

# XCMD2102L1

limit switch XCMD - steel roller plunger - 1NC  
+1NO - snap - 1 m



## 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                                    |
| Body material                 | Zamak                                    |
| Head material                 | Zamak                                    |
| Fixing mode                   | By the body                              |
| Movement of operating head    | Linear                                   |
| Type of operator              | Spring return roller plunger metal       |
| Type of approach              | Lateral approach, 2 directions           |
| Number of poles               | 2                                        |
| Contacts type and composition | 1 NC + 1 NO                              |
| Contact operation             | Snap action                              |

## Complementary

|                          |                           |
|--------------------------|---------------------------|
| Switch actuation         | By 30° cam                |
| Electrical connection    | Removable cable connector |
| Cable length             | 1 m                       |
| Cable composition        | 5 x 0.75 mm <sup>2</sup>  |
| Wire insulation material | PvR                       |
| Contacts insulation form | Zb                        |
| Positive opening         | With                      |

|                                        |                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Positive opening minimum force         | 35 N                                                                                                                                                                                                                                                                                                                                                                  |
| Minimum force for tripping             | 7 N                                                                                                                                                                                                                                                                                                                                                                   |
| Maximum actuation speed                | 0.5 m/s                                                                                                                                                                                                                                                                                                                                                               |
| Contact code designation               | B300, AC-15 (Ue = 240 V), Ie = 1.5 A conforming to EN/IEC 60947-5-1 appendix A<br>R300, DC-13 (Ue = 250 V), Ie = 0.1 A conforming to EN/IEC 60947-5-1 appendix A                                                                                                                                                                                                      |
| [Ui] rated insulation voltage          | 300 V (pollution degree 3) conforming to UL 508<br>400 V (pollution degree 3) conforming to IEC 60947-5-1<br>300 V (pollution degree 3) conforming to CSA C22.2 No 14                                                                                                                                                                                                 |
| Maximum resistance across terminals    | 25 mOhm conforming to IEC 60255-7 category 3                                                                                                                                                                                                                                                                                                                          |
| [Uimp] rated impulse withstand voltage | IEC 60664 4 kV<br>IEC 60947-1 4 kV                                                                                                                                                                                                                                                                                                                                    |
| Short-circuit protection               | 6 A cartridge fuse, type gG                                                                                                                                                                                                                                                                                                                                           |
| Electrical durability                  | 5000000 cycles, DC-13, 120 V, 1 W, operating rate <60 cyc/mn, load factor: 0.5 conforming to IEC 60947-5-1 appendix C<br>5000000 cycles, DC-13, 24 V, 3 W, operating rate <60 cyc/mn, load factor: 0.5 conforming to IEC 60947-5-1 appendix C<br>5000000 cycles, DC-13, 48 V, 2 W, operating rate <60 cyc/mn, load factor: 0.5 conforming to IEC 60947-5-1 appendix C |
| Mechanical durability                  | 10000000 cycles                                                                                                                                                                                                                                                                                                                                                       |
| Width                                  | 30 mm                                                                                                                                                                                                                                                                                                                                                                 |
| Height                                 | 50 mm                                                                                                                                                                                                                                                                                                                                                                 |
| Depth                                  | 16 mm                                                                                                                                                                                                                                                                                                                                                                 |
| Net weight                             | 0.185 kg                                                                                                                                                                                                                                                                                                                                                              |

## Environment

|                                       |                                                                                              |
|---------------------------------------|----------------------------------------------------------------------------------------------|
| Shock resistance                      | 25 gn for 18 ms conforming to IEC 60068-2-27                                                 |
| Vibration resistance                  | 5 gn (f= 10...500 Hz) conforming to IEC 60068-2-6                                            |
| IP degree of protection               | IP66 conforming to IEC 60529<br>IP67 conforming to IEC 60529<br>IP68 conforming to IEC 60529 |
| IK degree of protection               | IK06 conforming to EN 62262                                                                  |
| Overvoltage category                  | Class I conforming to IEC 61140<br>Class I conforming to NF C 20-030                         |
| Ambient air temperature for operation | -25...70 °C                                                                                  |
| Ambient air temperature for storage   | -40...70 °C                                                                                  |
| Protective treatment                  | TC                                                                                           |
| Product certifications                | CCC<br>CSA<br>UL                                                                             |
| Standards                             | EN/IEC 60204-1<br>UL 508<br>EN/IEC 60947-5-1<br>CSA C22.2 No 14                              |

## Packing Units

|                  |          |
|------------------|----------|
| Package 1 Weight | 0.171 kg |
| Package 1 Height | 0.200 dm |
| Package 1 width  | 1.300 dm |
| Package 1 Length | 1.400 dm |

## Offer Sustainability

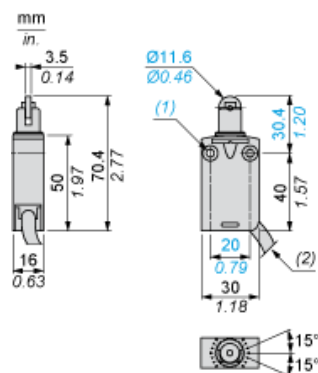
|                            |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                             |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                 |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                               |

|                          |                                               |
|--------------------------|-----------------------------------------------|
| Environmental Disclosure | <a href="#">Product Environmental Profile</a> |
| Circularity Profile      | <a href="#">End of Life Information</a>       |

**Contractual warranty**

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

## Dimensions



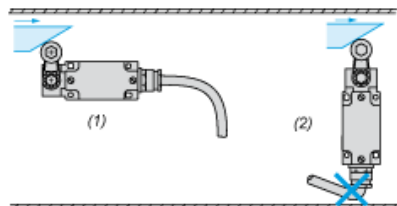
- (1) 2 fixing holes  $\varnothing 4.2$  mm, counterbored  $\varnothing 8$  mm by 4 mm deep.  
(2) External diameter of cable 7.5 mm.

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## Mounting

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### Sweep of Connecting Cable



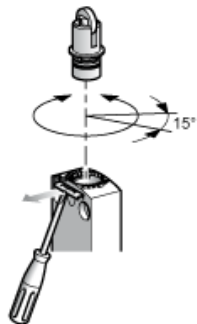
- (1) Recommended  
(2) To be avoided

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## Setting-up

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### Plunger or Multi-directional Heads

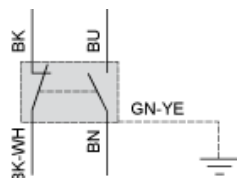


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## Wiring Diagram

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### 2-pole NC + NO Snap Action



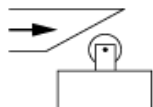
(BK) Black  
(BK-WH) Black White  
(BU) Blue  
(BN) Brown  
(GN-YE) Green Yellow

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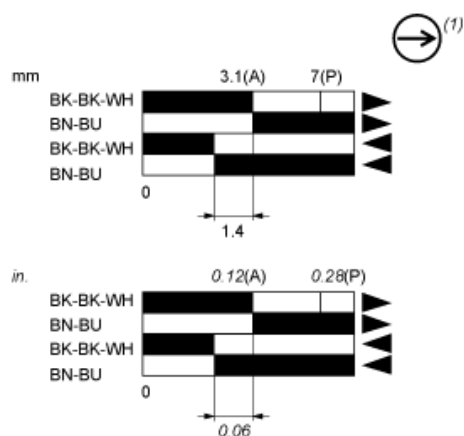
## Characteristics of Actuation

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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
- (BU) Blue
- (BN) Brown