

# XCMD21F2L5

Limit switch, Limit switches XC Standard, XCMD, M12 steel roller 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 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                           | 16.40 ft (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         | 35 N                                                                                                                                                                                                                           |
| Minimum force for tripping             | 7 N                                                                                                                                                                                                                            |
| Maximum actuation speed                | 10 cm/s                                                                                                                                                                                                                        |
| Contact code designation               | B300, AC-15 (Ue = 240 V), Ie = 1.5 A EN/IEC 60947-5-1 appendix A<br>R300, DC-13 (Ue = 250 V), Ie = 0.1 A EN/IEC 60947-5-1 appendix A                                                                                           |
| [Ui] rated insulation voltage          | 300 V 3)UL 508<br>400 V 3)IEC 60947-5-1<br>300 V 3)CSA C22.2 No 14                                                                                                                                                             |
| Maximum resistance across terminals    | 25 mOhm IEC 60255-7 category 3                                                                                                                                                                                                 |
| [Uimp] rated impulse withstand voltage | 4 kV IEC 60664<br>4 kV IEC 60947-1                                                                                                                                                                                             |
| Short-circuit protection               | 6 A cartridge fuse gG                                                                                                                                                                                                          |
| Electrical durability                  | 5000000 Cycles, DC-13, 120 V, 1 W 60 cyc/mn 0.5 IEC 60947-5-1 appendix C<br>5000000 Cycles, DC-13, 24 V, 3 W 60 cyc/mn 0.5 IEC 60947-5-1 appendix C<br>5000000 cycles, DC-13, 48 V, 2 W 60 cyc/mn 0.5 IEC 60947-5-1 appendix C |
| Mechanical durability                  | 10000000 cycles                                                                                                                                                                                                                |
| Width                                  | 1.18 in (30 mm)                                                                                                                                                                                                                |
| Height                                 | 1.97 in (50 mm)                                                                                                                                                                                                                |
| Depth                                  | 0.63 in (16 mm)                                                                                                                                                                                                                |

## Environment

|                                       |                                                                                              |
|---------------------------------------|----------------------------------------------------------------------------------------------|
| Shock resistance                      | 25 gn 18 ms IEC 60068-2-27                                                                   |
| Vibration resistance                  | 5 gn 10...500 Hz)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 EN 62262                                                                                |
| Overvoltage category                  | Class I IEC 61140<br>Class I NF C 20-030                                                     |
| Ambient Air Temperature for Operation | -13...158 °F (-25...70 °C)                                                                   |
| Ambient Air Temperature for Storage   | -40...158 °F (-40...70 °C)                                                                   |
| Protective treatment                  | TC                                                                                           |
| Product Certifications                | CCC<br>CSA<br>UL                                                                             |
| Standards                             | EN/IEC 60947-5-1<br>CSA C22.2 No 14<br>UL 508<br>EN/IEC 60204-1                              |

## Ordering and shipping details

|                   |                                    |
|-------------------|------------------------------------|
| Category          | 22413-LIMIT SWITCH, IEC, MINIATURE |
| Discount Schedule | T                                  |
| GTIN              | 3389119000444                      |
| Returnability     | No                                 |
| Country of origin | ID                                 |

## Packing Units

|                              |                          |
|------------------------------|--------------------------|
| Unit Type of Package 1       | PCE                      |
| Number of Units in Package 1 | 1                        |
| Package 1 Height             | 1.57 in (4 cm)           |
| Package 1 Width              | 7.87 in (20 cm)          |
| Package 1 Length             | 7.87 in (20 cm)          |
| Package 1 Weight             | 18.52 oz (525 g)         |
| Unit Type of Package 2       | S03                      |
| Number of Units in Package 2 | 20                       |
| Package 2 Height             | 11.81 in (30 cm)         |
| Package 2 Width              | 11.81 in (30 cm)         |
| Package 2 Length             | 15.75 in (40 cm)         |
| Package 2 Weight             | 24.77 lb(US) (11.234 kg) |

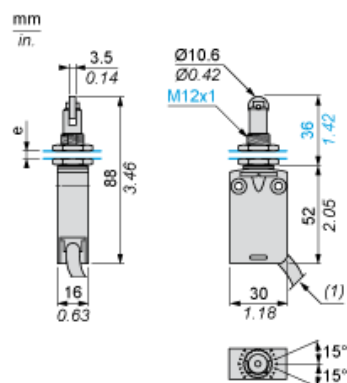
## Offer Sustainability

|                            |                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Diisodecyl 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> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                                                                                                                |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <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



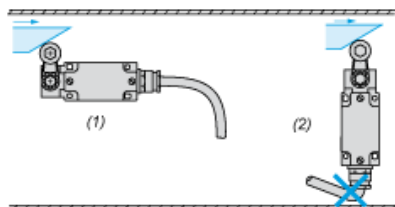
- (1) External diameter of cable 7.5 mm.  
e : 8 mm max, panel cut-out  $\varnothing$  12.5 mm.

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## Mounting

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### Sweep of Connecting Cable



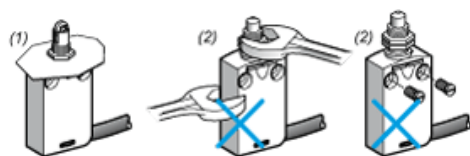
- (1) Recommended
- (2) To be avoided

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## Panel Mounting

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### Mounting and Fixing Limit Switches by the Head



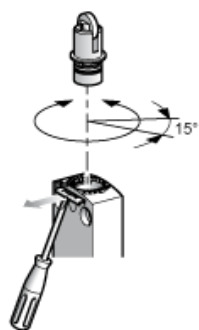
- (1) Recommended
- (2) Forbidden

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## Setting-up

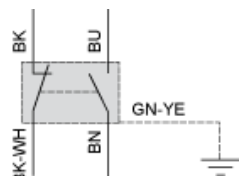
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### Plunger or Multi-directional Heads



## Wiring Diagram

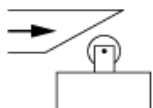
### 2-pole NC + NO Snap Action



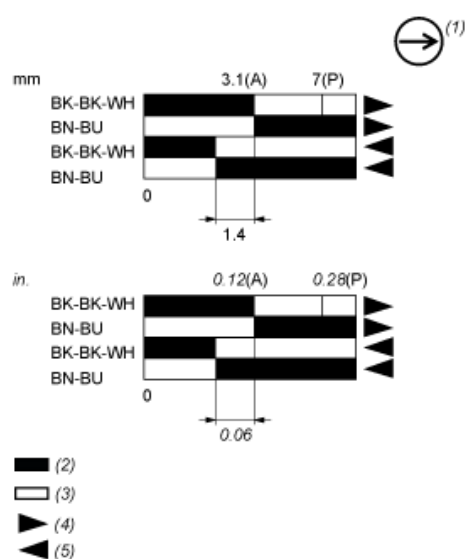
(BK) Black  
(BK- Black White  
WH)  
(BU) Blue  
(BN) Brown  
(GN- Green Yellow  
YE)

## Characteristics of Actuation

### 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- Black White
- WH)
- (BU) Blue
- (BN) Brown

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Authorized Distributor

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