# RFID OsiSense® XG

## EtherNet/IP Splitter Box
## User Guide

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The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.



All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

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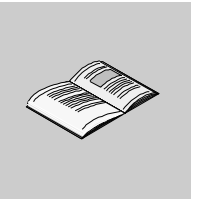


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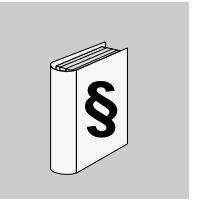
# Safety Information




## Important Information

**NOTICE**

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

**⚠ DANGER**

**DANGER** indicates an imminently hazardous situation which, if not avoided, **will result in** death or serious injury.

**⚠ WARNING**

**WARNING** indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

## ⚠ CAUTION

**CAUTION** indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

## CAUTION

**CAUTION**, used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, **can result in** equipment damage.

### PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

### BEFORE YOU BEGIN

Do not use this product on machinery lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.

## ⚠ WARNING

**UNGUARDED MACHINERY CAN CAUSE SERIOUS INJURY**

- Do not use this software and related automation equipment on equipment which does not have point-of-operation protection.
- Do not reach into machinery during operation.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

This automation equipment and related software is used to control a variety of industrial processes. The type or model of automation equipment suitable for each application will vary depending on factors such as the control function required, degree of protection required, production methods, unusual conditions, government regulations, etc. In some applications, more than one processor may be required, as when backup redundancy is needed.

Only the user can be aware of all the conditions and factors present during setup, operation, and maintenance of the machine; therefore, only the user can determine the automation equipment and the related safeties and interlocks which can be properly used. When selecting automation and control equipment and related software for a particular application, the user should refer to the applicable local and national standards and regulations. The National Safety Council's Accident Prevention Manual (nationally recognized in the United States of America) also provides much useful information.

In some applications, such as packaging machinery, additional operator protection such as point-of-operation guarding must be provided. This is necessary if the operator's hands and other parts of the body are free to enter the pinch points or other hazardous areas and serious injury can occur. Software products alone cannot protect an operator from injury. For this reason the software cannot be substituted for or take the place of point-of-operation protection.

Ensure that appropriate safeties and mechanical/electrical interlocks related to point-of-operation protection have been installed and are operational before placing the equipment into service. All interlocks and safeties related to point-of-operation protection must be coordinated with the related automation equipment and software programming.

**NOTE:** Coordination of safeties and mechanical/electrical interlocks for point-of-operation protection is outside the scope of the Function Block Library, System User Guide, or other implementation referenced in this documentation.

## START-UP AND TEST

Before using electrical control and automation equipment for regular operation after installation, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check be made and that enough time is allowed to perform complete and satisfactory testing.

**⚠ CAUTION**

**EQUIPMENT OPERATION HAZARD**

- Verify that all installation and set up procedures have been completed.
- Before operational tests are performed, remove all blocks or other temporary holding means used for shipment from all component devices.
- Remove tools, meters, and debris from equipment.

**Failure to follow these instructions can result in injury or equipment damage.**

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future references.

**Software testing must be done in both simulated and real environments.**

Verify that the completed system is free from all short circuits and grounds, except those grounds installed according to local regulations (according to the National Electrical Code in the U.S.A, for instance). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to prevent accidental equipment damage.

Before energizing equipment:

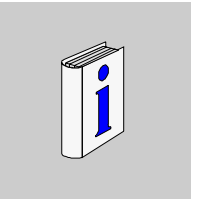
- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Remove ground from incoming power lines.
- Perform all start-up tests recommended by the manufacturer.

## OPERATION AND ADJUSTMENTS

The following precautions are from the NEMA Standards Publication ICS 7.1-1995 (English version prevails):

- Regardless of the care exercised in the design and manufacture of equipment or in the selection and ratings of components, there are hazards that can be encountered if such equipment is improperly operated.
- It is sometimes possible to misadjust the equipment and thus produce unsatisfactory or unsafe operation. Always use the manufacturer's instructions as a guide for functional adjustments. Personnel who have access to these adjustments should be familiar with the equipment manufacturer's instructions and the machinery used with the electrical equipment.
- Only those operational adjustments actually required by the operator should be accessible to the operator. Access to other controls should be restricted to prevent unauthorized changes in operating characteristics.

# About the Book



## At a Glance

### Document Scope

This document describes OsiSense® XG XGSZ33EIP EtherNet/IP splitter box.

The OsiSense® XG EtherNet/IP splitter box enables OsiSense® XG compact RFID smart antennas to be connected on an EtherNet/IP network in distributed automation systems using pre-assembled cables.

This splitter box is used to connect three XGCS compact smart antennas on an EtherNet/IP network (up to 15 smart antennas could be connected with T-connectors).

As a server on the network, the splitter box can receive and respond to data messages.

This data exchange allows your network accessing some OsiSense® XG smart antenna functions, such as:
- reading/writing tags
- control and command
- monitoring
- diagnostics

### Validity Note

The technical characteristics of the device(s) described in this manual also appear online. To access this information online:

| Step | Action |
|---|---|
| 1 | Go to the Schneider Electric home page *www.schneider-electric.com*. |
| 2 | In the **Search** box type the model number of a product or the name of a product range.<br>● Do not include blank spaces in the model number/product range.<br>● To get information on a grouping similar modules, use asterisks (*). |

| Step | Action |
|---|---|
| 3 | If you entered a model number, go to the **Product datasheets** search results and click on the model number that interests you.<br>If you entered the name of a product range, go to the **Product Ranges** search results and click on the product range that interests you. |
| 4 | If more than one model number appears in the **Products** search results, click on the model number that interests you. |
| 5 | Depending on the size of your screen, you may need to scroll down to see the data sheet. |
| 6 | To save or print a data sheet as a .pdf file, click **Download *XXX* product datasheet**. |

The characteristics presented in this manual should be the same as those that appear online. In line with our policy of constant improvement we may revise content over time to improve clarity and accuracy. In the event that you see a difference between the manual and online information, use the online information as your reference.

## Related Documents

| Title of Documentation | Reference Number |
|---|---|
| User Guide: OsiSense® XG Compact Stations | W916556690111 |

You can download these technical publications and other technical information from our website at www.schneider-electric.com.

## User Comments

We welcome your comments about this document. You can reach us by e-mail at techcomm@schneider-electric.com.

# Presentation

# 1

## Introduction

This chapter presents the OsiSense® XG EtherNet/IP splitter box and the associated range of accessories.

## What's in this Chapter?

This chapter contains the following topics:

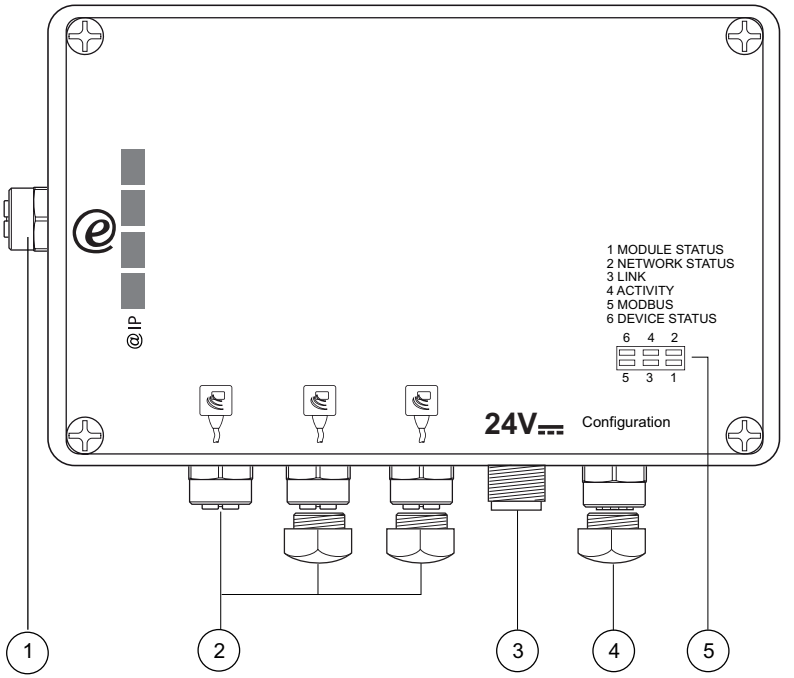

| Topic | Page |
|---|---|
| Overview | 12 |
| Overview of the Accessories Range | 13 |

# Overview

## Introduction

This section gives a detailed technical description of the OsiSense® XG EtherNet/IP splitter box.

