Extron

KNX 100G • Setup Guide

This setup guide covers the physical installation of the KNX 100G and KNXnet/IP tunneling from a PC to a KNX network during configuration and commissioning.

The KNX 100G allows better integration of control with KNX building management systems (BMS). The product serves as a gateway for control systems and ETS software to the KNX bus, and it is designed to be installed onto a DIN rail with a width of 1 unit (18 mm).

Power is supplied via the KNX bus; an external power supply is not necessary. The KNX bus can be accessed from any point on the LAN. The IP address can be obtained by a DHCP server or by manual configuration. There are five simultaneous connections possible for access via KNXnet.
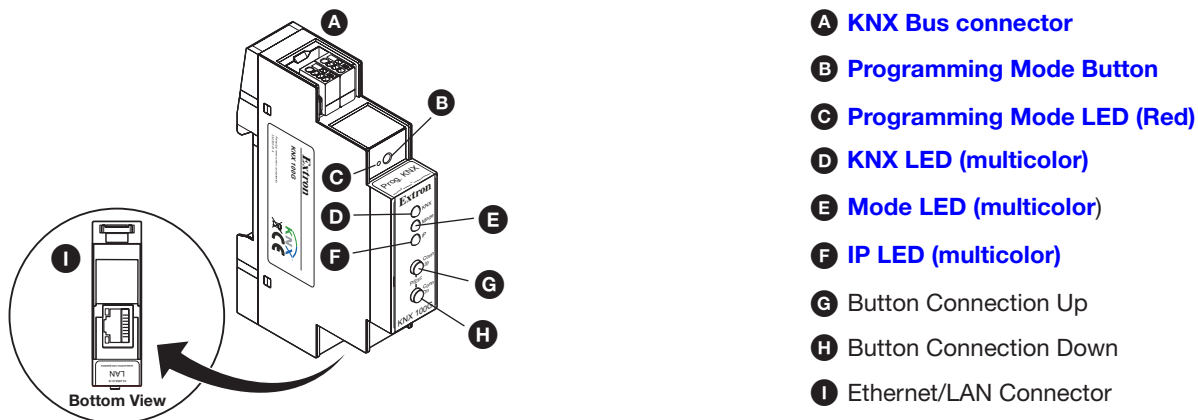

Ⓐ **KNX Bus connector**

Ⓑ **Programming Mode Button**

Ⓒ **Programming Mode LED (Red)**

Ⓓ **KNX LED (multicolor)**

Ⓔ **Mode LED (multicolor)**

Ⓕ **IP LED (multicolor)**

Ⓖ Button Connection Up

Ⓗ Button Connection Down

Ⓘ Ethernet/LAN Connector

Figure 1.   **KNX 100G Controls and Displays**

Installing Onto DIN Rail

1.   Ensure the DIN rail is securely mounted onto the wall or furniture.

2.   Place top rear against wall/furniture (Figure 2, ❶).

3.   Slide the unit down onto top of rail (Figure 2, ❷).

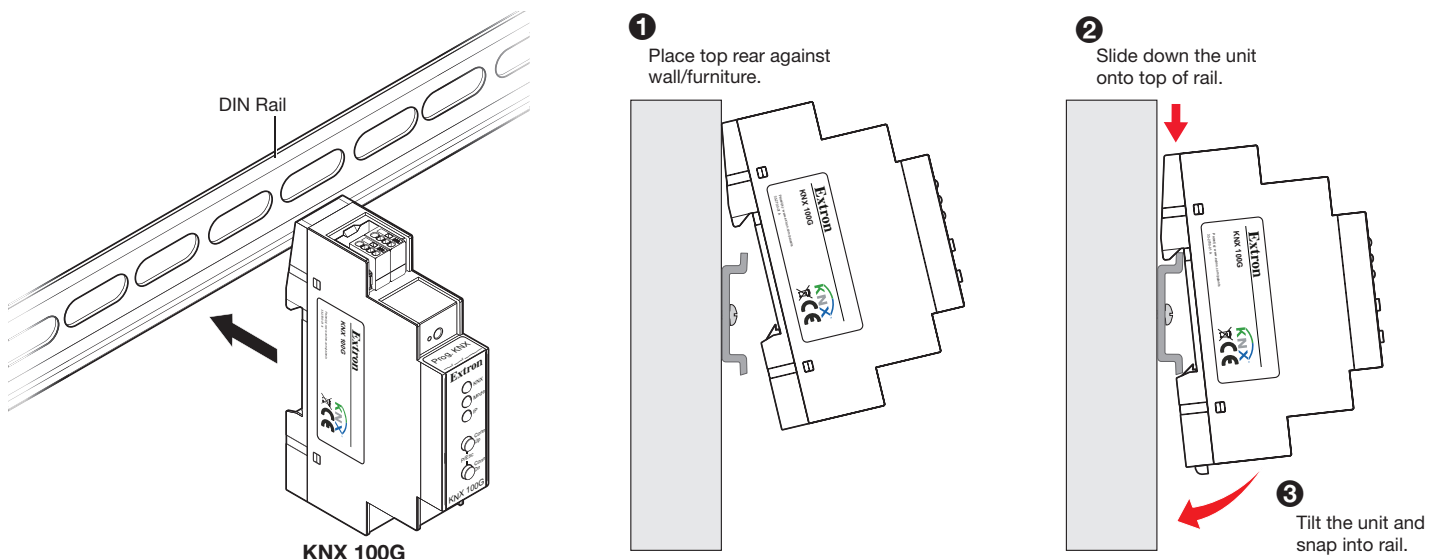4.   Tilt the unit and snap onto the rail (Figure 2, ❸).

