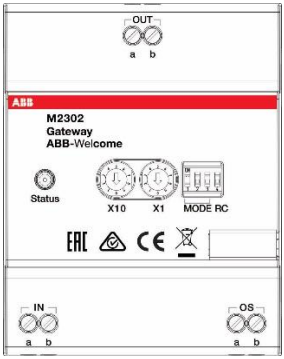
VER:1.3 | | 28.04.2017

ABB-Welcome

M2302
Gateway



1 Safety

Warning

Electric voltage!

Dangerous currents flow through the body when coming into direct or indirect contact with live components.

This can result in electric shock, burns or even death.

- Disconnect the mains power supply prior to installation and/or disassembly!
- Permit work on the 110-240 V supply system to be performed only by specialist staff!

2 Intended use

This device is an integral part of the ABB-Welcome door communication system and operates exclusively with components from this system. The device must only be installed on mounting rails according to DIN EN 500022.

3 Environment

Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

– The device contains valuable raw materials that can be recycled. Therefore, dispose of the device at the appropriate recycling facility.

3.1 ABB devices

ABB-Welcome

All packaging materials and devices from ABB bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via an authorized recycling facilities or disposal companies.
ABB products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.
(EU-Directive 2002/96/EG WEEE and 2002/95/EG RoHS)
(EU-REACH ordinance and law for the implementation of the ordinance (EG) No.1907/2006)

4 Operation

4.1 Control elements

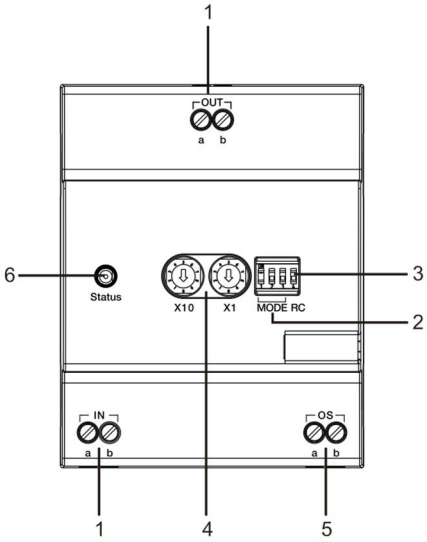


Fig. 1: Overview of control buttons

No.	Functions
1	Bus in/out
2	Operating mode settings: See chapter “Operating modes” for details.
3	Terminal resistor ON/OFF. In video installations or audio- and video-combined installations, the switch must be set as “RC on” on the last device of the line.
4	Rotary switches for addressing (01-99).
5	Connection with outdoor stations, or connection with bus in, in "line amplifier" mode.
6	Operating status indicating LED

4.2 Operating modes

4.2.1 Building gateway

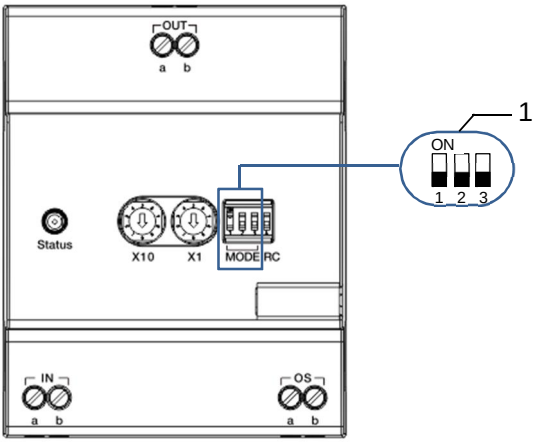


Fig. 2: Building gateway

No.	Functions
1	1->OFF, 2->OFF, 3->OFF

Enable one building as an independent sub-system (outdoor station(s)/guard unit(s) can be connected). Up to 60 such systems are supported within the whole system.
The gateway address is equal to the riser number.