## Description




| N° | Description |
|---|---|
| 1 | EtherNet/IP connector (M12 4-pin female, D-coding) |
| 2 | OsiSense® XG compact smart antenna connectors (M12 5-pin female, A-coding) |
| 3 | Power supply connector (M12 4-pin male, A-coding) |
| 4 | Configuration port (M12 female, A-coding) (for Schneider Electric use only) |
| 5 | Diagnostic LEDs for EtherNet/IP and Modbus fieldbuses, splitter box status |

# Overview of the Accessories Range

## Connection Accessories

Use the following components for wiring (please refer to Schneider Electric catalogs for more information):

| Connector N° | Type of cable / connectors | Type of equipment to be connected | Cable length (m) | Reference |
|---|---|---|---|---|
| 1 | IP67 straight-through cable 4-pin M12 male A / R J45 male | Switch Hub | 1 | TCS ECL1M3M1S2 |
| | | | 3 | TCS ECL1M3M3S2 |
| | | | 5 | TCS ECL1M3M5S2 |
| | | | 10 | TCS ECL1M3M10S2 |
| | | | 40 | TCS ECL1M3M40S2 |
| 2 | Extension 5-pin M12 male A / M12 female | XGCS••••••• Ositrack compact smart antennas | 1 | TCS MCN1M1F1 |
| | | | 2 | TCS MCN1M1F2 |
| | | | 5 | TCS MCN1M1F5 |
| | | | 10 | TCS MCN1M1F10 |
| 3 | Extension 4-pin M12 female A / flying leads | 24 Vdc Power supply | 2 | XGS Z09L2(1) |
| | | | 5 | XGS Z09L5(1) |
| | | | 10 | XGS Z09L10(1) |

**NOTE(1):** XGS Z09L• cables replace XGS Z08L• cables from January 2008.

**NOTE:** Refer to the Connexium IP67 catalog for the IP67 Ethernet cables and accessories.

# Installation

# 2

## Introduction

This chapter provides all required information for installing an OsiSense® XG EtherNet/IP splitter box.

## What's in this Chapter?

This chapter contains the following topics:


| Topic | Page |
|---|---|
| Installing the Splitter Box | 16 |
| EMC Compatibility | 18 |

## Installing the Splitter Box

### Description

The OsiSense® XG EtherNet/IP splitter box can be mounted directly onto a wall or a machine. Four threaded mounting holes have been provided for this purpose inside the splitter box.

**⚠ WARNING**

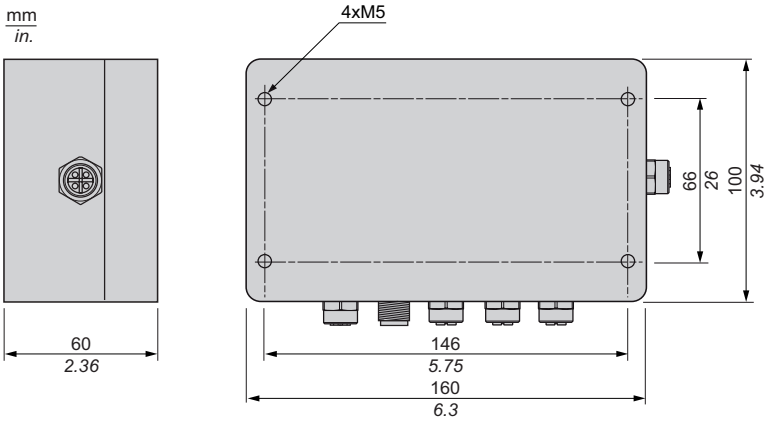
**LOSS OF ENCLOSURE PROTECTION**

To achieve enclosure protection level of IP65:

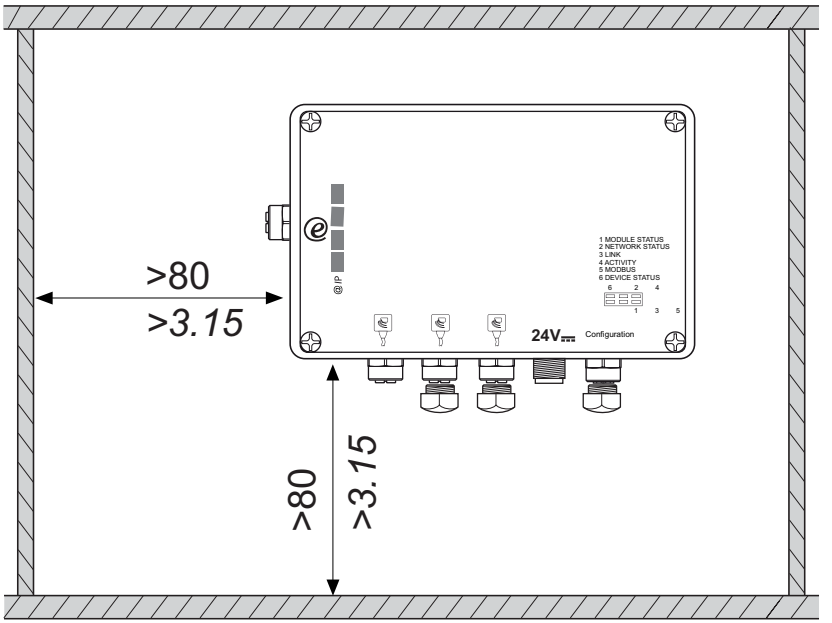
- Properly fit all connectors with cables or sealing plugs and tighten.
- Install cover onto the splitter box and tighten screws to 0.5-3.0 Nm (4.4-26.5 lb-in).

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

### Dimensions



## Minimum Clearances



## EMC Compatibility

### Product Compliance

CE

This product complies with the European directive 89/336/CEE on "electromagnetic compatibility".

The products described in this manual meet all the electromagnetic compatibility (EMC) conditions and are compliant with the applicable standards. To maintain electromagnetic compatibility in each particular end use application, the system designer must utilize EMC compliant and certified components and follow manufacturers instructions, work practices and applicable codes and standards related to EMC compliant installations.

The product described in this manual contains highly complex semiconductors that can be damaged or destroyed by electrostatic discharge (ESD). Care must be taken to avoid product damage from ESD. For example, the use of this product within the vicinity of devices rated as class A or B according to IEC 61000-4-4, may result in damage to this device. The effects of ESD damage, including the possibility of unintended equipment operation, may not be immediately detectable.

**⚠ WARNING**

**UNINTENDED EQUIPMENT OPERATION**

Where there is a risk of electromagnetic interference, the system designer must implement the protective measures:

- Do not expose electronic circuits to sources of Electrostatic Discharge.
- Avoid touching internal circuits with skin, clothing, or tools.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

### Cable Routing

Make sure that the following basic wiring rules are followed:

- Keep the data wire and the power cables apart from one another, in so far as is possible.
- Make sure there is a space of at least 10 cm *(3.94 in)* between the data wires and the power cables.
- The data wires and power cables must only cross at a right angle to one another.
- It is advisable to route the data wires and power cables through separate shielded ducts.

- When laying the cables, the noise voltage from other devices or wires must be considered. This particularly applies to frequency converters, motors and other devices or cables generating high frequency disturbances. High frequency sources and the cables described in this manual must be as far apart from each other as possible.
- The power supply must come from a Protected Extra Low voltage (PELV) power unit.
- The 0V of the PELV power unit must be connected to the earth.

## ⚠ WARNING

**UNINTENDED EQUIPMENT OPERATION**

- The cabling routing rules listed above must be followed.
- Cable routing is important for proper Electromagnetic Compatibility (EMC).

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

# Splitter Box Characteristics and Wiring

# 3

## Introduction

This chapter provides an overall description of the characteristics and wiring of the OsiSense® XG EtherNet/IP splitter box.

## What's in this Chapter?

This chapter contains the following topics:


| Topic | Page |
|---|---|
| Characteristics | 22 |
| Connectors Description | 24 |

# Characteristics

## Environment Characteristics

| Characteristic | | Description |
|---|---|---|
| Operating temperature | | 0...+55° C *(-32...+131° F)* |
| Storage temperature | | -25...+85° C *(-13...+185° F)* |
| Relative humidity | | 30...95% non condensing |
| Degree of protection | | IP65 |
| Vibration resistance conforming to EN 60068.2.6 | | 2 mm from 5 to 29.5 Hz / 7 gn from 29.5 to 150 Hz |
| Shock resistance conforming to | EN 60068.2.27 | 30 g/11 ms |
| | EN 50102 | Degree IK04 |
| Dimensions (except connectors) | | 160 x 100x 60 mm *(6.3 x 3.94 x 2.36 in)* |
| Weight | | 871 g *(30.72 oz)* |
| Electromagnetic interference conforming to | IEC61000 | Level 3 |
| | EN 55022 | Class B |

## *NOTICE*

**RADIO INTERFERENCE**

- This Class B product may cause radio interference.
- Implement reduction techniques in applications where radio interference is objectionable.

