

Product Information



DCM Standard indoor stations
TK IS A 514 A ..
TK IS A 514 AD .. (Design)



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Information about this manual

On pages 27 and 28 you can read the "terms and definitions" of this manual. We recommend to read these explanation carefully before you start the adjustment of the indoor station.

Safety instructions

! Assembly, installation, and commissioning must only be carried out by a qualified electrician!

For work on systems with 230 V AC mains current the safety requirements of DIN VDE 0100 must be observed.

When installing DCM BUS systems the general safety rules for telecommunication systems in accordance with VDE 0800 must be observed:

- separate cabling for high and low voltage lines
- minimum distance of 10 cm for joint cabling arrangements,
- use of separators between high and low voltage lines in joint cable ducts,
- use of standard telecommunication cables, e. g. J-Y (St) Y with 0.8 mm² cross section

! Suitable lightning prediction must ensure that a voltage of 32 V DC will not be exceeded at the DCM BUS wires a and b.

DCM = Door Communication Management

Application / Brief description

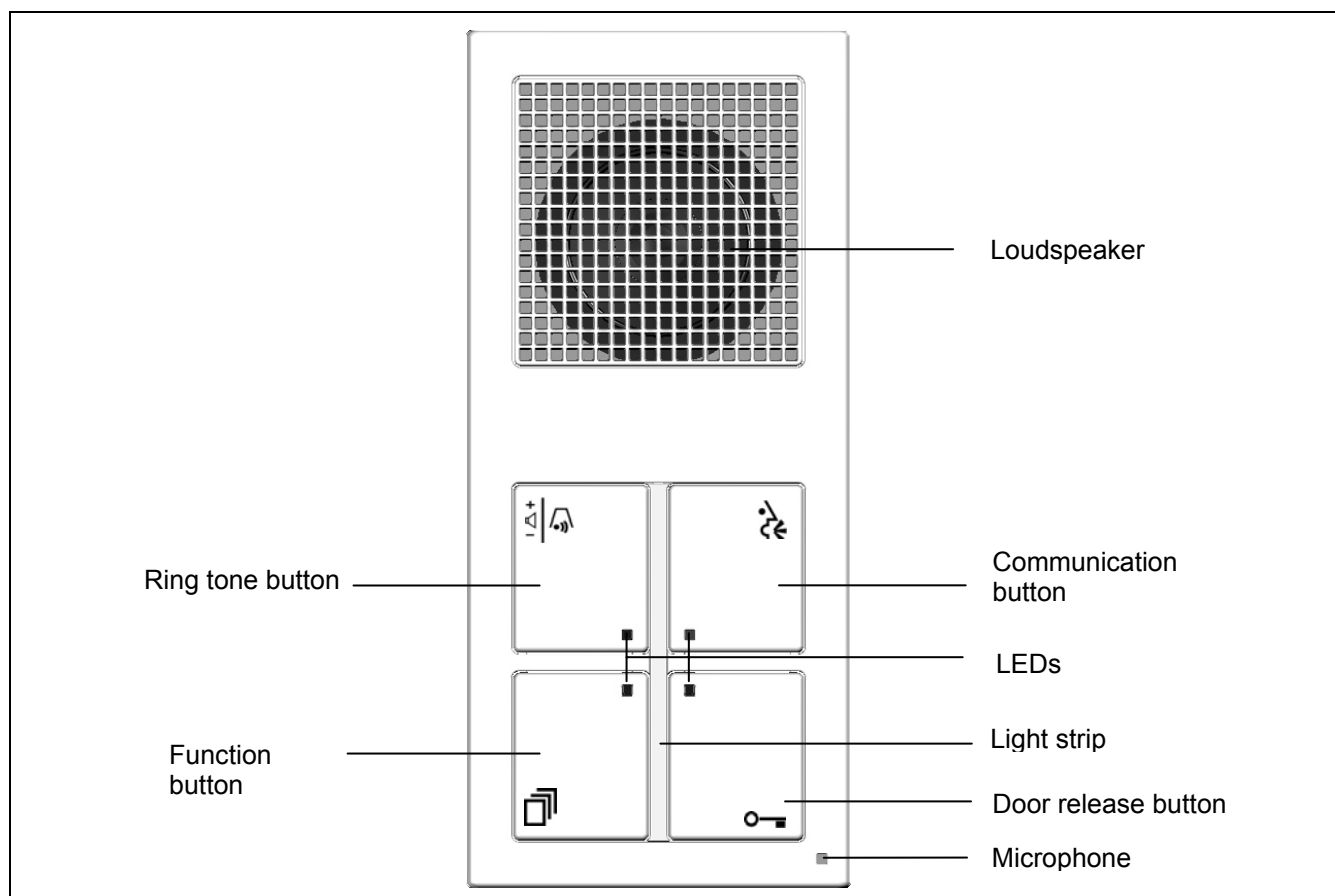
Application

- acoustical and optical indication of front door and internal calls
- hands-free operation with high audio quality
- door release function
- switching light
- The standard design version enables the installation of frames of the design ranges AS 500, A 500, Aplus and A creation.






Brief description

- hands-free operation , manually controlled simplex communication can be activated
- internal call with automatically hands-free operation
- door release button
- function button switches lighting (Basic settings)
Alternative assignment: Control function, internal call, automatic door release, call diversion
- Push-button for taking call or change over between speaking/listening if simplex communication is activated
- Selection of 13 ring tones
- ring tone differentiation between main door, floor door and internal call
- sub door call: 4 bell buttons of the outdoor station can be assigned to 4 different ring tones of the indoor station
- ring tone differentiation of 2 outdoor stations
- ring tone volume manually adjustable
- high quality sound and great speaker dynamic
- ring tone mute with optical display
- 1 parallel call can be activated
- integrated connection for floor door bell
- optical short-term memory of door calls
- audio privacy function
- automatic call cut-off
- optical status indication if system is occupied (existing communication)
- 2- and 3-wire technique
- blue orientation LED (3-wire technique required)
- electret capacitor microphone
- audio- and video indoor stations can be combined in the same installation