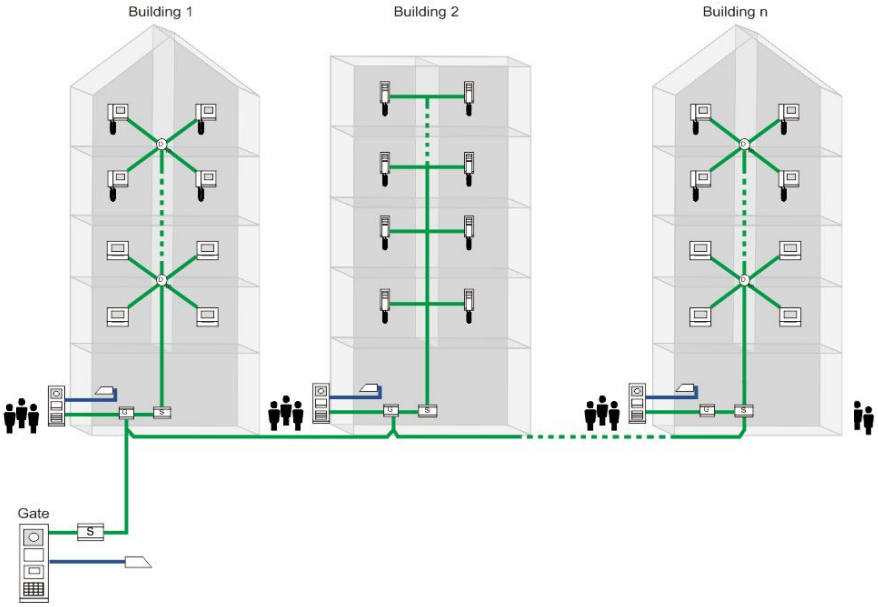


Fig. 3: Building gateway

Wiring diagram:

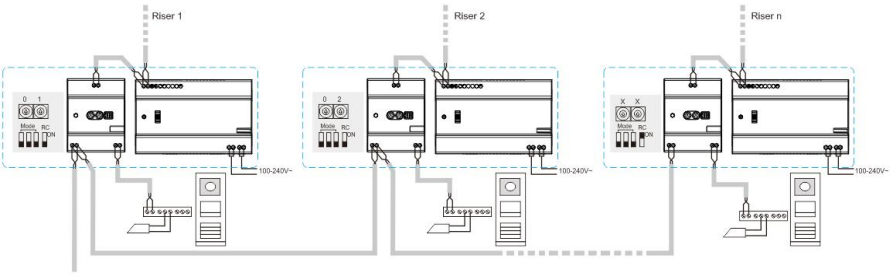


Fig. 4: Building gateway

4.2.2 Floor gateway

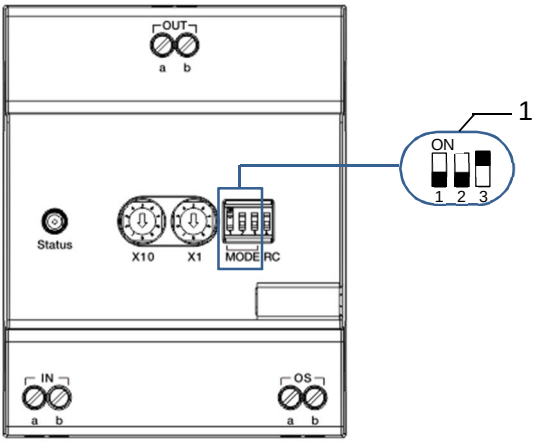


Fig. 5: Floor gateway

No.	Functions
1	1->OFF, 2->OFF, 3->ON

Enable a multi-apartment as an independent sub-system (another outdoor station can be connected, for example in front of the door of the floor with the multi-apartment). The gateway address is equal to the minimum address of the indoor station inside the sub-system.

