



### Main

|                               |                                                                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product              | OsiSense XG                                                                                                                                                                                                                                                       |
| Product or component type     | Panel mounting smart antenna with lights                                                                                                                                                                                                                          |
| RFID compact station name     | XGCS                                                                                                                                                                                                                                                              |
| RFID frequency                | 13.56 MHz                                                                                                                                                                                                                                                         |
| Design                        | Diameter 22 mounting                                                                                                                                                                                                                                              |
| Electrical connection         | 5 pin(s) 1 male connector M12                                                                                                                                                                                                                                     |
| Transmission rate             | 9600 bauds...115200 bauds (automatic detection)                                                                                                                                                                                                                   |
| Outer dimension               | 40 x 40 x 40 mm                                                                                                                                                                                                                                                   |
| Product compatibility         | RFID microchip STM (CR1X4K)<br>RFID microchip Fujitsu (MB89R118 - MB89R119)<br>RFID microchip Texas (Tag-it HFI)<br>RFID microchip INSIDE (micropass)<br>RFID microchip NXP (SL2, SL1, Ultralight, Std 1K/4K, Desfire)<br>RFID microchip Microelectronic (EM4135) |
| [Sn] nominal sensing distance | 10...70 mm                                                                                                                                                                                                                                                        |
| [Us] rated supply voltage     | 24 V DC conforming to Protective Extra Low Voltage                                                                                                                                                                                                                |

### Complementary

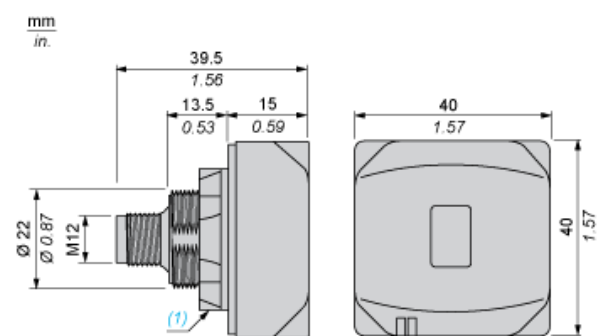
|                             |                                                                                                                                           |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Communication port protocol | Modbus RTU                                                                                                                                |
| Communication port support  | RS485 non isolated                                                                                                                        |
| Associated tag type         | Automatic detection of the type of tag<br>ISO 14443 standard tags<br>ISO 15693 standard tags                                              |
| Supply voltage limits       | 19.2...29 V DC                                                                                                                            |
| Current consumption         | < 60 mA                                                                                                                                   |
| Status LED                  | 2 LEDs (multi-colour) for multi-colour LED<br>1 LED (dual colour) for communication network<br>1 LED (dual colour) for RFID communication |
| Tightening torque           | < 2.2 N.m                                                                                                                                 |
| Marking                     | CE                                                                                                                                        |
| Product weight              | 0.057 kg                                                                                                                                  |

### Environment

|                                       |                                                                                                          |
|---------------------------------------|----------------------------------------------------------------------------------------------------------|
| Product certifications                | UL, FCC                                                                                                  |
| Standards                             | ETSI EN 301 489-3<br>ETSI EN 300 330-2<br>ETSI EN 300 330-1<br>ETSI EN 301 489-1                         |
| Ambient air temperature for operation | -25...70 °C                                                                                              |
| Ambient air temperature for storage   | -40...85 °C                                                                                              |
| IP degree of protection               | IP69K (front face) conforming to IEC 60529<br>IP65 (back) conforming to IEC 60529                        |
| Vibration resistance                  | 2 mm (f = 5...29.5 Hz) conforming to EN 60068-2-6<br>7 gn (f = 29.5...150 Hz) conforming to EN 60068-2-6 |
| Shock resistance                      | 30 gn for 11 ms conforming to EN 60068-2-27                                                              |