**Failure to follow these instructions can result in equipment damage.**

## Electrical Characteristics

| Characteristic | Description |
|---|---|
| Power supply voltage | 24 VDC PELV (range: 21.6 V...26.4 V) |
| Power consumption (splitter box only) | < 2.5 W |
| Connector | M12 4-pin male, A-coding |

## EtherNet/IP Fieldbus Characteristics

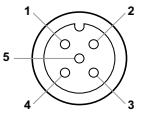
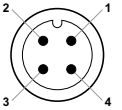
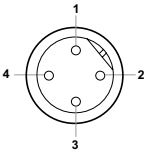
| Characteristic | Description |
|---|---|
| Topology | Star |
| Data rate | 10/100 Mbps |
| Physical interface | 10 Base-T / 100 Base-Tx |
| Transmission media | Shielded twisted pairs, category CAT 5E |
| Connector | M12 4-pin, A-coding |
| Cyclic Transmitted Data (in words) | • Input: 5 for control + ≤ 43 for user data<br>• Output: 7 for control + ≤ 41 for user data |
| Acyclic transmitted data | Not supported |

## RFID Smart Antenna Communication Characteristics

| Characteristic | Description |
|---|---|
| Transmission rate | 38400 Bits/s |
| Time-out | 3 s (after 3 automatic retries) |
| Quantity of RFiD smart antenna | 3 (direct connection) to 15 (chained with M12 tees) |
| Total length of the RFiD connections | 160 m max *(525 ft)* |
| Connector | M12 5-pin female, A-coding |

# Connectors Description

## Pin Assignment

| Connector | Pin | Color | Assignment |
|---|---|---|---|
| Smart antennas connector (M12 5-pin female, A-coding)<br>  <br> | 1 | - | Earth |
| | 2 | - | 24 Vdc |
| | 3 | - | 0 Vdc |
| | 4 | - | D0 |
| | 5 | - | D1 |
| Power supply connector (M12 4-pin male, A-coding)<br>  <br><br>Power supply cable XGS Z09L•• | 1 | Red | 24 Vdc |
| | 2 | - | Not connected |
| | 3 | Black | 0 Vdc |
| | 4 | - | Not connected |
| EtherNet/IP connector (M12 4-pin female, D-coding)<br>  <br> | 1 | - | TD + |
| | 2 | - | RD + |
| | 3 | - | TD - |
| | 4 | - | RD - |

**NOTE:** M12 connectors maximum tightening torque = 10 Nm (88.5 lb-in).

# Ethernet Network Interface

# 4

## Introduction

This chapter provides theoretical background on EtherNet/IP fieldbus operation.

## What's in this Chapter?

This chapter contains the following sections:


| Section | Topic | Page |
|---|---|---|
| 4.1 | Wiring to the EtherNet/IP Fieldbus | 26 |
| 4.2 | General Principles | 33 |

# 4.1 Wiring to the EtherNet/IP Fieldbus

### Introduction

The following section describes the element required for wiring the splitter box to the EtherNet/IP fieldbus.

### What's in this Section?

This section contains the following topics:


| Topic | Page |
|---|---|
| Fieldbus Connection | 27 |
| Address Configuration | 29 |

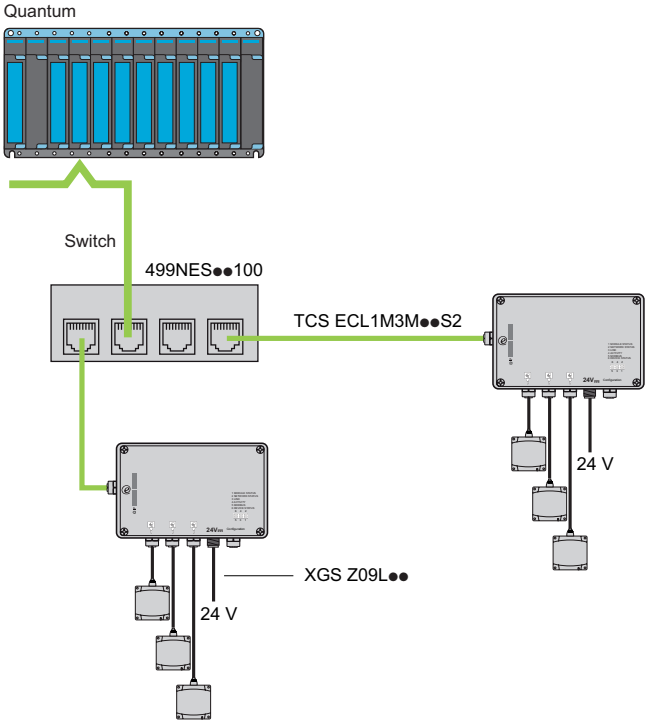
# Fieldbus Connection

## Description

The splitter box can either be connected to an EtherNet/IP client device, or to an Ethernet switch or hub in a star architecture.

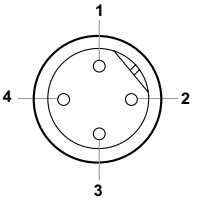
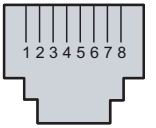
The fieldbus is connected via 4-pin M12 connectors (D-coding).

The following graphic represents of fieldbus connection with splitter boxes linked to a switch:



### Correspondence Between M12 4-pin Connector and RJ45 Connector

The following table shows the correspondence between pins on M12 4-pin connector and on RJ45 connector:

| M12 4-pin Connector | M12 Contact | Signal | RJ45 Contact | RJ45 Connector |
|---|---|---|---|---|
|  | 1 | TD+ | 1 |  |
| | 2 | RD+ | 3 | |
| | 3 | TD- | 2 | |
| | 4 | RD- | 6 | |
| | - | Not connected | 4 | |
| | - | Not connected | 5 | |
| | - | Not connected | 7 | |
| | - | Not connected | 8 | |

## Address Configuration

### Introduction

**IP address**: Every item of equipment connected to an Ethernet network must have a unique IP address. This address makes it possible to refer to a specific unit.

**Subnet mask**: The subnet mask defines a range of IP addresses that can be accessed from an item of equipment.

The following table describes the standard IP subnet masks:

| Network Class | Host Bits | Subnet Mask |
|---|---|---|
| A | 24 | 255.0.0.0 |
| B | 16 | 255.255.0.0 |
| C | 8 | 255.255.255.0 |

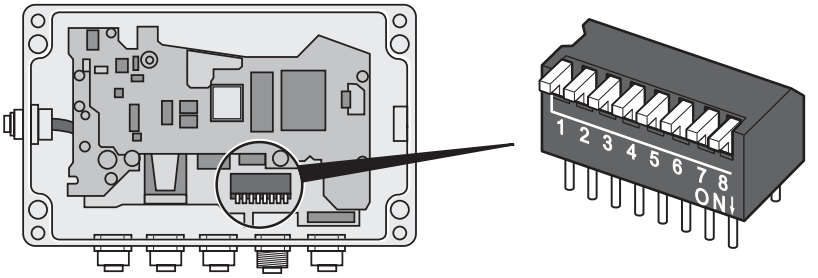
The following table gives an example of accessible address ranges depending on the network class:

| Network Class | Addresses | Accessible Addresses Ranges |
|---|---|---|
| B | IP: 192.168.0.1<br>Mask: 255.255.0.0 | IP: 192.168.xxx.xxx |
| C | IP: 192.168.0.1<br>Mask: 255.255.255.0 | IP: 192.168.0.xxx |

**NOTE:** xxx represents a possible value from 0 to 255.

The configuration of the IP address can be made by:
- setting internal configuration switches
- setting parameters in the Web server embedded in the splitter box to:
  - manually set the IP address
  - automatically get an IP address from the DHCP server

### Setting Internal Configuration Switches




Internal configuration switches can be set to:

- a non-zero value, forcing the splitter box to use an IP address in the range 192.168.0.1 to 192.168.0.255 defined by the switches position
- zero value, forcing the splitter box to use the IP address defined by the embedded Web server (the default IP address in the embedded Web server is set to 192.168.0.10). This value disables the configuration switches.

**NOTE:** Switches are set to zero value as a default factory setting.

The following table describes the IP address value regarding the splitter box switches position:

| SW1 | SW2 | SW3 | SW4 | SW5 | SW6 | SW7 | SW8 | DHCP | Subnet | Gateway | IP Address |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | Settings determined by the embedded Web server configuration page. | | | |
| OFF | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | 255.255.255.0 | 192.168.0.255 | 192.168.0.1 |
| OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | OFF | 255.255.255.0 | 192.168.0.255 | 192.168.0.2 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| ON | ON | ON | ON | ON | ON | ON | OFF | OFF | 255.255.255.0 | 192.168.0.255 | 192.168.0.254 |
| ON | ON | ON | ON | ON | ON | ON | ON | Invalid setting | | | |

**NOTE:** The switches value is read once during the splitter box startup. Any changes performed on the switches value require a splitter box reset to be applied.

## ⚠ WARNING

**EQUIPMENT DAMAGE**

- Turn off power supplying the splitter box before opening the cover.
- Do not touch electrical circuit components contained in the splitter box.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

## ⚠ CAUTION

**UNINTENDED EQUIPMENT DAMAGE**

- Do not use factory configured IP address for operation.
- Assign a new IP address for operation.

