

User Manual



KNXServerUM_EN_05

Contents

1 INTRODUCTION 1.1 Scope	
1.2 Qualified Personnel	3
2 SAFETY INFORMATION	4
2.1 Intended use	4
3 KNXSERVER	5
3.1 What is KNXServer	5
3.2 How it works	6
3.2.1 Install	
4 INSTALLATION	
4.1 Power Connections	8
4.2 LEDs Information	
4.3 Ethernet	
4.4 KNX IP Interface	9
5 CREATE KNXSERVER NETWORK BASED ON EXISTING KNX	
INFRASTRUCTURES	
5.1 VERIFICATIONS	
5.1.1 KNX/IP Interface:	10
5.1.2 KNXServer	10
5.1.2 KNXServer 5.1.3 Connections:	10 10
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension)	10 10 11
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software)	10 10 11 11
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software) 5.2.2 ETS 4.0 (Engineering Tool Software)	10 10 11 11 13
 5.1.2 KNXServer	10 10 11 11 13 15
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software) 5.2.2 ETS 4.0 (Engineering Tool Software) 5.2.3 ETS 5 (Enginnering Tool) 6 KNXTOOL	10 10 11 11 13 15 16
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software) 5.2.2 ETS 4.0 (Engineering Tool Software) 5.2.3 ETS 5 (Enginnering Tool) 6 KNXTOOL 6.1 Download and execute the KNXServer Tool	
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software) 5.2.2 ETS 4.0 (Engineering Tool Software) 5.2.3 ETS 5 (Enginnering Tool) 6 KNXTOOL 6.1 Download and execute the KNXServer Tool 6.2 Create a Workspace	10 11 11 13 15 16 16 16
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software) 5.2.2 ETS 4.0 (Engineering Tool Software) 5.2.3 ETS 5 (Enginnering Tool) 6 KNXTOOL 6.1 Download and execute the KNXServer Tool 6.2 Create a Workspace 6.3 Add Devices	
5.1.2 KNXServer 5.1.3 Connections: 5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software) 5.2.2 ETS 4.0 (Engineering Tool Software) 5.2.3 ETS 5 (Enginnering Tool) 6 KNXTOOL 6.1 Download and execute the KNXServer Tool 6.2 Create a Workspace	

Revision history

Rev #	Date	Authored	Approved	Change description, rationale, location
00	30.08.2012	FP	NCR	First revision
01	30.10.2012	FP	NCR	Update to HW3 devices
02	16.11.2012	JVF	NCR	ETS4.0 Chapter added
03	20.11.2012	JVF	NCR	Chapter 5.3
04	14.11.2014	JVF	JVF	Minor Revision
05	13/04/2015	CR	JVF	Global Revision

1 INTRODUCTION

1.1 Scope

This document is the User Manual (*manual*) for the *KNXServer*, developed and manufactured by Domatica Global Solutions, SA.

Use this document to:

- Get yourself familiarized with KNXServer.
- Quickly start using KNXServer
- Install and operate your KNXServer

NOTE: Read and understand this document and all related documents before installing, operating, or maintaining your device.

1.2 Qualified Personnel

Installation procedures must be carried out and inspected by qualified personnel. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with this product

2 SAFETY INFORMATION

Read these instructions carefully, and look at the equipments to become familiar with the device before trying to install, operate, or maintain it.

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol. These notices shown below are graded according to the degree of danger.

Alert messages are shown as below. The depicted triangle, meaningless by itself, is always filled with a symbol

DANGER, WARNING, CAUTION OR NOTICE

- DANGER indicates a hazard or unsafe practice that will result in severe injury or death;
- WARNING indicates a hazard or unsafe practice that could result in severe injury or death;
 - CAUTION indicates a hazard or unsafe practice that could result in injury;
 - **NOTICE** indicates an activity or practice that could result in damage to the device.

The symbol varies with the type of risk described

2.1 Intended use

Electronic devices are normally not failsafe. In the event of a failure on the iDomFramework devices, the user is responsible for ensuring that other devices that may be connected are made secure.

