Door Communication

ABB-Welcome User Manual

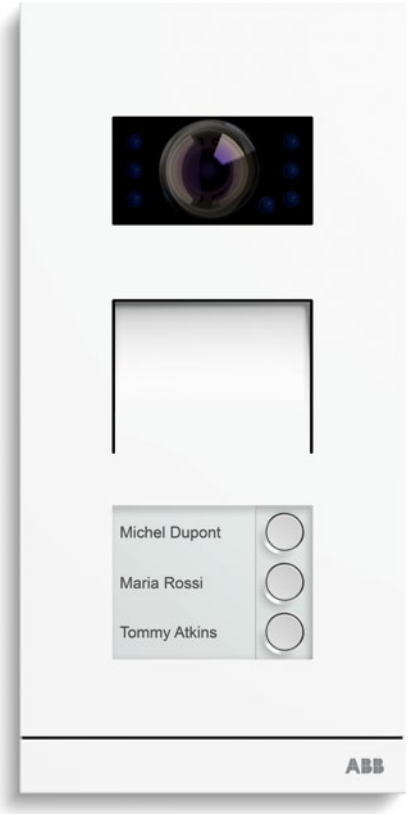
Power and productivity
for a better world™

The front door is the gateway between the outside world and your private living space. The modern door communication of ABB-Welcome now opens new possibilities for both sides – overall comfort, greater safety and stylistically matching design. The system harmoniously adapts to the architecture outdoors. In the interior area it can be uniformly matched with light switches and socket outlets.

Most welcome.
Intelligence with system.

ABB-Welcome. The new door communication from ABB, the leading brand with in home technology and innovative solutions for intelligent building automation. The new product range ABB-Welcome supplements the comprehensive range in a practical way. It sets new standards as a holistic system. It combines perfect design, comfort, efficiency and security. Living space can now be consistently and uniformly designed. From the light switch up to door communication. Inside and outside.

Door to door.
Technology and progress.



01

02

The right solution for every requirement. With the wide range of well-designed products, optimum door communication can be made a reality for all types of buildings. Without great effort due to the 2-wire bus technique. And always with high-quality materials that are carefully matched. This makes ABB-Welcome ideal for use in new buildings as well as the later integration during the modernization of all types of real estate.

03

04

01 **ABB**-Wel**come** Video outdoor station

02 **ABB**-Wel**come***Touch*

03 **ABB**-Wel**come** audio indoor station with handset

04 **ABB**-Wel**come** audio indoor station with display

Contents

01
The ideal system for every building

More is possible. ABB-Welcome systems offer flexible solutions. Planning is made as simple for you as are installation or commissioning. The 2-wire bus technique makes possible the suitable layout – to fully meet the requirements of the user.

One-family house, audio/video Fig. 1

ABB-Welcome systems consist at least of a system controller, outdoor station and indoor station. In Fig. 1 three indoor stations are installed in the one house. When a visitor rings the bell at the ABB-Welcome video outdoor station, the call can be answered either at the ABB-WelcomeTouch, at the ABB-Welcome audio indoor station with display or the ABB-Welcome audio indoor station with handset.

Multifamily house, audio Fig. 2

Retrofitting an ABB-Welcome system in a multifamily house with existing wiring is very easy. Even a plain bell system can be converted to audio or video. Depending on the local circumstances, an installation with recourse to a rising mains, as shown in Figure 2, is recommended. The wires branch off on each floor where the existing apartments are located – to where an audio indoor station with handset is mounted. There the user can answer incoming calls, open the door and switch on the lights in the stairwell. Also floor call buttons can be used. These are connected to the indoor station.

01 One-family house

02 Multifamily house

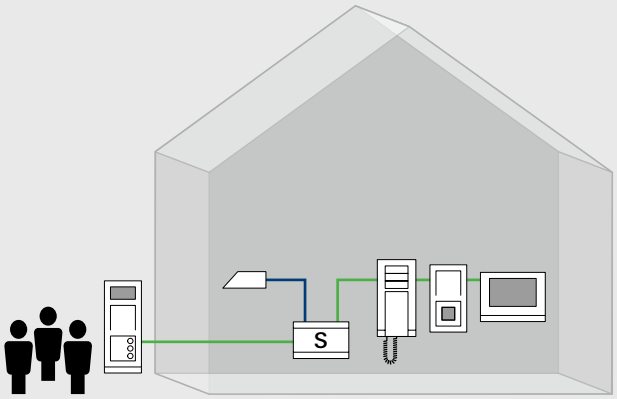
01

02

Fig. 1

One-family house/villa

- System type: audio/video combined
- Wiring: looped from device to device
- Devices used
  - One **ABB-**Wel**come** video outdoor station, 1gang, article number: 83121/1-xxx-500
  - One **ABB-**Wel**come** audio indoor station with display, article number: 83200 U-500, cover plates article number: 83260-xxx-500 2gang frame
  - One **ABB-**Wel**come** audio indoor station with handset, article number: 83205 AP-xxx-500
  - One **ABB-**Wel**come***Touch,*** article number: 83220 AP-xxx-500
  - One **ABB-**Wel**come** system controller, article number: 83300-500
  - One electric door opener

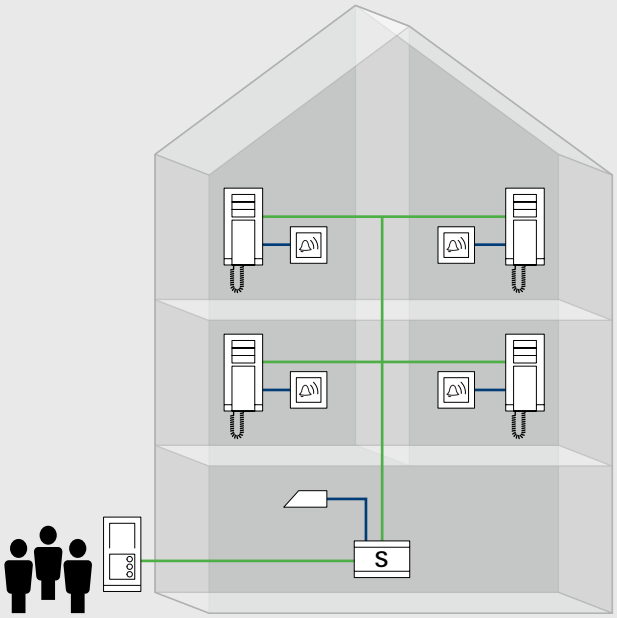


The combined audio/video solution for the one-family house. The drawing shows the easy-to-install 2-wire bus. From the ABB-Welcome video outdoor station to the ABB-Welcome system controller. And from there to the ABB-WelcomeTouch as well as to the ABB-Welcome audio indoor station with display and the ABB-Welcome audio indoor station with handset. Additional distributors are not required.

Fig. 2

Multifamily house with 4 private apartments

- System type: audio
- Wiring: rising mains with branch connections
- Devices used
  - One **ABB-**Wel**come** audio outdoor station, 4gang, article number: 83102/4-xxx-500
  - Four **ABB-**Wel**come** audio indoor stations with handset, article number: 83205 AP-xxx-500
  - One **ABB-**Wel**come** system controller, article number: 83300-500
  - Four floor call buttons
  - One electric door opener



The audio solution for the multifamily house. The drawing shows the easy-to-install 2-wire bus From the ABB-Welcome outdoor audio station to the ABB-Welcome system controller. And from there to the ABB-Welcome audio indoor station with handset. Additional distributors are not required

Note: Graphic symbols are explained in the legend on page 56.

Multifamily house, audio/video Fig. 3

The setup of a video system or a combined audio/video system can include an existing rising mains. To correctly distribute the video image of the outdoor station inside the house, flush-mounted video distributors are installed in each branch box. Or MDRC units can be used in existing sub-distributions.

Commercial object, audio/video Fig. 4

For buildings with several entrances (doctor's office, law firm, small workshops, or similar), these can be individually equipped with ABB-Welcome outdoor stations. A combination of ABB-Welcome audio outdoor stations and ABB-Welcome video outdoor stations is possible. For this a video outdoor distributor as MDRC unit must be used. The door – from which the bell is rung – is opened from the indoor station called.

01 Multifamily house

02 Commercial object

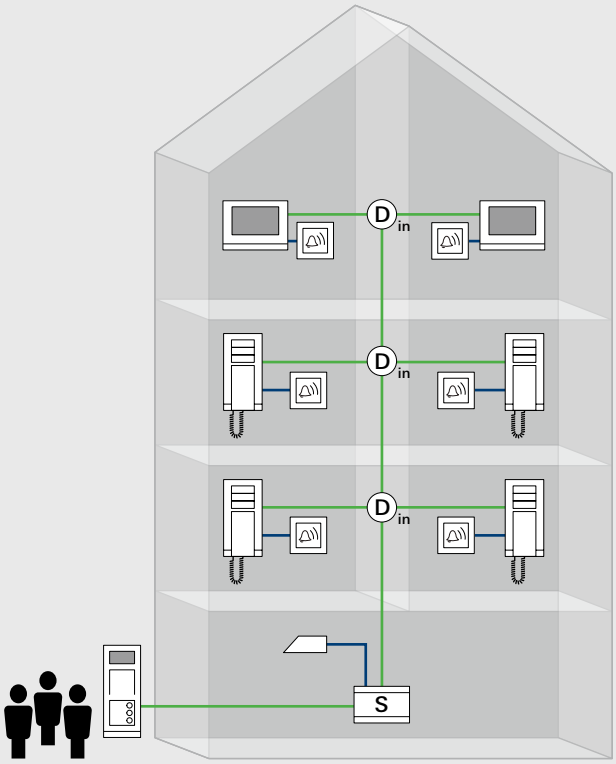
01

02

Fig. 3

Multifamily house with 6 private apartments

- System type: audio/video combined
- Wiring: rising mains with branch connections, i.e. video distributors
- Devices used:
  - One **ABB-**Wel**come** video outdoor station, 6gang, article number: 83122/6-xxx-500
  - Four **ABB-**Wel**come** audio indoor stations with handset, article number: 83205 AP-xxx-500
  - Two **ABB-**Wel**come***Touch***,** article number: 83220 AP-xxx-500
  - **ABB-**Wel**come** system controller, article number: 83300-500
  - Three **ABB-**Wel**come** video distributors, FM indoor, article number: 83320/2 U-500
  - Six floor call buttons
  - One electric door opener

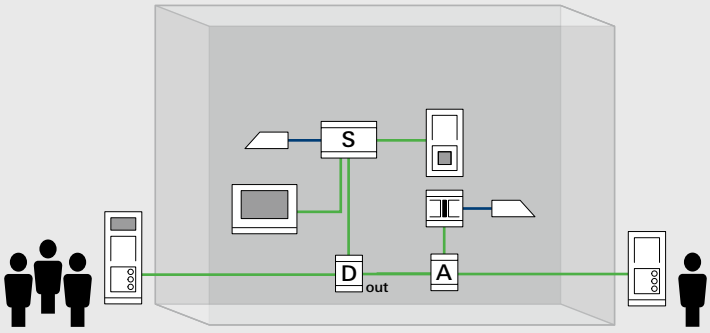


The combined audio/video solution for the multifamily house with six private apartments. The wiring from the ABB-Welcome system controller to the indoor stations is designed as rising mains. From here the wires branch off into the apartments. Each of the two bottom floors has an ABB-Welcome audio indoor station with handset installed. All branch connections require video distributors.

Fig. 4

Commercial object

- System type: audio/video
- Wiring: looped from device to device
- Devices used
  - One **ABB-**Wel**come** video outdoor station, 1gang, article number: 83121/1-xxx-500
  - One **ABB-**Wel**come** audio outdoor station, 1gang, article number: 83101/1-xxx-500
  - One **ABB-**Wel**come** audio indoor station with display, article number: 83200 U, cover plates article number: 83260-xxx-500 2gang frame
  - One **ABB-**Wel**come***Touch,*** article number: 83220 AP-xxx-500
  - One **ABB-**Wel**come** system controller, article number: 83300-500
  - One **ABB-**Wel**come** video outdoor distributor, article number: 83325/2-500
  - One **ABB-**Wel**come** bell transformer, article number: 83315-500
  - One switch actuator, door/light, article number: 83330-500
  - Two electric door openers



The combined audio/video solution for a building with several entrances – such as private apartment and office. One indoor station is located on the left at the office entrance, another one on the right at the apartment. Inside the building the two internal bus lines of the system controller are used. A distributor is required to connect the two outdoor stations.

02
Assistance for planning.

Early advantage: With the planning aids for ABB-Welcome. This makes even complex projects easy to manage and easy to implement at a later stage.

The ABB-Welcome door communication can be used purely as a 2-wire bus system in new buildings and for modernizing existing systems. In most cases, the existing lines can be used. The universally used 2-wire bus technology allows a bell system to be upgraded to a video system with outdoor camera.

An ABB-Welcome system can be set up purely as an audio system. Visitors and residents use it to communicate with each other between outdoor station and indoor station. Or it can be a video system. This makes the camera image of the video outdoor station visible on the ABB-WelcomeTouch. Video and audio units can also be installed in the same system. Also the later exchange of audio units with video units, and the reverse, is possible.*

An ABB-Welcome system is made up of the following units:
» One or more outdoor stations
» One or more indoor stations
» The system controller
» And, if required, additional system devices

All units are connected with each other via the ABB-Welcome 2-wire bus.

Equipping apartments and entrances with indoor or outdoor stations

With an ABB-Welcome system buildings can be upgraded from a one-family house to a large multifamily house. On the one system up to 15 apartments with audio applications (up to 12 apartments with video or mixed applications) can have their own bell connected to the outdoor station.**

Up to four different indoor stations can be installed in each apartment. They are assigned the same address and ring simultaneously at an incoming call. Also several indoor stations with different addresses can be installed in the one private apartment.

In one ABB-Welcome system up to four different entrances can be equipped with outdoor stations. The doors can be opened remote-controlled. The associated lighti ng can also be switched.

* The special system topology of a video system is to be observed (S. 20, Chapter. 02).
** The actual number of apartments is limited by the available bell buttons.

A flexible system. Also for residential buildings with integrated medical and legal and other offices.