Figure 2.   **KNX 100G DIN Rail Installation**

LED Status Indicators

C Programming Mode LED

LED STATUS	Meaning
LED lights red	Programming mode is active
LED Off	Programming mode is not active

D KNX LED

LED STATUS	Meaning
LED lights green	KNX 100G successfully powered
LED flashes green	Telegram traffic on the KNX bus
LED lights red shortly	Communication failure on the KNX bus

E Mode LED

LED STATUS	Meaning
LED lights green	Device is working in standard operation mode
LED lights red	Programming mode is active
LED flashes green 1x...5x	Programming mode is not active Manual operation is active The selected tunnel (1-5) is not used and free
LED flashes orange 1x...5x	Programming mode is not active Manual operation is active The selected tunnel (1-5) is used and free
LED flashes red	Programming mode is not active Manual operation is not active The device is not properly loaded for example after an interrupted download

F IP LED

LED STATUS	Meaning
LED lights green	The device has an active Ethernet link and valid IP settings.
LED lights red	The device has an active Ethernet link and invalid IP settings or not yet received the IP settings by a DHCP server.
LED flashes green	IP telegram traffic

KNX 100G Network Installation

1. Using a certified KNX twisted pair cable, connect to the KNX BUS located on the top of the device (see figure 3).

2. Connect an ethernet cable between the Ethernet port located at the bottom of the KNX 100G and the local network.

3. Configure the KNX 100G using ETS.

4. Configure your Extron Control System using the Extron driver targeted at your configured KNX 100G.

NOTE: Engineering Tool Software (ETS) is an application for designing, commissioning, and debugging KNX installations. Click this **link** to view and purchase ETS for your KNX setup. KNX system setup should be done by a certified KNX professional.
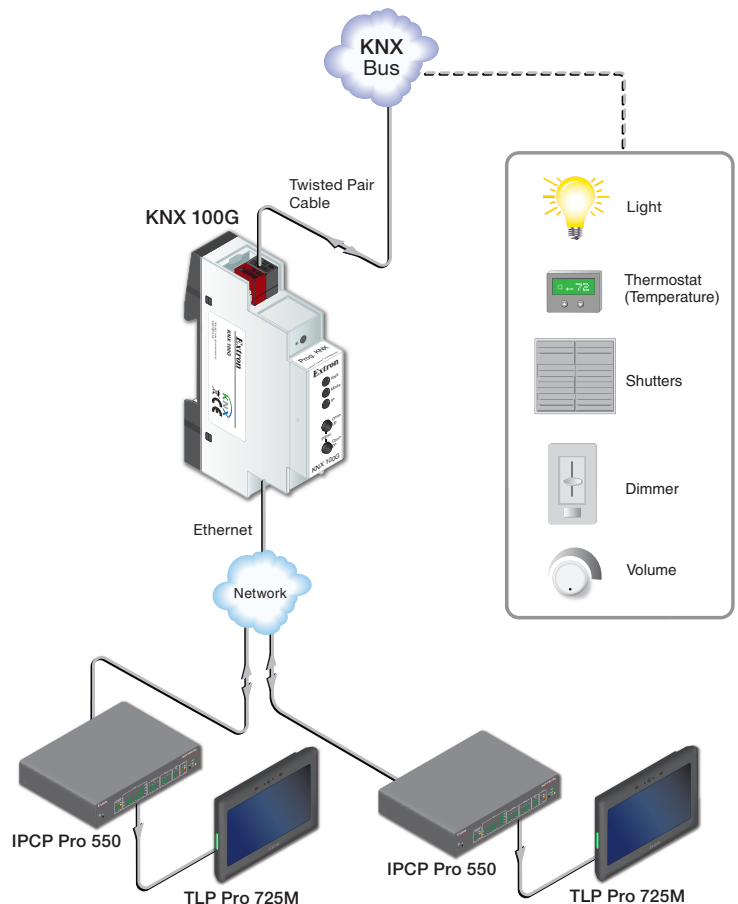