3 KNXSERVER

3.1 What is KNXServer

The KNXServer is a cloud-based Building Management System that provides a suite of endless functional features and can be applied to any KNX installation type.

The KNXServer is a DIN rail module to ease the integration in your KNX installation. The device connects to the KNX-bus through a standard KNXnet/IP Tunnelling (not included), and uses the free software KNXServer Tool to instantly setup the KNX installation. The KNXServer will allow you to expand your KNX system to other dimension that you never thought before.



- The KNXServer allows any KNX installation to go to the Web and be managed and controlled from anywhere, in one single platform.
- The KNXServer communicates with KNX sub-systems and brings them to the cloud in a seamless way.
- The KNXServer brings huge opportunities and challenges to the KNX integrators and users.
- The KNXServer enables real-time monitoring and control, automated rules, devices scheduler, alerts and notifications.
- The KNXServer is available in any interface using an internet connection.



KNXServer provides six digital input and six digital outputs for various applications.

3.2 How it works

3.2.1 Install

An easy installation at the Internet router allows you to communicate with your KNX system.



The KNXServer is a DIN Rail based for easily installation. It connects to KNX-Bus through any interface that supports KNXnet/IP Tunnelling.

Certified IP Interface

KNX IP Interface 730 and 770 (730 dedicated connection, 770 multiple connections) from Weinzierld - www.weinzierl.de

4 INSTALLATION

- Installation must take place according to the documentation, using suitable equipment and tools.
- Devices must be installed without voltage applied and by qualified personnel.
- General safety regulations and nationally applicable accident prevention guidelines must be observed.
- Electrical installation must be carried out according to the relevant guidelines

WARNING

The KNXServer use maximum of 30 Volts DC. The KNXServer can be installed in electrical control cabinets or in small distribution cabinets were hazard voltages are present. When installing observe the risks and avoid potential hazards

The KNXServer can be installed in electrical control cabinets or in small distribution boards according the DIN RAIL standard.



Installation detail on DIN rail

A typical installation of KNX can now integrate with other technologies with different protocols in a very simplified way. KNXServer added to the existing installation allows you to connect to: System Bridge Multi protocol.



4.1 Power Connections

An external power supply is required to provide power to KNXServer.



4.2 LEDs Information



Red (Power - Power Supply) Green (Ready - Ready to Work) Orange (Busy - Module Activity) Yellow (Bus - Bus Activity)

4.3 Ethernet

The Ethernet connection provides a full-duplex 10/100Tx connection to the KNX System. With such connection it is possible to program and control the whole KNX Network.



Pin	Description
1	Tranceive Data +
2	Tranceive Data -
3	Receive Data +
4	Bi-directional Data +
5	Bi-directional Data -
6	Receive Data -
7	Bi-directional Data +
8	Bi-directional Data -

Over Ethernet it is possible to connect to the KNX Ethernet Device protocol, for more details please refer to the specific manual.

4.4 KNX IP Interface

The KNX IP Interface allows communication between the KNXServer and the KNX network. The connection should be as shown below.



5 CREATE KNXSERVER NETWORK BASED ON EXISTING KNX INFRASTRUCTURES

Before start creating an KNXServer Network based on existing KNX Sytems infrastructures, you will need the following:

- 1. The KNXServer Hardware;
- 2. Network Router With DHCP;
- 3. KNX/IP Interface (certified);
- 4. KNX Project for ETS Software Tool;
 - a. ETS5 Project.knxproj;
 - b. ETS4 Project.knxproj;
 - c. ETS3 project.esf.

5.1 VERIFICATIONS

5.1.1 KNX/IP Interface:

1. Check if the KNX Device IP is in the same IP range as the router (Example: Image).

5.1.2 KNXServer

1. By default, the KNXServer has DHCP active, so it will get an IP automatically from the router. Nevertheless, check if the KNXServer IP is in the same IP range as the router (Example: Image).