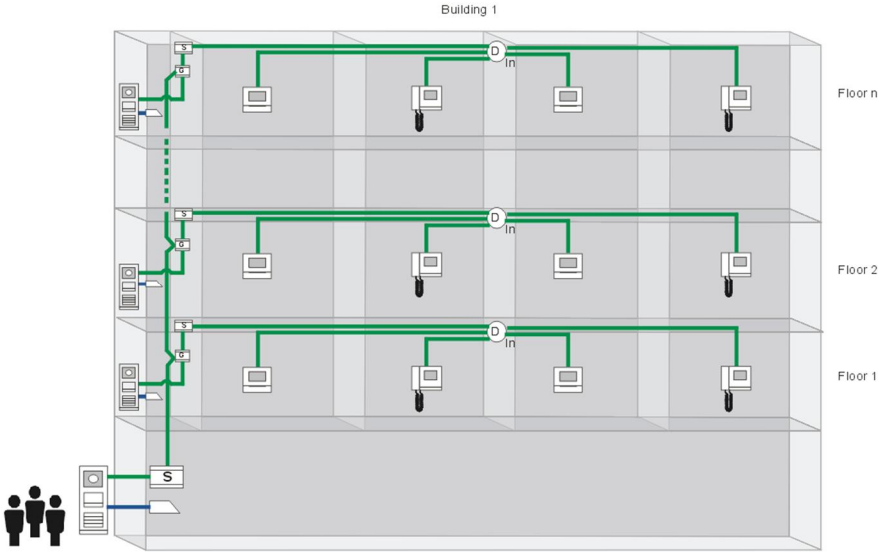


Fig. 6: Floor gateway

Wiring diagram:

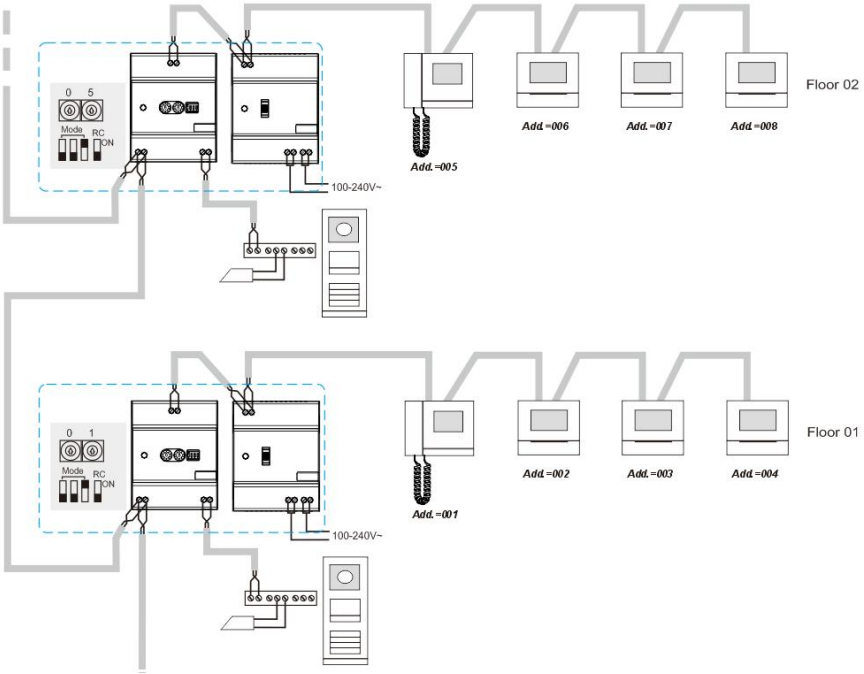
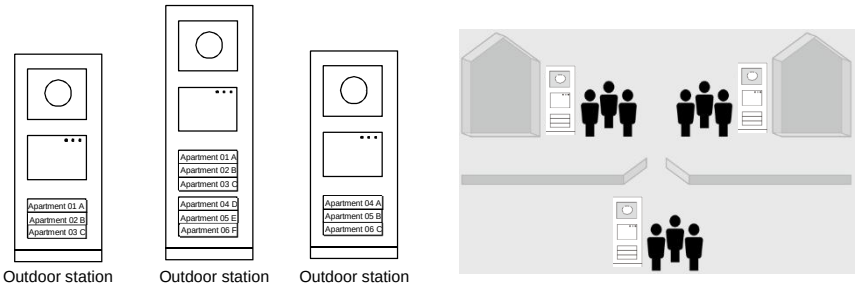


Fig. 7: Floor gateway

If using pushbutton outdoor station as a gate station, floor gateway is available for this kind of use case.
In following example, an outdoor station is mounted at the gate entrance with which all six apartments can be called. One outdoor station is on the left building with apartments 01 and 03 and a further outdoor station on the right building with apartments 04 and 05. This means that only three apartments can be called from these two outdoor stations. Using floor gateway for each building, and outdoor station 1 can manage these two buildings, while outdoor station 2 manage the left building and outdoor station 3 manage the right one.