Figure 3. KNX 100G Application Diagram

Factory Default Settings

Setting	Value
Individual Device Address	**15.15.255**
Number of configured KNXnet/IP tunneling connection	**1**
Individual address of tunneling connection	**15.15.250**
IP address assignment:	**DHCP**

Reset to Factory Device Settings

The following callouts reference **Figure 1 on page 1.**

1. Separate the KNX Bus connector Ⓐ from the device.
2. Press and hold the Programming Mode button Ⓑ.
3. Reconnect KNX Bus connector Ⓐ of device.
4. Continue holding the Programming Mode button Ⓑ for six seconds.
5. A short flashing of all LEDs (ⒸⒹⒺⒻ) visaulizes the successful reset of the device to factory default settings.

KNX 100G Setup

1. Add KNX 100G Interface Within ETS

Within ETS, the KNX 100G interfaces can be selected and setup via "Bus Interfaces".

> **NOTE:** ETS can access configured KNX 100G interfaces without a database entry if the default settings are compatible with the KNX installation. If the KNX 100G setup does not comply with installation conditions, it must be configured within an ETS project. See **Configure Interface Properties on page 4**.

After connecting the KNX 100G to the LAN and the KNX bus, the device should automatically appear in ETS within the "Bus" menu under "Discovered Interfaces". By double clicking on the discovered interface, it will be selected as the current interface. On the right side of the ETS window, all specific information and options of the connection appear (see figure 5).

2. Setup Individual Address for Tunneling

The device's name and "Individual Address" can be changed within your ETS project. The KNX 100G has an individual address which can be used to access the device.

The device supports up to five connections for control. Each connection is associated with one of the five individual addresses in the device. The addresses can be assigned via ETS. Telegrams sent to the bus contain a sender address from one of the five additional addresses, and response telegrams can be transmitted to respective clients.

Additional individual addresses must be selected from the address range of the bus line in which the interface is installed and may not be used by another device. The individual KNX 100G address and the addresses for additional tunneling connections can be changed within the ETS project after the device has been added to the project.
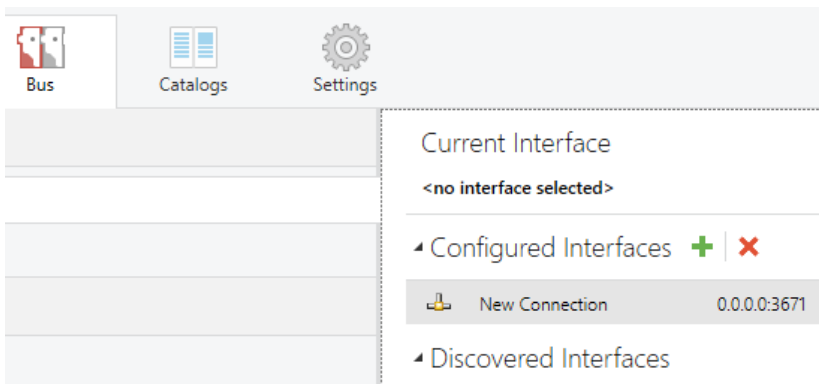

Figure 4.   New Connection in Bus Interfaces

Figure 5.   Changing Device Address in ETS

3. Configure Interface Properties

After adding the KNX 100G to a project, you can change the `Individual Address` and IP setting in `Properties` (see figure 7 below). In ETS 4, additional individual addresses will appear in the Topology view.

Within the 'Settings' overview, each individual KNX address and the device's name can be changed. 'Properties' will appear on the right side of the ETS window after clicking on the KNX 100G device entry within the project's topology view. Click on the list entry and type in the desired address into the `Individual Address` textfield to change an individual address (see ❶ in Figure 6). If the textfield frame switches to color red after entering the address, the address is already taken within your ETS project.