Device overview



Indication and operation

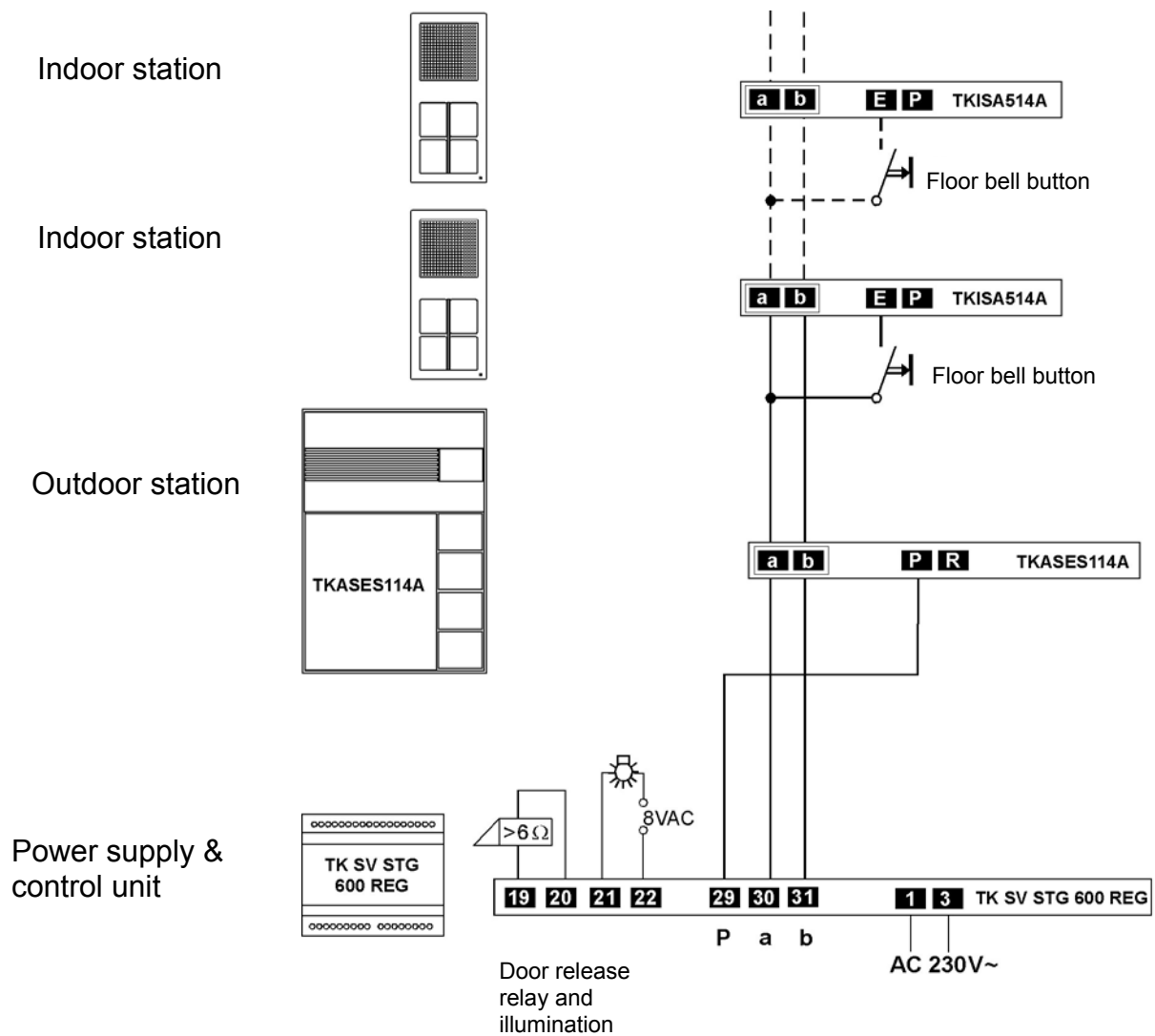
	Ring tone button	<ul style="list-style-type: none"> Adjustment of ring tone volume Initiate setting mode for ring tones
	Indication	LED on = Ring tone deactivated
	Communication button	<ul style="list-style-type: none"> Start/end of hands free communication Switching and operating the simplex communication
	Indication	LED flashes: incoming door call / communication occupied LED off: no communication LED on: talking mode
	Function button	<ul style="list-style-type: none"> Activation of the assigned function Initiate the setting mode of the function button
	Indication	LED on = Call diversion or automatic door release is activated
	Door release button	<ul style="list-style-type: none"> Activation of door release (and light, if light switch function is activated)
	Indication	LED on: for approx. 3 s when door release is activated
	Light strip	<ul style="list-style-type: none"> Blue illuminated vertical light strip
	Indication	illuminated, if P-wire is connected and slide switch adjusted for 3-wire operation

Wiring and installation

Wiring example

2-wire technique

Please observe cable length and loop resistance.
No illumination of indoor station in 2 wire installations possible. Slide switch in position II.



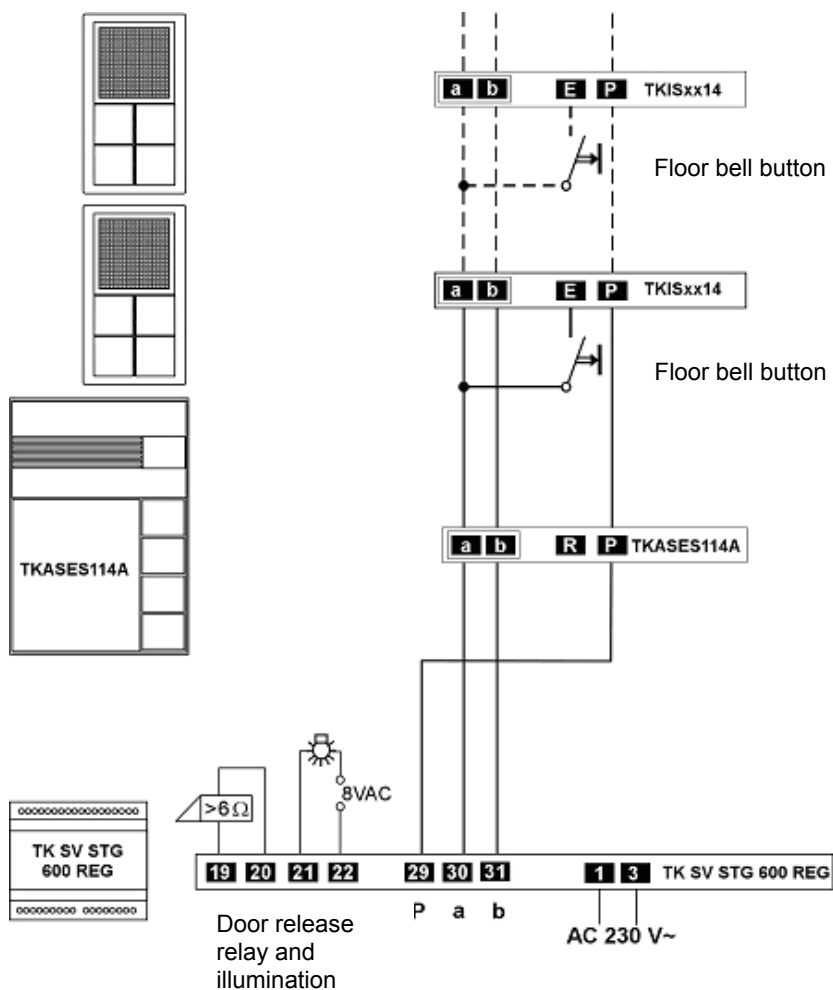
3-wire technique

Please observe cable length and loop resistance.
Slide switch in position III.