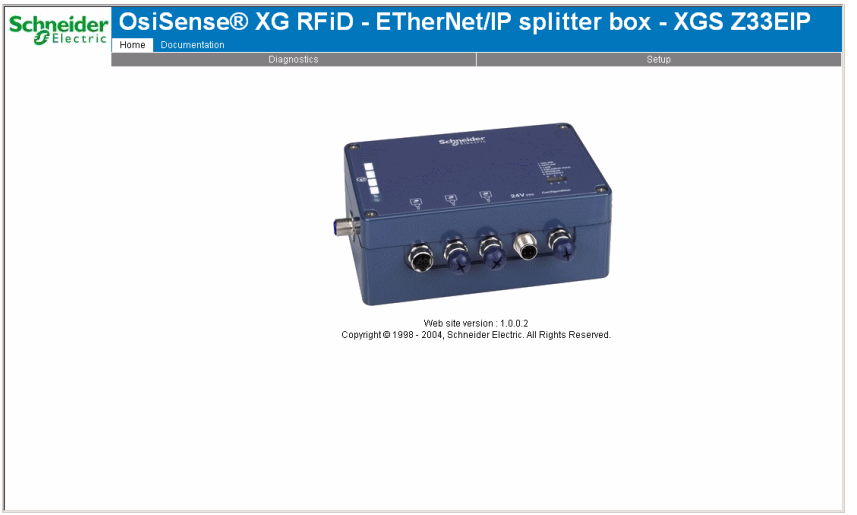
**Failure to follow these instructions can result in injury or equipment damage.**

**NOTE:** Two or more splitter boxes with identical IP address on the same EtherNet/IP network generate loss of communication.

### Accessing the Splitter Box Embedded Web Server

To connect a PC to the splitter box Web server **Home** page, enter the following address: http://192.168.0.10 (splitter box factory setting IP address) from the PC browser.

The following graphic shows the splitter box Web server **Home** page:



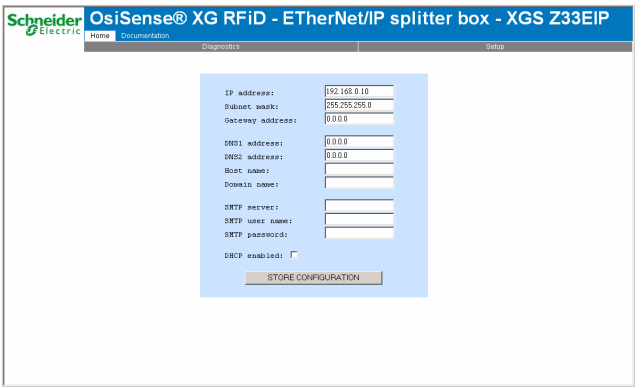
The **Home** page gives access to the following Web service pages:
- **Setup** page for IP address settings
- **Diagnostic** page for access to the splitter box internal information
- **Documentation** page for access to the splitter box user guide

**NOTE:** If the internal switches are not set to zero, the IP address value to enter in the PC browser must be in accordance with the position of the switches.

**NOTE:** The network configuration of the PC must be compatible with the IP address range of the splitter box.

### Configuring IP Address in the Web Server

The following graphic shows the splitter box Web server **Setup** page:




The following table describes the steps to follow to configure the EtherNet/IP address in the **Setup** page:

| Step | Action |
|---|---|
| 1 | Choose IP address allocation mode. |
| 2 | Set the following depending on the IP address allocation mode:<br>● For automatic allocation mode (activation of DHCP service), check the **DHCP Enabled** check box.<br>● For manual allocation mode, type:<br>  ● IP address<br>  ● subnet mask<br>  ● default Gateway address |
| 3 | Click **STORE CONFIGURATION** to validate the settings. |
| 4 | Cycle the XGS Z33EIP splitter box power off and on to apply the new settings. |

**NOTE:** If the internal switches are not set to zero, the settings are stored in memory but not applied.

**NOTE:** The network configuration of the PC must be compatible with the IP address range of the splitter box.

# 4.2 General Principles

## EtherNet/IP Connectivity

### Introduction

The OsiSense® XG XGSZ33EIP allows to connect OsiSense® XG RFID smart antennas as a node on an EtherNet/IP local area network (LAN).

### What is EtherNet/IP

EtherNet/IP (the Ethernet Industrial Protocol) is especially suited to factory applications in which there is an emphasis on control, configuration and information reporting. The ODVA-specified protocol runs CIP (Common Industrial Protocol) on top of standard Internet protocols, like TCP/IP and UDP. It is an open local (communications) network that enables the interconnectivity of all levels of manufacturing operations from the plant's office to the sensors and actuators on its floor.

**NOTE:** For more information on standard EtherNet/IP specifications and mechanisms, refer to the ODVA home page (http://www.odva.org).

### Transmission Rate

An OsiSense® XG XGSZ33EIP node resides on a baseband network with an auto-negotiated transmission rate of 10 or 100 Mbit/s.

### Object Model

The EtherNet/IP specification is presented in terms of an abstract object model describing device characteristics and the manner in which network connections are established and managed. Each network node is modeled as a collection of objects that describe the node's available communication services and behavior. A device object model mapping is specific to its implementation on the network.

### Device Profiles

The EtherNet/IP device models define the physical connections and promote interoperability among standard devices. Devices that implement the same device model must support common identity and communications status data. Device-specific data is contained in device profiles that are defined for various device types.

Typically, a device profile defines the device:
- object model
- I/O data format
- parameters that can be configured

### What is an EDS

The EDS (Electronic Data Sheet) is a standardized ASCII file that contains information about a network device communications functionality and the contents of its object dictionary (as defined by ODVA). The EDS also defines device-specific and manufacturer-specific objects.

Your application may or may not require the EDS file.

Using the EDS, you can standardize tools to:
- configure EtherNet/IP devices
- design networks for EtherNet/IP devices
- manage project information on different platforms

### EDS File

An EDS file is embedded in the OsiSense® XG XGSZ33EIP. This file can be downloaded by a PC connected to the web server embedded in the device, in the **Documentation** page *(see page 49)*, with a web browser. The address to be typed in the web browser is the IP address of the OsiSense® XG XGSZ33EIP (factory setting is 192.168.0.10).

### I/O Data

The OsiSense® XG XGSZ33EIP splitter box provides two memory tables, where the clients (PLCs, HMI, etc.) connected to the EtherNet/IP network can exchange data with the group of OsiSense® XG RFID smart antennas connected to the splitter box.

The size of each table is defined by the master on the EtherNet/IP network, from the EDS file of the OsiSense® XG XGSZ33EIP splitter box.

# Data Access to OsiSense® XG Smart Atenna

# 5

## Introduction

This chapter provides information about the exchange of data between:
- a client on EtherNet/IP network
- a node on the network composed of the XGS Z33EIP splitter box connected with one or more OsiSense® XG RFID smart antennas

## What's in this Chapter?

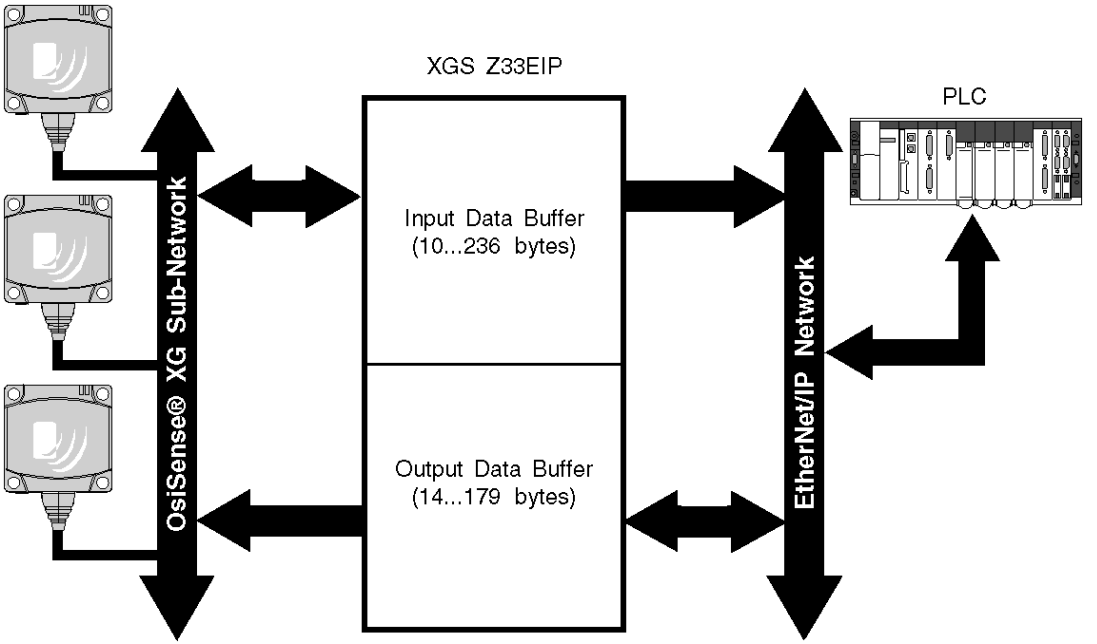
This chapter contains the following topics:


| Topic | Page |
|---|---|
| Data Exchanges | 36 |
| Data Buffer Structure | 37 |
| Data Access Procedure | 39 |
| Write Command Example | 40 |
| Read Command Example | 42 |