5.1.3 Connections:

How to connect the KNXServer and the KNX device (Example: Image).



5.2 Export ETS Project or OPC File (ESF extension) 5.2.1 ETS 3.0 (Engineering Tool Software)

Open *ETS 3.0*.

In main menu select File and click Open/Manage Project.



Select the most recent project and click Open.

Name	Project Number	Devices Count	Conctract Number	Open
Project	ารรักษาสามารถ มีการเราสามารถ สามารถ มีการเราสามารถ	6		Cancel
				<u>N</u> ew
				Add Copy
				<u>D</u> elete
•			•	

In main menu select File and click Extract Data (e.g. OPC).

Ę	ETS3 - All Devices in Feira			_		-								
	<u>File Edit View Commissioning Diagnostics</u>	E⊻t	ras <u>W</u> indow <u>H</u> elp	p										
	New Project Ctrl+N) 🔇	. 🖬 🖩 🖬	l 😂 🖌 🏭 📸	道 道	街 街 街 1		- 🕺 🔂	3 🖬					
ľ	C <u>l</u> ose Project													
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ľ	🔚 All Devices in Feira										[- • ×		
	□ Devices □ 1.1.1 KNX IP BAOS 771 □ 1.1.2 Push-button 2-gang plus □ 1.1.3 Push-button 2-gang plus □ 1.1.4 Universal dimming a stuator REG-1 □ 1.1.4 Universal dimming a stuator REG-1 □ 1.1.5 Binary input REG-K/ &230 □ 1.1.4 Universal dimming a stuator REG-1					Address 1.1.1 1.1.2 1.1.3 1.1.4 1.1.4 1.1.5 1.1.9	Room	Function	Description	KND Unis Unis Unis		1 .0 .0	F 4 4 4 4 4 4	

In menu Export to OPC Server click Export.

Export to CSV/XML Export the content of the active list view (right browser pane) to a CSV or XML file (e.g. for further use in a spreadsheet program).	_
Export to OPC Server Exports project data for use by the KNX OPC server. Export Cancel	

Insert the intended name and save the project.

Save As							×
C v libe	oraries	Documents > Project	•	49	Search Project		٩
Organize 👻 Nev	w folde	r.					0
Computer Compu		Documents library Project	No ítems match your search.		Arrange by:	Folder *	
File name:	projec	t.esf					-
Save as type:					1		•
Hide Folders			Tools	•	Save	Cancel	

5.2.2 ETS 4.0 (Engineering Tool Software)

ETS4™ ETS	_					
Quick Actions	Overview	Projects	Catalogs	Database	Settings	KNX
Open a database Diagnostics	First Steps					Version Information
Open diagnostic tools Open diagnostic tools Device Info Individual Addresses Unload Device Bus Monitoring Group Monitoring Tool Diagnostics Import Pota Import Poducts	No database of the provided of the provid	ase opened for ETS4 available. database database	bases or create a new o	r there is at least one al		ETS Version: ETS 4.1.2 (Build 3013) Master Data: Version 92, Schema 1.1 Licenses: ETS4 Demo License
Help ETS 4 Help Exit	KNX News					Licensing About
Closes the ETS		um of KNX Technol	nov and Application for	r home and building co	ntrol a 4	Certified KNX Products
ecent Projects	KNX Association to	o support Euroskills nference 2014: Call I	2014	the trid building co		For a list of certified KNX products see here. New KNX Products
IS_KNXPannel estes	KNX Training Cont Over 1500 visitors	ference in Portugal congratulate the K III	NX Award winners at th		* }	HOTELLO App for Hotel Customer Imagine: You arrive late in the evening at your hotel; entrance and reception are already

Open ETS4 and go to *Projects* by clicking the respective icon.

Select the project you want to use and click on the *Export* button.

