

# Product datasheet

Specifications



## Wireless limit switch, Limit switches XC Standard, XCMW, roller plunger

Local distributor code: 408743600 XCMW102

### Main

|                           |                                          |
|---------------------------|------------------------------------------|
| Range of product          | Telemecanique Limit switches XC Standard |
| Series name               | Miniature format                         |
| Product or component type | Wireless limit switch                    |
| Device short name         | XCMW                                     |
| Sensor design             | Miniature                                |
| Body type                 | Fixed                                    |
| Head type                 | Plunger head                             |

### Complementary

|                              |                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------|
| Body material                | Plastic                                                                              |
| Head material                | Metal                                                                                |
| Lever material               | Metal                                                                                |
| Fixing mode                  | By 2 screws                                                                          |
| Type of operator             | Spring return roller plunger metal                                                   |
| Switch actuation             | By 30° cam                                                                           |
| Type of approach             | Lateral approach, 2 directions                                                       |
| Communication network type   | ZigBee green power - 2.4 GHz conforming to IEEE 802.15.4                             |
| Electrical composition code  | PW1                                                                                  |
| Emission power               | 3 mW                                                                                 |
| Response time                | <= 2 ms                                                                              |
| Maximum sensing distance     | 100 m in free field<br>300 m with external antenna<br>25 m in industrial environment |
| Contact operation            | Snap action                                                                          |
| Number of steps              | 1                                                                                    |
| Maximum force for tripping   | 50 N                                                                                 |
| Maximum actuation speed      | 0.1 m/s                                                                              |
| Maximum operating rate       | 60 cyc/mn                                                                            |
| Mechanical durability        | 400000 cycles                                                                        |
| Switching operation per hour | 3600                                                                                 |

|            |          |
|------------|----------|
| Width      | 30.0 mm  |
| Height     | 84 mm    |
| Depth      | 16.0 mm  |
| Net weight | 0.046 kg |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility         | Radiated emission<br>Immunity for industrial environments<br>Susceptibility to electromagnetic fields - test level: 3 V/m (80...2700 MHz, distance = 20 m)<br>Susceptibility to electromagnetic fields - test level: 10 V/m (80...2000 MHz)<br>Electrostatic discharge immunity test - test level: 6 kV (on contact (on metal parts))<br>Electrostatic discharge immunity test - test level: 8 kV (in free air (in insulating parts)) |
| Shock resistance                      | 50 gn for 11 ms conforming to IEC 60068-2-27                                                                                                                                                                                                                                                                                                                                                                                          |
| Vibration resistance                  | 25 gn (f= 10...500 Hz) conforming to IEC 60068-2-6<br>+/- 10 mm (f= 2...11 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                                                                                                                                                                                                                                                                                                                                                                                                           |
| Ambient air temperature for operation | -25...55 °C                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Ambient air temperature for storage   | -40...70 °C                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Directives                            | 1999/5/EC - R&TTE directive<br>2004/108/EC - electromagnetic compatibility                                                                                                                                                                                                                                                                                                                                                            |
| Standards                             | EN/IEC 60947-1<br>EN/IEC 60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                    |
| Radio agreement                       | IC conforming to RSS<br>FCC conforming to RCM                                                                                                                                                                                                                                                                                                                                                                                         |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 61.0 g   |
| Package 1 Height             | 3.3 cm   |
| Package 1 width              | 5 cm     |
| Package 1 Length             | 13 cm    |
| Unit Type of Package 2       | S01      |
| Number of Units in Package 2 | 22       |
| Package 2 Weight             | 1.527 kg |
| Package 2 Height             | 15 cm    |
| Package 2 width              | 15 cm    |
| Package 2 Length             | 40 cm    |

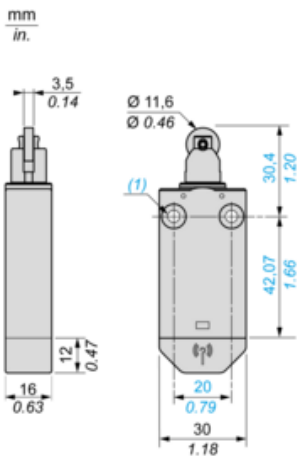
## Offer Sustainability

|                            |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| 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)<br><a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                               |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                     |

## Contractual warranty

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

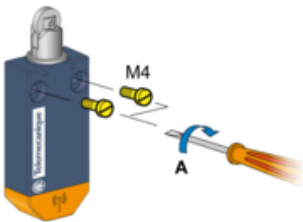
Dimensions



(1) : 2 fixing holes Ø 4.2 mm (Ø 0.17 in.)