Options of flexible addressing

Assigning doorbell push-buttons to apartments

The doorbell push-buttons of an outdoor station can be freely assigned to an apartment. When the doorbell push-button is pressed the call is received at the fixed address. The option of flexible addressing allows the ABB-Welcome system to be adapted to the individual requirements of the user. This is a big advantage – especially when a system has several outdoor stations.

The use of several outdoor stations: uniform assignment of call buttons Fig. 5

With several outdoor stations within an ABB-Welcome system the call buttons of each outdoor station are generally assigned similarly. This means that all apartments can be called from all outdoor stations. This is practical for buildings with several entrances – from each of which all apartments are accessible.

Several outdoor stations with different bell fields Fig. 6

Alternatively, the call buttons of the various outdoor stations can be assigned differently when all apartments are to be called from one outdoor station and only some apartments from additional outdoor stations.

In the example an outdoor station is mounted at the gate entrance with which all four apartments can be called. One outdoor station is on the left building with apartments 01 and 02 and a further outdoor station on the right building with apartments 03 and 04. This means that only two apartments can be called from these two outdoor stations.

The use of several outdoor stations: assigning the standard outdoor station

The ABB-Welcome system guarantees the opening of the door at several outdoor stations at which the visitor has rung the bell. The resident simply presses the button "Open door" at the indoor station. Also the associated light at the entrance can be switched on. Opening and switching in the apartment is also possible without an existing outside call.

For several entrances with a system with outdoor stations, one standard outdoor station is defined for opening the door and switching the light. The setting is made at the indoor stations of each apartment. With the ABB-WelcomeTouch the camera image of an outdoor station can also be activated without having received a call. Here the camera image of the standard outdoor station is displayed.

System controller and auxiliary power supply Fig. 7

The system controller supplies the other bus subscribers with voltage and controls communication on the 2-wire bus. Starting from the system controller, the 2-wire bus divides into three bus lines, the external bus and the two internal bus lines.

The ABB-Welcome system controller additionally offers options for connecting a door opener and hallway or path illumination. The switching times can be set on the device.

These hints should definitely be observed to prevent faults from occurring during the audio and video transmission.

Notes:

- All branches of the wiring system should be terminated by a connected bus device (e.g., an indoor station, outdoor station or a system device). This means that no branches are to be open.
- The system controller should not be installed in the immediate vicinity of bell transformers or other switched power supplies to prevent interference.
- Do not install the lines of the system bus together with 230 V cables.
- Connection cables for door openers should not be placed in the same cable as the lines of the 2-wire bus.
- Avoid transitions between different cable types.
- In a cable with four or more wires, only one pair of wires should be used for the 2-wire bus.
- When looping the 2-wire bus to a bus that is incoming or outgoing from a device, it should not be installed in the same cable.
- Internal and external bus must not laid in the same cable.

A system controller makes 65 consumer units available to the ABB-Welcome. They are used to supply the connected devices. In a one-family house, for example, this allows one video outdoor station as well as up to four ABB-WelcomeTouch to be operated.

In a multifamily house, for example, this allows a system with one ABB-Welcome audio outdoor station with 15 bell buttons and 30 audio indoor stations with handset (i.e. two per apartment) to be operated by one system controller. For a larger number of units an auxiliary power supply is required.*

* Detailed information about calculations, starting from page 24, Chapter 02.

Fig. 5

The use of several outdoor stations: uniform assignment of call buttons

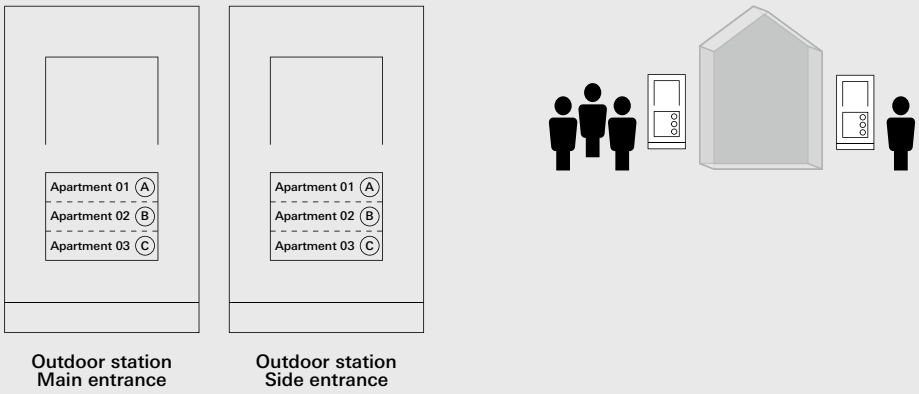


Fig. 6

Several outdoor stations with different bell fields

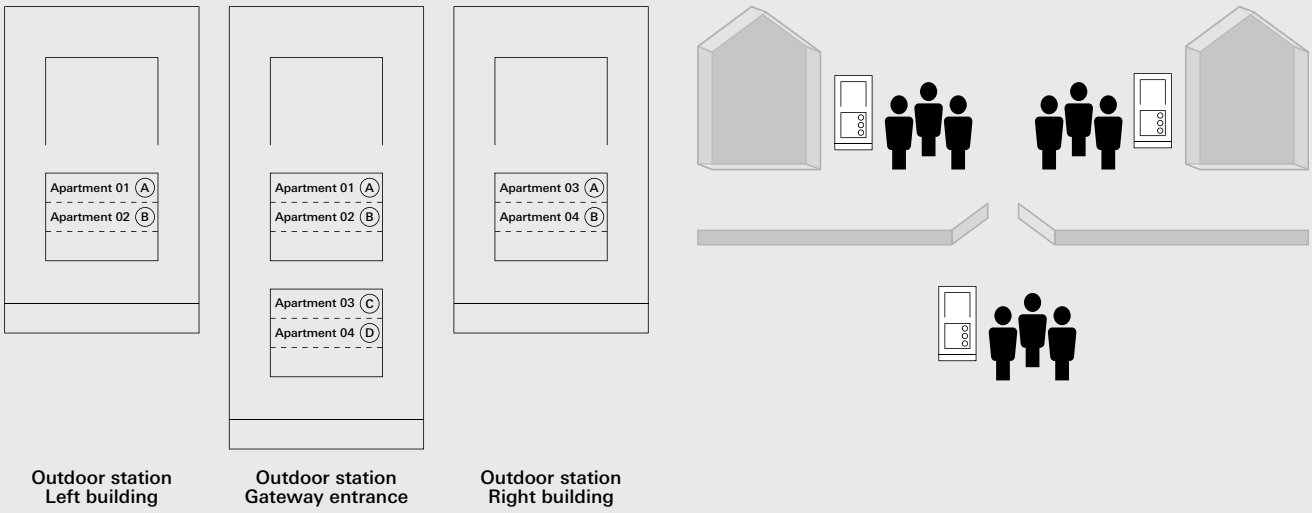
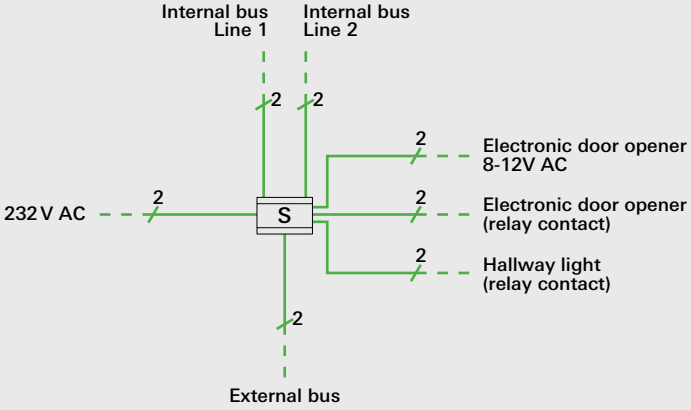


Fig. 7

The system controller



Auxiliary power supplies

Auxiliary power supplies can be connected to the internal bus lines at any position. They serve for the connection of indoor stations. One auxiliary power supply makes available 45 consumer units. Neither they nor the connected devices put a load on the system controller.

The use of auxiliary power supplies increases the number of devices in a system. The maximum signal range – measured from the system controller – is not increased. The indoor stations can be connected to each of the four outputs of the auxiliary power supply. A uniform distribution of the outputs is recommended.

Cable type and signal ranges

The following cable types with a diameter of 0.8 mm are recommended:

» Telecommunication lines J-Y(St)-Y
» Bell lines YR
» Telecommunication lines for outdoor A-2Y(L)2Y

The following cable types should not be used:

» Antenna cables
» NYM cables
» Riser cables
» Cable with a diameter smaller than 0.6 mm

The signal ranges for bus lines

The length of cables for the system controller to the remotest indoor station or outdoor station must not exceed the following values:

Bus lines	Connected indoor or outdoor stations	Signal range
External bus	Audio	300 m
External bus	Audio/Video	100 m*
Internal bus line 1	Audio	300 m
Internal bus line 1	Audio/Video	100 m
Internal bus line 2	Audio	300 m
Internal bus line 2	Audio/Video	100 m

* When connecting only one ABB-Welcome video outdoor station to the external bus line the signal range is 150 m.

Note: The two separate internal bus lines 1 and 2 permit the setup of a pure audio line with a signal range of 300 m and an audio/video line with a signal range of 100 m.

Maximum number of devices per internal bus line

The maximum number of devices per internal bus line must be observed. It is dependent on the power consumption of the connected indoor stations:

Connected device type	Maximum number of indoor stations	Maximum cable length between power supply and the remotest indoor station
ABB-Welcome audio indoor station with handset	30 devices	300 m
ABB-Welcome audio indoor station with display	30 devices	100 m*
ABB-Welcome audio indoor station with display	6 devices	200 m*
ABB-Welcome audio indoor station with display	4 devices	300 m
ABB-Welcome IP gateway for Busch-ComfortTouch®	4 devices	100 m
ABB-WelcomeTouch	4 devices	100 m

* The shortened length of cable in comparison to the signal range of the ABB-Welcome indoor audio station with display results from the increase in current consumption in comparison to the ABB-Welcome audio indoor station with handset. When the maximum number of devices at the system controller is exceeded, an auxiliary power supply must be used. In turn, for each of the four outputs of the auxiliary power supply the number of devices and limits of cable length specified in the table apply.

Note: The maximum cable length specified applies to cables with a diameter of 0.8 mm. For a diameter of 0.6 mm the length of cable is halved.

Topology rules for the internal and external bus

Indoor stations, outdoor stations and system devices must be connected to the system controller according to topology rules for ABB-Welcome systems.

Topology rules for audio systems Topology rules for audio systems Fig. 8 Fig. 9

For planning an ABB-Welcome audio system in which, next to control information, only one audio signal is transmitted on a 2-wire bus.

Audio system: Connection of devices on the internal bus

The following devices, aside from the system controller, are usually connected to the internal bus of an audio system:

» ABB-Welcome audio indoor station with handset
» ABB-Welcome audio indoor station with display
» ABB-Welcome auxiliary power supply

There are two options for wiring the devices: Looping and branch line connections ("stub lines"). Both versions can be combined within the one system.

Note: For all devices the terminal resistor should not be activated – the switch "RC" is always on "OFF".

Audio system: Looping the internal bus

For looping a continuous bus line the incoming and outgoing 2-wire bus is connected at each device as shown in Fig. 8. A device must be connected to the end of the bus line – so that the bus line does not remain "open". In all devices of the audio system the terminal resistor should not be activated – the switch "RC" is always on "OFF". Fig. 8

Audio system: Internal bus stub lines

As an alternative to looping, the devices can also be connected at the end of a branch line or stub line:

» ABB-Welcome audio indoor station with handset
» ABB-Welcome audio indoor station with display
» ABB-Welcome auxiliary power supply

An example of this layout: A rising mains in a building connects the floors and the stub lines branch off on the floors. Fig. 9

A topology with a rising mains and several stub lines can easily be set up in an audio system. Here the bus lines are switched parallel to the branch connections.

Fig. 8

Audio system: Looping the internal bus

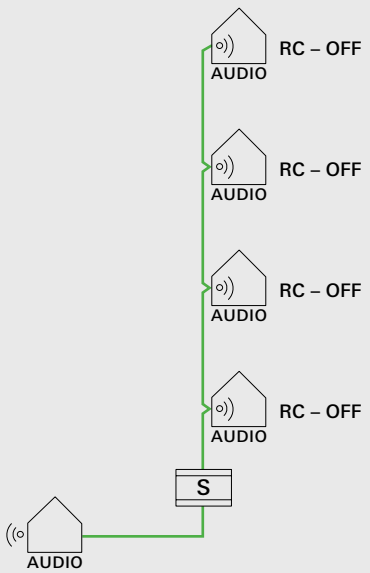
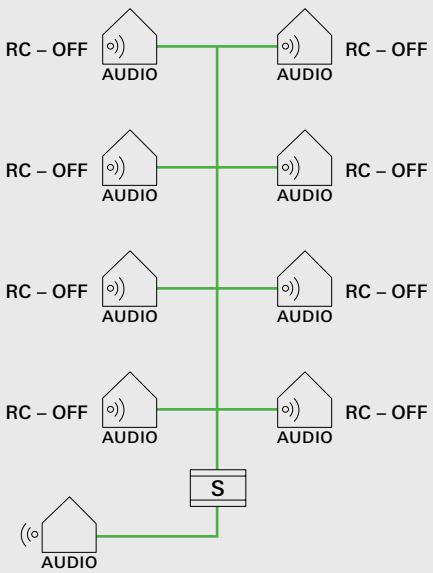


Fig. 9

Audio system: Internal bus stub line



Audio system: Connection of devices to the external bus

Fig. 10

The following devices, aside from the system controller, are usually connected to the external bus of an audio system:

» ABB-Welcome audio outdoor station
» Switch actuator, door/light

Up to four outdoor stations can be connected. For each of these, two switch actuators for opening doors and switching lights can be used. When installing only one outdoor station, the door opening or light function of the system controller can be used.

The connection is made directly on their external bus. With two or more outdoor stations, star-shaped wiring is to be selected. The star point is to be located as close to the system controller as possible. Fig. 10

It is irrelevant whether the external bus is terminated from an audio outdoor station or a switch actuator.