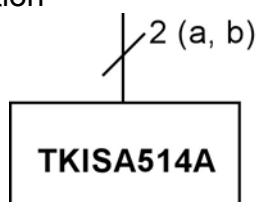
Indoor station

Indoor station

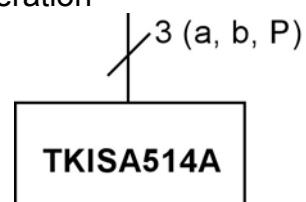
Outdoor station

Power supply &
control unit**Connecting diagram**

2-wire operation



3- wire operation

**Slide switch**

2- wire operation



3- wire operation

Installation of bottom shell

- Recommended installation height: 1.5 m
- For an easier installation and space for the wires a *flush box for wall mounted lamps* is recommended (see. figure below).
- Place the cable entry over the flush box.
- Connect the bottom shell with adequate screws. Consider the TOP site as shown in the image!

Therefore you can use the connection holes (1) and (2) for direct fixing on the wall. The connection holes (1) can be used to connect an indoor station with design frame onto a wall box with hole centre distance of 60 mm.

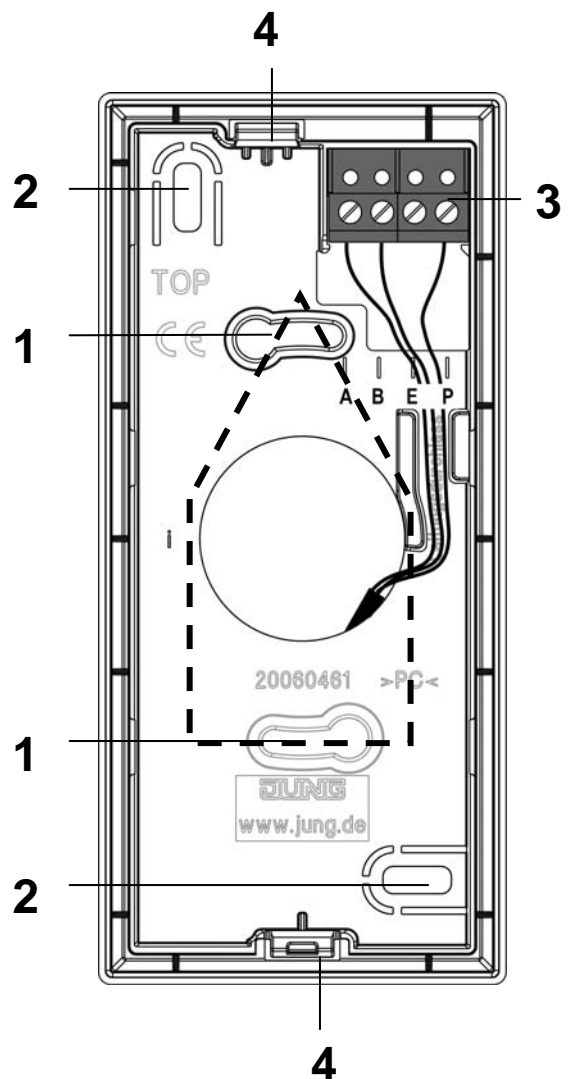
Connecting wires

Type of cable:

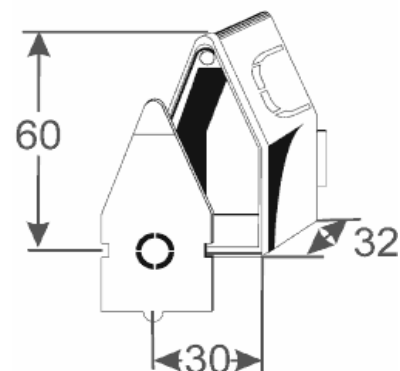
Telecommunication cable J-Y (St) Y with twisted pairs with a cross section of 0.6 mm or 0.8 mm.

- Take off the connection block (3).
- Attach the wires to the connection block in accordance with the terminal description on the bottom shell (A B E P).
- Place the wires into the guide slot to avoid, that the wires do not get pinched or damaged.
- Plug on the connection block in the original position.

Bottom shell



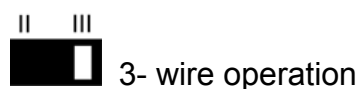
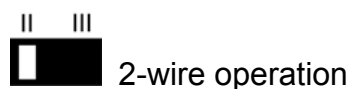
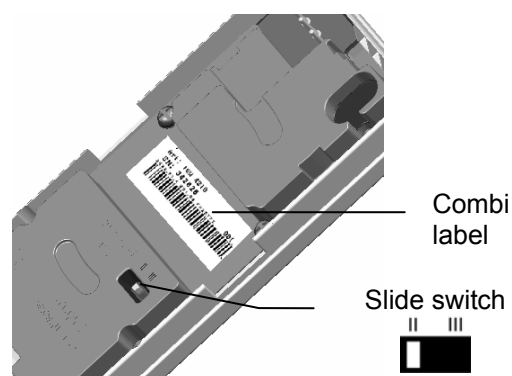
Flush box for wall mounted lamps



Adjust the device for 2- or 3-wire operation

- **2-wire operation:**
Factory settings: The slide switch is in position II.
The a and b wire will be connected.
- **3- wire operation:**
Put the slide switch in position III
The a, b and P wire will be connected.

Top device (reverse side)



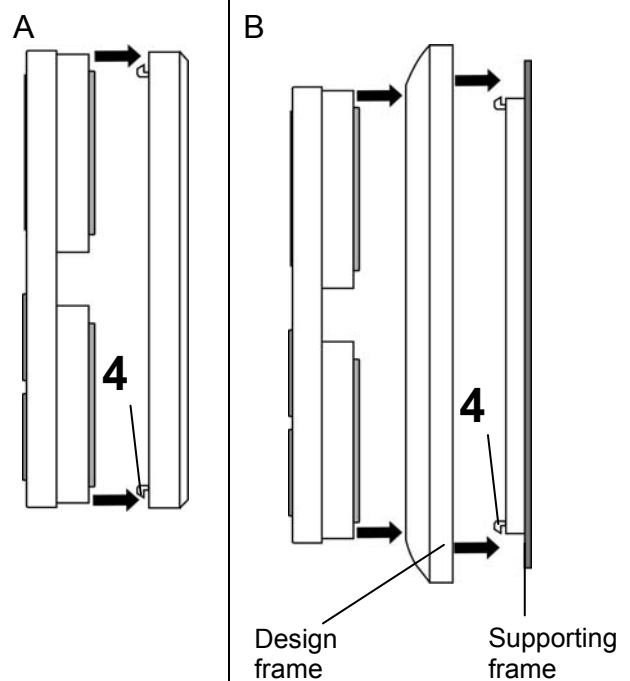
Assembling device

Device without design frame (A)

- Put the top device onto the snap connectors (4) of the bottom shell and press until you can hear a snap-on sound.

