

# XCMD21F0L5

Limit switch, Limit switches XC Standard, XCMD, M12 metal end plunger, 1NC+1 NO, snap, 5 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                     | M12 plunger head                         |
| Material                      | Metal                                    |
| Body material                 | Zamak                                    |
| Head material                 | Zamak                                    |
| Fixing mode                   | By the head                              |
| Movement of operating head    | Linear                                   |
| Type of operator              | Spring return plunger metal              |
| Type of approach              | Vertical approach, 1 direction           |
| Number of poles               | 2                                        |
| Contacts type and composition | 1 NC + 1 NO                              |
| Contact operation             | Snap action                              |

## Complementary

|                                        |                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switch actuation                       | On end                                                                                                                                                                                                                                                                                                                                                                |
| Electrical connection                  | Removable cable connector                                                                                                                                                                                                                                                                                                                                             |
| Cable length                           | 5 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         | 42.5 N                                                                                                                                                                                                                                                                                                                                                                |
| Minimum force for tripping             | 8.5 N                                                                                                                                                                                                                                                                                                                                                                 |
| Minimum actuation speed                | 0.01 m/min                                                                                                                                                                                                                                                                                                                                                            |
| Maximum actuation speed                | 0.5 m/s                                                                                                                                                                                                                                                                                                                                                               |
| Contact code designation               | B300, AC-15 (Ue = 240 V), Ie = 1.5 A conforming to IEC 60947-5-1 appendix A<br>R300, DC-13 (Ue = 250 V), Ie = 0.1 A conforming to 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 | 4 kV conforming to IEC 60664<br>4 kV conforming to IEC 60947-1                                                                                                                                                                                                                                                                                                        |
| 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 |

## 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 IEC 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[RETURN]CSA[RETURN]UL                                                                     |
| Standards                             | IEC 60947-5-1<br>UL 508<br>CSA C22.2 No 14<br>IEC 60204-1                                    |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 4 cm      |
| Package 1 Width              | 20 cm     |
| Package 1 Length             | 20 cm     |
| Package 1 Weight             | 519 g     |
| Unit Type of Package 2       | S03       |
| Number of Units in Package 2 | 20        |
| Package 2 Height             | 30 cm     |
| Package 2 Width              | 30 cm     |
| Package 2 Length             | 40 cm     |
| Package 2 Weight             | 10.836 kg |
| Unit Type of Package 3       | P06       |
| Number of Units in Package 3 | 160       |
| Package 3 Height             | 75 cm     |
| Package 3 Width              | 40 cm     |
| Package 3 Length             | 80 cm     |
| Package 3 Weight             | 108.04 kg |

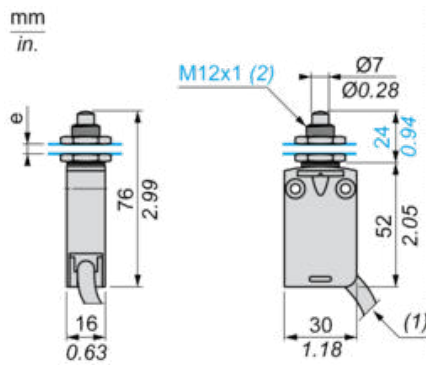
## Offer Sustainability

|                                            |                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status                   | Green Premium product                                                                                                                                                                                                                                                                                                                                                             |
| California proposition 65                  | 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> |
| For all Reach Rohs enquiries contact us at | <a href="mailto:sustainability@tesensors.com">sustainability@tesensors.com</a>                                                                                                                                                                                                                                                                                                    |

## Contractual warranty

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

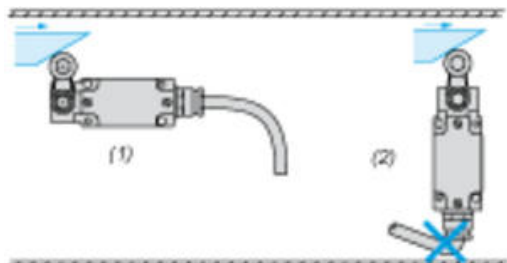
## Dimensions



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

## Mounting

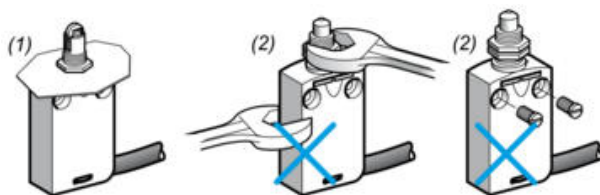
### Sweep of Connecting Cable



- (1) Recommended  
(2) To be avoided

## Panel Mounting

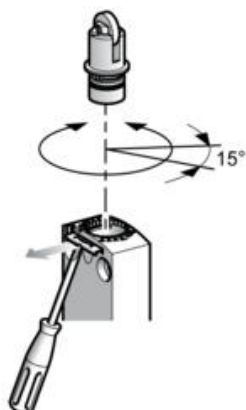
### Mounting and Fixing Limit Switches by the Head



- (1) Recommended  
(2) Forbidden

## Setting-up

### Plunger or Multi-directional Heads

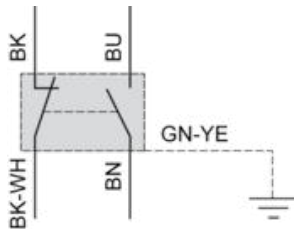


---

## Wiring Diagram

---

### 2-pole NC + NO Snap Action



(BK) Black

(BK-WH) Black White

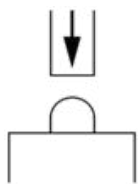
(BU) Blue

(BN) Brown

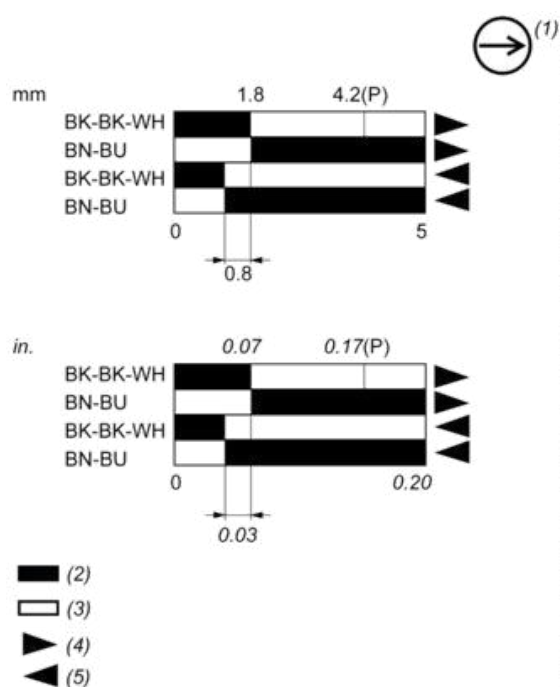
(GN-YE) Green Yellow

## Characteristics of Actuation

### Switch Actuation on End



## Functional Diagram



(P) Positive opening point

(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