Note: Neither the ABB-Welcome audio outdoor station nor the switch actuator have a switch for the terminal resistor.

Topology rules for video systems

An ABB-Welcome video system with transmission of the control information, of the audio signal as well as the video signal is planned as follows:

Video system: Connection of devices on the internal bus

The devices used for setting up an audio system can also be used for setting up a video system. This means system controller, ABB-Welcome audio outdoor station and audio indoor station. And, depending on the layout, the following devices are additionally connected to the internal bus.

» ABB-WelcomeTouch
» ABB-Welcome IP gateway
» Video indoor distributor

Video system: Looping the internal bus Fig. 11

The 2-wire bus for a video system can be looped from device to device similar to an audio system. This results in a continuous bus line.

The terminal resistor must be activated on the last device of the bus line – the switch "RC" is set to "ON". For all other devices the switch is set on "OFF".

Video system: Internal bus stub lines Fig. 12

As an alternative to looping, the devices can also be connected at the video system via stub line. In this case a video distributor is to be used on all branch connections. The video indoor distributor exist as MDRC unit for mounting in a sub-distribution or as built-in device for flush-mounted installation in a branch box. The terminal resistor must be activated on the last device of each stub line and at the end of the riser main – the switch "RC" is set to "ON".

Fig. 10

Audio system: Two outdoor stations

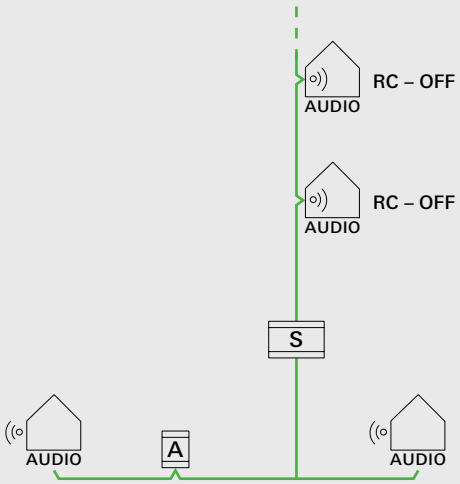


Fig. 11

Video system: Looping the internal bus

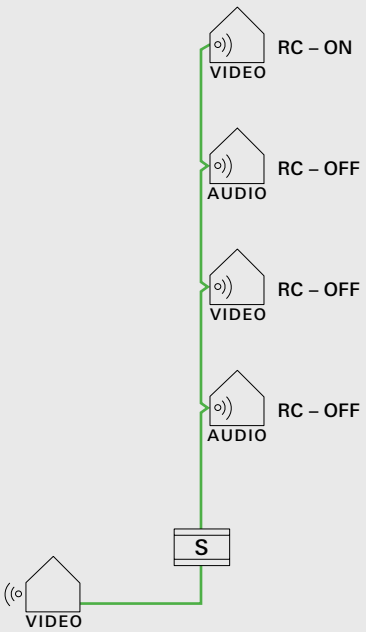
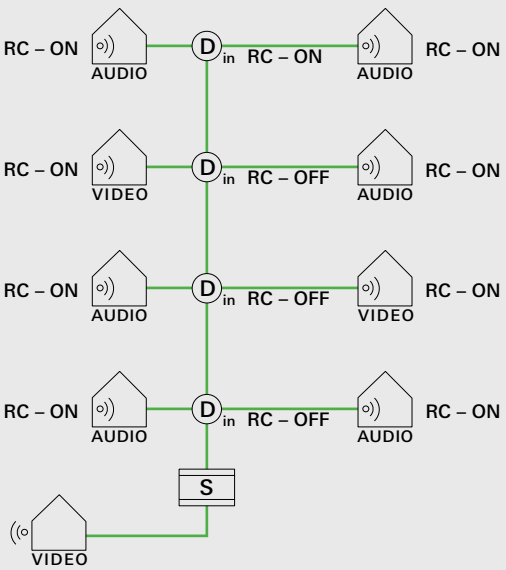


Fig. 12

Video system: Internal bus stub lines



Video system: Connection of devices on the external bus

Fig. 13 Fig. 14 Fig. 15

The following devices, aside from the system controller and the previously listed devices, are usually connected to the external bus of an video system:

» ABB-Welcome video outdoor station
» ABB-Welcome video outdoor distributor

For a video system only, branch connections with one outdoor video distributor each are permitted for wiring several ABB-Welcome video outdoor stations. Additional devices – such as the corridor/light switch actuators or ABB-Welcome audio outdoor station – can be connected via looping. For systems with up to four ABB-Welcome video outdoor stations we recommend the topologies shown.

It is irrelevant whether the external bus is terminated from an audio outdoor station or a switch actuator.

Utilization of the two internal bus lines

Fig. 16

Two internal bus lines can be connected to the system controller via the two terminal pairs. Depending on the layout of the building, the following divisions are recommended:

» All devices are connected to an internal bus line. The second internal bus line remains unoccupied for later applications.
» The devices are distributed uniformly on the two internal bus lines. This allows two rising mains to be implemented, for example.

For the second version one internal bus line can be used for audio only. This is wired according to the rules for audio systems. No video distributors are required on the branch connections and the terminal resistors are to be set on "OFF". The other internal bus line – for video and, if necessary, for audio – is to be wired according to the rules for video.

The following applies to the system limits:

» When calculating the consumer units, all devices without a power supply that are connected to the internal bus line must be taken into consideration.
» For a pure audio internal bus line the signal range is 300 m.
» For a video internal bus line the signal range is 100 m.
» For each internal bus line the upper limits for the device apply which are listed in the Table on page 18, Chapter 02.

Notes:

» The twisted pairs of both internal bus lines must not be installed in the same cable.
» The two internal bus lines must not be connected together.

Connection of floor call buttons

In multifamily houses the floor call buttons for ringing at the apartment door are mostly installed in the stairwell or corridor.

In an ABB-Welcome system a floor call button for connecting to an indoor station is provided for each apartment. If available, two wires of the cable can be used, which also includes the 2-wire bus. The maximum distance from the indoor station to the floor call button can be 50 metres. When the button is pressed all indoor stations will ring. At the indoor station a separate bell sound can be selected for the floor call and the call from the outdoor station.

Fig. 13

Video system: Two outdoor stations

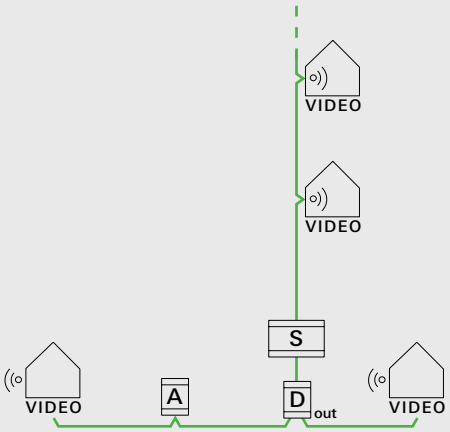


Fig. 14

Video system: Three outdoor stations

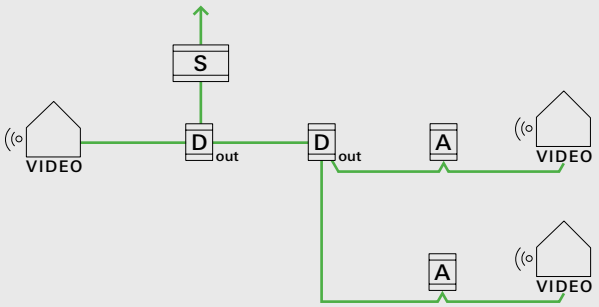


Fig. 15

Video system: Four outdoor stations

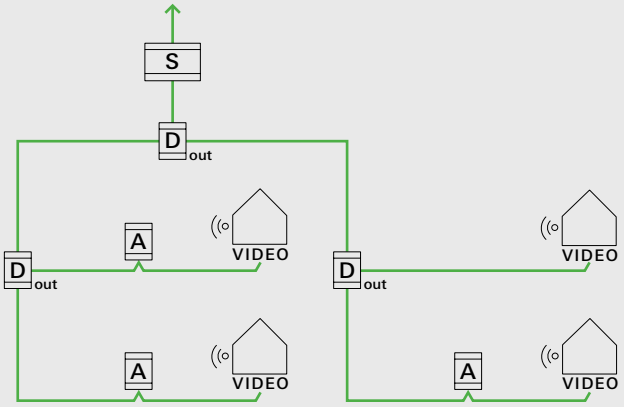
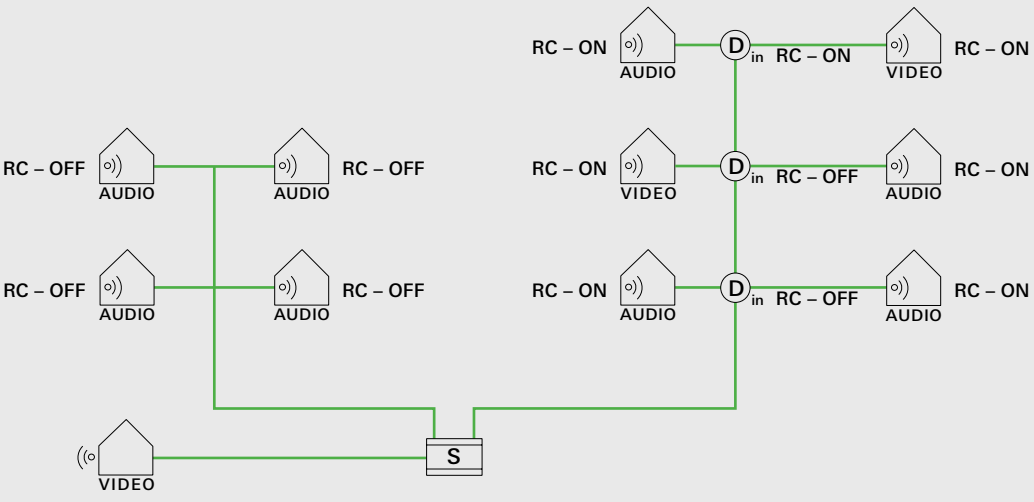


Fig. 16

Audio/video system: Utilization of the two internal bus lines



Planning simple systems

One-family house with four indoor stations Fig. 17

An ABB-Welcome system with up to four indoor stations can be set up in a one-family house without further calculation. Also up to four ABB-WelcomeTouch can be connected to the system controller.

Multifamily houses

The following table serves to calculate the maximum number of devices with power supply in multifamily houses.

Note: The table applies only to apartments with one to two indoor stations.

Calculation of consumption for system controller

Device	Number	Consumption units	Number x Consumer units
Indoor stations			
ABB-Welcome audio indoor station with handset		1	
ABB-Welcome audio indoor station with display		2	
ABB-WelcomeTouch		11	
ABB-Welcome IP gateway for Busch-ComfortTouch®		11	
Video outdoor stations			
ABB-Welcome video outdoor station, 1gang, 2gang, 3-gang		8	
ABB-Welcome video outdoor station, 4gang, 6gang		10	
ABB-Welcome video outdoor station, 8gang, 12gang		13	
Audio outdoor station			
ABB-Welcome audio outdoor station, 1gang, 2gang, 3-gang		5	
ABB-Welcome audio outdoor station, 4gang, 6gang		6	
ABB-Welcome audio outdoor station, 10gang, 15gang		11	
System devices			
ABB-Welcome door/light switch actuators		2	
Only for two indoor stations per apartment			
Number of apartments with two audio indoor stations		1 or 2	
Number of apartments with one audio indoor station and one ABB-WelcomeTouch		1 or 2	
Number of apartments with two ABB-WelcomeTouch	Must not be considered	Must not be considered	
Total number of consumer units must not exceed 65			

"1 or 2": If an ABB-Welcome audio indoor station with display is installed in the apartments, please attach 2 consumer units; otherwise attach only 1 consumer unit.

The following table serves to calculate the maximum number of devices with auxiliary power supply in multifamily houses.

Note: The table applies only to apartments with one to two indoor stations.

Consumption calculation for auxiliary power supply

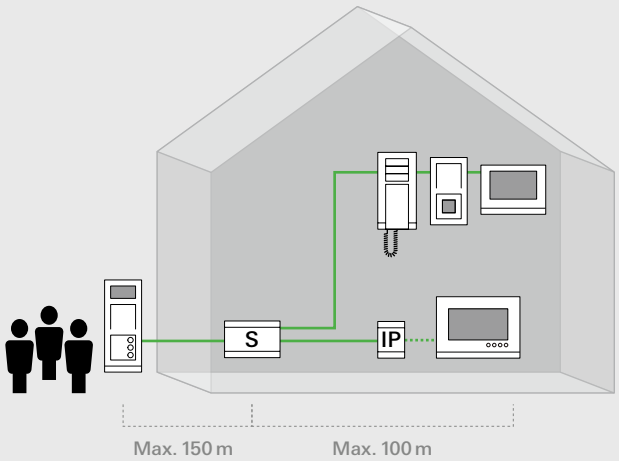
Device	Number	Consumer units	Number x Consumer units
Indoor stations			
ABB-Welcome audio indoor station with handset		1	
ABB-Welcome audio indoor station with display		2	
ABB-WelcomeTouch		11	
ABB-Welcome IP gateway for Busch-ComfortTouch®		11	
Only for two indoor stations per apartment			
Number of apartments with two ABB-Welcome audio indoor stations		1 or 2	
Number of apartments with one ABB-Welcome audio indoor station and one ABB-WelcomeTouch		1 or 2	
Number of apartments with two ABB-WelcomeTouch	Must not be considered	Must not be considered	
Total number of consumer units must not exceed 45			

"1 or 2": If an ABB-Welcome audio indoor station with display is installed in the apartments, please attach 2 consumer units; otherwise attach only 1 consumer unit.