## Data Exchanges

### Presentation

The diagram below illustrates the data exchanges:




Two memory buffers are integrated in the XGS Z33EIP splitter box:

- Output Data Buffer for:
  - commands addressed to OsiSense® XG smart antennas
  - commands written from EtherNet/IP network
- Input Data Buffer for:
  - results of commands addressed to OsiSense® XG smart antennas
  - status of the commands addressed to OsiSense® XG smart antennas

## Data Buffer Structure

### Presentation

The following table describes the Output Data Buffer structure of the XGS Z33EIP splitter box:

| Register (Word) | Description | |
|---|---|---|
| 1st | Not applicable | |
| 2nd | Bit 0 = Read command trigger bit | |
| 3rd | Bit 0 = Write command trigger bit | |
| 4th | RFID smart antenna slave address (1 to 15) | |
| 5th | Start address of the Read/Write command | |
| 6th | Quantity of registers to Read (1 to 113) / Write (1 to 82) | |
| 7th | LSB: Not used<br>MSB: Quantity of bytes Write command (2 x quantity of registers defined in the 6th word) | |
| 8th | Data 1 | Used only for Write command |
| 9th | Data 2 | |
| 10th | Data 3 | |
| ... | ... | |
| ... | Data n | |

**⚠ WARNING**

**UNINTENDED EQUIPMENT OPERATION**

- Do not exceed the maximum number of words to read or write.
- Communication errors can result if the maximum number of words is exceeded.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

The following table describes the Input Data Buffer structure of the XGS Z33EIP splitter box:

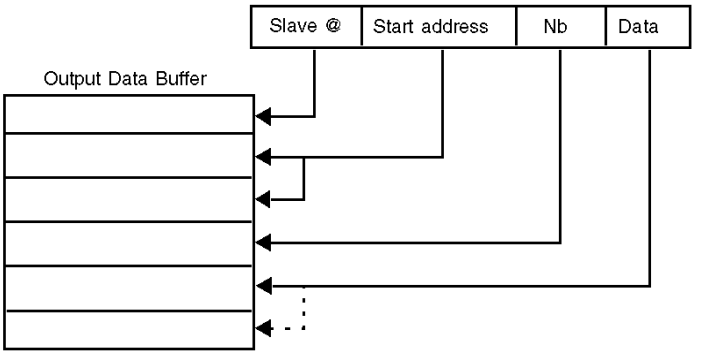
| Register (Word) | Description | |
|---|---|---|
| | **MSB** | **LSB** |
| 1st | Status bit (bit4):<br>● 1 = OK<br>● 0 = missing RFID smart antenna *(see page 48)* | |
| 2nd | Not applicable | Counter of Read commands |

| Register (Word) | Description | | |
|---|---|---|---|
| | **MSB** | **LSB** | |
| 3rd | Not applicable | Counter of Write commands | |
| 4th | Total Data bytes received (Read command only) | Address of the RFID smart antenna | |
| 5th | Bit 8 to bit 14: command codes.<br>Values of the command code:<br>● 03h: Read<br>● 10h: Write<br>Bit 15: `error status bit`.<br>Values of the `error status bit`:<br>● 1: negative answer from the RFID smart antenna and validation of the error code in the LSB<br>● 0: valid answer from the RFID smart antenna | The content of the LSB has two meanings depending on the `error status bit` (bit 15) value:<br>● if `error status bit` = 1: detected error code with the following values:<br>● 1h: unknown function code or incorrect request format<br>● 2h: incorrect address, or prohibited zone, or protected zone, or address outside the tag memory zone<br>● 3h: incorrect data, or too much data in the frame, or not enough data in the frame, or quantity is null, or incompatible data<br>● 4h: execution detected error in read or write mode, or tag out of the dialog area<br>● if `error status bit` = 0: Read data byte count | |
| 6th | Data 1 | | Used only for Read command |
| 7th | Data 2 | | |
| 8th | Data 3 | | |
| ... | ... | | |
| ... | Data n | | |

# Data Access Procedure

## Presentation

The following table describes the steps to follow to access the data:

| Step | Action |
|---|---|
| 1 | From the PLC, send the data contents to the Output Data Buffer:<br>  |
| 2 | Toggle the Command trigger bit (2nd register of the Output Data Buffer for Read, 3rd register of the Output Data Buffer for Write).<br>The command is sent to the OsiSense® XG smart antenna. |
| 3 | Test the Counter of Read or Write commands (2nd or 3rd register of the Input Data Buffer), when the OsiSense® XG smart antenna has answered to the command, the splitter box increments this register. |
| 4 | The answer can be read by the PLC.<br>**Note:** The `error status bit` of the 5th register of the Input Data buffer (bit 15) must be tested to know if the command has been well executed or if a detected error arose *(see page 37)*. |

## Write Command Example

### Presentation

This example describes a write command of two words from address 5 to the OsiSense® XG smart antenna at address 3.

The table below illustrates the data to send to the output data buffer:

| Output Word (%QW) | Description | | Value |
|---|---|---|---|
| | MSB | LSB | |
| 0 | Not applicable | | - |
| 1 | 00 | Not applicable | - |
| 2 | Not applicable | Write command trigger byte | - |
| 3 | 00 | Slave address | 0003h |
| 4 | Start address | | 0005h |
| 5 | 00 | Quantity of registers | 0002h |
| 6 | Byte count | Not applicable | 0400h |
| 7 | Data to write 1 | | 0123h |
| 8 | Data to write 2 | | 4567h |

**NOTE:** For a write command, 82 words maximum can be written.

The table below illustrates the smart antenna answer in the input data buffer (after a toggle of the command trigger byte %QW2 and a detection of a change in the counter byte %IW2):

| Input Word (%IW) | Description | | Value |
|---|---|---|---|
| | MSB | LSB | |
| 0 | Status word | | - |
| 1 | 00 | Not applicable | - |
| 2 | 00 | Write command count | - |
| 3 | Total byte count | Slave address | 0503h |
| 4 | Command code | Not applicable | 1000h |

The table below illustrates the smart antenna answer in the input data buffer if the tag is missing:

| Input Word (%IW) | Description | | Value |
|---|---|---|---|
| | MSB | LSB | |
| 0 | Status word | | - |
| 1 | 00 | Not applicable | - |
| 2 | 00 | Write command count | - |
| 3 | Total byte count | Slave address | 0503h |
| 4 | Command code | Detected error code | 9004h |

## Read Command Example

### Presentation

This example describes a read command of two words from address 5 to the OsiSense® XG smart antenna at address 3.

The table below illustrates the data to send to the output data buffer:

| Output Word (%QW) | Description | | Value |
|---|---|---|---|
| | MSB | LSB | |
| 0 | Command word | | - |
| 1 | 00 | Read command trigger byte | - |
| 2 | Not applicable | Not applicable | - |
| 3 | 00 | Slave address | 0003h |
| 4 | Start address | | 0005h |
| 5 | 00 | Quantity of registers | 0002h |

**NOTE:** For a read command, 113 words maximum can be read.

The table below illustrates the smart antenna answer in the input data buffer (after a toggle of the command trigger byte %QW1 and a detection of a change in the counter byte %IW1):

| Input Word (%IW) | Description | | Value |
|---|---|---|---|
| | MSB | LSB | |
| 0 | Status word | | - |
| 1 | 00 | Read command count | - |
| 2 | Not applicable | Not applicable | - |
| 3 | Total byte count | Slave address | 0903h |
| 4 | Command code | Read data byte count | 0304h |
| 5 | Read Data 1 | | 0123h |
| 6 | Read Data 2 | | 4567h |

The table below illustrates the smart antenna answer in the input data buffer in case of addressing detected error (out of memory range):

| Input Word (%IW) | Description | | Value |
|---|---|---|---|
| | MSB | LSB | |
| 0 | Status word | | - |
| 1 | 00 | Read command count | - |
| 2 | Not applicable | Not applicable | - |
| 3 | Total byte count | Slave address | 0903h |
| 4 | Command code | Detected error code | 8302h |

# Diagnostics

# 6

## Introduction

Diagnostics information simplifies installation and accelerates troubleshooting.

