

XCMD21F2L1

Limit switch, Limit switches XC Standard, XCMD, M12 steel roller plunger, 1NC+1 NO, 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	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	1 m
Cable composition	5 x 0.75 mm ²
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 conforming to IEC 60947-5-1 appendix A 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 508 400 V (pollution degree 3) conforming to IEC 60947-5-1 300 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 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 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
Mechanical durability	10000000 cycles
Width	30 mm

Height	50 mm
Depth	16 mm
Net weight	0.205 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 IP67 conforming to IEC 60529 IP68 conforming to IEC 60529
IK degree of protection	IK06 conforming to IEC 62262
Overvoltage category	Class I conforming to IEC 61140 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	CSA[RETURN]UL[RETURN]CCC
Standards	UL 508 IEC 60204-1 IEC 60947-5-1 CSA C22.2 No 14

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.6 cm
Package 1 Width	16.0 cm
Package 1 Length	14.0 cm
Package 1 Weight	193.0 g
Unit Type of Package 2	PAL
Number of Units in Package 2	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	11.208 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 www.P65Warnings.ca.gov
For all Reach Rohs enquiries contact us at	sustainability@tesensors.com

Contractual warranty

Warranty	18 months
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Technical drawing of the M12x1 ball joint (1) showing side and front views with dimensions in mm and inches.

Side View Dimensions:

- Top width: 3.5 mm (0.14 in.)
- Height from base to top of upper nut: 88 mm (3.46 in.)
- Base width: 16 mm (0.63 in.)
- Base thickness: 0.63 mm

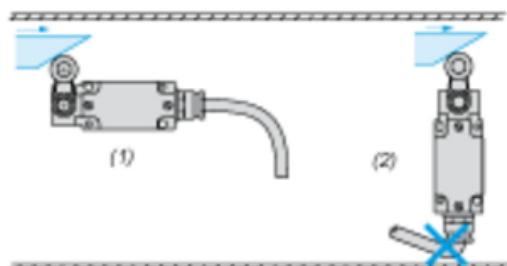
Front View Dimensions:

- Top diameter: Ø10.6 mm (Ø0.42 in.)
- Thread specification: M12x1
- Height from base to top of upper nut: 36 mm (1.42 in.)
- Height from base to center of upper nut: 52 mm (2.05 in.)
- Base width: 30 mm (1.18 in.)
- Base thickness: 1.18 mm
- Angle of base flange: 15°

e : 8 mm max, panel cut-out Ø 12.5 mm.

Mounting

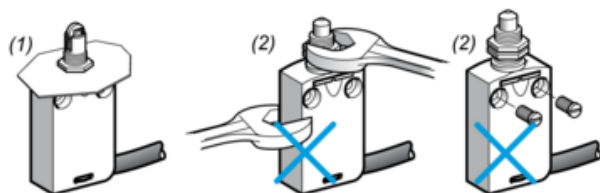
Sweep of Connecting Cable



- (1) Recommended
(2) To be avoided

Panel Mounting

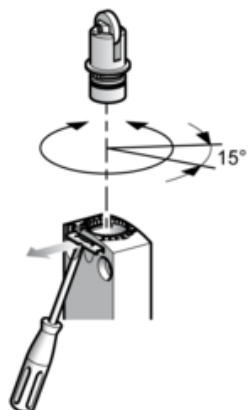
Mounting and Fixing Limit Switches by the Head



- (1) Recommended
(2) Forbidden

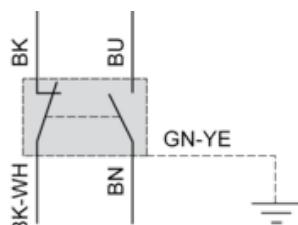
Setting-up

Plunger or Multi-directional Heads



Wiring Diagram

2-pole NC + NO Snap Action



(BK) Black

(BK-WH) Black White

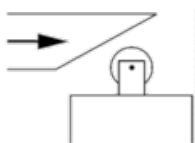
(BU) Blue

(BN) Brown

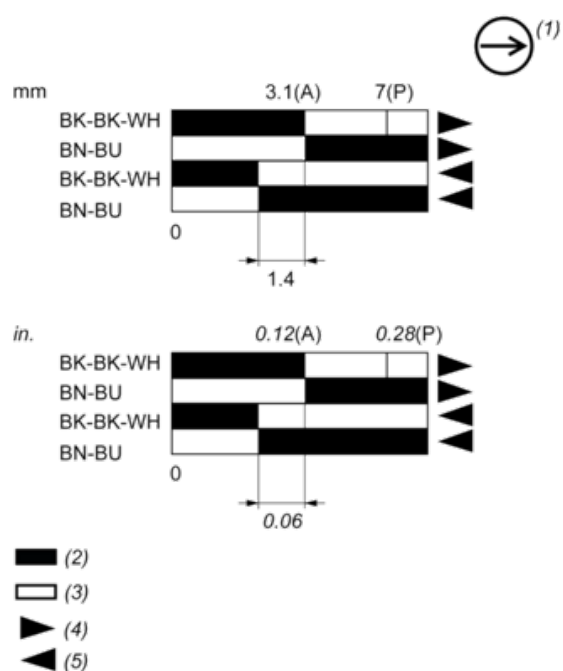
(GN-YE) Green Yellow

Characteristics of Actuation

Switch Actuation 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