Fig. 17

Single-family house

- System type: audio/video combined
- Wiring: looping
- Devices used:
  - One **ABB-**Welcome video outdoor station, 1gang, article number: 83121/1-xxx-500
  - One **ABB-**Welcome audio indoor station with display, article number: 83200 U-500, cover plates, article number: 83260-xxx-500, 2gang frame
  - One **ABB-**Welcome audio indoor station with handset, article number: 83205 AP-xxx-500
  - One **ABB-**Welcome*Touch,* article number: 83220 AP-xxx-500
  - One **Busch-*Comfort****Touch*®
  - One IP gateway for **Busch-*Comfort****Touch*®, article number: 83340-500
  - One **ABB-**Welcome system controller, article number: 83300-500



Multifamily houses with 15 private apartments, in each apartment: one ABB-Welcome audio indoor station with handset Fig. 18

Calculation of consumption for system controller

Device	Number	Consumer units	Number x Consumer units
Indoor stations			
ABB-Welcome audio indoor station with handset	15	1	15
Audio outdoor station			
ABB-Welcome audio outdoor station, 15gang	2	11	22
System devices			
ABB-Welcome door/light switch actuators	1	2	2
Total number of consumer units must not exceed 65			**39**

The consumer units required are covered by the system controller. The maximum number of devices per internal bus line is not exceeded. No auxiliary power supply required.

Multifamily houses with 10 private apartments, in each apartment: one ABB-Welcome audio indoor station with display and one ABB-Welcome audio indoor station with handset Fig. 19

Calculation of consumption for system controller

Device	Number	Consumer units	Number x Consumer units
Indoor stations			
ABB-Welcome audio indoor station with handset	10	1	10
ABB-Welcome audio indoor station with display	10	2	20
Audio outdoor station			
ABB-Welcome audio outdoor station, 10gang	1	11	11
Only for two indoor stations per apartment			
Number of apartments with two ABB-Welcome audio indoor stations	10	1 or 2: 2	20
Total number of consumer units must not exceed 65			**61**

"1 or 2": If an ABB-Welcome audio indoor station with display is installed, please attach 2 consumer units; otherwise attach only 1 consumer unit.

The required number of consumer units are covered by the system controller. The maximum number of devices per internal bus line is not exceeded. The maximum lenghth is 100 m. No additional auxiliary power supply is necessary.

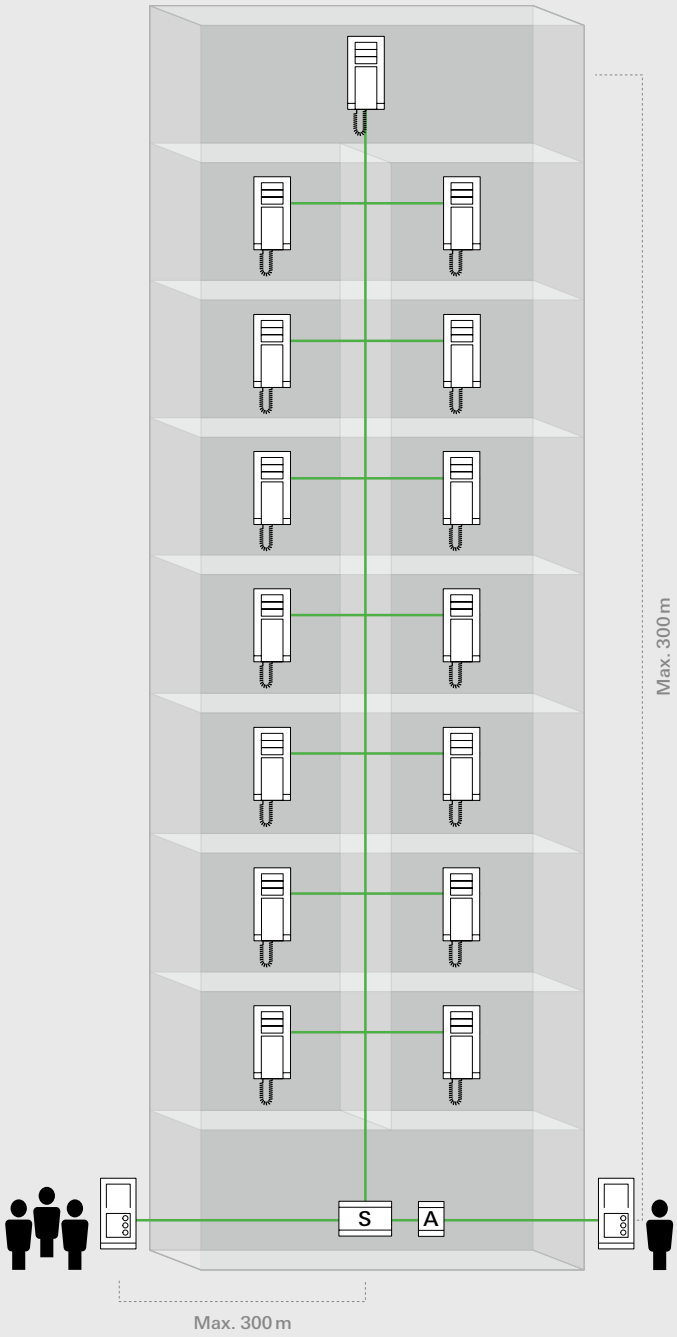


Fig. 18

Multifamily house with 15 private apartments

- System type: audio
- Wiring: rising mains with branch connections to the apartments
- Devices used:
  - One **ABB-**Wel**come** audio outdoor station, 15gang, article number: 83105/15-xxx-500
  - Fifteen ABB-Welcome audio indoor stations with handset, article number: 83205 AP-xxx-500
  - One **ABB-**Wel**come** system controller, article number: 83300-500
  - One switch actuator, door/light, article number: 83330-500

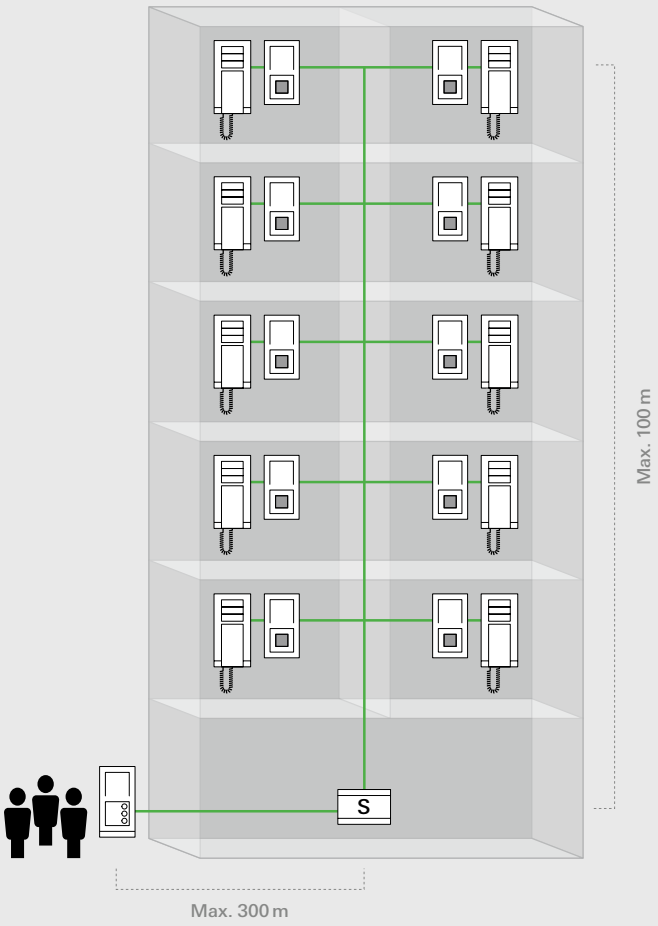


Fig. 19

Multifamily house with 10 private apartments

- System type: audio
- Wiring: rising mains with branch connections to the apartments
- Devices used:
  - One **ABB-**Wel**come** audio outdoor station, 10gang, article number: 83105/10-xxx-500
  - Ten **ABB-**Wel**come** audio indoor station with display, article number: 83200 U-500, cover plates, article number: 83260-xxx-500, 2gang frame
  - Ten **ABB-**Wel**come** audio indoor stations with handset, article number: 83205 AP-xxx-500
  - One **ABB-**Wel**come** system controller, article number: 83300-500

Multifamily house with 4 apartments, in each apartment: one ABB-WelcomeTouch Fig. 20

Calculation of consumption for system controller

Device	Number	Consumer units	Number x Consumer units
Indoor stations			
ABB-WelcomeTouch	4	11	44
Video outdoor stations			
ABB-Welcome video outdoor station, 4gang	1	10	10
Total number of consumer units must not exceed 65			54

The consumer units required are covered by the system controller. The maximum number of devices per internal bus line is not exceeded. No auxiliary power supply required.

Multifamily houses with 12 private apartments, in each apartment: one ABB-WelcomeTouch and one ABB-Welcome audio indoor station with handset Fig. 21

Calculation of consumption for system controller

Device	Number	Consumer units	Number x Consumer units
Indoor stations			
ABB-Welcome audio indoor station with handset	12	1	12
ABB-WelcomeTouch	12	11	132
Video outdoor stations			
ABB-Welcome video outdoor station, 12gang	1	13	13
Only for two ABB-Welcome indoor stations per apartment			
Number of apartments with one audio indoor station and one ABB-WelcomeTouch	12	1 or 2: 1	12
Total number of consumer units must not exceed 65			**169**

"1 or 2": If an ABB-Welcome audio indoor station with display is installed, please attach 2 consumer units; otherwise attach only 1 consumer unit.

The consumer units required are covered by the system controller (65 consumer units) and the five auxiliary power supplies (5x45=225). The maximum number of devices of the internal bus line and the maximum number of outputs of the auxiliary power supplies are not exceeded.

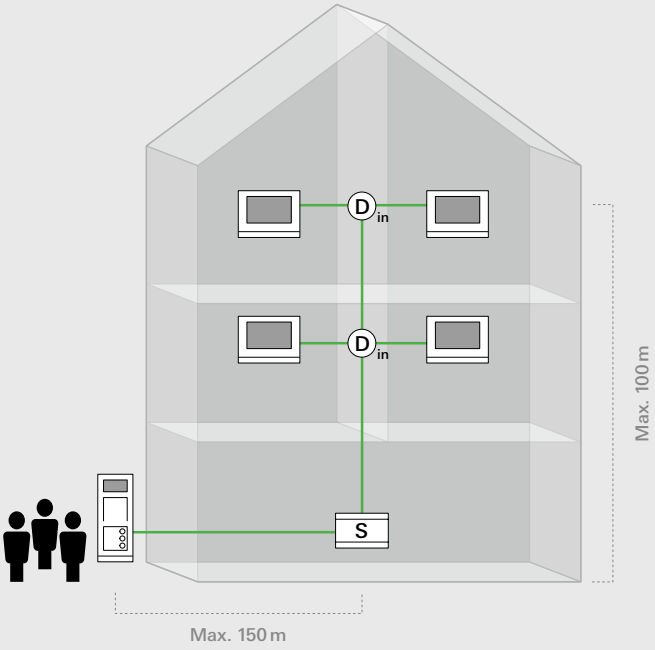


Fig. 20

Multifamily house with 4 private apartments

- System type: video
- Wiring: rising mains with video distributors at the branch connections
- Devices used:
  - One **ABB-**Wel**come** video outdoor station, 4gang, article number: 83122/4-xxx-500
  - Four ABB-WelcomeTouch, article number: 83220 AP-xxx-500
  - Two **ABB-**Wel**come** video distributors, FM indoor, article number: 83320/2 U-500
  - One **ABB-**Wel**come** system controller, article number: 83300-500

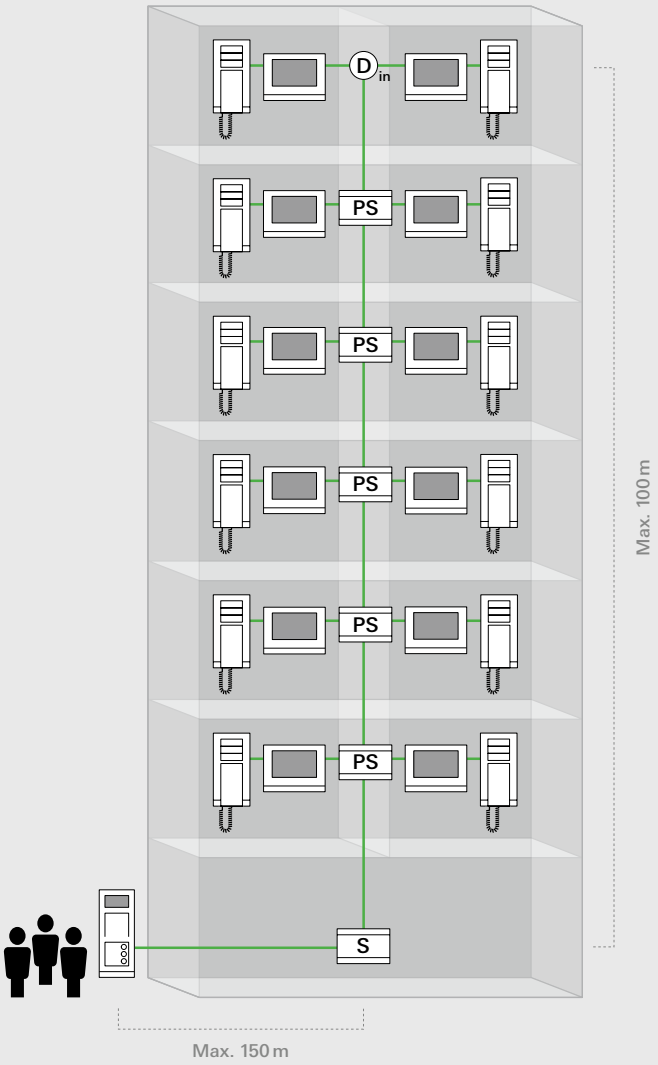


Fig. 21

Multifamily house with 12 private apartments

- System type: video
- Wiring: Rising mains with five auxiliary power supplies at the branch connections; a video distributor is located at the topmost branch connection
- Devices used:
  - One **ABB-**Wel**come** video outdoor station, 12gang, article number: 83124/12-xxx-500
  - Twelve ABB-Welcome audio indoor stations with handset, article number: 83205 AP-xxx-500
  - Twelve ABB-Welco**meTo**uch, article number: 83220 AP-xxx-500
  - One **ABB-**Wel**come** video distributor, FM indoor, article number: 83320/2 U-500
  - Five **ABB-**Wel**come** auxiliary power supplies, article number: 83310-500
  - One **ABB-**Wel**come** system controller, article number: 83300-500

03
Expert installation.

General information for the installation of an ABB-Welcome system in new and existing buildings. The installation of flush-mounted and surface-mounted devices as well as MDRC units is described in detail in the operating manuals of the devices.