This chapter provides information for diagnostics by:
- LED display
- software

## What's in this Chapter?

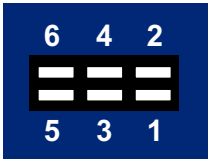
This chapter contains the following topics:


| Topic | Page |
|---|---|
| Diagnostic LEDs | 46 |
| Software Diagnostics | 48 |

# Diagnostic LEDs

## Description

6 LEDs allow you to diagnose the splitter box communication status:




The following table describes the states and status of these 6 LEDs:

| No. | Description | State | Status |
|---|---|---|---|
| 1 | Module Status | Off | No power |
| | | Green | Normal operation |
| | | Green, flashing | Standby, not initialized |
| | | Red | Major detected error |
| | | Red, flashing | Minor detected error |
| | | Alternating Red/Green | Self test |
| 2 | Network Status | Off | • no IP address, or<br>• no power |
| | | Green | EtherNet/IP connection established |
| | | Green, flashing | No EtherNet/IP connection established |
| | | Red | Duplicate IP address detected |
| | | Red, flashing | One or several connections timed out |
| | | Alternating Red/Green | Self test |
| 3 | Link | Off | • no link, or<br>• no power |
| | | Green | Connected to an EtherNet/IP network |
| 4 | Activity | Off | • no EtherNet/IP activity, or<br>• no power |
| | | Green | Receiving or transmitting EtherNet/IP packets |
| 5 | Modbus | Off | No power |
| | | Green | Running |
| | | Green, flashing | Initializing and not running |
| | | Red | • stopped, or<br>• subnet detected error, or<br>• timeout |

| No. | Description | State | Status |
|---|---|---|---|
| 6 | Device Status | Off | No power |
| | | Green | Initializing |
| | | Green, flashing | Running |
| | | Red, flashing | Contact Schneider Electric support service |
| | | Alternating Red/Green | Invalid or missing configuration |

### LED 4 (Activity) Behavior

Specific detected errors indicated by the **Activity** LED:

- Flashing red LED (1 Hz): input and/or output data length is invalid.
  Check the overall length of the splitter box data, using the network configuration tool of the EtherNet/IP network master, e.g., SyCon.
- Flashing red LED (2 Hz): User parameter data length and/or content is invalid.
- Flashing red LED (4 Hz): Error detected when resetting the ASIC in charge of EtherNet/IP communications.

### LED 5 (Modbus) Behavior

The **Modbus** LED turns red when one or more Modbus slaves can not respond to the splitter box as expected. This can be caused by:

- the loss of communication with one or more OsiSense® XG RFID smart antenna, e.g., a broken or disconnected cable
- a wrong configuration of the network address of one or more OsiSense® XG RFID smart antenna

**NOTE:** When **Modbus** LED is flashing red because of a simple loss of communication, the LED reverts to a green state when communications are restored.

The **Modbus** LED turns green when all transactions have been active at least once. This includes transactions using **Change of state** or **Change of state on trigger**. If a timeout occurs on a transaction, this LED turns red.

### LED 6 (Device Status) Behavior

**NOTE:** If the **Device Status** LED is flashing with a sequence beginning with one or more red flashes, cycle the splitter box power **OFF** and **ON** again. If flashing does not stop, please note the order of the sequence and contact Schneider Electric support service.

## Software Diagnostics

### Status Bit Description

A status bit of the smart antennas connected to the splitter box is located at address 0000h of the splitter box input memory:

| Bit | Description | Value |
|---|---|---|
| 7 | Not applicable | - |
| 6 | | |
| 5 | | |
| 4 | Status Bit | • 1: normal conditions<br>• 0: at least one RFID smart antenna is missing |
| 3 | Not applicable | - |
| 2 | | |
| 1 | | |
| 0 | | |

**⚠ WARNING**

**UNINTENDED EQUIPMENT OPERATION**

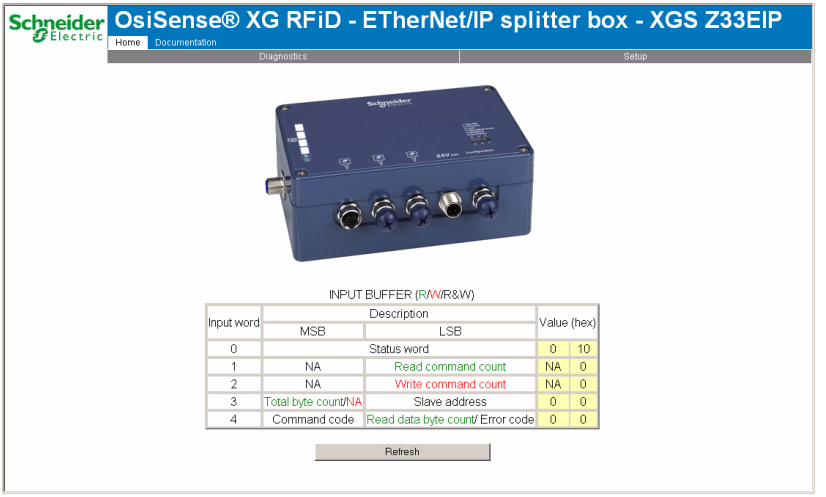
- Always initialize the splitter box by cycling the Power Off then On before connecting a new smart antenna.
- Always stop communications from Profibus-DP network to the splitter box until full setup of the new smart antenna.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

### Diagnostic Page Description

The **Diagnostic** page of the splitter box embedded Web server allows to see the upper part of the input data buffer.

The following graphic shows the splitter box Web server **Diagnostic** page:



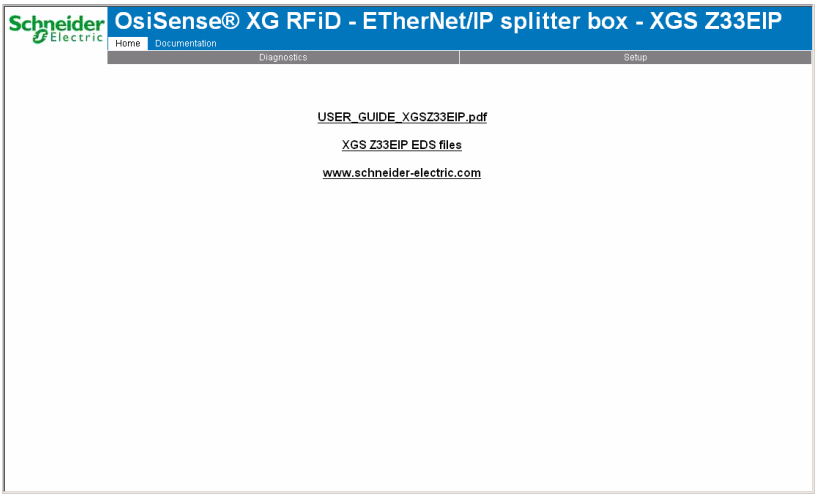

**NOTE:** The page must be refreshed manually by clicking **Refresh**.

## Documentation Page Description

The **Documentation** page of the splitter box embedded Web server allows to access the splitter box:

- user guide
- EDS file

The following graphic shows the splitter box Web server **Documentation** page:



# Application Example

# 7

## Introduction

The example illustrates the OsiSense XGSZ33EIP connection box on an Ethernet/IP network to communicate with a Premium controller on Unity Pro.

## What's in this Chapter?

This chapter contains the following topics:


| Topic | Page |
|---|---|
| Presentation | 52 |
| Creating a Project | 53 |
| Configuring the TSX ETC 100 EtherNet/IP Communication Module | 54 |
| Configuring the Ethernet Connection Box | 56 |
| Creating an Animation Table | 60 |
| Write Application Example | 61 |
| Read Application Example | 62 |

# Presentation

## Overview

This example illustrates the OsiSense XGSZ33EIP connection box on an Ethernet/IP network to communicate with a Premium controller on Unity Pro.

It is a walkthrough for the configuration of the connection box with the following steps:

- Create the required Premium platform on Unity Pro
- Configure the XGSZ33EIP
- 2 command examples

**NOTE:** This example will not provide explanations on how to install the hardware, refer to the document of the controller for this purpose.

