

2018

KNX-RS485 Gateway User Manual



Zhuhai Sation Technology Co., Ltd.

2018-3-27

Content

1	Overview.....	1
2	Technical Data.....	II
3	Description.....	2
4	Wiring diagram.....	3
5	Dimension Drawing.....	5
6	Contact.....	6

1. Overview

GW2302.0201 is a KNX device with gateway function between a serial RS485 Modbus RTU network (Master function) and a KNX TP network over a twisted pair communication cable. Ideal application in integration of Modbus devices over a RS485 serial network in a KNX-based home and building control system.



Copyright Clarify

Copyright ownership belongs to Zhuhai Sation Technology Co., Ltd. shall not be reproduced, copied, or used in other ways without permission. Otherwise Zhuhai Sation Technology Co., Ltd. will have the right to pursue legal responsibilities.

Version

Version No.	Release Date	Description
V1.0	March 27 th , 2018	1 st Release

Notice

1. Please read this user manual carefully before using the product.
2. This product is used in indoor environment and installed in electrical control box.
3. Please install this product in a dry and ventilated place.
4. Before power on, please confirm the input voltage according to the manual; after power on, please confirm the normal output voltage before connecting to the control bus.
5. Please make sure the secure shell is in good condition, if the shell is damaged, please stop using to avoid accident.
6. This product is NOT a toy, please make sure it is out of children touch.
7. Only be suitable for EIB/KNX system bus.
8. Others:
The below sign indicates this product can't be dealt as ordinary family rubbish, in order to avoid the possible environment and human health harm caused by the electrical waste, this product must follow recovery processing. Please contact the local recycling department after this product is scrapped, to make sure it can go as the right waste processing procedure.



2. Technical Data

External Power supply	10~30 VDC
Installation	Install on 35 mm DIN rail (according to EN 60529)
Shell Material	Plastic case
Safety class	II
Weight	80 g
Modular device	2UM (1UM = 18 mm)
Dimension	36 x 90 x 63 mm (WxHxD)
Operating temperature	-40 ... + 85°C
Stock temperature	-25 ... + 55°C
Relative humidity	93% non-condensing

3.Description

GW2302.0201 is a KNX modular unit for installation in the distribution board on 35 mm mounting rails. It allows you to exchange information with one or more slave devices over a RS485 differential serial network through Modbus RTU (Remote Terminal Unit) protocol. GW2302.0201 acts as Modbus Master. The information exchanged over the Modbus network are updated over the KNX network by means of a twisted pair (TP) communication cable.

The device manages a two-way data stream: the Modbus registers can be cyclically read and their value sent as a communication object over the KNX TP network through a multicast communication to configured group addresses. The data update over the KNX network can be done cyclically and/or on event of change of the data acquired by the Modbus network.

Likewise, GW2302.0201 can make requests to cyclically readings KNX communication objects or acquire their values during data exchange over the bus. Cyclically or on event of change of the communication objects, data are written on the Modbus registers of one or more configured

devices.

GW2302.0201 supports the entire Modbus RTU master protocol with the possibility of reading and writing single and multiple 1-bit registers (Coil and Status) as well as 16-bit registers (Holding and Input). It is also possible to read and write multiple registers containing 32-bit floating point values (IEEE 754 format).

As for KNX communication, 1-bit, 1-byte, 2-byte and 4-byte communication objects can be acquired: internal conversion functions allow you to convert the information from and to 16-bit floating point values (DPT 9.xxx) starting from integer Modbus registers.

Configuration is performed through a PC application software called ETS.

4.Wiring diagram

Modbus side

- RS485 serial communication port, electrically isolated from KNX Bus, 120 Ohm termination resistance is included by default.
- Modbus master RTU (Remote Terminal Unit) communication
- Selectable baud rate from 2400 to 115200 baud
- Device addressing from 1 to 255
- Coil, Input, Holding Register e Input Register data exchange
- Single and multiple register reading/writing

Power side

External power supply range from 10V DC to 30V DC.

KNX TP (Twisted Pair) communication port set to 9600 baud, electrically isolated from external power supply.