> **NOTE:** Make sure none of the individual KNX addresses are in use within the KNX installation.
>
> If the physical KNX addresses of the tunneling connections have been assigned via ETS, a manual address setting on the device is not allowed.

The IP network specific options of the KNX 100G can be changed. In the 'Properties' window, click on the 'IP' tab. Change **Obtain an IP address automatically** to **Use a static IP address** to set the **IP address**, **subnet mask**, and **default gateway freely** ❷.
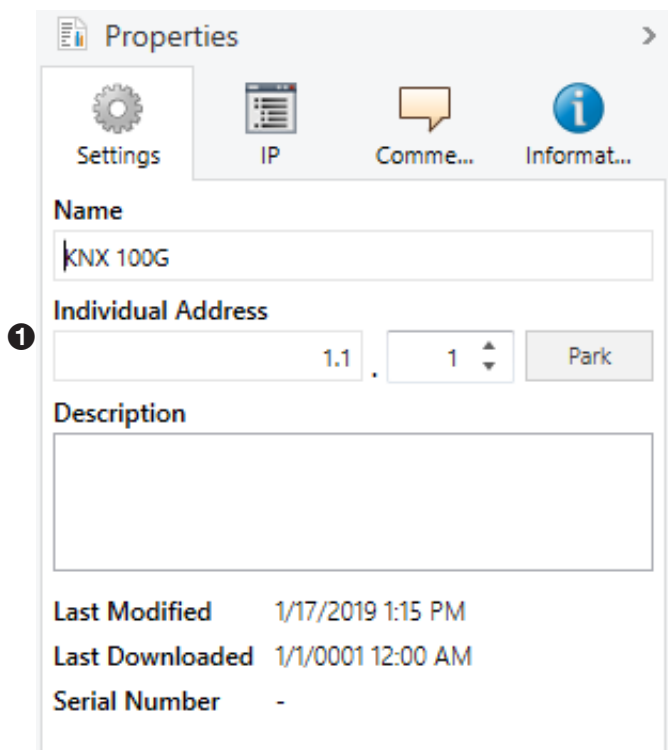
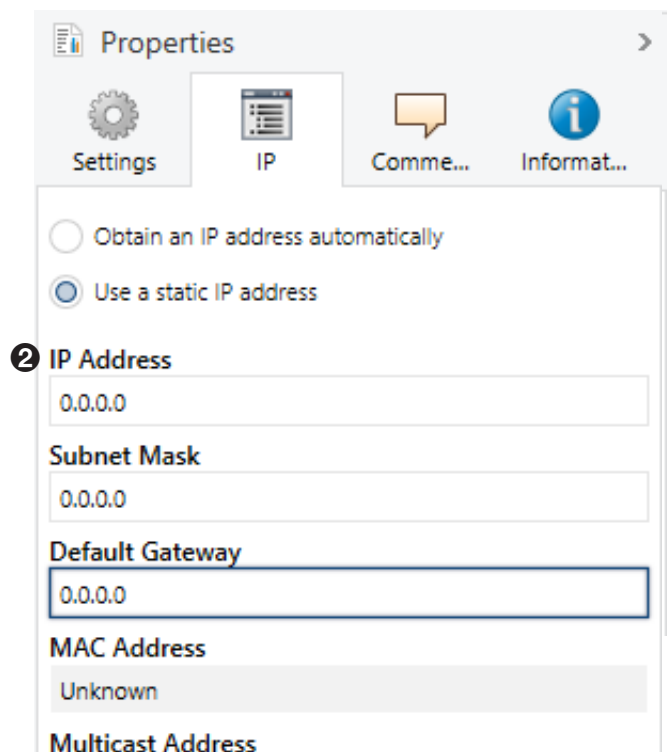

Figure 6.   ETS Properties Settings

Figure 7.   ETS Properties IP

4. Program the KNX System

Via the KNX Bus

The device only needs to be connected to the KNX bus. ETS requires an additional interface to have access to the bus. Both the individual address and the entire application can be programmed via the KNX bus. Programming via the bus is recommended if no IP connection can be established.

Via KNXnet/IP Tunneling

No additional interface is required. Programming via KNXnet/IP Tunneling is possible if the device already has a valid IP configuration. The device is displayed in the interface configuration of ETS and must be selected. The download is executed via ETS.

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the **Extron Safety and Regulatory Compliance Guide** on the Extron website.