## Hardware Requirement

The hardware required to set up this example is the following:

- A Premium controller TSX P57 6634M
- A TSX ETC 100 ethernet module
- OsiSense XGSZ33EIP connection box (set to IP address *(see page 29)* to: 192.168.0.10)
- 2 OsiSense reader smart antennas XGCS4901201 (set to Modbus address 2and 3)
- OsiSense power cable XGSZ09L2
- OsiSense Ethernet cable TCSECL1M3M1S2

## Software Requirement

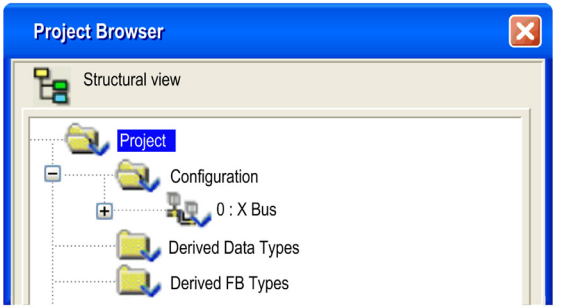
The software required to set up this example is the following:

- Unity Pro (version 5.0 or better)
- EtherNet/IP configuration tool

# Creating a Project

## Procedure

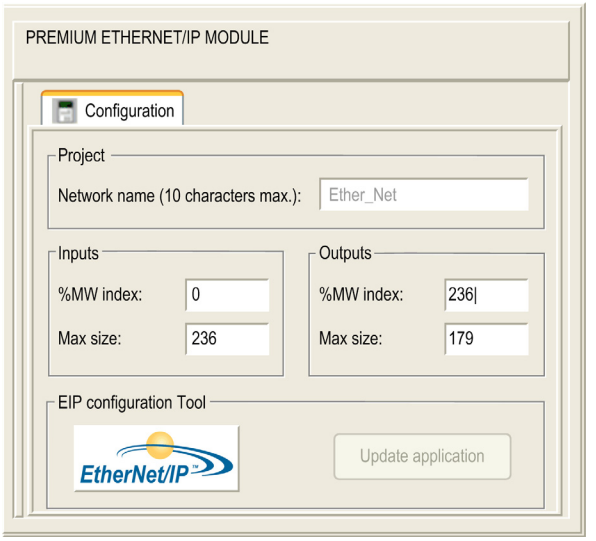
Use Unity Pro to create a new project:

| Step | Action |
|---|---|
| 1 | Launch Unity Pro. |
| 2 | In the Unity Pro main menu, select **File** →**New...**.<br>The **New Project** window opens displaying a list of Schneider-Electric controller types. |
| 3 | In the **New Project** window, open the Premium sub-list and select the controller TSX P57 6634M. |
| 4 | Click **OK**.<br>The **Project Browser** opens:<br>  |
| 5 | In the **Project Browser**, double click **Local Bus**. Unity Pro displays:<br>● the **Hardware catalog**, and<br>● a **Local Bus** window with the selected CPU in the second position (slot 0) and a TSX PSY 2600M power supply in the first position |
| 6 | In the **Hardware catalog**, use your mouse to drag a TSX ETC 100 EtherNet/IP communication module from the **Communication** section to a position in the backplane. In this example, the module is placed in the third position (slot 2). |
| 7 | To open the configuration window for the TSX ETC 100, do one of the following:<br>● double click the left mouse button on the TSX ETC 100 module in the **Local Bus** window above, or<br>● click the right mouse button on the module, then select **Open Module...** in the popup menu<br>The module configuration window opens, where you can configure the properties for the TSX ETC 100. |

# Configuring the TSX ETC 100 EtherNet/IP Communication Module

## Setting Input and Output Memory Addresses and Naming the Module

The **Configuration** page looks like this:



In the **Configuration** page, perform the following steps to name the module, and to set addresses and sizes for both inputs and outputs:

| Step | Action |
|---|---|
| 1 | In the **Project** section, type in a name for your module in the **Module name** input box - in this example: **ETC1**<br>**Note:** After the module name is entered and the EtherNet/IP configuration is validated (by clicking the  button), the module name cannot be edited. |
| 2 | In the **Input area** and **Output area**, type in the size and starting position of both the inputs and outputs. These values can later be edited. For this example, the following values are entered:<br>In the **Input area**:<br>● In the **%MW index** field, type in a starting address for inputs—in this example: **0**.<br>● In the **Max size** field, type in the maximum number of 16-bit words dedicated to inputs—in this example: **236**.)<br>In the **Output area**:<br>● In the **%MW index** field, type in a starting address for outputs—in this example: **236**.<br>● In the **Max size** field, type in the maximum number of 16-bit words dedicated to outputs—in this example: **179**.)<br>**Notes**:<br>● The inputs and outputs can be located at any available address, and do not need to be located in adjacent areas. It is important only that the space allocated to inputs and outputs do not overlap<br>● The specified %MW range for both inputs and outputs must be available in the CPU. For more information, refer to the Unity Pro help file topic *Processor Configuration Screen*. |
| 3 | In Unity Pro, select **Edit** →**Validate** (or click the **Validate**  button) to:<br>● save the EtherNet/IP module name—which becomes a non-editable, read-only value<br>● save the address and size settings for inputs and outputs, and |

# Configuring the Ethernet Connection Box

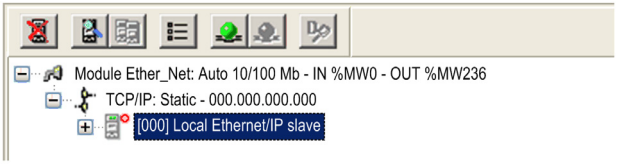
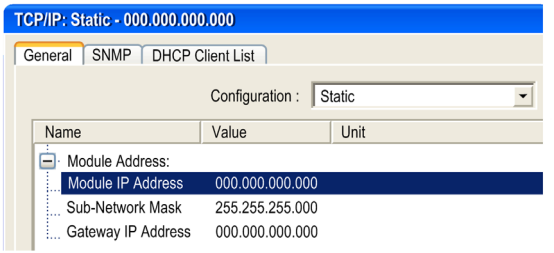
## Launching the Ethernet/IP Configuration Tool

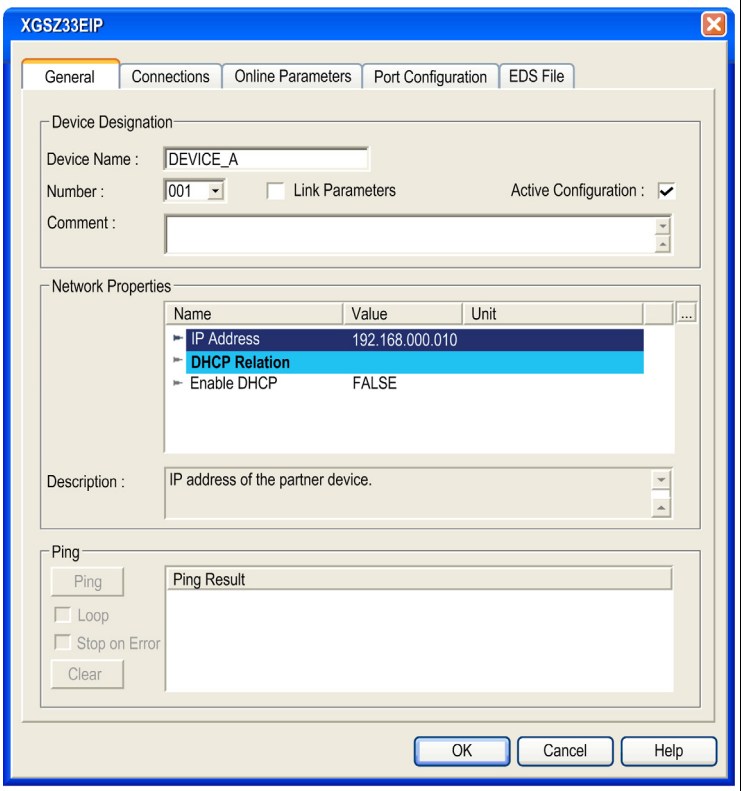
After you have saved both the EtherNet/IP module name and the input and output settings, launch the EtherNet/IP configuration tool by clicking on the EtherNet/IP button:


The EtherNet/IP configuration tool opens for editing. If EtherNet/IP device configurations have previously been edited and saved, they will be displayed.

**NOTE:** If the EtherNet/IP button is grayed, it means the EtherNet/IP Configuration Tool software is not installed. It is provided with the Unity Pro installation CD.

