

# Product data sheet

Specifications



## Limit switch, Limit switches XC Standard, XCMD, roller plunger, 2NC + 2 NO, ATEX/IECEX

XCMD4102L5EX

### Main

Range of product	Telemecanique Limit switches XC Standard
Series name	Standard format
Product or component type	Limit switch
Device short name	XCMD
Sensor design	Miniature
Body type	Fixed
Head type	Plunger head
Material	Metal
Fixing mode	By the body
Movement of operating head	Linear
Type of operator	Spring return roller plunger steel
Switch actuation	By 30° cam
Type of approach	Lateral approach, 2 directions
Electrical connection	Fixed cable
Number of poles	4
Contacts type and composition	2 x (1 NC + 1 NO)
Contacts insulation form	Zb
Contact operation	Snap action
Number of steps	1
Positive opening	With
Minimum force for tripping	7 N
Maximum actuation speed	0.5 m/s
IP degree of protection	IP66 conforming to IEC 60529 IP67 conforming to IEC 60529

### Complementary

Body material	Zamak
Head material	Zamak
Cable length	5 m

<b>Cable composition</b>	9 x 0.34 mm <sup>2</sup>
<b>Wire insulation material</b>	PvR
<b>Positive opening minimum force</b>	35 N
<b>Minimum actuation speed</b>	0.01 m/min
<b>Contact code designation</b>	R300, DC-13 (U <sub>e</sub> = 250 V), I <sub>e</sub> = 0.1 A conforming to EN 60947-5-1 R300, DC-13 (U <sub>e</sub> = 250 V), I <sub>e</sub> = 0.1 A conforming to IEC 60947-5-1 appendix A C300, AC-15 (U <sub>e</sub> = 240 V), I <sub>e</sub> = 0.75 A conforming to EN 60947-5-1 C300, AC-15 (U <sub>e</sub> = 240 V), I <sub>e</sub> = 0.75 A conforming to IEC 60947-5-1 appendix A
<b>[I<sub>th</sub>e] conventional enclosed thermal current</b>	3 A AC
<b>[U<sub>i</sub>] rated insulation voltage</b>	300 V conforming to UL 508 400 V (pollution degree 3) conforming to IEC 60947-1 300 V conforming to CSA C22.2 No 14
<b>Maximum resistance across terminals</b>	25 MOhm conforming to IEC 60255-7 category 3
<b>[U<sub>imp</sub>] rated impulse withstand voltage</b>	4 kV conforming to IEC 60664 4 kV conforming to IEC 60947-1
<b>Short-circuit protection</b>	6 A cartridge fuse, type gG
<b>Electrical durability</b>	5000000 cycles, DC-13, inductive load type, 24 V, 3 W, operating rate <3600 cyc/mn, load factor: 0.5, DC conforming to IEC 60947-5-1 appendix C 5000000 cycles, DC-13, inductive load type, 48 V, 2 W, operating rate <3600 cyc/mn, load factor: 0.5, DC conforming to IEC 60947-5-1 appendix C 5000000 cycles, DC-13, inductive load type, 120 V, 1 W, operating rate <3600 cyc/mn, load factor: 0.5, DC conforming to IEC 60947-5-1 appendix C
<b>Mechanical durability</b>	10000000 cycles
<b>Marking</b>	II2 D-Ex tb IIIC T85°C Db IP66/67
<b>Width</b>	30 mm
<b>Height</b>	50 mm
<b>Depth</b>	16 mm

## Environment

<b>Shock resistance</b>	25 gn for 18 ms conforming to IEC 60068-2-27
<b>Vibration resistance</b>	5 gn (f= 10...500 Hz) conforming to IEC 60068-2-6
<b>Electrical shock protection class</b>	Class I conforming to IEC 61140 Class I conforming to NF C 20-030
<b>Ambient air temperature for operation</b>	-20...60 °C
<b>Protective treatment</b>	TC
<b>Dust zone</b>	Zone 21 - 22
<b>Product certifications</b>	INERIS 04ATEX0014X IEC-Ex INE 17.0020X
<b>Standards</b>	EN/IEC 60079-31 EN/IEC 60079-0
<b>Directives</b>	2014/34/EU - ATEX directive

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	3.0 cm
<b>Package 1 Width</b>	17.5 cm
<b>Package 1 Length</b>	20.0 cm
<b>Package 1 Weight</b>	475.0 g

<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	20
<b>Package 2 Height</b>	30.0 cm
<b>Package 2 Width</b>	30.0 cm
<b>Package 2 Length</b>	40.0 cm
<b>Package 2 Weight</b>	10.261 kg

