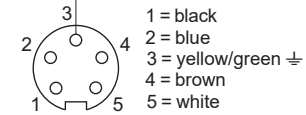
4-pin, M12



5-pin, M12

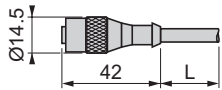


5-pin, 7/8"-16 UN

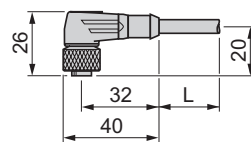


Dimensions

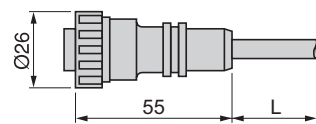
XZCP116●L●



XZCP1264L●



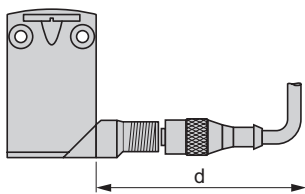
XZCP1771L●



L: cable length 2, 5 or 10 m.

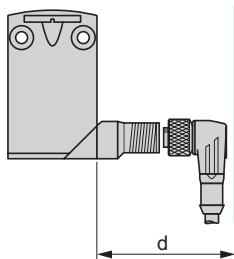
Distances required for plug-in connectors

M12 straight connector



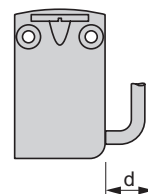
d: min. 65 mm, recommended 69 mm

M12 elbowed connector



d: min. 42 mm, recommended 45 mm

Connector on flying lead



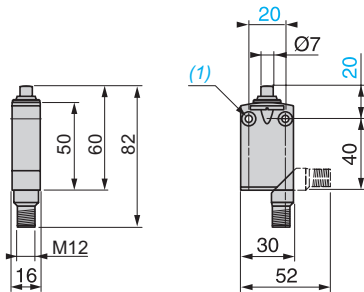
d: min. 20 mm

Limit switches

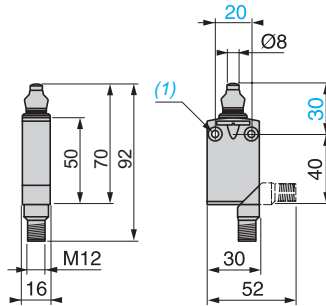
XC Standard range
Miniature design, metal, XCMD
Complete units
Connector