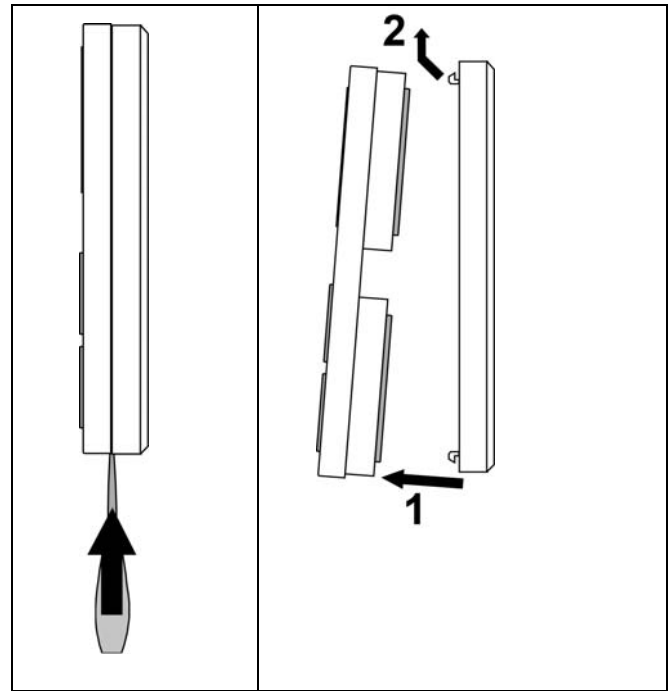
Device with design frame (B)

- Put the design frame onto supporting frame of the bottom shell.
- Put the top device onto the snap connectors (4) of the bottom shell and press until you can hear a snap-on sound.



Opening the device

1. On the bottom side of the indoor station is a squared slot to unlock and open the device. Insert a screwdriver (approx. 7mm) with slight pressure straight into the slot.
2. The device can be pulled at the lower side out of the shell (1).
3. Remove the top shell from the snap connector (2).



Commissioning

- Install all of the devices of the system completely.
- Check the a, b and P wires for short-circuit.
- Switch on the mains voltage.
The following functions are available without additional programming:
 - existing communication from the indoor stations to the outdoor station
 - door release function
 - light switching
- Programming of the system see product information of the outdoor station

Device settings










Storing the device settings

The indoor station is equipped with an EEPROM. After mains voltage failure following remains saved in the EEPROM: Selected ring tone, ring tone volume/mute, activated call diversion, internal call, automatic door release, control functions and light switching.

Factory settings

Limited communication time	approx. 1 min
Timeout setting mode	approx. 8 s
Indication of green LED after pushing communication button when communication is occupied	3 x
Stand-by after internal call	approx. 30 s

Sings and symbols

	acknowledge tone
	ring tone
	slow LED flashing: 0.5 s ON / 0.5 s OFF
	fast LED flashing: 0.125 s ON / 0.125 s OFF
	LED pulse flashing: 0.5 s ON / 1.5 s OFF
	LED ON
	short pushing of button
	push button until
	release the button

Function button

Setting of function button:

Internal call, call diversion, door release function and control function

Internal call

	<p>Preparation DCM system is in idle mode.</p> <p>IS 1 IS 2</p> <p>Target indoor station (IS2): Push communication button.</p>
	<p>Starting setting mode at indoor station (IS1)</p> <ul style="list-style-type: none"> • Push function button (for approx. 8 s) until you can hear acknowledge tone. • fast LED flashing • release the function button
	<p>All LED flashing fast</p> <ul style="list-style-type: none"> • Push communication button • acknowledge tone End of settings. The device switches into idle mode. • all LEDs OFF
	<p>Target indoor station (IS2):</p> <p>If green LED is illuminated:</p> <ul style="list-style-type: none"> • Push communication button • green LED is OFF <p>After 60s the target indoor station (IS2) automatically switches into idle mode.</p>

Now you can activate an **internal call** to call indoor station (**IS2**) by means of pushing the function button (**IS1**).

Call diversion

		<p>Preparation DCM system is in idle mode.</p> <p>IS 1 IS 2</p> <p>Target indoor station (IS2): Push communication button.</p>
		<p>Starting setting mode at indoor station (IS1)</p> <ul style="list-style-type: none"> • Push function button (for approx. 8 s) until you can hear acknowledge tone. • fast LED flashing • release the function button
		<p>All LED flashing fast</p> <ul style="list-style-type: none"> • push communication button • acknowledge tone End of settings. The device switches into idle mode. • All LEDs OFF
		<p>Target indoor station (IS2):</p> <p>If green LED is illuminated:</p> <ul style="list-style-type: none"> • Push communication button • green LED is OFF <p>After 60s the target indoor station (IS2) automatically switches into idle mode.</p>

Now you can activate/deactivate a **call diversion** to a selected indoor station (**IS2**) by means of pushing the function button (**IS1**).

Automatic door release

		<p>Preparation DCM system is in idle mode.</p> <ul style="list-style-type: none"> • Push function button (for approx. 8 s) until you can hear acknowledge tone. • fast LED flashing • release the function button
		<p>All LED flashing fast</p> <ul style="list-style-type: none"> • push door release button • acknowledge tone End of settings. The device switches into idle mode. • all LEDs OFF

Now you can activate/deactivate the **automatic door release** by means of pushing the function button.

Control function 8

		<p>Preparation DCM system is in idle mode.</p> <ul style="list-style-type: none"> • Push function button (for approx. 8 s) until you can hear acknowledge tone. • fast LED flashing • release the function button
		<p>All LED flashing fast</p> <ul style="list-style-type: none"> • push function button • acknowledge tone End of settings. The device switches into idle mode. • All LEDs OFF

Now you can activate the **control function 8** by means of pushing the function button.

Light switching

Resetting the function button to the function „light switching“ takes place by means of reloading the factory settings.