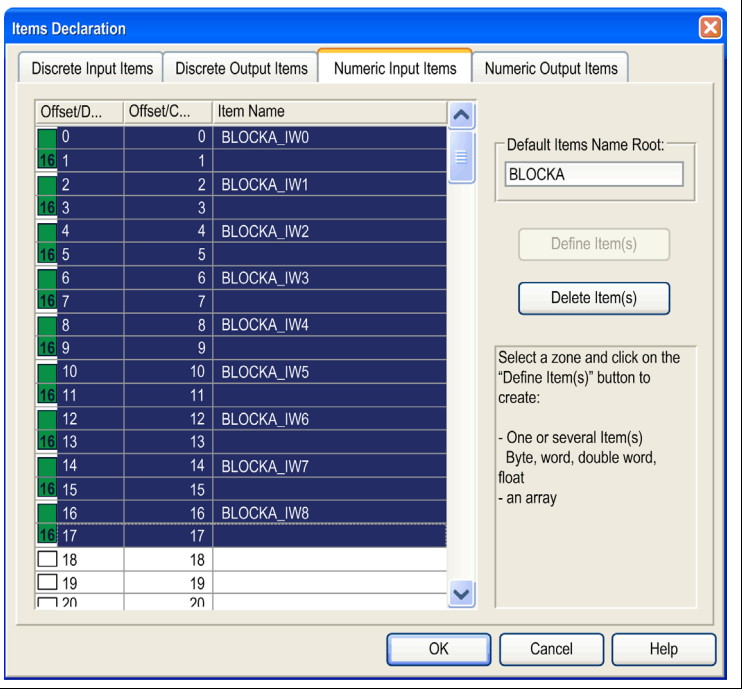
## Adding the Ethernet Connection Box

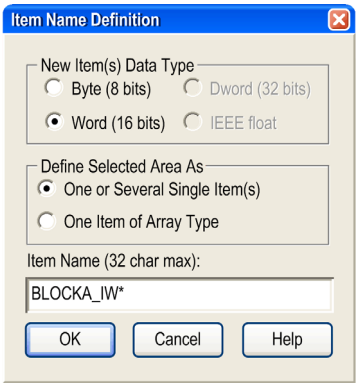
| Step | Action |
|---|---|
| 1 | Remove the **[000] Local Ethernet/IP Slave** element:<br>  <br> |
| 2 | Double click the **TCP/IP: Static - 000.000.000.000**<br>  <br><br>Double click on the Module IP Address and set the ip address to 192.168.000.003. |
| 3 | Follow this step if you haven't added the XGZS33EIP EDS file before.<br>Select **Library** →**Add**<br>Click **Next**<br>Click **Browse** and browse your computer folders to the location of the file `XGSZ33EIP_V_2.10.EDS` select the file and click **Open.**<br>Click **Next** →**Close** |

| Step | Action |
|---|---|
| 4 | Add the XGZS33EIP to you configuration by selecting the XGZS33EIP and select **Library →Insert in Configuration**.<br>  |
| 5 | Double click the **IP Address** field and set the IP address to 192.168.000.010. |

## Configuring the XGSZ33EIP

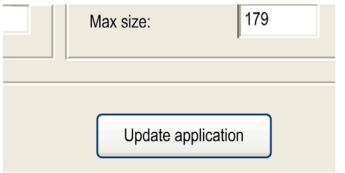
Follow the procedure to define 9 words of inputs and 9 word of outputs:

| Step | Action |
|---|---|
| 1 | Extend the **Device_A XGSZ33EIP**:<br>  <br><br>Double click the **Position: 000 XGSZ33EIP IO Connection** |
| 2 | Select the **Numeric Input Items** tab. |
| 3 | Select the first 18 bytes (0 to 17):<br>  <br> |

| Step | Action |
|---|---|
| 4 | Click the **Define Item(s)** button and select **Word (16 bits)**:<br>  <br>Click **OK** |
| 5 | Select the **Numeric Output Items** tab and reproduce the actions from step 1 to 4 in the output table. |

## Update Unity Pro Configuration

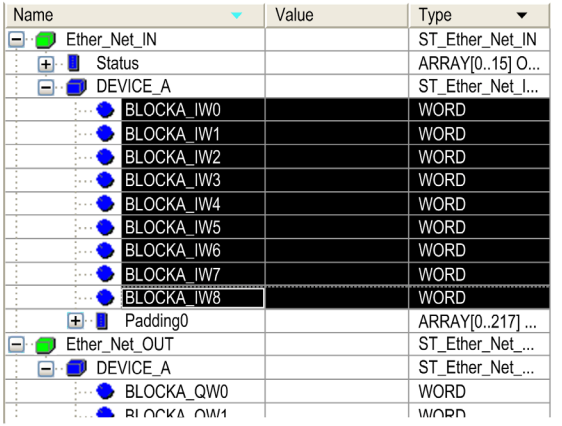
Once the configuration of the XGSZ33EIP is done, you need to import the configuration to Unity Pro:

| Step | Action |
|---|---|
| 1 | Save and close the EtherNET/IP Configuration Tool software. |
| 2 | Click on **Update Application**<br>  <br>**NOTE:** If you get an **Import Trouble Report** select **Replace All** and click **OK** |

# Creating an Animation Table

## Procedure

Create the animation table *(see Unity Pro, Operating Modes)* to visualize the applications:

| Step | Action |
|---|---|
| 1 | Add the 2 arrays which were imported from the EtherNET/IP Configuration Tool:<br>● `Ether_Net_IN`<br>● `Ether_Net_OUT` |
| 2 | Extend the `Ether_Net_IN` values and select all the words.<br>  |
| 3 | Display the words in hexadecimal by right clicking **Display Format** → **Hexadecimal** |
| 4 | Do the same for `Ether_Net_Out` words. |

# Write Application Example

## Overview

In this example, you will write 2 values in the RFiD tag.

Refer to the data buffer structure *(see page 37)* to understanding the meaning of each value provided.

## Procedure

| Step | Action |
|---|---|
| 1 | Change the value in output word 3 (`BLOCKA_QW3`), to a value of 16#0002. |
| 2 | Change the value in output word 4 (`BLOCKA_QW4`), to a value of 16#0001. |
| 3 | Change the value in output word 5 (`BLOCKA_QW5`), to a value of 16#0004. |
| 4 | Change the value in output word 6 (`BLOCKA_QW6`), to a value of 16#0800. |
| 5 | Change the value in output word 7 (`BLOCKA_QW7`), to a value of 16#1234. |
| 6 | Change the value in output word 8 (`BLOCKA_QW8`), to a value of 16#5678. |
| 7 | Place an RFiD tag near the smart antenna reader at Modbus Address 2. |
| 8 | Change the value in Output Word 2 back to a 16#0001. |

| | | |
|---|---|---|
| Ether_Net_OUT | | ST_Ether_Net_... |
| DEVICE_A | | ST_Ether_Net_... |
| BLOCKA_QW0 | 16#0000 | WORD |
| BLOCKA_QW1 | 16#0000 | WORD |
| BLOCKA_QW2 | 16#0001 | WORD |
| BLOCKA_QW3 | 16#0002 | WORD |
| BLOCKA_QW4 | 16#0001 | WORD |
| BLOCKA_QW5 | 16#0004 | WORD |
| BLOCKA_QW6 | 16#0800 | WORD |
| BLOCKA_QW7 | 16#1234 | WORD |
| BLOCKA_QW8 | 16#5678 | WORD |
| Padding0 | | ARRAY[0..161] ... |

This writes the values 16#1234 and 16#5678 from output words 7 and 8 in the PLC to the words 1 and 2 on the RFiD tag.

# Read Application Example

## Overview

After writing the values 16#1234 and 16#5678 on the RFiD tag, this example will provide the command to verify that the data was written to the RFiD tag in the correct locations.

Refer to the data buffer structure *(see page 37)* to understanding the meaning of each value provided.

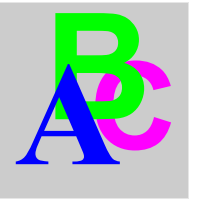
## Procedure

| Step | Action |
|---|---|
| 1 | Change the value in output word 3 (`BLOCKA_QW3`), to a value of 16#0003. |
| 2 | The value in output word 4,5 and 6 remain the same. |
| 3 | Place an RFiD tag near the smart antenna reader at Modbus Address 3. |
| 4 | Change the value in output word 1 (`BLOCKA_QW1`), to a value of 16#0001. |

The values in input words 5 and 6 are 16#1234 and 16#5678 respectively, as shown below:

| Name | Value | Type |
|---|---|---|
| Ether_Net_IN | | ST_Ether_Net_IN |
| Status | | ARRAY[0..15] O... |
| DEVICE_A | | ST_Ether_Net_I... |
| BLOCKA_IW0 | 16#0190 | WORD |
| BLOCKA_IW1 | 16#0015 | WORD |
| BLOCKA_IW2 | 16#0015 | WORD |
| BLOCKA_IW3 | 16#0A03 | WORD |
| BLOCKA_IW4 | 16#0308 | WORD |
| BLOCKA_IW5 | 16#1234 | WORD |
| BLOCKA_IW6 | 16#5678 | WORD |
| BLOCKA_IW7 | 16#0000 | WORD |
| BLOCKA_IW8 | 16#0000 | WORD |
| Padding0 | | ARRAY[0..217] ... |
| Ether_Net_OUT | | ST_Ether_Net_... |
| DEVICE_A | | ST_Ether_Net_... |
| BLOCKA_QW0 | 16#0000 | WORD |
| BLOCKA_QW1 | 16#0001 | WORD |
| BLOCKA_QW2 | 16#0000 | WORD |
| BLOCKA_QW3 | 16#0003 | WORD |
| BLOCKA_QW4 | 16#0001 | WORD |
| BLOCKA_QW5 | 16#0004 | WORD |
| BLOCKA_QW6 | 16#0800 | WORD |
| BLOCKA_QW7 | 16#0000 | WORD |
| BLOCKA_QW8 | 16#0000 | WORD |
| Padding0 | | ARRAY[0..161] ... |

# Index

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