Dimensions

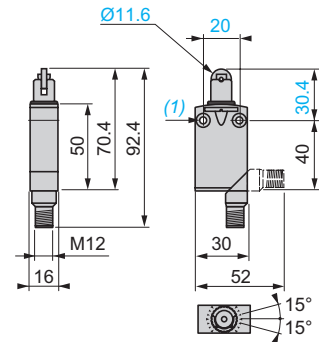
XCMD2110M12 and XCMD2110C12



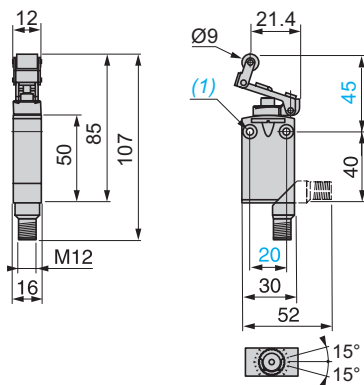
XCMD2111M12 and XCMD2111C12



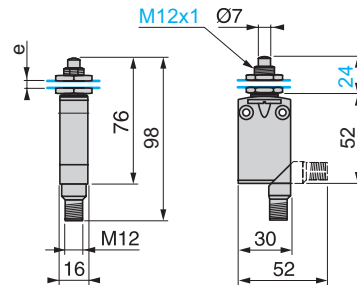
XCMD2102M12 and XCMD2102C12



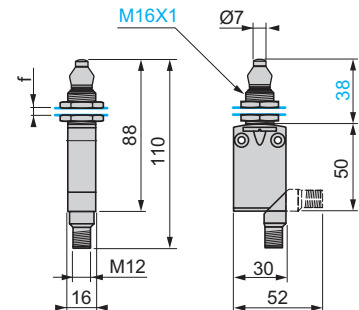
XCMD2124M12 and XCMD2124C12



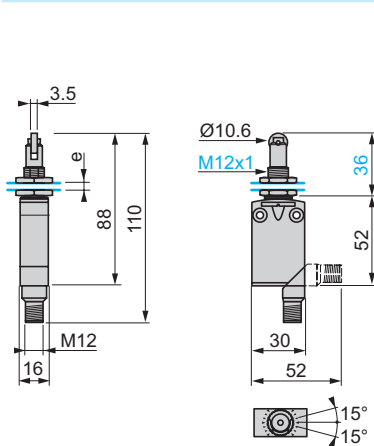
XCMD21F0M12 and XCMD21F0C12



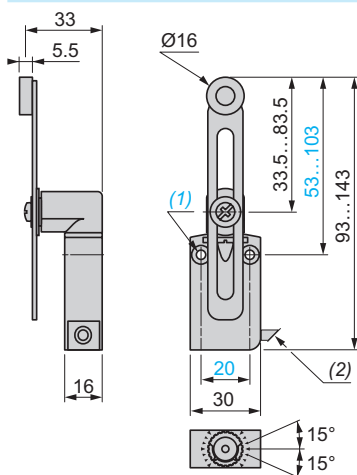
XCMD21G1M12 and XCMD21G1C12



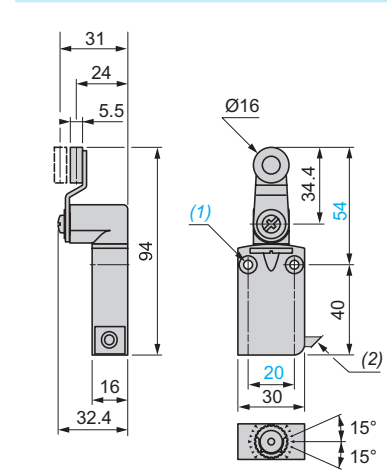
XCMD21F2M12 and XCMD21F2C12



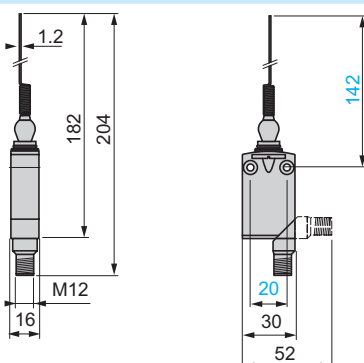
XCMD2145M12 and XCMD2145C12



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



XCMD2106M12 and XCMD2106C12



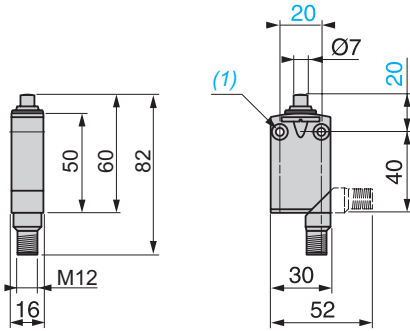
(1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.
e: 8 mm max., panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm.
f: 8 mm max., panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

Limit switches

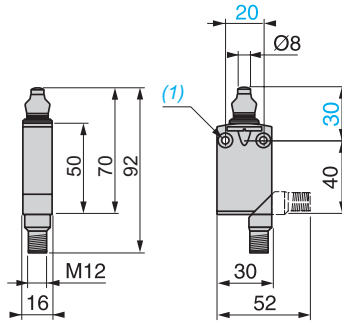
XC Standard range
Miniature design, metal, XCMD
Modular units
Connector

Dimensions (continued)

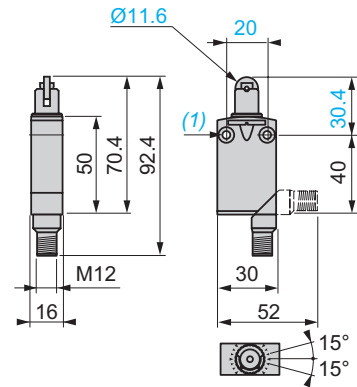
ZCMD21M12 + ZCE10
ZCMD2●C12 + ZCE10
ZCMD21L08●●● + ZCE10



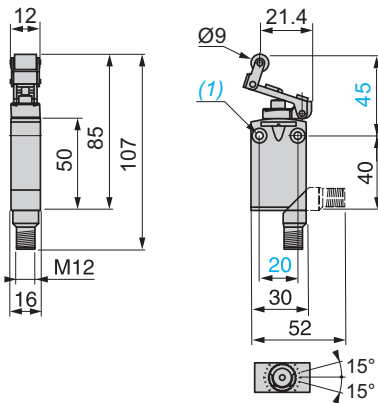
ZCMD21M12 + ZCE11
ZCMD2●C12 + ZCE11
ZCMD21L08●●● + ZCE11