Reloading the factory settings

		<p>Attention ! All settings are reset to factory settings.</p> <ul style="list-style-type: none"> • Push ring tone button and function button (for approx. 8 s) until you can hear acknowledge tone. • End of settings. The device switches into idle mode. • release the buttons <p>The function button is assigned with the function light switching.</p>
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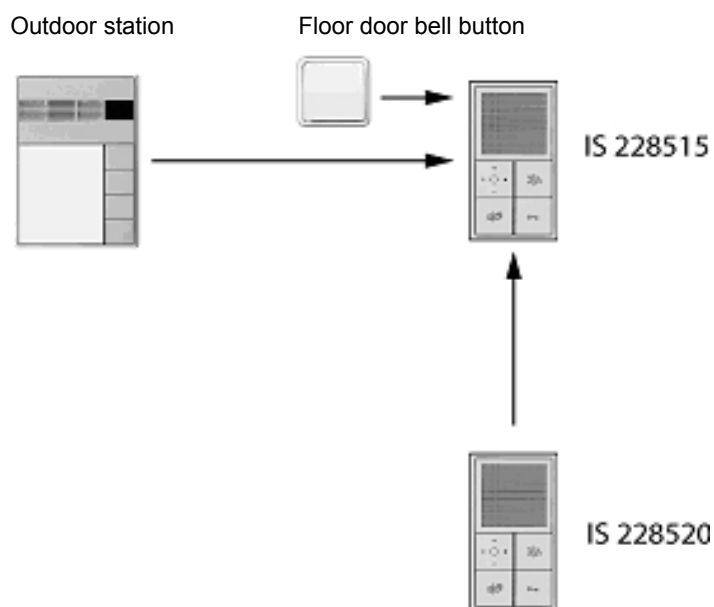
Now you can switch the **light** by means of pushing the function button.

Adjusting the function button with the service device

The initiation starts always with the key combination ***95#Ser.-Nr.#** .

Initiation	⌘ 95 ⌘ Ser.-Nr. ⌘
Call diversion	⌘ 90 ⌘ Ser.-Nr. ⌘ ZielSNr. ⌘
Automatic door release	⌘ 91 ⌘ Ser.-Nr. ⌘
Internal call	⌘ 92 ⌘ Ser.-Nr. ⌘ IntSNr ⌘
Control function 8	⌘ 93 ⌘ Ser.-Nr. ⌘
Parallel function	⌘ 99 ⌘ Ser.-Nr. ⌘ ParSNr ⌘

Example:



IS (228515) is assigned to a bell button of the outdoor station.

IS (228520) will be parallel assigned to the IS (228515).

With the following key combination IS (228520) operates parallel with IS (228515).

*** 99 # 228520 # 228515 #**

Note:










Deleting the parallel function with ParSNr = 0.

*** 99 # 228520 # 0 #**

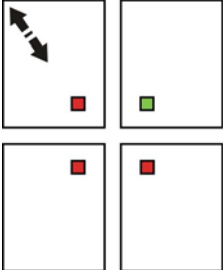
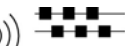
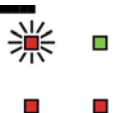
- Ser.-Nr. = Serial number of the indoor station which should be adjusted.
- ZielSNr. = Serial number of the target indoor station for a call diversion
- IntSNr. = Serial number of the target indoor station for an internal call
- ParSNr. = Serial number of the (first) indoor station to which the additional indoor station should be assigned.

Ring tone selection

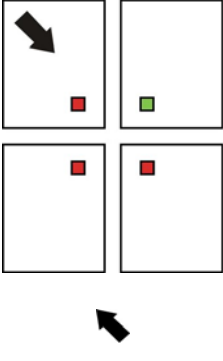
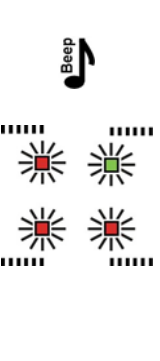
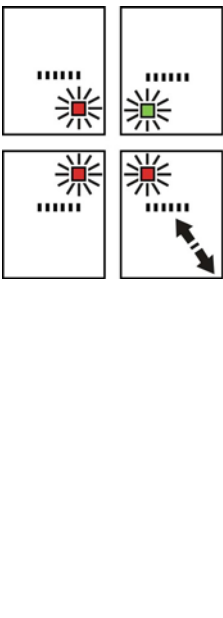
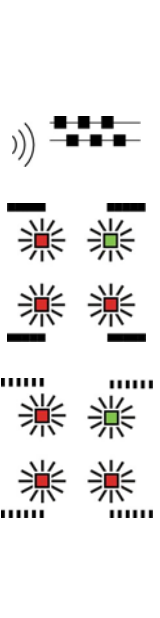
Sings and symbols

	acknowledge tone
	ring tone
	slow LED flashing: 0.5 s ON / 0.5 s OFF
	fast LED flashing: 0.125 s ON / 0.125 s OFF
	LED pulse flashing: 0.5 s ON / 1.5 s OFF
	LED ON
	short pushing of button
	push button until
	release the button

Ring tone volume / Ring tone OFF/ON

		<p>The ring tone volume is adjustable in 5 levels: 1, 2, 3, 4 and OFF (ring tone is switched OFF).</p> <ul style="list-style-type: none"> • Push ring tone button (approx. 1 s) • You can hear the adjusted ring tone • now the volume is one level louder <p>Repeat the action as long as the desired volume is reached.</p>
		<p>Ring tone OFF:</p> <ul style="list-style-type: none"> • Repeat the action until the level OFF is adjusted. The LED of the ring tone button is ON. • push the button again to turn the ring tone ON

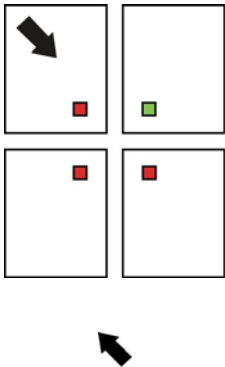
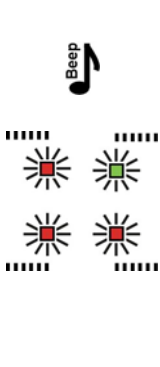
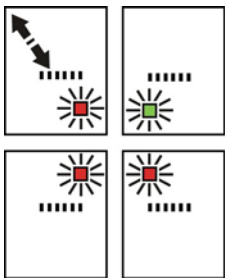
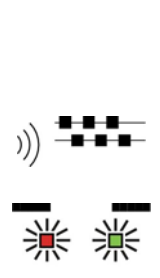
Ring tone selection for:**Outdoor station 1, Outdoor station 2, Internal call, Floor bell button****Ring tone for outdoor station 1 (Outdoor station address = 0)**

		<p>Preparation DCM system is in idle mode.</p> <ul style="list-style-type: none"> • Push ring tone button (for approx. 8 s) until you can hear acknowledge tone • fast LED flashing • release the ring tone button.
		<p>All LED flashing fast</p> <ul style="list-style-type: none"> • Push door release button • You can hear the next ring tone. All LEDs are ON for the time of the ring tone, then flashing fast again. <p>The last audible ring tone is selected for the outdoor station 1. Repeat the action until the desired ring tone is selected. After approx. 8 s the indoor station turns into idle mode. The LEDs turn OFF.</p>