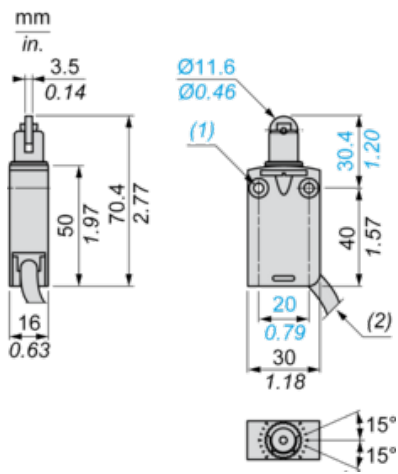
## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope)
<b>Mercury free</b>	Yes
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>California proposition 65</b>	WARNING: This product can expose you to chemicals including: Diisononyl phthalate (DINP), which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## Contractual warranty

<b>Warranty</b>	18 months
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Dimensions

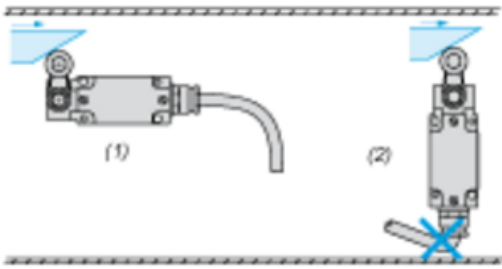


- (1) 2 fixing holes  $\varnothing 4.2$  mm, counterbored  $\varnothing 8$  mm by 4 mm deep.
- (2) External diameter of cable 7.5 mm.

**Mounting**

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**Sweep of Connecting Cable**

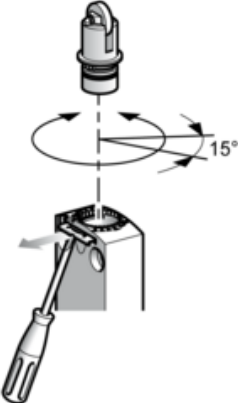


- (1) Recommended
- (2) To be avoided

**Setting-up**

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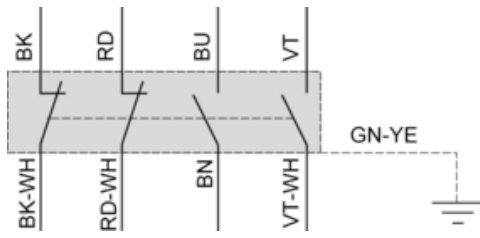
**Plunger or Multi-directional Heads**



**Wiring Diagram**

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**4-pole NC + NC + NO + NO Snap Action**

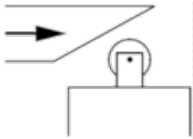


- (BK) Black
- (BK-WH) Black White
- (RD) Red
- (RD-WH) Red White
- (BU) Blue
- (BN) Brown
- (VT) Violet White
- (VT-WH) Violet White
- (GN-YE) Green Yellow

**Characteristics of Actuation**

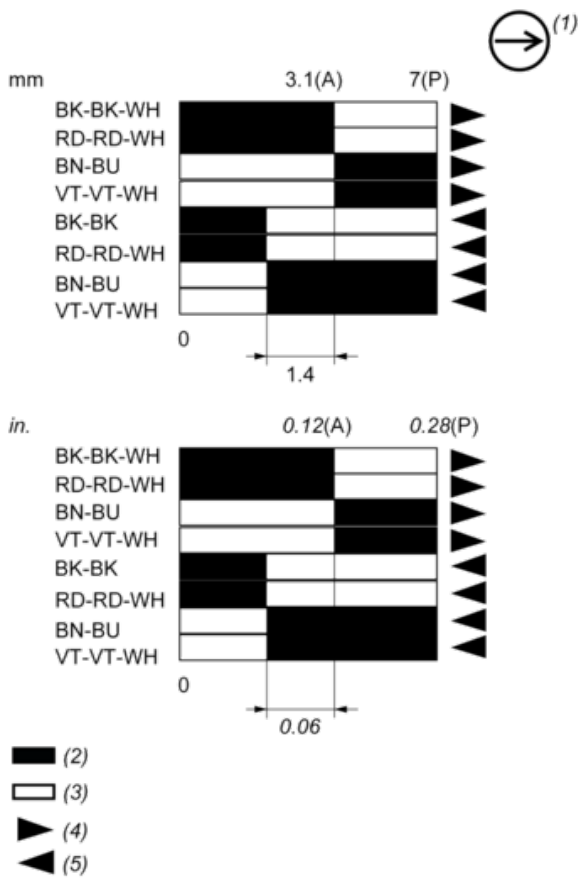
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**Switch Actuation by 30° Cam**





Functional Diagram



- (P) Positive opening point
- (A) Cam displacement
- (1) NC contact with positive opening operation
- (2) Closed
- (3) Open
- (4) Tripping
- (5) Resetting
- (BK) Black
- (BK-WH) Black White
- (RD) Red
- (RD-WH) Red White
- (BN) Brown
- (BU) Blue
- (VT) Violet
- (VT WH) Violet White

Recommended replacement(s)