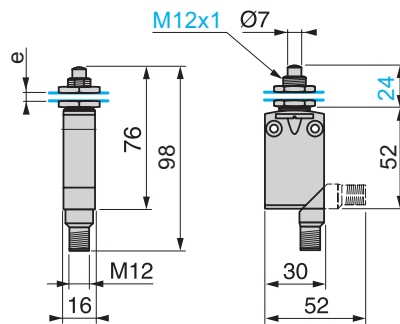
ZCMD21M12 + ZCE02
ZCMD2●C12 + ZCE02
ZCMD21L08●●● + ZCE02



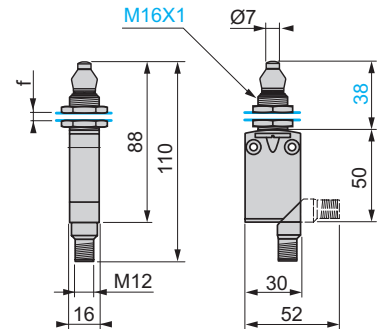
ZCMD21M12 + ZCE24
ZCMD2●C12 + ZCE24
ZCMD21L08●●● + ZCE24



ZCMD21M12 + ZCEF0
ZCMD2●C12 + ZCEF0
ZCMD21L08●●● + ZCEF0



ZCMD21M12 + ZCEG1
ZCMD2●C12 + ZCEG1
ZCMD21L08●●● + ZCEG1



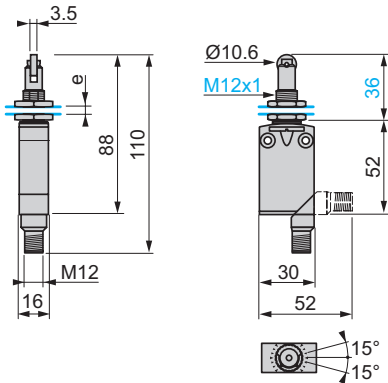
(1) 2 fixing holes $\varnothing 4.2$ mm, counterbored $\varnothing 8$ mm by 4 mm deep.
e: 8 mm max., panel cut-out $\varnothing 12.5$ mm, fixing nut thickness 3.5 mm.
f: 8 mm max., panel cut-out $\varnothing 16.5$ mm, fixing nut thickness 3.5 mm.

Limit switches

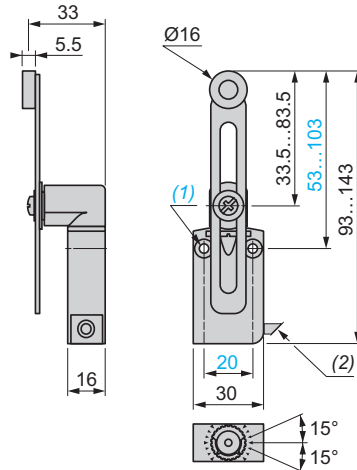
XC Standard range
Miniature design, metal, XCMD
Modular units
Connector

Dimensions (continued)

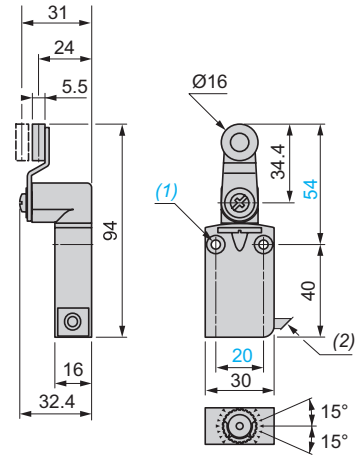
ZCMD21M12 + ZCEF2
ZCMD2●C12 + ZCEF2
ZCMD21L08●●● + ZCEF2



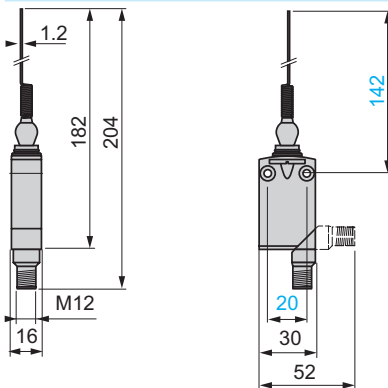
ZCMD21M12 + ZCE01 + ZCY45
ZCMD2●C12 + ZCE01 + ZCY45
ZCMD21L08●●● + ZCE01 + ZCY45



