

## Product data sheet

### Characteristics

# XCKN2502P20

Limit switch, Limit switches XC Standard, XCKN, plastic roller plunger, 1NC+1 NO, slow, M20



### Main

|                               |                                                                           |
|-------------------------------|---------------------------------------------------------------------------|
| Range of product              | Telemecanique Limit switches XC Standard                                  |
| Series name                   | Standard format                                                           |
| Product or component type     | Limit switch                                                              |
| Device short name             | XCKN                                                                      |
| Sensor design                 | Compact form C                                                            |
| Body type                     | Fixed                                                                     |
| Head type                     | Plunger head                                                              |
| Material                      | Plastic                                                                   |
| Body material                 | Plastic                                                                   |
| Head material                 | Plastic                                                                   |
| Fixing mode                   | By the body                                                               |
| Movement of operating head    | Linear                                                                    |
| Type of operator              | Spring return roller plunger plastic                                      |
| Type of approach              | Lateral approach, 2 directions                                            |
| Cable entry                   | 1 entry tapped for M20 x 1.5 cable gland, cable outer diameter: 7...13 mm |
| Number of poles               | 2                                                                         |
| Contacts type and composition | 1 NC + 1 NO                                                               |
| Contact operation             | Slow-break, break before make                                             |

### Complementary

|                                        |                                                                                                                                                                                                                                         |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switch actuation                       | By 30° cam                                                                                                                                                                                                                              |
| Electrical connection                  | Screw-clamp terminals, clamping capacity: 1 x 0.5...2 x 2.5 mm <sup>2</sup>                                                                                                                                                             |
| Contacts insulation form               | Zb                                                                                                                                                                                                                                      |
| Positive opening                       | With                                                                                                                                                                                                                                    |
| Positive opening minimum force         | 20 N                                                                                                                                                                                                                                    |
| Minimum force for tripping             | 12 N                                                                                                                                                                                                                                    |
| Maximum actuation speed                | 0.3 m/s                                                                                                                                                                                                                                 |
| Contact code designation               | A300, AC-15 (U <sub>e</sub> = 240 V), I <sub>e</sub> = 3 A, I <sub>the</sub> = 10 A conforming to EN/IEC 60947-5-1 appendix A<br>R300, DC-13 (U <sub>e</sub> = 250 V), I <sub>e</sub> = 0.1 A conforming to EN/IEC 60947-5-1 appendix A |
| [Ui] rated insulation voltage          | 300 V conforming to UL 508<br>500 V (pollution degree 3) conforming to IEC 60947-1<br>300 V conforming to CSA C22.2 No 14                                                                                                               |
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 60664<br>6 kV conforming to IEC 60947-1                                                                                                                                                                          |
| Short-circuit protection               | 10 A cartridge fuse, type gG                                                                                                                                                                                                            |

|                               |                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical durability         | 5000000 Cycles, DC-13, 120 V, 4 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, 10 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, 7 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                        | 85 mm                                                                                                                                                                                                                                                                                                                                                                  |
| Depth                         | 30 mm                                                                                                                                                                                                                                                                                                                                                                  |
| Net weight                    | 0.145 kg                                                                                                                                                                                                                                                                                                                                                               |
| Terminals description ISO n°1 | (21-22)NC<br>(13-14)NO                                                                                                                                                                                                                                                                                                                                                 |

## Environment

|                                       |                                                                                         |
|---------------------------------------|-----------------------------------------------------------------------------------------|
| Shock resistance                      | 45 gn for 11 ms conforming to IEC 60068-2-27                                            |
| Vibration resistance                  | 25 gn (f= 10...500 Hz) conforming to IEC 60068-2-6                                      |
| IP degree of protection               | IP65 conforming to IEC 60529                                                            |
| IK degree of protection               | IK04 conforming to EN 50102                                                             |
| Overvoltage category                  | Class II conforming to IEC 61140<br>Class II 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]UL[RETURN]CSA                                                                |
| Standards                             | IEC 60947-5-1<br>EN 60204-1<br>IEC 60204-1<br>EN 60947-5-1<br>CSA C22.2 No 14<br>UL 508 |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 11.0 cm |
| Package 1 Width              | 12.7 cm |
| Package 1 Length             | 17.0 cm |
| Package 1 Weight             | 65.0 g  |
| Unit Type of Package 2       | BB1     |
| Number of Units in Package 2 | 20      |
| Package 2 Height             | 11.0 cm |
| Package 2 Width              | 12.7 cm |
| Package 2 Length             | 17.0 cm |
| Package 2 Weight             | 1.31 kg |
| Unit Type of Package 3       | S02     |
| Number of Units in Package 3 | 80      |
| Package 3 Height             | 15.0 cm |
| Package 3 Width              | 30.0 cm |
| Package 3 Length             | 40.0 cm |
| Package 3 Weight             | 5.2 kg  |

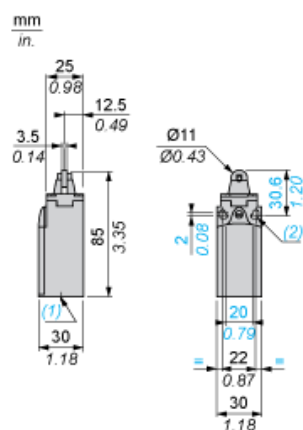
## Offer Sustainability

|                            |                                                                                                                     |
|----------------------------|---------------------------------------------------------------------------------------------------------------------|
| 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)                                                          |
| Mercury free               | Yes                                                                                                                 |
| RoHS exemption information |  <a href="#">Yes</a>               |
| Circularity Profile        | No need of specific recycling operations                                                                            |

## Contractual warranty

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

## Dimensions



- (1) 1 tapped entry for M20 x 1.5  
(2) Ø: 2 elongated holes Ø 4.3 x 6.3 on 22 mm centres, 2 holes Ø 4.3 on 20 mm centres.

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## Mounting with Cable Entry

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### Position of Cable Gland



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

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## Wiring Diagram

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2-pole N/C + N/O Break before Make, Slow Break

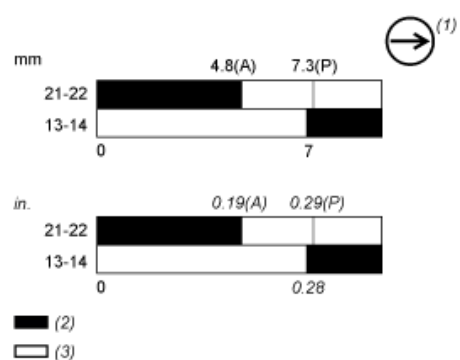


## Characteristics of Actuation

### Switch Actuation by 30° Cam



## Functionnal Diagram



- (P) Positive opening point
- (1) NC contact with positive opening operation
- (2) Closed
- (3) Open