Installation instructions for new buildings

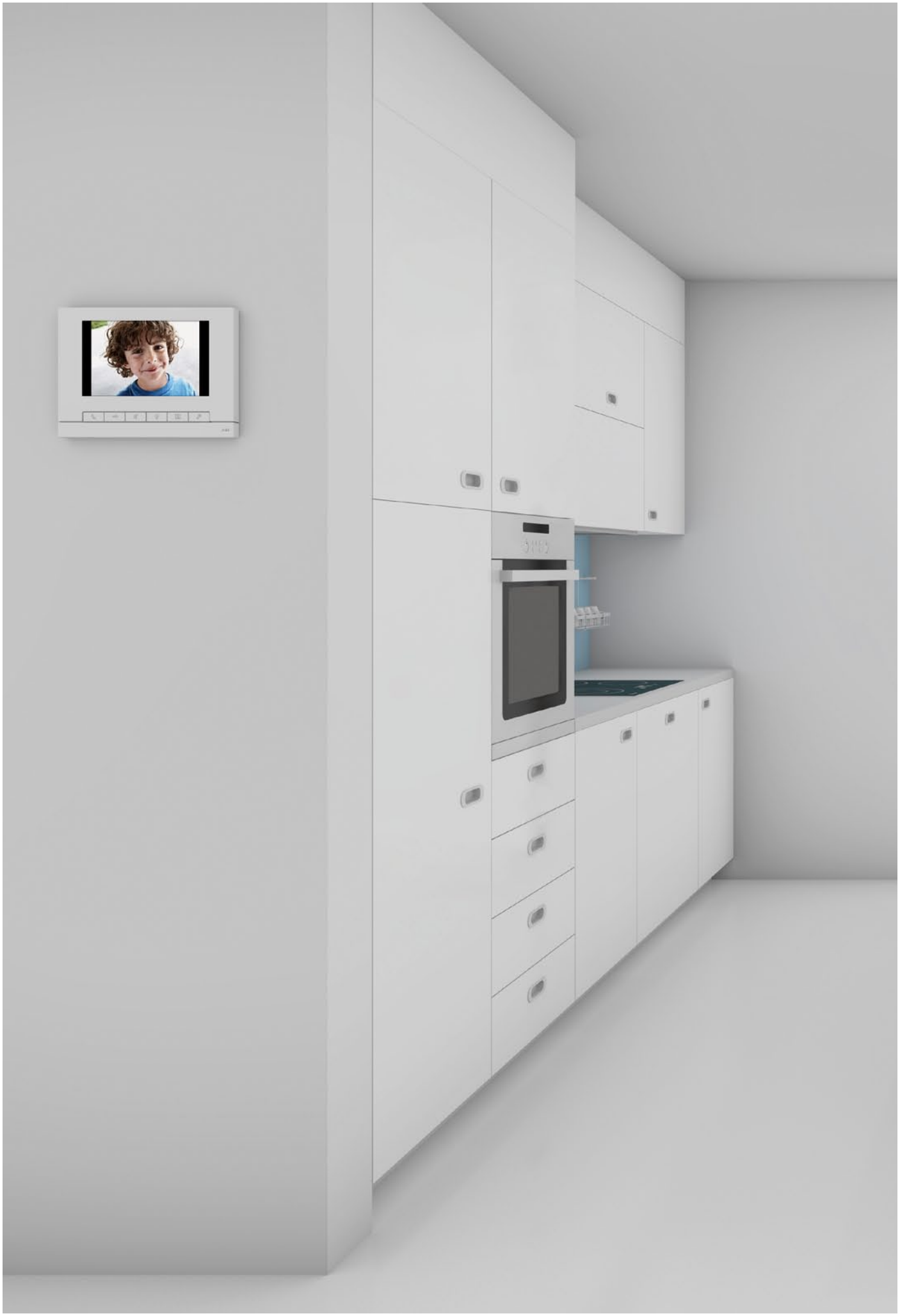
The following should be ensured when setting up a reliable, simple, economical and future-oriented ABB-Welcome system:

- The use of telecommunication cables J-Y(St)-Y in the indoor and A-2Y(L)2Y in the outdoor area with a diameter of 0.8 mm. In addition to the wire pair of the ABB-Welcome 2-wire bus, other pairs of wires can be kept as "reserve" in the same cable. For example, for later connection to a Busch-Watchdog movement detector in the outdoor area or as power supply for future bus devices.
- For smaller systems: Looping the internal bus from device to device
- For larger systems: Setup of a structure with a rising mains and several stub lines. If two rising mains are provided, the two internal bus lines can be used.

An ABB-Welcome audio system should make later conversion to video easy. The conversion includes the exchange of at least one ABB-Welcome audio outdoor station with an ABB-Welcome video outdoor station and at least one ABB-Welcome audio indoor station with an ABB-WelcomeTouch. The system controller need not be replaced.

For branch connections in the system, video distributors must be installed for the conversion. These are not required in the internal bus – if it is looped from device to device. The setting of the terminal resistors of the system must be checked after the conversion (See 20, Chapter 02).

Part of daily life. The ABB-WelcomeTouch in new buildings.



Installation instructions for modernization

The modernization of a building is an ideal opportunity for replacing an existing intercom with a modern ABB-Welcome system within the design of the other electrical installations.

Here, as a rule – independent of the type of wiring of the old system (pure bell system, intercom in "1+n" technology or comparable systems, 2-wire bus technique) – existing lines can be used. In case of existing cable material a possible reduction of the transmission range is to be checked.

It is recommended not to install the bus lines and power supply for the electric door opener in the same cable, since this may impair the quality of the picture in video systems. We additionally recommend the use of high-impedance door openers.

Conversion of old bell systems in one-family houses to ABB-Welcome

Available:

» At the door: one bell
» Indoors: one gong
» In the sub-distribution: one transformer for the gong and the name plate

The conversion of the bell system in a one-family house to an ABB-Welcome system is easy if a cable is available from the front door to the distribution and a cable from the distribution into the building, e.g. in the hallway. This layout is used by the system controller, outdoor station and indoor station.

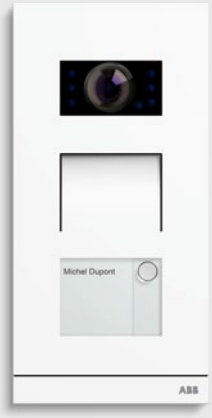
This enables buildings with only a bell system to be retrofitted with audio or video systems.

The conversion of old bell and intercom systems to ABB-Welcome ("1+n" technique, with coaxial cable for video if necessary) The multifamily house has available:

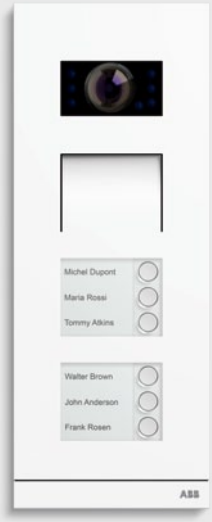
» At the door: bells (with "1+n" wiring) + loudspeakers / microphones
» Indoors: in each apartment, one indoor station with gong and a button for opening the front door
» In the sub-distribution: one bell transformer for the buzzer/ electronic door opener, one transformer for the house telephones

For systems with "1+n" wiring as rising mains installation with branch connections to the indoor stations only two wires are required from the multi-wire cable. The indoor stations of the ABB-Welcome system are also connected to the rising mains via the branch line. For a video system one indoor FM video distributor should be installed in the branch box.

The layout of a system in "1+n" wiring as star-shaped installation – which comes from the main distribution, for example – can easily be used in an ABB-Welcome system. Here all cables to the indoor stations are connected to the system controller. For a video system, indoor MDRC video distributors must additionally be installed. For an existing "1+n" system without system controller a two-wire cable must be laid from the outdoor station to the system controller. Usually an existing cable can be used here.



01



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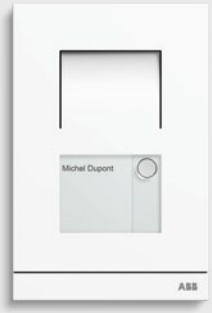
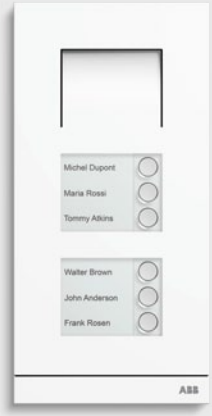
03



04



05

06

ABB-Wel**come** outdoor stations

01	**ABB-**Wel**come** video outdoor station, 1gang, dimensions in mm (H x W x D): 277 x 135 x 43, article number: 83121/1-664-500
02	**ABB-**Wel**come** video outdoor station, 6gang, dimensions in mm (H x W x D): 349 x 135 x 43, article number: 83122/6-664-500
03	**ABB-**Wel**come** video outdoor station, 12gang, dimensions in mm (H x W x D): 277 x 235 x 43, article number: 83124/12-664-500
04	**ABB-**Wel**come** audio outdoor station, 1gang, dimensions in mm (H x W x D): 205 x 135 x 29, article number: 83101/1-664-500
05	**ABB-**Wel**come** audio outdoor station, 6gang, dimensions in mm (H x W x D): 277 x 135 x 29, article number: 83102/6-664-500
06	**ABB-**Wel**come** audio outdoor station, 15gang, dimensions in mm (H x W x D): 277 x 235 x 29, article number: 83105/15-664-500

Installation of the outdoor stations Fig. 22 Fig. 23

For all outdoor stations an installation wall box of matching colour is available for flush-mounting or surface-mounting.

Surface-mounting is suitable for all types of walls, whether rendered, clinker or cavity wall. They are recommended particularly for walls with a thermal sandwich system. Here the use of suitable mounting material should be ensured.

Also flush-mounting is possible on the same wall types, because the installation socket has a full perimeter frame. For flush-mounting in a cavity wall (thickness between 2 and 25 mm) a cavity wall mounting set consisting of mounting anchors is available.

To make plastering easy after a cavity has been cut into of the wall for flush-mounted installation a mounting accessory is available. This is inserted in the cavity and removed again after plastering is completed. The flush-mounting box can then be installed.

For dismantling the end strip, a distance of 1 cm should be kept to the right of the outdoor station.

To be able to change the name plates while the outdoor station is mounted, a distance of 10 cm should remain free below the outdoor station. If this is not possible the outdoor station must be removed from the installation socket to change the name plates.

Note: The camera of the ABB-Welcome video outdoor station should not face powerful light sources, such as street lights. This should be taken into consideration when choosing the correct position for mounting. Lamps in the entrance area should uniformly illuminate the face of the visitor. The recommended installation height is 1.50 m. This optimally captures persons of average body size. Bright or backgrounds with a deep contrast should be avoided. It could reduce the quality of the picture.

Installation of indoor stations

The ABB-Welcome audio indoor station with handset and the ABB-WelcomeTouch are easy to install as a surface-mounted device with the aid of the enclosed mounting frame. The devices can also be mounted on a commercially available 58 flush-mounted wall box.

The ABB-Welcome audio indoor station with display can be installed in the design of various switch programs and so adapts to the other light switches and socket outlets in an apartment. Two 58 flush-mounted wall boxes are required for the installation.

Additional information is contained in the operating manuals. The associated QR codes are listed starting from page 46.

Fig. 22

The distance zones for the installation of the outdoor station

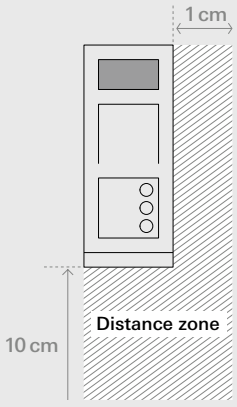
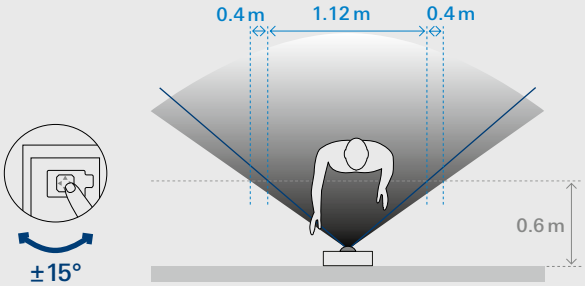


Fig. 23

Detection angle of camera



Installation instructions for system devices

Recommendation: All MDRC units should be mounted in the central distribution of the building. This can be altered depending on the size of the building and topology selected. For example, when installing an auxiliary power supply in the sub-distribution of the apartment, for connecting the devices.

The ABB-Welcome indoor FM video distributor is suitable for mounting in rising mains below a floor call button in a deep flush-mounted wall box.

Wiring the devices

Internal bus

The internal bus is wired continuously via terminal pairs a_1/b_1 available on the devices. To connect the two internal bus lines, the system controller has two terminal pairs a_1/b_1. They are labelled OUT 1 and OUT 2. Starting from these terminal pairs the internal bus lines are fed to the indoor stations, including IP gateway, the indoor video distributors and the auxiliary power supplies and there also connected to a terminal pair a_1/b_1.

For a device with only one terminal pair a_1/b_1 this is used for looping the bus line. Also terminal pairs a_1/b_1 labelled IN are used for looping the bus line on indoor video distributors and the auxiliary power supply.* The stub line of the bus line is connected to the terminal pairs a_1/b_1 labelled OUT 1 to 4.

External bus

The external bus is wired continuously via the terminal pairs a_2/b_2 available on the devices. The system controller has a terminal pair a_2/b_2 labelled IN to connect the external bus line. To these the external bus lines to the outdoor stations, the outdoor video distributors and the switch actuators are connected.