ZCMD21M12 + ZCE01 + ZCY1●
ZCMD2●C12 + ZCE01 + ZCY1●
ZCMD21L08●●● + ZCE01 + ZCY1●



ZCMD21M12 + ZCE06
ZCMD2●C12 + ZCE06
ZCMD21L08●●● + ZCE06

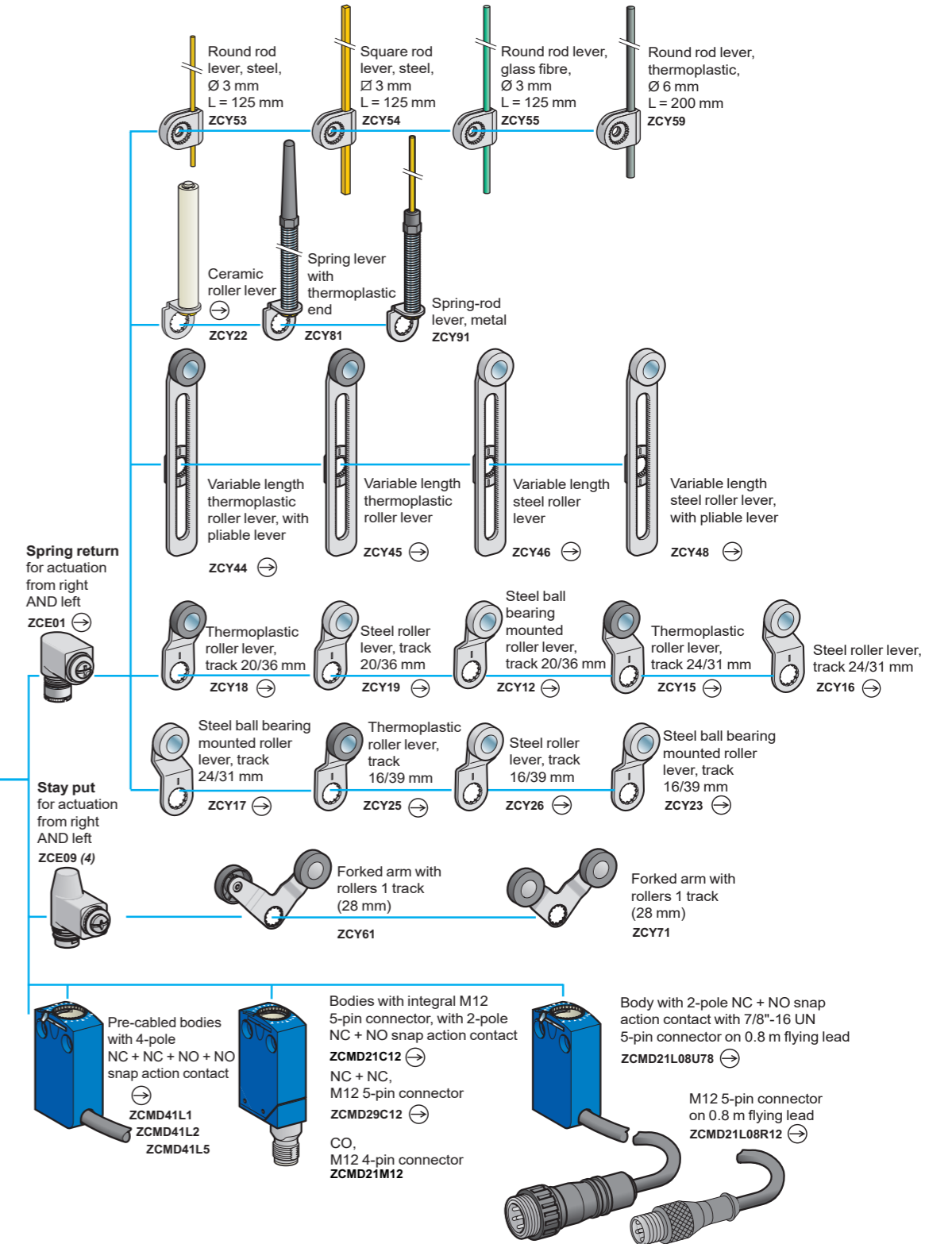
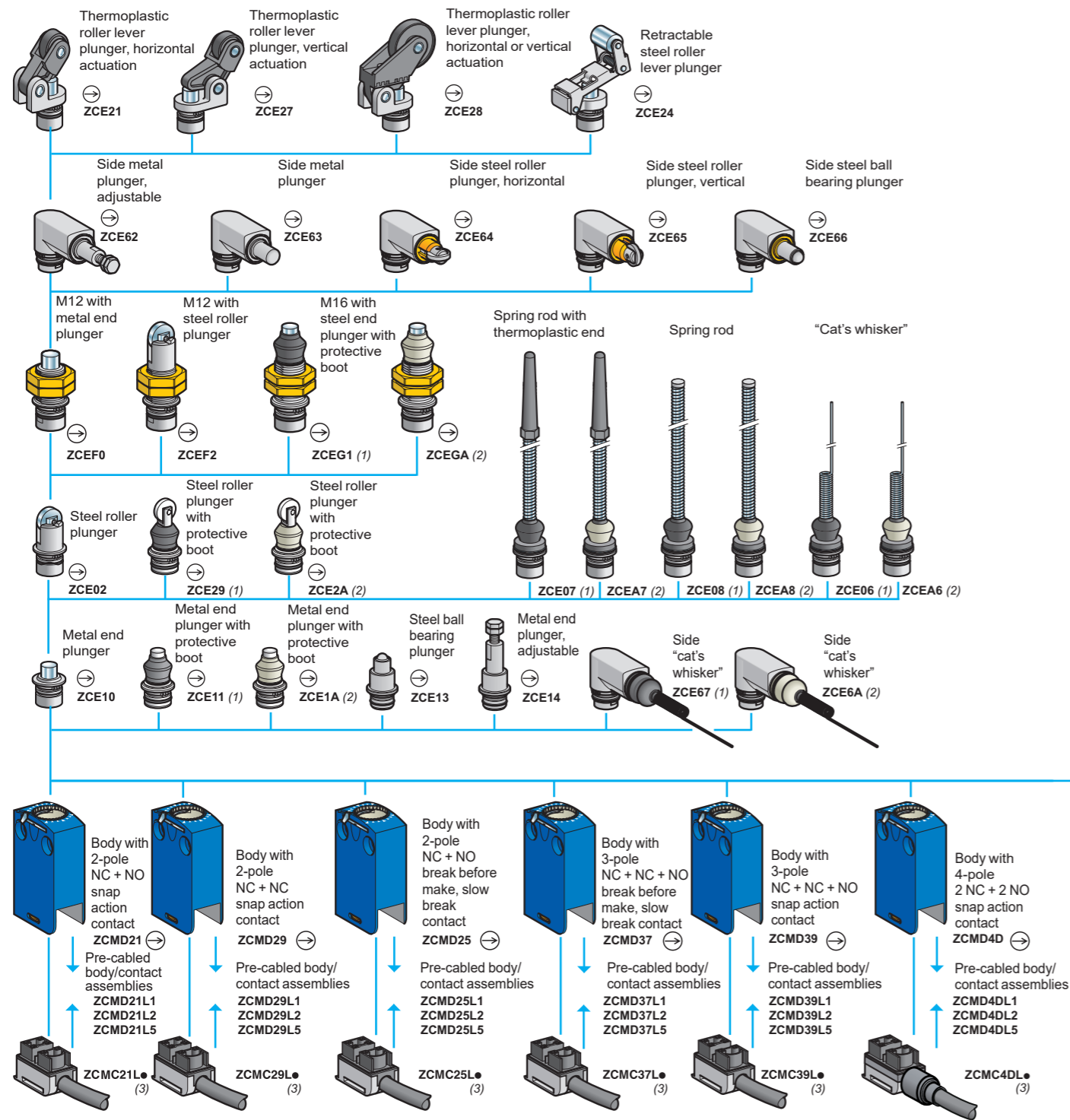