1 -	S4™ - Project 1							
ETS		Diagnostics Extras	Window Help					
	ck Actions	Overview		Catalogs	Database	() Settings		KNX
R	Change Database Change the currently open database	🕂 New 🛅 O			Import 📑 Export		ct 🚔 Reset Split	Find P
o	New Project Create a new project from scratch	Name A Last Project 1 15-04	Jpdated Status -2015 10:33 Unknow		Number Start Date E .034	nd Date		
1	New Project (Assistant) Create a new project using the assistant							
	Diagnostics Open diagnostic tools Device Info Individual Addresses	*						•
	Unload Device Bus Monitoring	Details: Project 1 General Project log	Project files					
	Group Monitoring Tool Diagnostics	Name:	Project 1		Password:		<u>C</u> hange	
-	Import Data Import projects or products Import Projects	Project number: Contract number:	201411.034		BAU Password: Codepage:	Western Europe	<u>Change</u> ean (ISO 8859-1) ▼	
	Import Products	Start date: End date:		15	Group address s	yle		
	Help ETS 4 Help Exit		15-04-2015 10:33	15	Two level Three level			
0	Closes the ETS	Import date:	15-04-2015 10:29		Hide extend	ed group addres	s range for plugins	
Rec	ent Projects	Status:	Unknown	•				

Choose directory to save your Project and click *Save* button.

→ → W7VM → Downloads	← ← Sear	ch Downloads 🛛 🔎
)rganize 👻 New folder		:= • 0
 Favorites Favorites Desktop Downloads Recent Places Libraries Documents Music Pictures Videos Computer Computer 	Date modified Type No items match your search.	Size
File name: Project 1.knxproj		84

5.2.3 ETS 5 (Enginnering Tool)

Open ETS5, select the project you want to use and click on *Export* button.

FS Vour Projects Your Projects Your Project 1 15/04/2015 Project 1 15/04/2015 Project 1 15/04/2015 Project 1 15/04/2015
Overview Bus Catalog Settings Your Projects • + ** ************************************
Name Last Modified * Status Project 1 15/04/2015 12:45 Tested, last modified in project archive by you on this machine at Name Password Project 1 Set Password Set Contract Number Set Key 201504.003 Set Key Start Date Group Address Style Select a date Tree Implement
Project 1 15/04/2015 12:45 Tested, last modified in project archive by you on this machine at Details Project Log Project Files Name Password Project 1 Set Password Project 100000 Set Key 201504.003 Contract Number Contract Number Codepage Western European (ISO 8859-1) Set Key Start Date Group Address Style Select a date To Two level
Project 1 Set Password Project Number BCU Key 201504.003 Set Key Contract Number Codepage Western European (ISO 8859-1) ▼ Start Date Group Address Style Select a date □
Project Number 201504.003 Contract Number Codepage Western European (SO 8859-1) ▼ Start Date Select a date Selec
201504.003 Set Key Contract Number Start Date Select a date Select a date S
Western European (ISO 8859-1) Start Date Group Address Style Select a date Select a date
Start Date Group Address Style Select a date
Select a date 5
End Date
Select a date IS
Status Compatibility
Tested Hide extended group address range for plugins Comment Use slowed bus communication
Comment
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ETS Version ETS 5.0.4 (Build 1146) Licentes Demo Appr 0 activ

Choose directory to save you project and click *Save* button.

8		Export project file				×
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Documentos						
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📗 Música						
Vídeos						
-	~ <	(>
File <u>n</u> ame:	Project 1.knxproj					~
Save as <u>t</u> ype:	ETS project file (*.)	knxproj;)				~
Hide Folders				Save	Cancel	

6 KNXSERVER TOOL

6.1 Download and execute the KNXServer Tool

Download the KNXServer Tool from the support website.



6.2 Create a Workspace

Open your KNXServer Tool and create a new KNXServer Branch, using the Add button, as shown in picture



Fill Branch Name field, insert KNXServer Serial Number and click Network Configuration.