Ring tone for all other outdoor stations (Outdoor station address > 0)

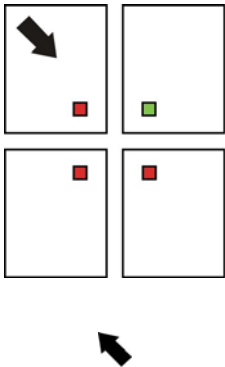
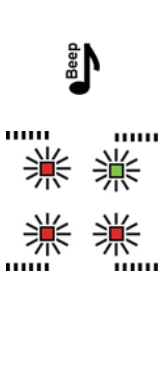
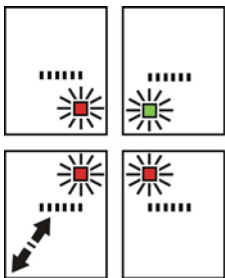
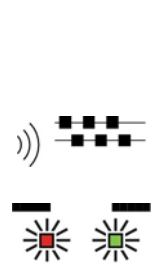
		<p>Preparation DCM system is in idle mode.</p> <ul style="list-style-type: none"> • Push ring tone button (for approx. 8 s) until you can hear acknowledge tone. • fast LED flashing • release the ring tone button.
		<p>All LED flashing fast</p> <ul style="list-style-type: none"> • Push communication button • You can hear the next ring tone. All LEDs are ON for the time of the ring tone, then flashing fast again <p>The last audible ring tone is selected for the outdoor stations (address > 0). Repeat the action until the desired ring tone is selected. After approx. 8 s the indoor station turns into idle mode. The LEDs turn OFF.</p>

Ring tone internal call

		<p>Preparation DCM system is in idle mode.</p> <ul style="list-style-type: none"> • Push ring tone button (for approx. 8 s) until you can hear acknowledge tone. • fast LED flashing • release the ring tone button.
		<p>All LED flashing fast</p> <ul style="list-style-type: none"> • Push ring tone button • You can hear the next ring tone. All LEDs are ON for the time of the ring tone, then flashing fast again

The last audible ring tone is selected for the internal call. Repeat the action until the desired ring tone is selected.
After approx. 8 s the indoor station turns into idle mode. The LEDs turn OFF.

Ring tone floor bell button

		<p>Preparation DCM system is in idle mode.</p> <ul style="list-style-type: none"> • Push ring tone button (for approx. 8 s) until you can hear acknowledge tone. • fast LED flashing • release the ring tone button.
		<p>All LED flashing fast</p> <ul style="list-style-type: none"> • Push function button • You can hear the next ring tone. All LEDs are ON for the time of the ring tone, then flashing fast again

The last audible ring tone is selected for the floor bell button.
Repeat the action until the desired ring tone is selected.
After approx. 8 s the indoor station turns into idle mode.
The LEDs turn OFF.

End of setting mode

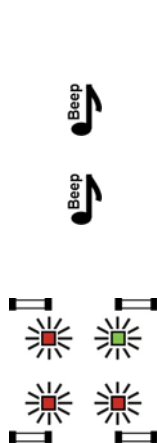
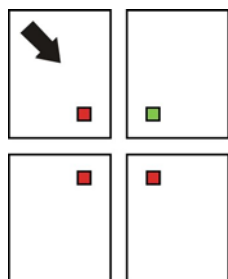
After approx. 8 s the indoor station turns into idle mode.

Ring tone selection for sub door call

Note:

The assignment of a **sub door call** at the **outdoor station** is only possible with the service device (see product information of TK-SERVICE).

Start setting mode



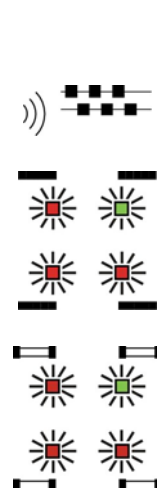
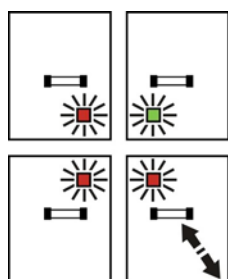
Preparation

DCM system is in idle mode.

- Push ring tone button for longer than 12 s.
- After approx. 8 s you can hear acknowledge tone....
- ... continue pushing. After further 4 s you can hear a second acknowledge tone.
- LED pulse flashing ...
- release the ring tone button.

Now the indoor station is ready for the following assignment:

Selection sub door call 1 (Serial-no.+1)

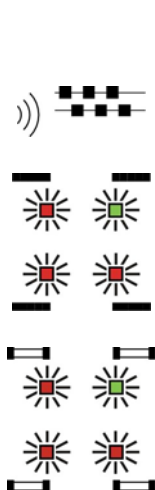
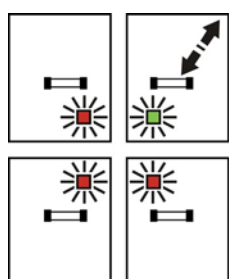


All LED are pulse flashing

- Push door release button
- You can hear the next ring tone.
All LEDs are ON for the time of the ring tone, then pulse flashing again

The last audible ring tone is selected for the sub door call 1.
Repeat the action until the desired ring tone is selected.

Selection sub door call 2 (Serial-no.+2)

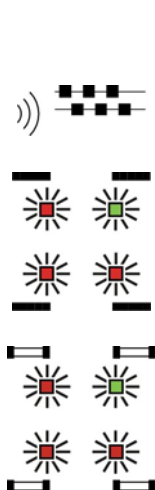
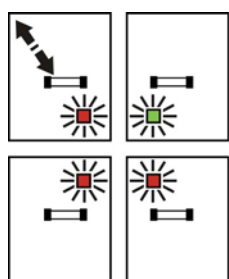


All LED are pulse flashing

- Push communication button
- You can hear the next ring tone.
All LEDs are ON for the time of the ring tone, then pulse flashing again

The last audible ring tone is selected for the sub door call 2.
Repeat the action until the desired ring tone is selected.

Selection sub door call 3 (Serial-no.+3)

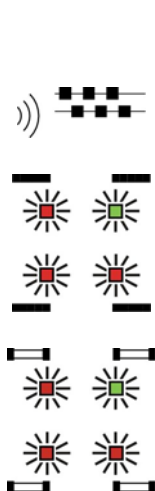
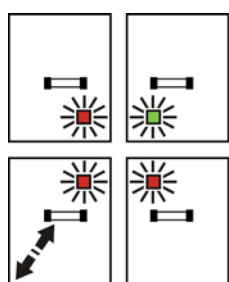


All LED are pulse flashing

- Push ring tone button
- You can hear the next ring tone.
All LEDs are ON for the time of the ring tone, then pulse flashing again

The last audible ring tone is selected for the sub door call 3.
Repeat the action until the desired ring tone is selected.