(1) 2 fixing holes Ø 4.2 mm, counterbored Ø 8 mm by 4 mm deep.
e: 8 mm max., panel cut-out Ø 12.5 mm, fixing nut thickness 3.5 mm.
f: 8 mm max., panel cut-out Ø 16.5 mm, fixing nut thickness 3.5 mm.

Limit switches

XC Standard range

Miniature design, metal, XCMD
Variable composition

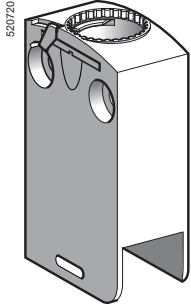


(1) Nitrile boot for indoor use.
 (2) Silicone boot for outdoor use.
 (3) Connection components: replace the "●" in the reference with the required cable length in metres (1, 2, 3, 5, 7 or 10 m).
 For example, ZCMC21L● becomes ZCMC21L7 for a 7 m cable.
 Note: Only cable lengths of 1, 2 and 5 m are available for connection components ZCMC37L●, ZCMC39L● and ZCMC4DL●.

(4) Suitable with bodies: ZCMD21, ZCMD29, ZCMD39, ZCMD41, ZCMD4D, ZCMD21C12, ZCMD21M12, ZCMD29C12 or ZCMD21L08●●●.

Limit switches

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



ZCMD6●
ZCMD7●
ZCMD4D

Body/contact assemblies					
Type of contact	Positive operation (1)	Scheme	Type of contact	Reference	Weight kg
2-pole					
NC + NO snap action	⊕		Standard	ZCMD21	0.055
			Gold plated	ZCMD61	0.055
NC + NC snap action	⊕		Standard	ZCMD29	0.055
			Gold plated	ZCMD69	0.055
NC + NO break before make, slow break	⊕		Standard	ZCMD25	0.055
			Gold plated	ZCMD65	0.055
3-pole					
NC + NC + NO break before make, slow break	⊕		Standard	ZCMD37	0.055
			Gold plated	ZCMD77	0.055
NC + NC + NO snap action	⊕		Standard	ZCMD39	0.055
			Gold plated	ZCMD79	0.055
4-pole					
2 NC + 2 NO snap action	⊕		Standard	ZCMD4D	0.055

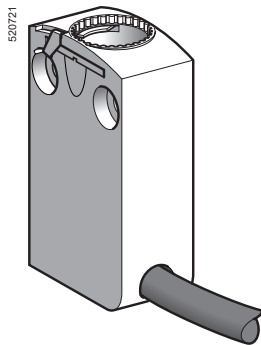
(1) ⊕ bodies with contacts assuring positive opening operation.

Limit switches

XC Standard range

Miniature design, metal, XCMD

Pre-cabled body/contact assemblies



XCMD●●L●

Body/contact assemblies with removable cable

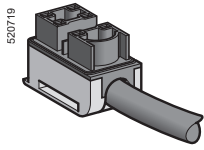
Type of contact	Positive operation (1)	Scheme	Length of cable in metres	Reference	Weight kg
2-pole					
NC + NO snap action	⊕		1	ZCMD21L1	0.160
			2	ZCMD21L2	0.250
			5	ZCMD21L5	0.520
NC + NC snap action	⊕		1	ZCMD29L1	0.160
			2	ZCMD29L2	0.250
			5	ZCMD29L2	0.520
NC + NO break before make, slow break	⊕		1	ZCMD25L1	0.160
			2	ZCMD25L2	0.250
			5	ZCMD25L5	0.520
3-pole					
NC + NC + NO break before make, slow break	⊕		1	ZCMD37L1	0.160
			2	ZCMD37L2	0.250
			5	ZCMD37L5	0.520
NC + NC + NO snap action	⊕		1	ZCMD39L1	0.160
			2	ZCMD39L2	0.250
			5	ZCMD39L5	0.520
4-pole					
2 NC + 2 NO snap action	⊕		1	ZCMD4DL1	0.160
			2	ZCMD4DL2	0.250
			5	ZCMD4DL5	0.520
Pre-cabled bodies/contact assemblies (fixed cable)					
4-pole					
2 NC + 2 NO snap action	⊕		1	ZCMD41L1	0.160
			2	ZCMD41L2	0.250
			5	ZCMD41L5	0.520
Pre-cabled bodies with gold contacts (fixed cable)					
4-pole					
2 NC + 2 NO snap action	⊕		1	ZCMD81L1	0.160
			2	ZCMD81L2	0.250
			5	ZCMD81L5	0.520

(1) ⊕ bodies with contacts assuring positive opening operation.