***		Add KN	NXServer Bra	nch	- 🗆	2
	anch Name					
	SBON OFFICE					
K	NXServer Network SERIAL NUMBER		MODULE TYPE	:	MASTE	R
	23000123		KNXServer	-	✓	•
	Network Configuration	1		ОК	Cance	

Then click on Discover to find your KNXServer

***	Network Configura	ition ×
IP Config DHCP	Port	Server Connection Enable Sever IP
IP Address	3002	123.456.789.000
Netmask	Default Gateway	Server Port 1234
Discover		OK Cancel

**	Network Configura	tion ×
IP Config		Server Connection
IP Address 192,168,000,288	Port 3002	Sever IP 123.456.789.000
Netmask 255,255,255,000	Default Gateway 192,168,000,254	Server Port 1234
Discover	KServer found!	OK Cancel

When it finds the KNXServer you wil get the message "KNXServer found! S N: 23000123".

Click Ok to save Network Configurations and again to create KNXServer Brach.

6.3 Add Devices

For "LISBON OFFICE" add a new device by clicking the "Add" button on the right side of the Tool.

🐨 workspac	e1 - KNXServer Tool	- 🗆 💌
<u>F</u> ile <u>T</u> ools <u>S</u> ettings <u>H</u> elp		
O 🖉 🛅 🚿 🧏 🟦		KNX server
KNXServer Branches LISBON OFFICE	O 🔊 🗇	
	Devices	Reference
	<	>

Then, on "Import", select what version of ETS Project you want to import and click "Add" button.

	Devices		×
E- Import - KNX Project - ETS3 - KNX Project - ETS4 - KNX Project - ETS5			
		Add Cancel],1

In the next window, click on "Import", navigate to the wanted ETS project file and click open.

KNX Tel					KNX F	roject									- [×
L	Import	Project name Project date Coordinator Request time	LISBON OFFICE 0x23000123 50		~		IP interface address IP interface port Group address style Hide 16 bit group add		3671 three	elev	0.289 el)				•	-
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Validate Group Address Function, Description, Data Size, Flags and Enable or Disable group addresses, and click "Ok".

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Impo		ect date				IP interface port 3671										
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	10/4/14	Blind Up		~	Office 1 Blinds UP/DOWN		1 bit	~	•	•	•	~	•	•		
	10/4/17	Light OnC)FF	~	Office 1 Lighting		1 bit	~	•	•	•	•	•	•	0	✓
	10/4/18	Light Stat	e	~	SI Office 1 Lighting		1 bit	~	•	•	•	•	•	✓	0	~
	10/4/22	Light OnC)FF	~	Bedroom Hall Lighting		1 bit	~	✓	✓	✓	•	•	✓	0	~
	10/4/23	Light Stat	e	~	SI Bedroom Hall Lighting		1 bit	~	✓	•	✓	•	•	-	0	~
	10/4/24	Light OnC)FF	~	Common WC Lighting		1 bit	~	✓	✓	✓	•	•	✓	0	~
	10/4/25	Light Stat	•	- U	SI Common WC Lighting		1.6#	U			1	1	1	1	0	4

Make sure to insert the IP interface address and port!

6.4 Send the data to the KNXServer

The final step is to send the data to the KNXServer.

To do that you must click the connect button as shown bellow. If connection is successful it will appear *"[Online]*' next to branch name.



Then, click on "Deploy" button to send the data.



7 REGISTER AND ACCESS KNXSERVER ONLINE

The last step to start using your KNXServer is to register online so you can access all KNXServer functionalities.

When you order your KNXServer, you will receive an email with the following information:

- Entity code
- Username
- Automatically generated passsword

Then, when you receive your KNXServer, on the right top of it you have a small label with the serial number and the label key, as shown in image.



Serial Number and Label Key format is:

S N: 23XXXXXX L K: XXXXXXXXXXXXXXXXXX

Where X represents a hexadecimal digit.

Go to http://register.knxserver.com and register your equipment.

Entity Code 🛛	E55555e5ee5E55	
System Name	Lisbon Office Characters: 13/40	
Timezone	(UTC +01:00) Lisbon	
Serial Number Ø	23000123	
Label Key Ø	ΑΑΑΑΑΑΑΑΑΑΑΑΑΑ	



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