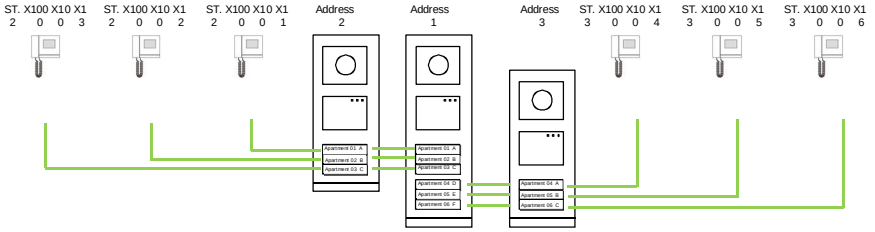


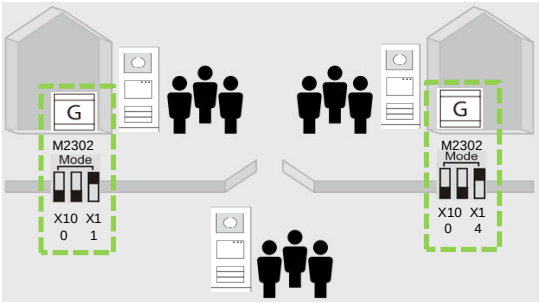
Outdoor station
Left building

Outdoor station
Gate entrance

Outdoor station
Right building

Wiring diagram (using floor gateway for each building)





4.2.3 Apartment gateway

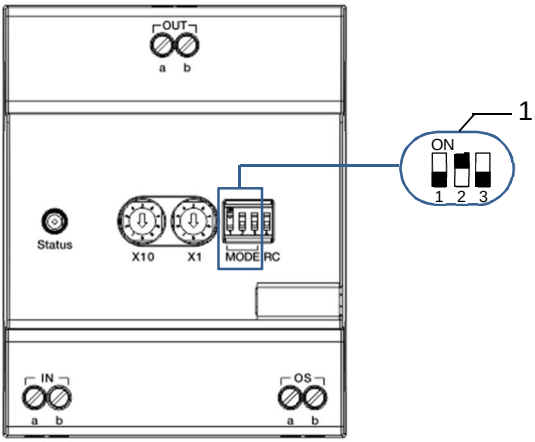


Fig. 8: Apartment gateway

No.	Functions
1	1->OFF, 2->ON, 3->OFF

Enable one apartment as an independent sub-system (The 2nd confirmed outdoor station can be connected). Up to 99 such systems can be supported within the whole system.
The gateway address is equal to the apartment number.

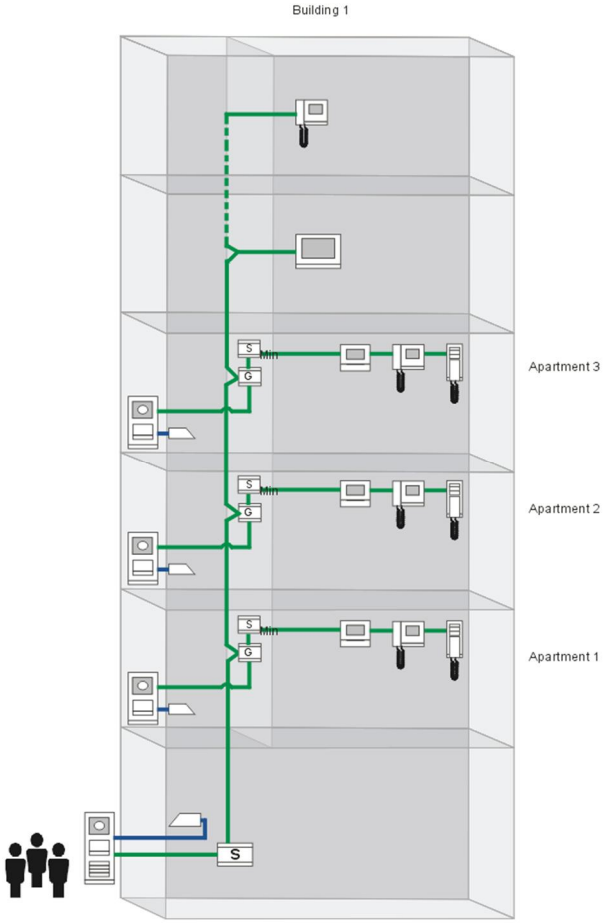


Fig. 9: Apartment gateway

Wiring diagram:

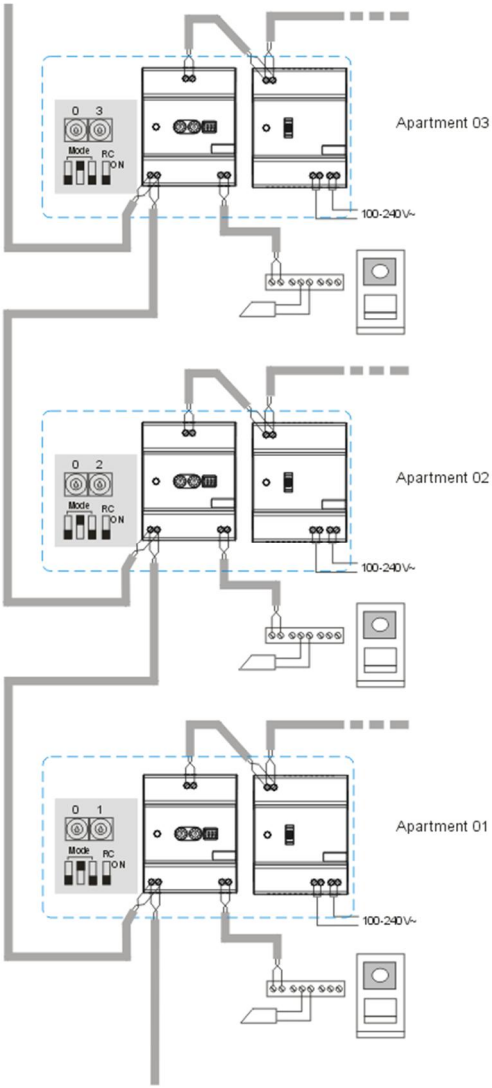


Fig. 10: Apartment gateway

4.2.4 Additional power supply mode

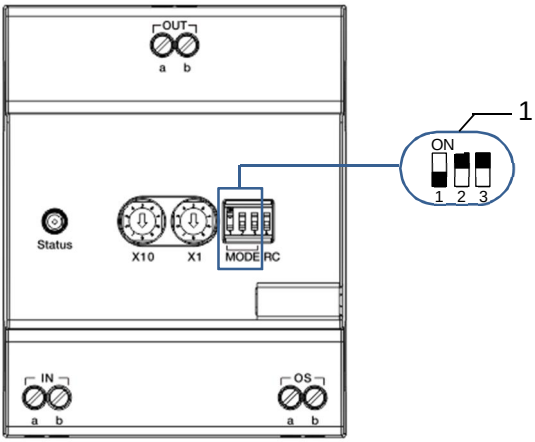


Fig. 11: Additional power supply mode

No.	Functions
1	1->OFF, 2->ON, 3->ON

Enable an additional power source for systems with a system controller.