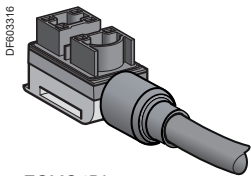
Limit switches

XC Standard range

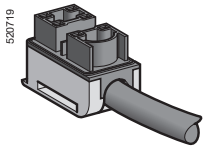
Miniature design, metal, XCMD
Connection components



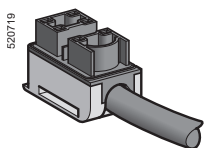
ZCMC2●L●●
ZCMC3●L●●



ZCMC4DL●



ZCMC21E●



ZCMC25T06
ZCMC21T●

Pre-cabled connection components with PVC cable

2-pole

Type of contact	Scheme	Length of cable in metres	Reference	Weight kg
NC + NO snap action		1	ZCMC21L1	0.100
		2	ZCMC21L2	0.190
		3	ZCMC21L3	0.280
		5	ZCMC21L5	0.460
		7	ZCMC21L7	0.700
10	ZCMC21L10	0.970		

NC + NC snap action		1	ZCMC29L1	0.100
		2	ZCMC29L2	0.190
		3	ZCMC29L3	0.280
		5	ZCMC29L5	0.460
		7	ZCMC29L7	0.700
10	ZCMC29L10	0.970		

NC + NO break before make, slow break		1	ZCMC25L1	0.100
		2	ZCMC25L2	0.190
		3	ZCMC25L3	0.280
		5	ZCMC25L5	0.460
		7	ZCMC25L7	0.700
10	ZCMC25L10	0.970		

3-pole

NC + NC + NO break before make, slow break		1	ZCMC37L1	0.100
		2	ZCMC37L2	0.190
		5	ZCMC37L5	0.460

NC + NC + NO snap action		1	ZCMC39L1	0.100
		2	ZCMC39L2	0.190
		5	ZCMC39L5	0.460

4-pole

2 NC + 2 NO snap action		1	ZCMC4DL1	0.100
		2	ZCMC4DL2	0.190
		5	ZCMC4DL5	0.460

Pre-cabled connection components with CEI cable

(Connitato Elettrotecnico Italiano) (1)

Type of contact	Scheme	Length of CEI cable in metres	Reference	Weight kg
2-pole NC + NO snap action		1	ZCMC21E1	0.100
		2	ZCMC21E2	0.190
		3	ZCMC21E3	0.280
		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	⊕		0.6	ZCMC25T06	0.080
			1	ZCMC21T1	0.130
NC + NO snap action	⊕		1	ZCMC21T2	0.250
			2	ZCMC21T5	0.520
			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.

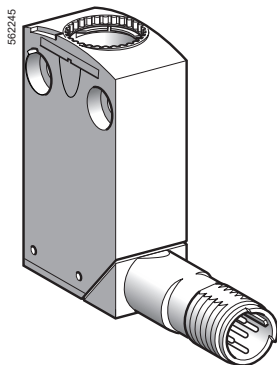
(3) ⊕ bodies with contacts assuring positive opening operation.

Limit switches

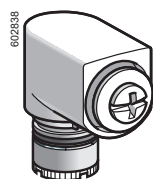
XC Standard range

Miniature design, metal, XCMD

Separate parts



ZCMD61●●●



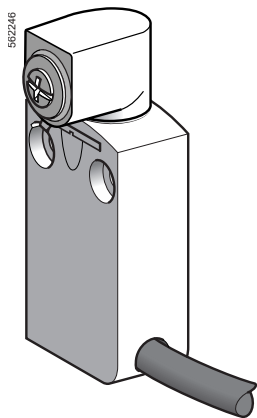
ZCE05



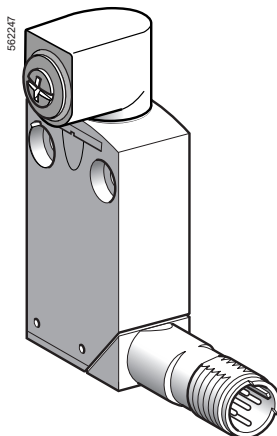
XCMZ06



XCMZ07



XCMD2●01L1



XCMD2101●12

Bodies with gold contacts, connector

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	—		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		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 body/contact assemblies, with rotary head (without operating lever)

Type of contact	Positive operation (1)	Scheme	Length of cable in metres	Reference	Weight kg
2-pole					
NC + NO snap action			1	XCMD2101L1	0.180
NC + NO break before make, slow break			1	XCMD2501L1	0.180

Body/contact assemblies with rotary head (without operating lever), connector

Type of contact	Positive operation (1)	Scheme	Connector	Reference	Weight kg
2-pole					
NC + NO snap action			M12 5-pin	XCMD2101C12	0.110
Single-pole					
CO snap action	—		M12 4-pin	XCMD2101M12	0.110

(1) bodies with contacts or head assuring positive opening operation.