Selection sub door call 4 (Serial-no.+4)



All LED are pulse flashing

- Push function button
- You can hear the next ring tone.
All LEDs are ON for the time of the ring tone, then pulse flashing again

The last audible ring tone is selected for the sub door call 4.
Repeat the action until the desired ring tone is selected.

End of setting mode

After approx. 8 s the indoor station turns into idle mode.

Operation

Start communication, door release, switching light

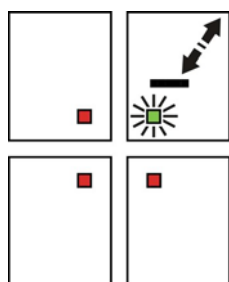
Start communication after incoming call (Door call or internal call)

		<ul style="list-style-type: none"> • Incoming call You can hear the selected ring tone and the green LED of the communication button flashes.
		<ul style="list-style-type: none"> • Push the communication button to start the connection (max. 1 s). The green LED is illuminated.
		<ul style="list-style-type: none"> • Hands-free operation: The communication will be controlled depending on the volume of the speaking person. It is not required to push the communication button.
		<ul style="list-style-type: none"> • Manually controlled simplex communication: Loud and abnormal background noise disturb the proper function of the communication. Deactivation of the hands-free operation is recommended:
	1 s →	<ul style="list-style-type: none"> • During an existing communication push the communication button longer than 1 s.
		<ul style="list-style-type: none"> • Push the button for talking
		<ul style="list-style-type: none"> • Release the button, if an answer from the outdoor station is expected.
		<ul style="list-style-type: none"> • End of communication: <ul style="list-style-type: none"> - short push of the communication button - adjusted talking time has elapsed - push the door release button

Start communication without incoming call

		<p>This function can be deactivated with the SERVICE DEVICE (Communication only after incoming call).</p>
		<ul style="list-style-type: none"> • Push the communication button to start the connection (max. 1 s). The green LED is illuminated. Now communication is possible.
	1 s →	

Stop communication

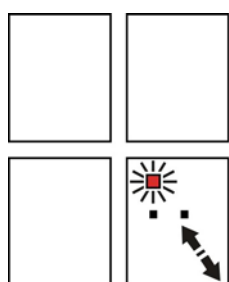


The communication will be stopped:

- by means of pushing the communication button (max. 1 s)
- when the preset communication time of the outdoor station is elapsed (factory setting: 1min.)
- by means of pushing the door release button.

Disconnected communication: The LED turns off.

Door release

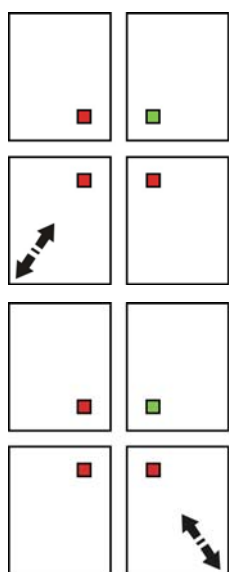


- Push the door release button to open the door.

When **light switching function*** is activated:

- Push communication button
- Push the door release button to open the door.

Light switching



- Push the function button, when function button is adjusted with light switching (factory setting).

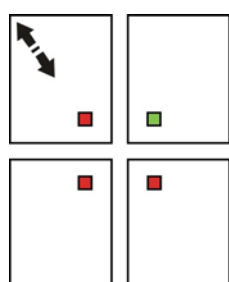
or

When **light switching function*** is activated:

- Push the door release button, if no communication is activated. The LED is not illuminated.

* = please see *explanation of terms and definitions* on page 27

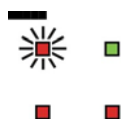
Ring tone volume / Ring tone OFF/ON



The ring tone volume is adjustable in 5 levels: 1, 2, 3, 4 and OFF (ring tone is switched OFF).

- Push ring tone button (approx. 1 s).
- You can hear the adjusted ring tone
- Now the volume is one level louder

Repeat the action as long as the desired volume is reached.

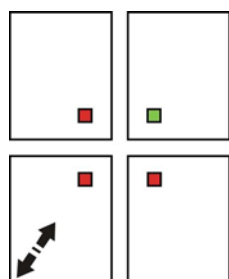


Ring tone OFF:

- Repeat the action until the level OFF is adjusted. The LED of the ring tone button is ON.

Push the button again to turn the ring tone ON.

Functions of the function button



Short push of the function button (max. 1 s).

Depending on the set function the indoor station indicates the action with visual or acoustic signals:

Light switching	-	-
Internal call	✓	flashing
Call diversion ON	-	✓
Call diversion OFF	-	-
Automatic door release ON	-	✓
Automatic door release OFF	-	-

Explanation of terms and definitions

OS address	Every outdoor station is assigned with an outdoor station address . The address enables the differentiation between the various installed outdoor station. Selective communication or door release of e.g. main- or side entrance can be realised.
Ready for operation	Incoming door call - You can hear a ring tone and the LED at the communication button flashes. You can activate a communication with the outdoor station by means of a short push of the communication button.
Hands-free operation (Full duplex)	Simultaneous communication in both directions.
Door call	You release a door call at the assigned indoor station by means of pushing the bell button. A bell button can release a door call at two indoor stations (parallel call).
Internal call	An indoor station can call another assigned indoor station for an internal communication.
Automatic light switching <i>Programming at the outdoor station.</i>	The light will be switched depending on the ambient brightness when you push the bell button of the outdoor station. The limited brightness value is adjustable.
Light switching	The function button of the indoor station is assigned with the function "light switching" (factory setting). A bell button of the outdoor station will switch the light, if the bell button is not assigned to an indoor station.
Light switching function <i>Programming at the power supply and control unit.</i>	The door release button can be assigned with an extra function, when the light switching function is activated at the power supply and control unit: You first have to push the communication button before you can release the door with the door release button. Without pushing the communication button you will switch the light with the door release button.
Parallel call	A second indoor station can be programmed to a bell button of the outdoor station.
Parallel function <i>Programming only with the service device.</i>	Multiple indoor station can respond to one bell button of the outdoor station or the floor bell button. Each further indoor station respond just as the first indoor station.
Programming mode	The system has to be in programming mode to assign the indoor stations to the desired bell buttons of the outdoor station.
Acknowledge tone	Acoustical confirmation
Idle mode	The device is ready for a door call or other operation.
Call diversion	An incoming door call will be forwarded from one indoor station to another indoor station. The call diversion has to be activated with the function button. The illuminated LED of the function button indicates the activated call diversion.