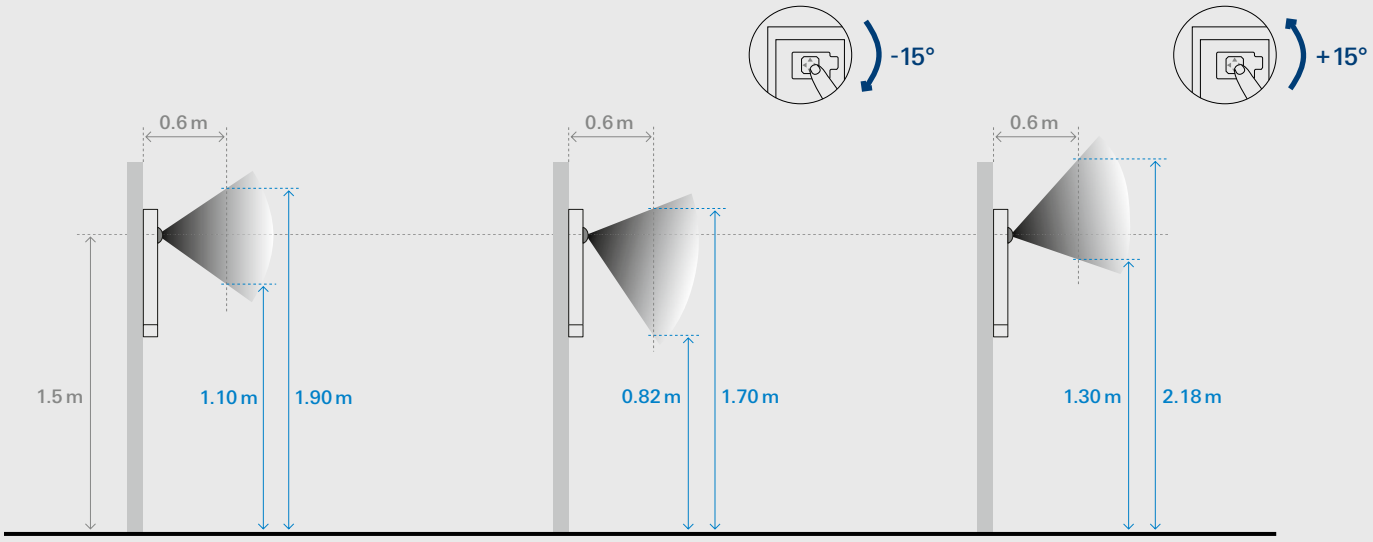
The terminal pairs a_2/b_2 labelled IN 1 and IN 2 are used on the outdoor video distributors for connecting the bus lines coming from the outdoor stations. The terminal pair a_2/b_2 labelled OUT is used for connecting the bus line going to the system controller. Only one terminal pair a_2/b_2 is available on the door/light switch actuator. It is used for looping the bus line.

Additional terminal pairs

All additional terminal pairs – for connecting an electronic door opener or floor call button – are explained in the operating manuals of the respective devices. Additional connecting diagrams are available as example on pages 52 to 53.

Warning: Low-voltage and 230 V cables must not be installed together in a flush-mounted socket. In case of a short-circuit there is the danger of a 230 V load on the low-voltage line.

* An exception is the indoor FM video distributor, which contains two internally bridged terminal pairs a1/b1 labelled IN for more practical wiring.



04
Basic settings

Well-prepared for everything. Several settings need to be made prior to the installation of an ABB-Welcome system. These can be carried out by the electrical installer already at the factory, so that the devices can be directly installed at the customer's premises.

The following settings are to be carried out.

Setting the address of the outdoor station: Fig. 24

The allocation to one of the four inputs of the ABB-Welcome system is made on the outdoor stations and the associated switch actuators for door and light via the setting of the address.

Here the rotary knob house/outdoor is set on an address between 1 and 4. The knob is located on the rear of the outdoor station or the front of the MDRC switch actuator.

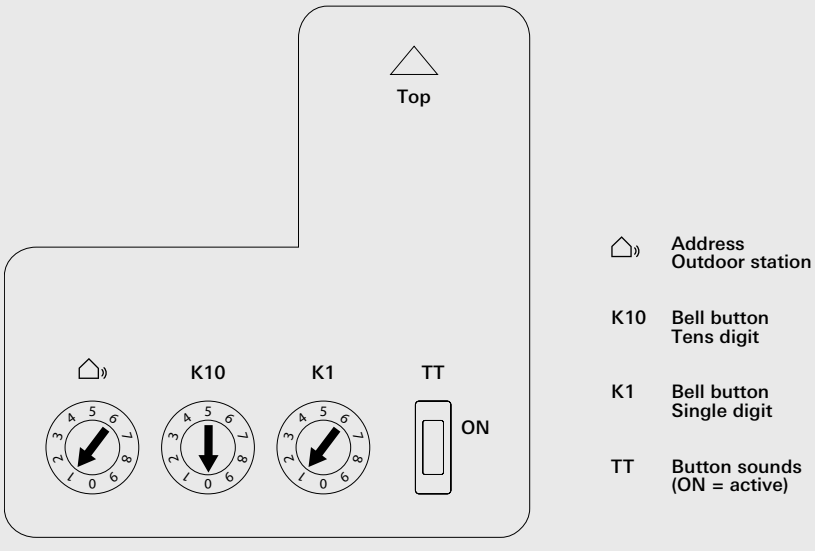
Setting the button sounds on/off

On the outdoor stations the acoustic feedback signal is switched on and off via the "TT" button sounds switch when a doorbell button is pressed. The switch is located on the rear of the outdoor station.

Comfortable for the electrical installers.
Setting in the workshop. Installing at the building and in the apartment.

Fig. 24

Rotary knob for setting the address of an outdoor station



Address
Outdoor station

K10 Bell button
Tens digit

K1 Bell button
Single digit

TT Button sounds
(ON = active)

Overview of the different setting options

Device	Setting	Note
ABB-Welcome outdoor station	Address of the outdoor station	
	Button sounds on/off	
	Assigning the doorbell buttons to the apartments	Only if the specified allocation is different
ABB-Welcome indoor station	Address of the indoor station	
	Setting of the terminal resistor	
	Setting of the standard outdoor station	Only if several outdoor stations are used in the one system
	Setting of the main indoor station	
ABB-Welcome system controller	Setting of the door opener times and light times	Only if the door opener and light switch are used
ABB-Welcome video indoor distributor	Setting of the terminal resistor	
ABB-Welcome Switch actuator, door/light	Address of the associated outdoor station	
	Setting of the door opener or light switch	
	Setting of the door opener times and light times	

Assigning the doorbell push-button of an outdoor station to an apartment

Factory assignment of the doorbell push-buttons Fig. 25

The doorbell push-buttons of an outdoor station are assigned to the apartments consecutively from top to bottom and left to right with the addresses 01, 02, etc.

This assignment applies equally to several outdoor stations in a system. This means that in Figure 26 in each outdoor station push-button A is assigned to apartment 01, etc.

This factory setting is fixed via two potentiometers on the rear of the outdoor station. "K10" must be set on "0" and "K1" on "1".

Change in the assignment of the doorbell push-buttons ("Offset") Fig. 27

The preset addresses of the doorbell push-buttons can be changed. This means that the top doorbell push-button on the left side is assigned to a different apartment. The other doorbell push-buttons are consecutively assigned to the other apartments.

Figure 27 shows the three outdoor stations from the example on page 16. The outdoor station at the gate entrance and the outdoor station at the left building show the factory assignment of the doorbell push-buttons. At the outdoor station of the building on the right an offset of 03 is set.

The value of the "Offset" is fixed at the rear of the outdoor station. Here "K10" indicates the tens digit (here "0") and "K1" the single digit (here "3"). The factory setting of the offset is on "01".

Fig. 25

Factory assignment of doorbell push-buttons

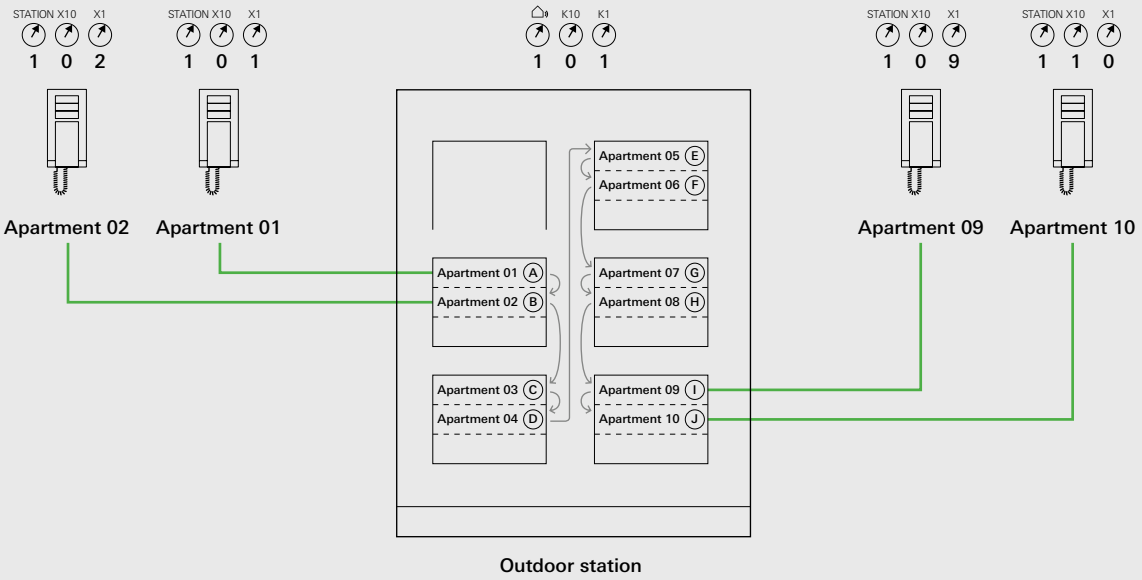
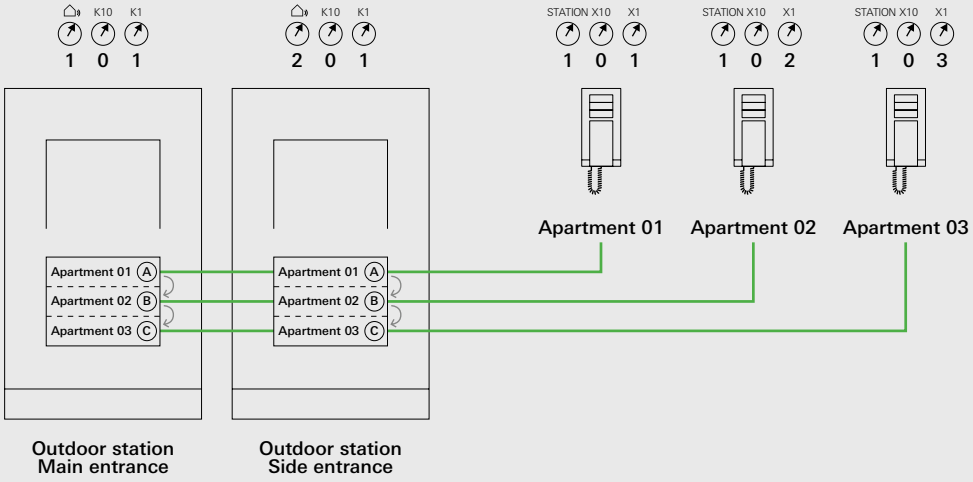


Fig. 26

Several outdoor stations with identical assignment



Setting the address of the indoor station

At the indoor stations the apartment is assigned via the setting of the address. Up to 99 apartments can be addressed within an ABB-Welcome system. Up to four indoor stations with equal rights can be located in each with the same address. The four indoor stations are called when the assigned doorbell push-button is pressed.

The address of an indoor station (e.g. "15") is set with the aid of the rotary knobs "X10" and "X1" at the indoor stations, where "X10" specifies the tens digit (here "1") and "X1" the single digit (here "5"). The rotary knobs are located at the rear or outside of the indoor stations.

Setting of the "standard outdoor station"

For several outdoor stations in an ABB-Welcome system the "standard outdoor station" must be set on the indoor stations.

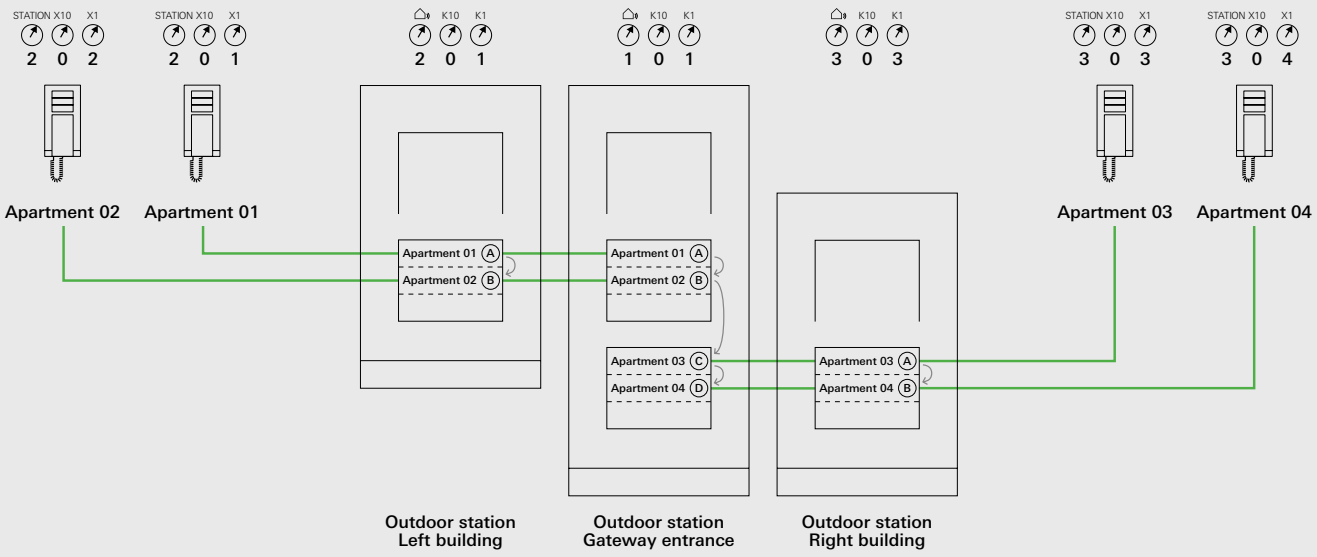
Here the rotary knob STATION is set on the address of the standard outdoor station – between 1 and 4. The rotary knob is located at the rear or outside of the indoor stations.