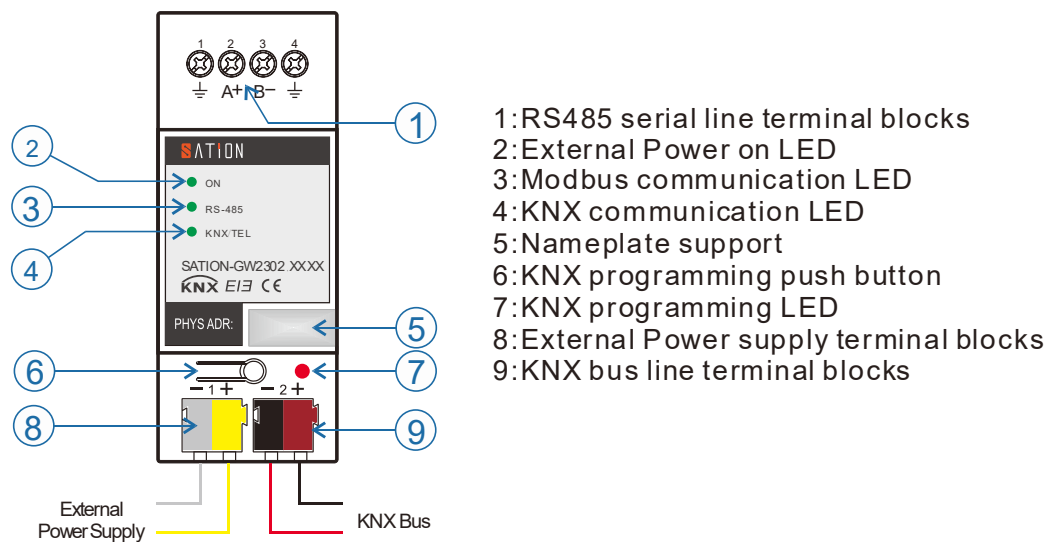
Display elements

If external power supply is OK, the ON led ON, otherwise the ON led OFF.

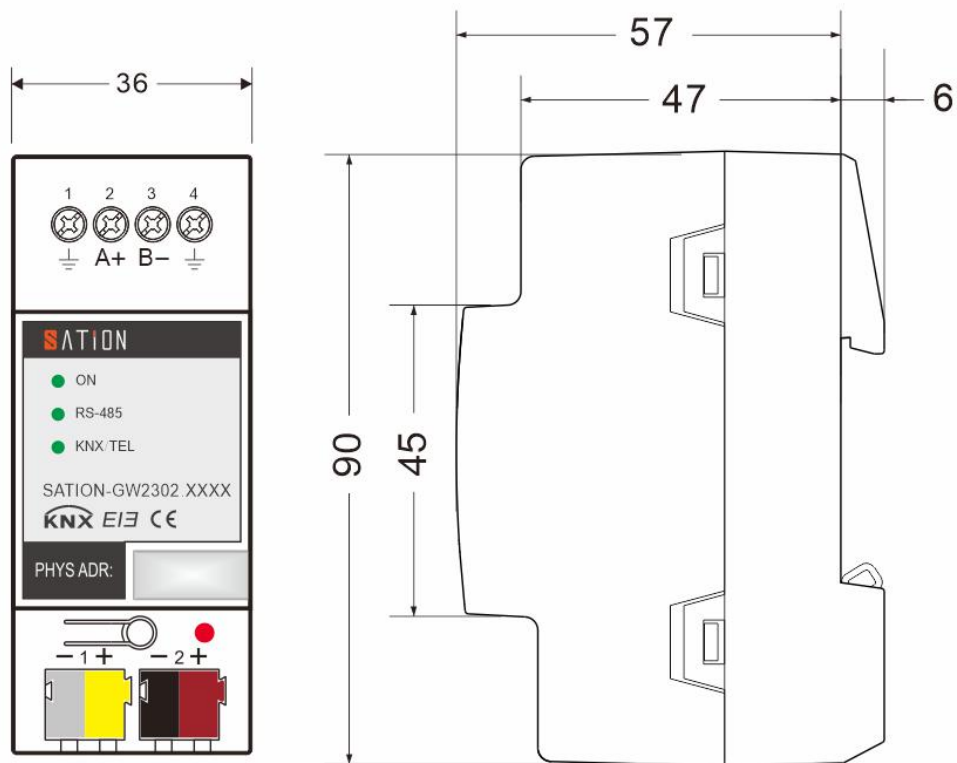
The RS-485 led indicates Modbus communication.

The KNX/TEL led indicates KNX communication.

Push button that switches between normal mode and KNX physical address programming, the programming led on indicates the product is in programming mode.



5.Dimension Drawing



Unit: mm

6.Contact

Zhuhai Sation Technology CO., Ltd

3F-2 Blog B1, No.1 Software Road, Hi-tech Zone, Zhuhai, Guangdong, China
519000

TEL: +86-756-3628187/3628287/3628387

FAX: +86-756-2612730

www.sation.com.cn

Factory· Shenzhen HuaYuan Display Co., Ltd.

TEL: +86-755-27336598

FAX: +86-755-27301699