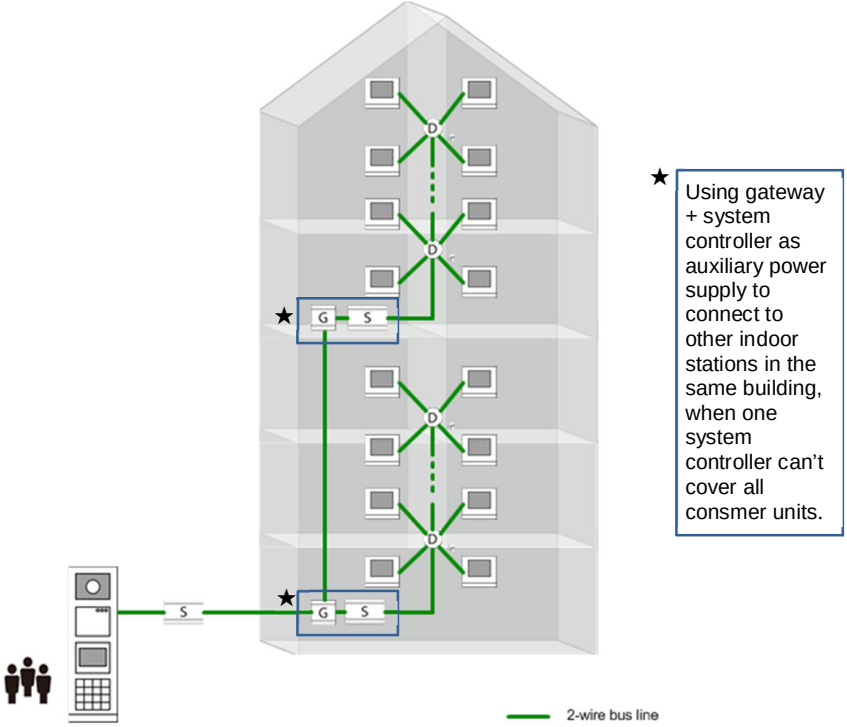


Fig. 12: Additional power supply mode

Wiring diagram:

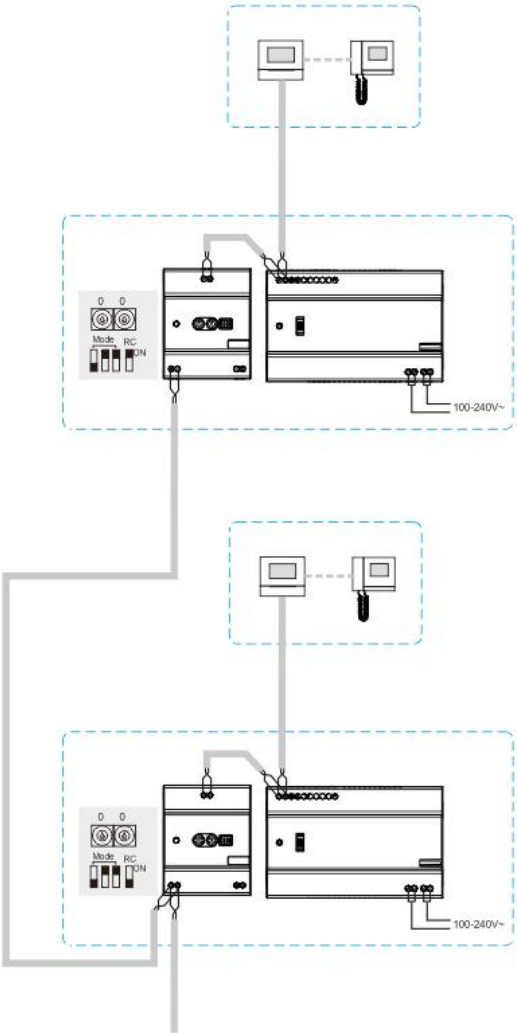


Fig. 13: Additional power supply mode

4.2.5 Line amplifier

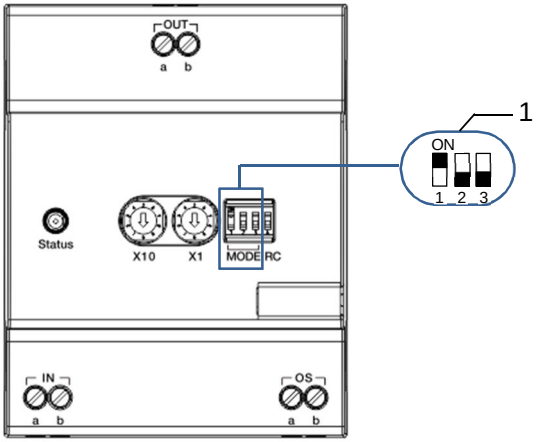


Fig. 14: Line amplifier

No.	Functions
1	1->ON, 2->OFF, 3->OFF

Strengthen the video signal and extend transmission. For increased distance please refer to ABB-Welcome system manual.

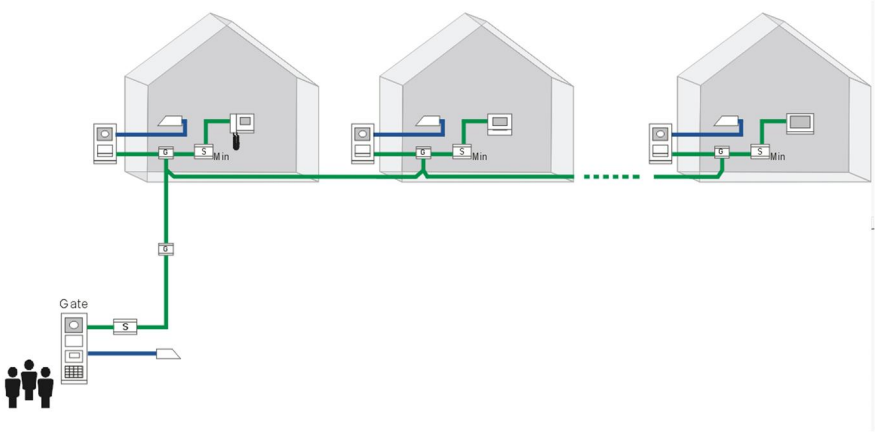


Fig. 15: Line amplifier

Wiring diagram:

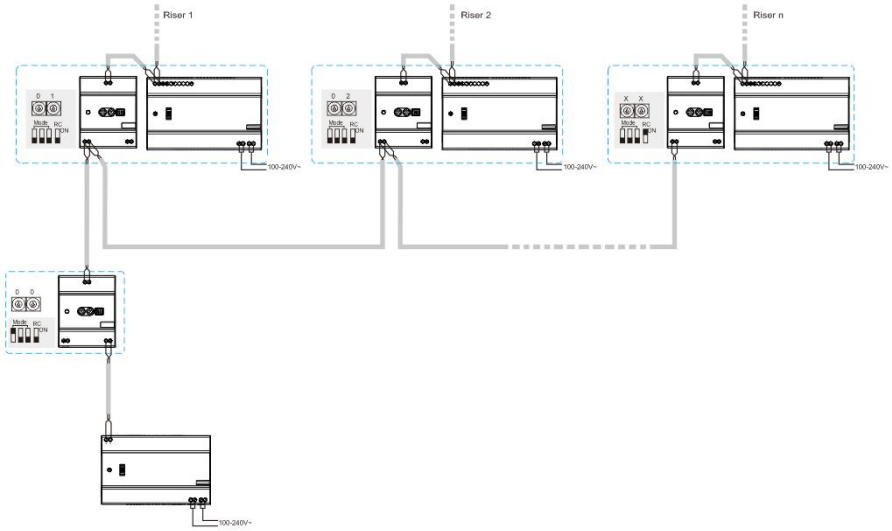


Fig. 16: Line amplifier

5 Technical data

Designation	Value
Operating temperature	-25 °C - +55 °C
Protection	IP 20
Single-wire clamps	2 x 0.28 mm² - 2 x 0.75 mm²
Fine-wire clamps	2 x 0.28 mm² - 2 x 0.75 mm²
Bus voltage	20-30 V

6 Mounting/Installation

Warning

Electric voltage!

Dangerous currents flow through the body when coming into direct or indirect contact with live components.

This can result in electric shock, burns or even death.

- Disconnect the mains power supply prior to installation and/or disassembly!
- Permit work on the 110-240 V supply system to be performed only by specialist staff!

6.1 Requirements for the electrician

Warning

Electric voltage!

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  1. Disconnect from power.
  2. Secure against being re-connected.
  3. Ensure there is no voltage.
  4. Connect to earth.
  5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the type supply network (TN system, IT system, TT system) to secure the following power supply conditions (classic connection

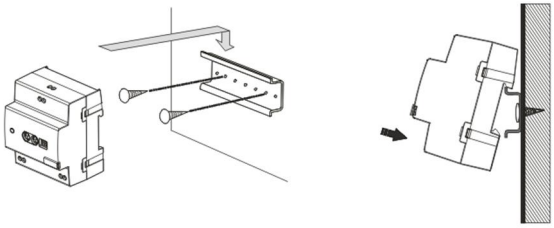
to ground, protective earthing, necessary additional measures, etc.).

6.2 General installation instructions

- Terminate all branches of the wiring system via a connected bus device (e.g., indoor station, outdoor station, system device).
- Do not install the system controller directly next to the bell transformer and other power supplies (to avoid interference).
- Do not install the wires of the system bus together with 100-240 V wires.
- Do not use common cables for the connecting wires of the door openers and wires of the system bus.
- Avoid bridges between different cable types.
- Use only two wires for the system bus in a four-core or multi-core cable.
- When looping, never install the incoming and outgoing bus inside the same cable.
- Never install the internal and external bus inside the same cable.

6.3 Mounting

The device M2302 must only be installed on mounting rails according to DIN EN 500022.



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