Setting of the main indoor station

In each apartment the switch "M/S" must be activated on one indoor station. This means "M=ON". For additional indoor stations in the apartment the switch here must be on "M=OFF". The switch is located on the back or outside of the indoor stations.

Fig. 27

Several outdoor stations with identical assignment



Setting of the terminal resistor

As described in Chapter 02, the terminal resistor in ABB-Welcome audio only systems is always switched to "OFF". For video systems, the terminal resistors are to be switched to "ON" for the last devices of a branch and to "OFF" for all others.

The terminal resistors are set via the switch "R/C" on all indoor stations as well as video indoor distributors and auxiliary power supplies.

Setting of the door opener or light switch

The setting is only made on the door/light switch actuator. It shows the respective function of the device in the ABB-Welcome system. The sliding switch on the device is used for setting.

Setting of the door opener times and light times

This setting on the system controller and the door/light switch actuator determines the operating period of the door buzzer (from one to ten seconds). The light-on period can be set between one second and five minutes.

A separate potentiometer for both is located on the system controller. In case of the switch actuator the same potentiometer is used for one of the two control values depending on the position of the sliding switch.

05
Control and system behaviour

Always intuitively correct. ABB-Welcome systems make this possible from the very first contact. Because the eyes, hands and ears quickly orient themselves. In this way the intelligent system fulfils individual wishes and requirements.

Operating the outdoor and indoor stations

The ABB-Welcome outdoor and indoor stations are operated intuitively. Familiar style elements and easy-to-understand icons are used. For the ABB-WelcomeTouch and the ABB-Welcome audio indoor station with display the intelligent menu structure is used.

The functions of all devices are described in the respective operating manuals.

System behaviour

The digital technology of an ABB-Welcome system offers the user a large variety of options.

A connection can be established by ringing the bell on the outdoor station. Or it can be established at the indoor station by switching on the microphone and/or the camera of the outdoor station. A connection lasts at the most two minutes after which it is automatically terminated.

To guarantee that no call of a visitor is missed at an outdoor station, the two following simple rules apply:

- Connections that are established at the outdoor station always have a higher priority than existing connections. This means that an existing connection is interrupted as soon as the bell is rung at the outdoor station.
- A resident cannot establish a connection to an outdoor station if one already exists. An occupied ABB-Welcome system is displayed on the indoor stations.

The floor call buttons can be rung irrespective of an existing connection between outdoor and indoor station. Depending on the work load of the ABB-Welcome system, settings can be carried out on several indoor stations. If the system is occupied, this is indicated at the indoor station.

In front of the door and behind the door. Intuitive operability. For visitors and residents.

06
Design and technology in full harmony.

The ABB-Welcome product range is innovative, sets standards in design, function and technique. It offers high-quality design, attractive colours and numerous intelligent functions. It raises the quality of life in every area of the house. All products are designed to harmonize perfectly, so that living space can be uniformly designed throughout the home. From light switches to socket outlets and up to door communication. This makes the new door communication from ABB not only outstandingly attractive, but also convincingly comfortable. And clear operating instructions with the most important technical data assist in the safe and faultless installation. More about the latest door communication you will also discover with our QR-Code service.

Living space perfectly designed.
With ABB-Welcome. With uniform
language of form. For all functions.

ABB-Welcome video outdoor station

Article number: 8312x/x-xxx-500

Functions

- Two high-quality versions: outdoor station studio white matt (metal-coated) and stainless steel (brushed), especially robust and resistant to environmental factors
- Thickness of front plate of all outdoor stations is 3 mm
- Stainless steel version: robust polished stainless steel front plate
- ABB-Welcome audio outdoor station with 1 to 12 doorbell push-buttons
- Suppression of noise interference for clearly audible door communication between resident and visitor
- Power supply via 2-wire bus; additional wiring with outdoor station for auxiliary power is not required
- Name plates: hidden mechanism for exchanging, protects against unauthorized access
- Hands-free function
- Homogenous illumination of name plates and call buttons with long-life LEDs
- Supplied ready for connection, only the 2-wire bus needs to be connected
- If required, selectable acoustic feedback signal with a press of the call button
- Video camera with wide detection angle (H: 86°, V: 67°) and mechanical adjustment (H +/- 15°, V +/- 15°)
- Automatic day and night switchover and infrared LEDs for illumination during the night

Technical data

Operating temperature: -25°C–+55°C
Protection: IP 44
Single-wire clamps: 2 x 0.6 mm^2–2x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0091,artikel.html

ABB-Welcome audio outdoor station

Article number: 8310x/x-xxx-500

Functions

- Two high-quality versions: outdoor station stainless steel (brushed) and studio white matt (metal-coated), especially robust and resistant to environmental factors
- Thickness of front plate of all outdoor stations is 3 mm
- Stainless steel version: robust polished stainless steel front plate
- ABB-Welcome audio outdoor station with 1 to 15 doorbell push-buttons
- Suppression of noise interference for clearly audible door communication between resident and visitor
- Power supply and data transmission via 2-wire bus; additional wiring with outdoor station for auxiliary power is not required
- Name plates: hidden mechanism for exchanging, protects against unauthorized access
- Homogenous illumination of name plates and call buttons with long-life LEDs
- Supplied ready for connection, only the 2-wire bus needs to be connected
- If required, selectable acoustic feedback signal with a press of the call button

Technical data

Operating temperature: -25°C–+55°C
Protection: IP 44
Single-wire clamps: 2 x 0.6 mm^2–2x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0086,artikel.html

ABB-WelcomeTouch

Article number: 83220 AP-xxx-500

Functions

- 17.8 cm (7") large high-quality colour TFT touchdisplay with intuitive control (resolution of 800 x 480 [WVGA])
- Automatic activation of the camera image at an incoming door call
- During absence three pictures of the visitor are automatically stored in the events memory
- Manual recording of pictures during a conversation is possible at any time
- Events memory: the user is informed who rang the bell at his front door and when
- Electronic picture frame can be selected in standby mode
- Hands-free function with suppression of noise and echo interference for audible communication
- Six easy operation keys for the basic functions of communication, opening of doors, mute function, switching of lights, snapshot and settings are easy and fast to operate
- Differentiating between door call and floor ringing
- Five ring tones can be selected
- Monitoring barrier
- Five-stage adjustable volume
- Automatic door opening function, opens the front door when the doorbell button is pressed
- Power supply and data transmission via 2-wire bus; additional wiring with indoor station for auxiliary power is not required

Technical data

Operating temperature: -5°C–+40°C
Protection: IP 30
Single-wire clamps: 2 x 0.6 mm^2–2 x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0083,artikel.html

ABB-Welcome
Audio indoor station with handset

Article number: 83205 AP-xxx-500

Functions

- The handset is easy to take up and replace
- Three easy operation keys for the basic functions: opening the door, switching the lights and mute function
- Activating the easy operation keys without lifting the handset
- Differentiating between door call and floor ringing
- Five ring tones can be selected
- Monitoring barrier
- Easy to mount on the surface or install on the commercially available 58 flush-mounted socket

Technical data

Operating temperature: -5°C–+40°C
Protection: IP 30
Single-wire clamps: 2 x 0.6 mm^2–2 x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0080,artikel.html

ABB-Welcome
Indoor station with display

Article number: 83200 U-500,
Article number for cover plates: 83260-xxx-500, 2gang frame

Functions

- Large illuminated, monochrome display 3.8 cm (1.5")
- Feedback signals in the display make operation easier for the user since he gets constant feedback about the setting that is currently being made
- Automatic activation of the screen at an incoming door call
- Hands-free function with suppression of noise and echo interference for audible communication
- The basic functions of communication, opening of doors, switching of lights and mute function are located directly on the rocker switch and are quick and easy to adjust
- Differentiating between door call and floor ringing
- Five ring tones can be selected
- Monitoring barrier
- Five-stage adjustable volume
- Automatic door opening function, opens the front door when the doorbell button is pressed
- Power supply and data transmission via 2-wire bus; additional wiring with indoor station for auxiliary power is not required

Technical data

Operating temperature: -5°C–+40°C
Protection: IP 30
Single-wire clamps: 2 x 0.6 mm^2–2 x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0218,artikel.html

ABB-Welcome
System controller

Article number: 83300-500

Functions

- Supplies and controls the entire door communication system
- The ABB-Welcome outdoor stations, the ABB-Welcome indoor stations and the electric door opener as well as the hall light are connected to the system controller
- The switching duration of door opener and light can be adjusted

Technical data

Operating temperature: -5°C–+45°C
Protection: IP 20
Single-wire clamps: 2 x 0.6 mm^2–2 x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm–2 x 0.75 mm^2
Bus voltage: 28 V– ±2V; 1.5 A
Mains voltage: 100–240 V; 50–60 Hz; 0.9 A
Cross section of connection for 230 V: 1.5 mm^2 – 2.5 mm^2
Power supply for door opener: ~12 V; 1.6 A
Floating output for door opener: 30 V AC/DC; 3 A
Floating output for light: 230 V~; 3 AX
Size: 12 MW

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0125,artikel.html

ABB-Welcome Auxiliary power supply

Article number: 83310-500

Functions

» Additional supply device of the Busch-Welcome system to increase the number of connectable indoor stations

Technical data

Operating temperature: -5°C–+45°C
Protection: IP 20
Single-wire clamps: 2 x 0.6 mm²–2 x 1 mm²
Fine-wire clamps: 2 x 0.6 mm²–2 x 0.75 mm²
Bus voltage: 28 V–±2 V; 1 A
Mains voltage: 100 – 240V; 50/60 Hz; 0.9 A
connection cross section for 230 V: 1.5 mm² – 2.5 mm²
Indoor stations for direct connection: 4
Size: 8 TE

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0126,artikel.html

ABB-Welcome Video indoor distributor

Article number: 83320/2 U-500
Article number: 83320/2-500

Functions

» Distributes the video signal of the ABB-Welcome video outdoor station in the building
» The video signal of the entrance door can be received in different apartments or in several rooms with the aid of the distributor
» Is available as MDRC unit or for flush-mounted installation
» Is only required when installing stub lines and rising mains

Technical data

Operating temperature: -5°C–+40°C
Protection: IP 20
Single-wire clamps: 2 x 0.6 mm²–2 x 1 mm²
Fine-wire clamps: 2 x 0.6 mm²–2 x 0.75 mm²
Bus voltage: 28 V – ±2 V
Size 83320/2 U: for installation in a deep flush-mounted socket
Größe 83320/2: 2 MW

QR-Code service

For flush-mounting
www.busch-jaeger-catalogue.com/
8300-0-0121,artikel.html

MDRC unit
www.busch-jaeger-catalogue.com/
8300-0-0120,artikel.html

ABB-Welcome
Outdoor video distributor

Article number: 83325/2-500

Functions

- Makes possible the connection of several ABB-Welcome video outdoor stations to the ABB-Welcome system controller
- Is used in buildings with more than one ABB-Welcome video outdoor station

Technical data

Operating temperature: -5°C–+45°C
Protection: IP 20
Single-wire clamps: 2 x 0.6 mm^2–2 x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V
Size: 2 MW

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0122,artikel.html

ABB-Welcome
Switch actuator, door/light

Article number: 83330-500

Functions

- For connecting an electronic door opener or for switching the hall light or connecting a hall light relay
- The switching duration of the door opener or the hall light is adjustable
- Assignment to an outdoor station is adjustable

Technical data

Operating temperature: -5°C–+45°C
Protection: IP 20
Single-wire clamps: 2 x 0.6 mm^2–2 x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V
Door opener: 3 A maximum
Light: switch actuator
Neon light: 350 W
230-V halogen lamp: 300 W
Low-voltage halogen lamp, conv. transformer: 350 VA
Low-voltage halogen lamp, electr. transformer: 300 VA
Size: 4 MW

QR-Code service

www.busch-jaeger-catalogue.com/
8300-0-0123,artikel.html

ABB-Welcome IP gateway for Busch-ComfortTouch®

Article number: 83340-500

Functions

» Makes possible the integration of audio and video signals of the ABB-Welcome system into the building system technology (KNX installation)
» With the ABB-Welcome IP gateway (ABB i-bus® KNX installation) the Busch-ComfortTouch® turns into a comfortable video indoor station

Technical data

Operating temperature: -5°C–+45°C
Protection: IP 20
Single-wire clamps: 2 x 0.6 mm^2–2 x 1 mm^2
Fine-wire clamps: 2 x 0.6 mm^2–2 x 0.75 mm^2
Bus voltage: 28 V – ±2 V
Size: 10 MW