Talking mode	<p>A communication between indoor and outdoor station will be activated by means of pushing the communication button. The LED of the communication button is illuminated.</p> <p>The LED of the communication button is flashing, when another indoor station is already communicating with the outdoor station.</p> <p>After elapsed talking time, activating the door release or pushing the communication button again, the device turns back into idle mode.</p>
<p>Talking only after incoming door call</p> <p><i>Programming only with the service device.</i></p>	<p>A communication between indoor and outdoor station can only be activated after an incoming door call.</p>
Talking time	<p>The communication between indoor and outdoor station will be interrupted after a pre-defined talking time (60 s factory setting). The talking time is adjustable.</p>
Control function	<p>Command for the control of various relays in the door communication system.</p>
<p>Sub door call</p> <p><i>Programming only with the service device.</i></p>	<p>The sub door call enables to assign 4 additional bell button of the outdoor station to the same indoor station. Each bell button can be assigned to a separate ring tone (e.g.: individual ring tones for each family member).</p>
Automatic door release	<p>The door release relay will be activated by means of pushing the bell button. The automatic door release can be activated/deactivated with the function button of the indoor station. The LED of the function button indicates the status.</p> <p>LED ON = automatic door release activated</p> <p>LED OFF = automatic door release deactivated</p>
Door release time	<p>The door release relay can be activated for an adjusted time.</p>
Voice memo-function	<p>Record and play a voice memo (message) up to a length of 30 s.</p>

General notes on the wiring in DCM audio systems

The cabling depends on the building situation and is only limited by its length.

- When selecting the cable length consider: the loop resistance must not exceed max. 20 Ω (table)
- To keep within the max. permissible loop resistance the wire cross section can be doubled, i.e. two lines are used for one wire (figure). The lines must be twisted.
- When using screened cables: connect the screens to each other and connect on one side to earth (b wire) on the power supply unit
- Choice of line or star wiring

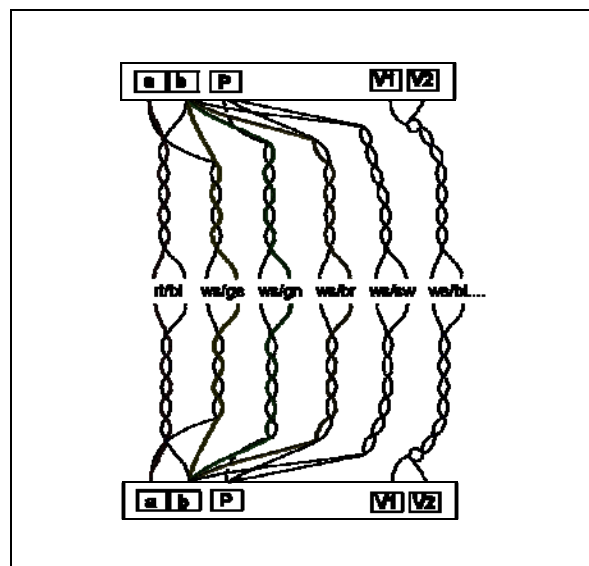


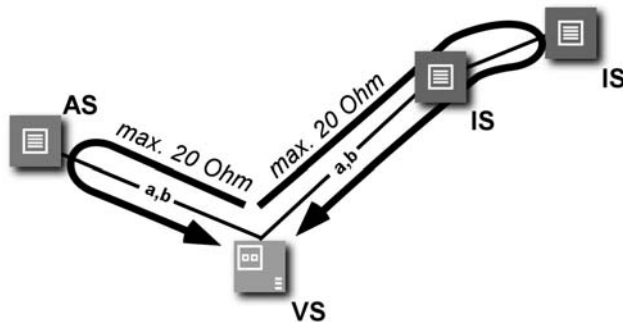
Table: Loop resistance

Wire length in m	Cross section	
	0.6 mm	0.8 mm
	Loop resistance in Ω	
10	1.22	0.69
20	2.45	1.38
30	3.67	2.07
40	4.90	2.76
50	6.12	3.44
60	7.35	4.13
70	8.57	4.82
80	9.80	5.51
90	11.02	6.20
100	12.24	6.89
150	18.37	10.33
200	24.49	13.78
250		17.22
300		20.66

Principle of loop resistance

Rule:

No *door communication device* shall have a longer distance from the *power supply & control unit* than 20 Ohm !



20 Ohm:

160 m wire length AS-VS (IS-VS) at a cross section of 0.6 mm

300 m wire length AS-VS (IS-VS) at a cross section of 0.8 mm

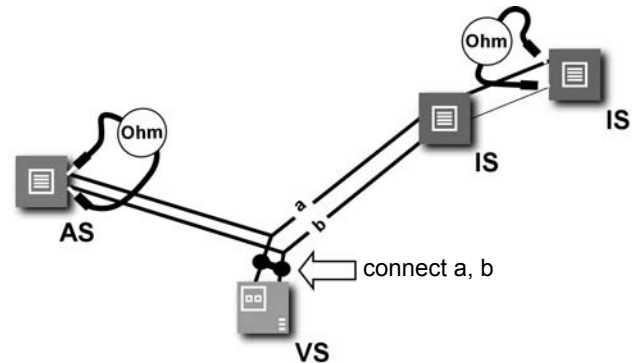
Measuring loop resistance

Rule:

Turn OFF 230 V / 50 Hz of the VS.

Connect a and b short circuit at the VS.

All other devices do not disturb the measuring process and remain connected.



AS: Outdoor station

IS: Indoor station

VS: Power supply and control unit

Technical data

Supply voltage:	+24 V DC \pm 8 % (Power supply & control unit)
	24 V (a-b) / 26 V (P-b) in idle state
Dimensions (W x H x D):	58 x 129 x 21 mm
Input current 2-wire	I(a) = 2.6 mA in idle state
Max. input current:	I(a _{max}) = 60 mA
input current 3-wire	I(a) = 0.4 mA, I(P) = 3.2 mA in idle state
Max. input current:	I(P _{max}) = 40 mA
Protection class:	III
Admissible ambient temperature:	0 °C to 40 °C
Operation humidity:	0 to 93 % r. h., no condensation
Installation height:	Recommended 1.50 m

Cleaning

! Avoid the penetration of water into this device!
Do not use any aggressive or abrasive cleaning supplies!

Please clean the device with a dry or slightly moist rag.
Intense dirt can be removed with a mild cleaning supply.

Acceptance of guarantee

We accept the guarantee in accordance with the corresponding legal provisions.
Please return the unit postage paid to our central service department giving a brief description of the fault:

ALBRECHT JUNG GMBH & CO. KG

Service-Centre

Kupferstr. 17-19
44532 Lünen
Germany

Service-Line: 0 23 55 . 80 65 51
Fax: 0 23 55 . 80 61 89
E-Mail: mail.vka@jung.de


Technique (DCM)

Service-Line: 0 23 55 . 80 65 52
Fax: 0 23 55 . 80 62 55
E-Mail: mail.vka@jung.de



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Technical subjects to change.
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