| IK degree of protection       | IK02 conforming to EN 50102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility | <p>Electrostatic discharge immunity test for contact discharge ( level: 3) - test level 6 kV conforming to IEC 61000-4-2</p> <p>Electrostatic discharge immunity test for air discharge ( level: 3) - test level 8 kV conforming to IEC 61000-4-2</p> <p>Susceptibility to electromagnetic fields ( level: 3) - test level 10 V/m conforming to IEC 61000-4-3</p> <p>Electrical fast transient/burst immunity test for signal ports ( level: 3) - test level 1 kV conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test for power ports ( level: 3) - test level 2 kV conforming to IEC 61000-4-4</p> <p>1.2/50 <math>\mu</math>s shock waves immunity test ( level: 3) - test level 10 kV conforming to IEC 61000-4-5</p> <p>Conducted RF disturbances ( level: 3) - test level 10 V conforming to IEC 61000-4-6</p> <p>Magnetic field at power frequency ( level: 4) - test level 30 A/m conforming to IEC 61000-4-8</p> |

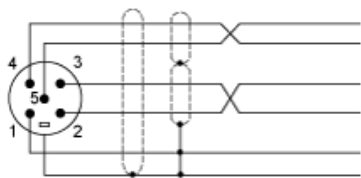
## Dimensions



(1) Locking nut

Connections

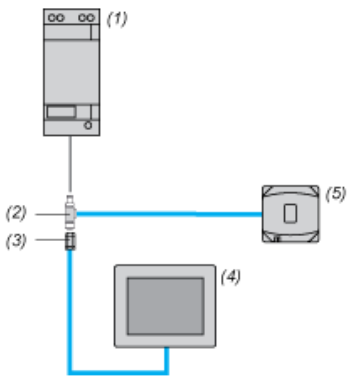
Modbus Connections



| Pin no. | Modbus smart antenna signal |
|---------|-----------------------------|
| 1       | Drain (Modbus-SHLD)         |
| 2       | + 24 VDC                    |
| 3       | 0 V/Modbus-GND              |
| 4       | D0                          |
| 5       | D1                          |

Connection Examples

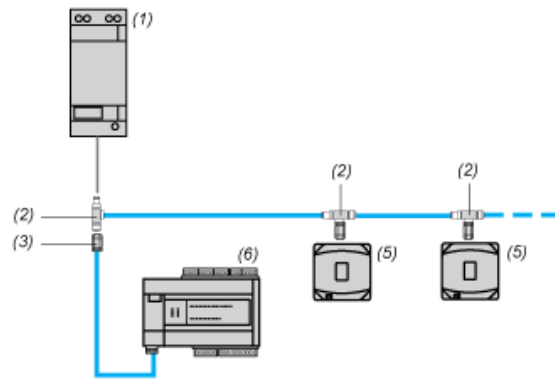
Connection to a Terminal



- (1) Power supply
- (2) Network Tee
- (3) Male M12 connector
- (4) Terminal
- (5) Smart antenna

## Connection to an Automation Platform

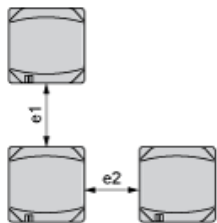
## Daisy chain topology



- (1) Power supply
- (2) Network Tee
- (3) Male M12 connector
- (4) Terminal
- (5) Smart antenna
- (6) Automation platform

## Mounting and Clearance

### Minimum Distance Between 2 Identical Smart Antennas According to their Positioning and Type of Tag Used



Dimensions in mm

| Tag        | e1  | e2  |
|------------|-----|-----|
| XGHBPB3345 | 90  | 90  |
| XGHB90E340 | 310 | 310 |
| XGHB90E341 | 90  | 90  |

Dimensions in in.

| Tag        | e1    | e2    |
|------------|-------|-------|
| XGHBPB3345 | 3.54  | 3.54  |
| XGHB90E340 | 12.20 | 12.20 |
| XGHB90E341 | 3.54  | 3.54  |