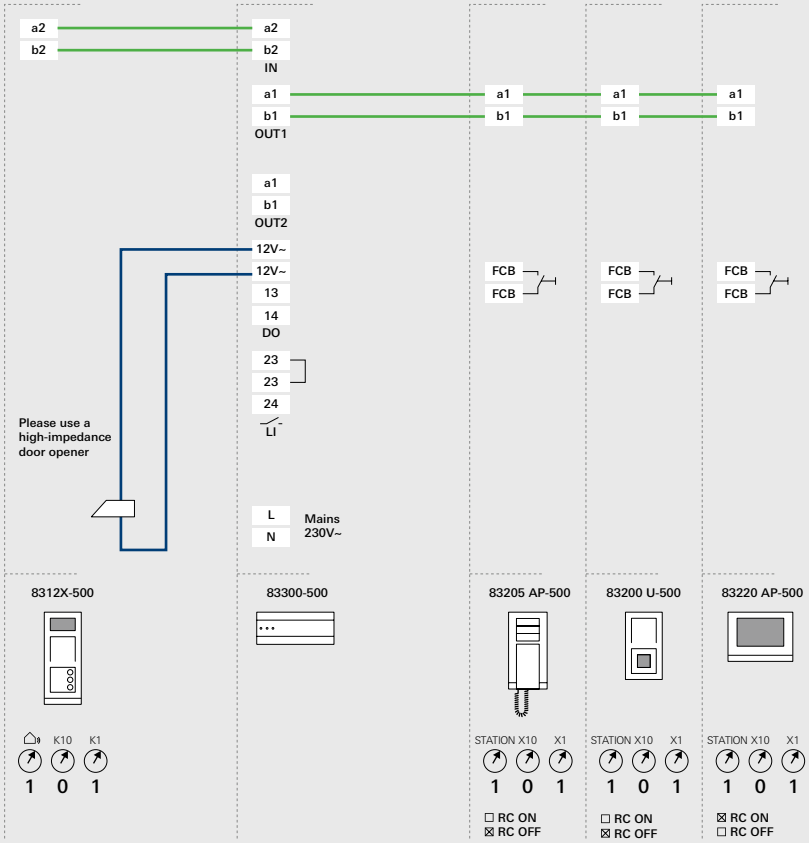
QR-Code service

www.busch-jaeger-catalogue.com/8300-0-0127,artikel.html

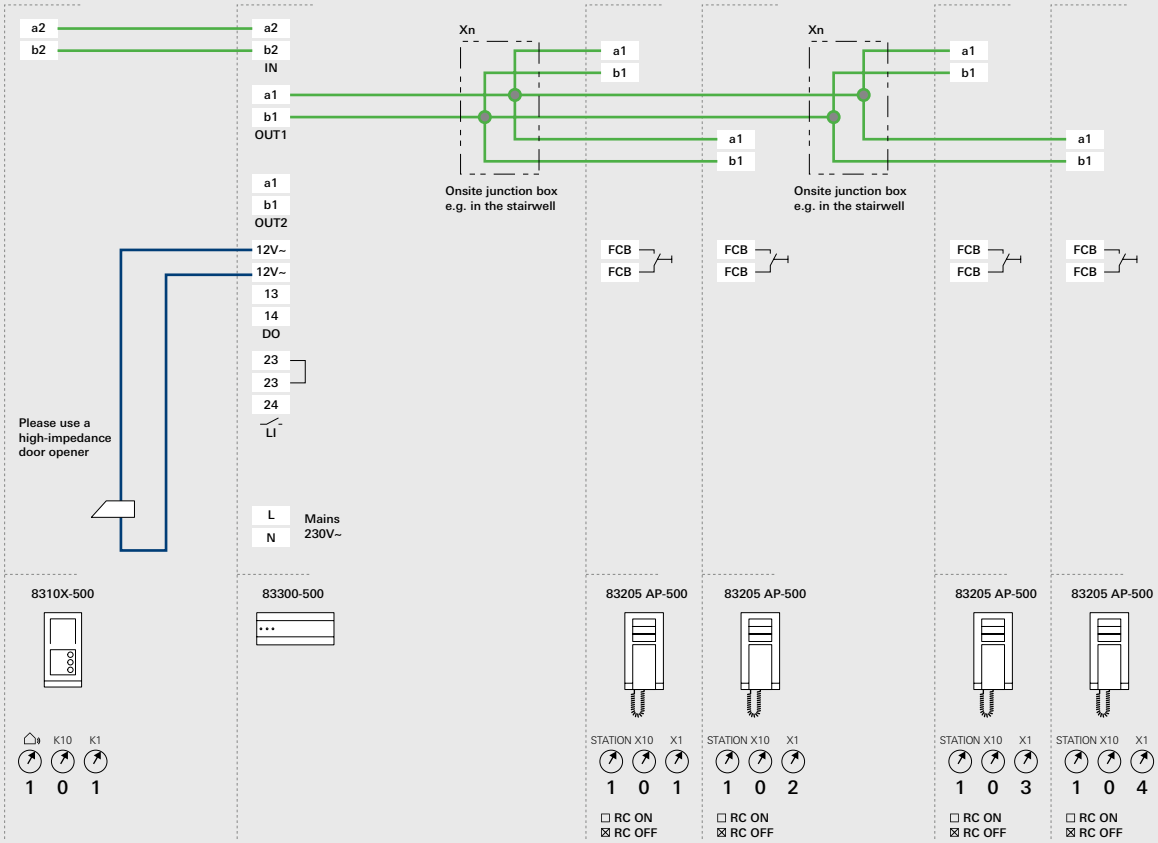
07
Connection without detours

Simple, easy to read, informative. ABB-Welcome not only makes daily life more comfortable. The products can also be easily and quickly connected and are suitable for all requirements. The following four examples of terminal diagrams provide optimum orientation and guarantee effective installation.

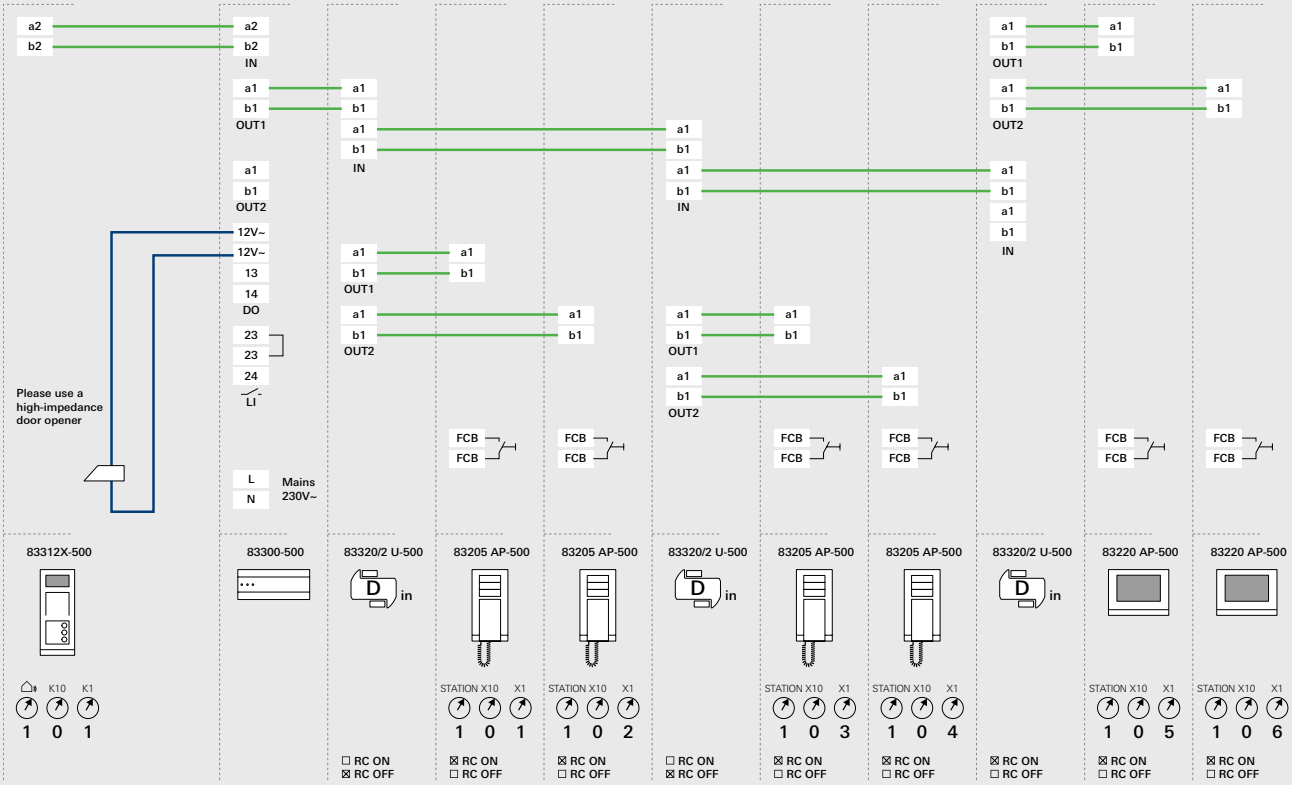
System type: audio/video; Wiring: looped from device to device



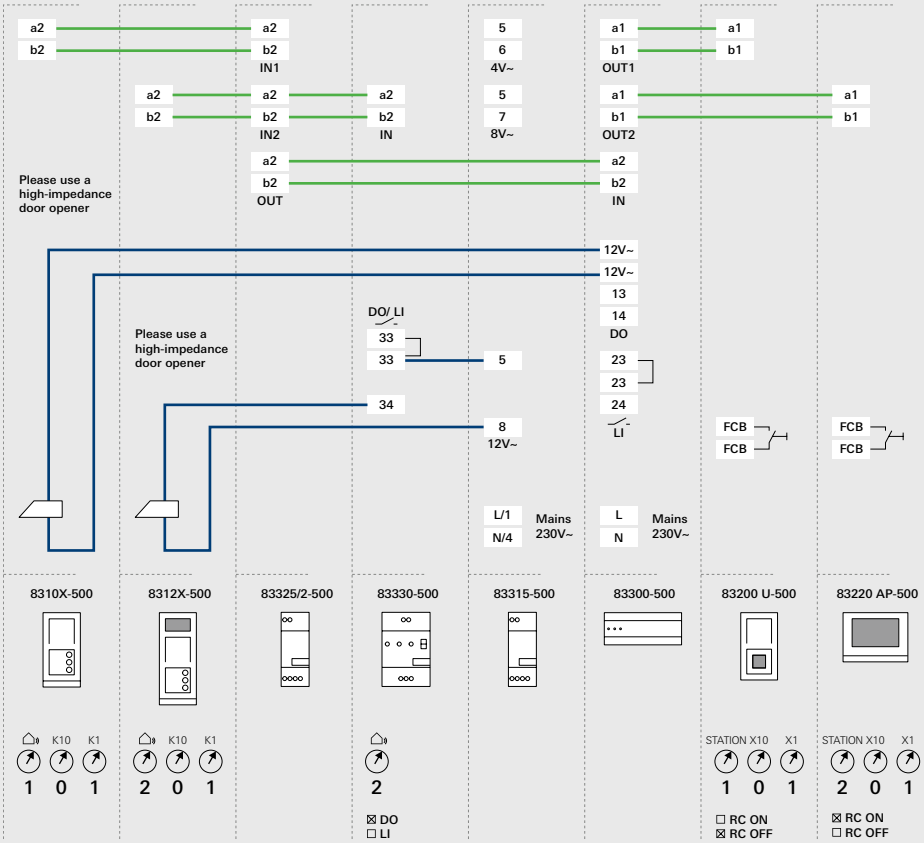
System type: audio; Wiring: rising mains with branch connections



System type: audio/video; Wiring: rising mains with branch connections/video distributors



System type: audio/video combination with two door stations; Wiring: the two internal bus lines are used inside the building



Notes.

Legend.

Terminal devices

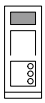


ABB-Welcome video outdoor station


ABB-Welcome audio outdoor station


ABB-WelcomeTouch

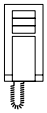


ABB-Welcome audio indoor station with handset


ABB-Welcome audio indoor station with display


Busch-ComfortTouch®

System devices/wiring

ABB-Welcome system controller

ABB-Welcome video outdoor distributor, construction type: MDRC

ABB-Welcome video indoor distributor, neutral construction type: MDRC, FM

ABB-Welcome auxiliary power supply

Switch actuator


ABB-Welcome bell transformer


Electronic door opener

Indoor video station (ABB-WelcomeTouch)

Audio indoor station (ABB-Welcome audio indoor station with handset, ABB-Welcome audio indoor station with display)

Video outdoor station

Audio outdoor station

2-wire bus line

Wire

LAN connection

ABB-Welcome IP gateway

M/S Master/Slave configuration

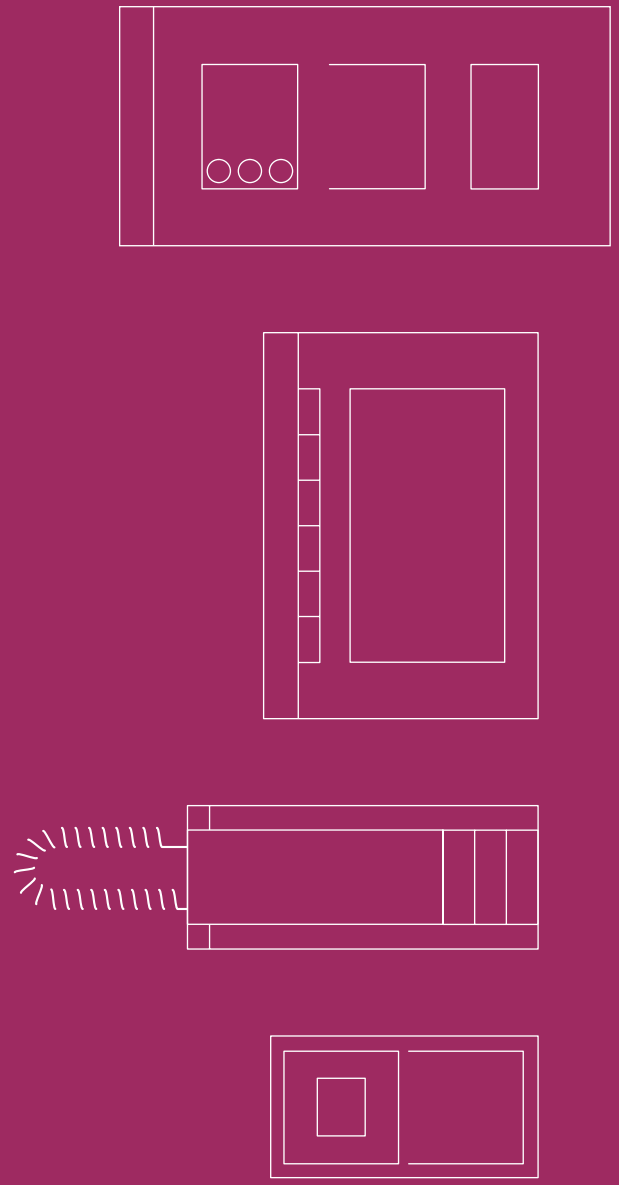

Floor call button

RC Terminal resistor

Inputs


Main entrance


Side entrance



Contact

A member
of the ABB Group

Busch-Jaeger Elektro GmbH
P.O. Box
58505 Lüdenscheid
Germany

Freisenbergstraße 2
58513 Lüdenscheid
Germany

www.BUSCH-JAEGER.com
info.bje@de.abb.com

Central sales service:

Phone +49 180 5 669900
Fax +49 180 5 669909
(0.14 €/min. from the German landline but different costs from abroad, please check it locally)

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