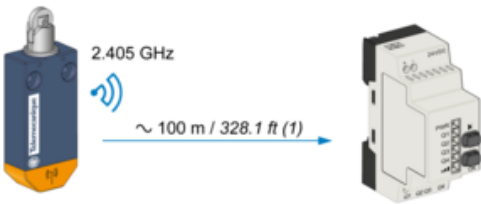
Screw Mounting

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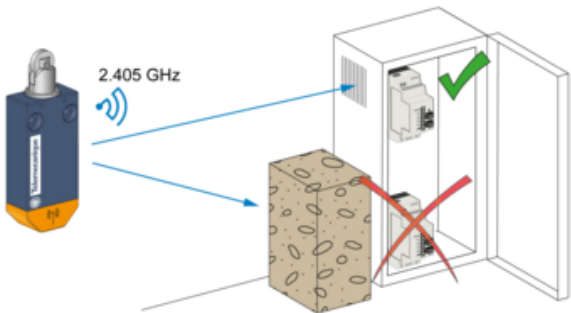
A = 1 Nm  $\pm 0.1$   
A = 8.85 lb.in.  $\pm 0.89$

Unobstructed Mounting

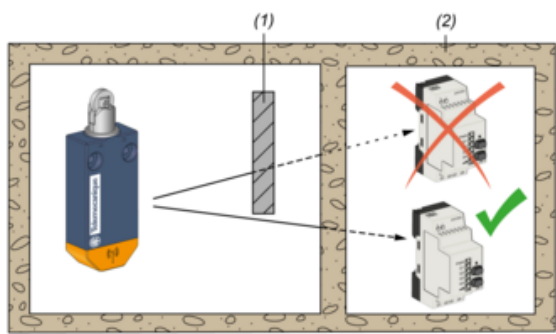


(1) : Typical values that may be modified by the application environment.

Mounting in a Metal Cabinet



Signal Attenuation According to the Material



- (1) : Metal structure
- (2) : Wall
- (3) : Values for indication purposes only

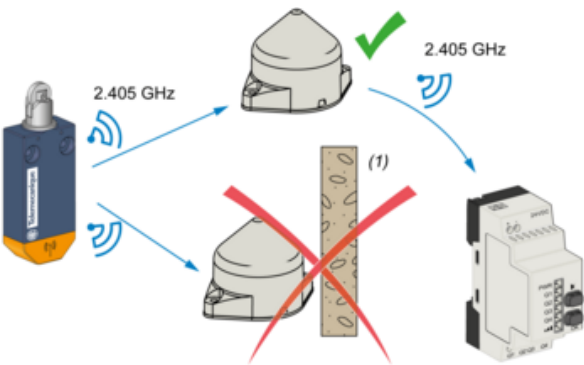
**NOTE:** Actual values depend on the thickness and nature of the material.

| Material        | Signal attenuation (%) |
|-----------------|------------------------|
| Glass window    | 10...20% (3)           |
| Plaster wall    | 20...45% (3)           |
| Brick wall      | 60% (3)                |
| Concrete wall   | 70...80% (3)           |
| Metal structure | 50...100% (3)          |



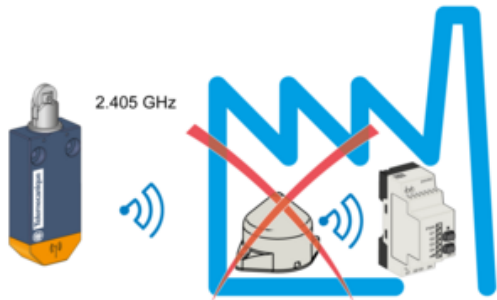
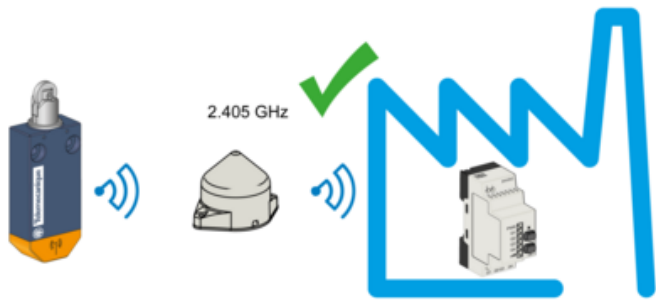
Mounting Tips for Antenna

Optimized Installation



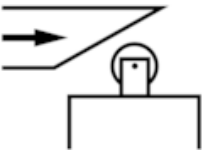
(1) : Obstacle

The Relay Antenna is used to Bypass an Obstacle and/or Increase the Range



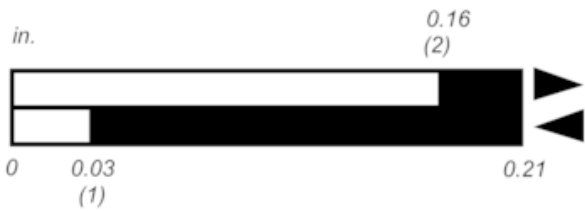
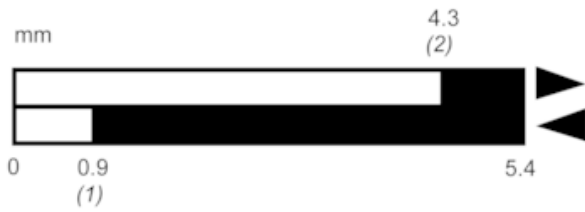
Characteristics of Actuation

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Technical Description

Functional Diagram, Travel Distance



(1) : Reset

(2) : Set