

# Product data sheet

Specifications



## Limit switch, Limit switches XC Standard, XCMD, M12 metal end plunger, 1NC+1 NO, snap, 1 m

XCMD21F0L1

### 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	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	42.5 N
Minimum force for tripping	8.5 N
Minimum actuation speed	0.01 m/min

<b>Maximum actuation speed</b>	0.5 m/s
<b>Contact code designation</b>	B300, AC-15 (Ue = 240 V), Ie = 1.5 A conforming to EN/IEC 60947-5-1 appendix A R300, DC-13 (Ue = 250 V), Ie = 0.1 A conforming to EN/IEC 60947-5-1 appendix A
<b>[Ui] rated insulation voltage</b>	300 V (pollution degree 3) conforming to UL 508 400 V (pollution degree 3) conforming to IEC 60947-5-1 300 V (pollution degree 3) conforming to CSA C22.2 No 14
<b>Maximum resistance across terminals</b>	25 mOhm conforming to IEC 60255-7 category 3
<b>[Uimp] 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, 120 V, 1 W, operating rate <60 cyc/mn, load factor: 0.5 conforming to IEC 60947-5-1 appendix C 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 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
<b>Mechanical durability</b>	10000000 cycles
<b>Width</b>	30 mm
<b>Height</b>	50 mm
<b>Depth</b>	16 mm
<b>Product weight</b>	0.195 kg

## 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>IP degree of protection</b>	IP66 conforming to IEC 60529 IP67 conforming to IEC 60529 IP68 conforming to IEC 60529
<b>IK degree of protection</b>	IK06 conforming to EN 62262
<b>Overvoltage category</b>	Class I conforming to IEC 61140 Class I conforming to NF C 20-030
<b>Ambient air temperature for operation</b>	-25...70 °C
<b>Ambient air temperature for storage</b>	-40...70 °C
<b>Protective treatment</b>	TC
<b>Product certifications</b>	CCC CSA UL
<b>Standards</b>	UL 508 EN/IEC 60204-1 EN/IEC 60947-5-1 CSA C22.2 No 14

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	1.6 cm
<b>Package 1 Width</b>	15.0 cm
<b>Package 1 Length</b>	13.0 cm
<b>Package 1 Weight</b>	186.0 g
<b>Unit Type of Package 2</b>	PAL
<b>Number of Units in Package 2</b>	440

Package 2 Height	60.0 cm
Package 2 Width	80.0 cm
Package 2 Length	440.0 cm
Package 2 Weight	94.6 kg
Unit Type of Package 3	S03
Number of Units in Package 3	55
Package 3 Height	30.0 cm
Package 3 Width	30.0 cm
Package 3 Length	40.0 cm
Package 3 Weight	10.788 kg

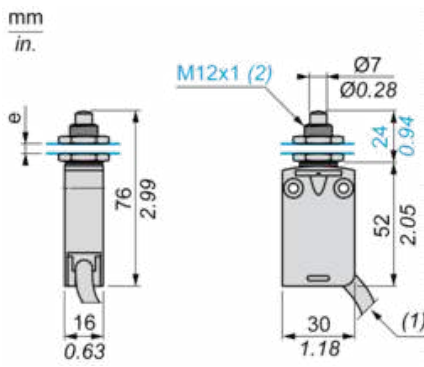
## Offer Sustainability

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) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	Yes
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
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>

## Contractual warranty

Warranty	18 months
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Dimensions

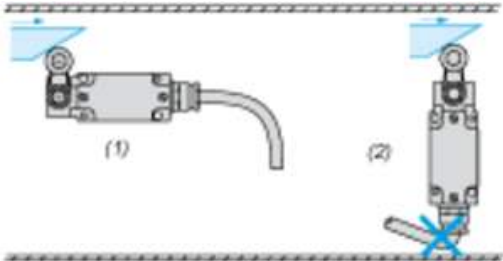


- (1) External diameter of cable 7.5 mm.
  - (2) Fixing nut thickness 3.5 mm.
- e : 8 mm max, panel cut-out Ø 12.5 mm.

**Mounting**

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**Sweep of Connecting Cable**

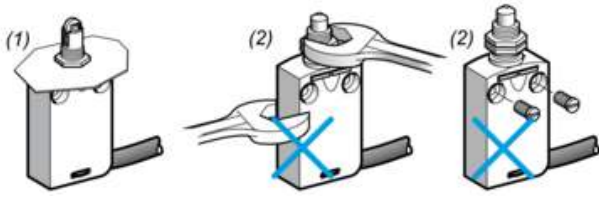


- (1) Recommended
- (2) To be avoided

**Panel Mounting**

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**Mounting and Fixing Limit Switches by the Head**

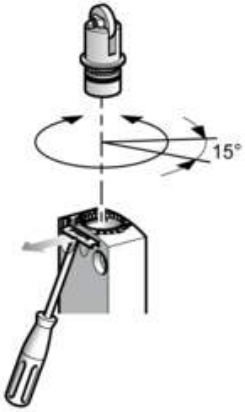


- (1) Recommended
- (2) Forbidden

**Setting-up**

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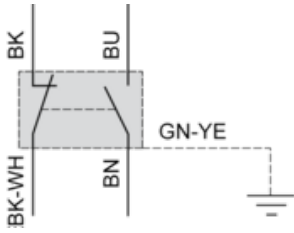
**Plunger or Multi-directional Heads**



**Wiring Diagram**

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



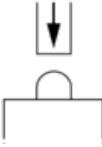
- (BK) Black
- (BK-WH) Black White
- (BU) Blue
- (BN) Brown
- (GN-YE) Green Yellow



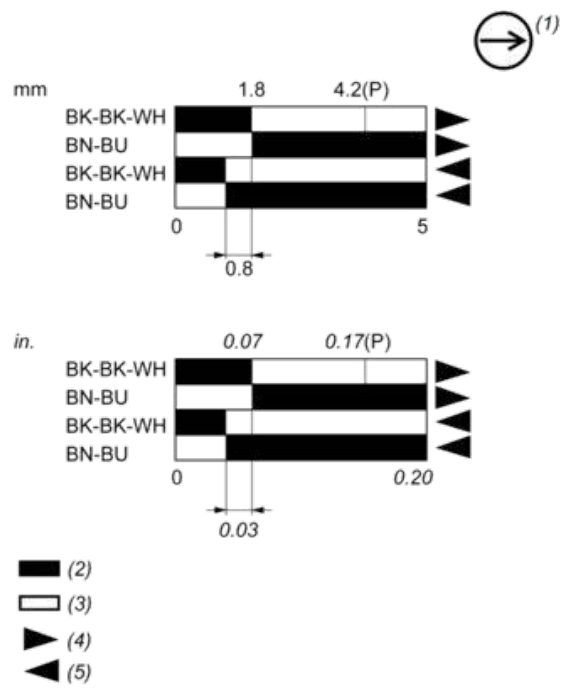
**Characteristics of Actuation**

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**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

Recommended replacement(s)